ENVIRONMENTAL ASSESSMENT

for the

Pāhala Large Capacity Cesspool (LCC)
Replacement Project
EPA Grant XP-96942401

VOLUME 2: APPENDICES

Pāhala, District of Kaʻu, County of Hawaiʻi, Hawaiʻi
TMK: 9-6-002:018

U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California 94105

County of Hawaiʻi
25 Aupuni Street
Hilo, HI 96720

FINAL

February 2020

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Appendix A
Responses to Pre-Assessment Consultation Letters

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(10349-01) 4/12/18

Earl Matsukawa

From: Koskelo, Vera B CIV (US) <Vera.B.Koskelo@usace.army.mil>
Sent: Wednesday, April 11, 2018 11:24 AM
To: Earl Matsukawa
Subject: Corps comments on pre-assessment Consultation for DEA for POH-2018-00068 (Pahala Community Large Capacity Cesspool Replacement, Ka'u, Hilo, HI)

cc. BC

cc: AECOS 6/19/18

Aloha Mr. Matsukawa,

Thank you for the opportunity to comment on the preparation of a draft EA for the Pahala Community Large Capacity Cesspool Replacement.

The Corps has assigned the pre-application consultation for the project the following name and number: POH-2018-00068 (Pahala Community Large Capacity Cesspool Replacement, Ka'u, Hilo, HI). Please reference this project name and number in any subsequent communication with the Corps.

The Corps has determined that the information submitted with your letter dated March 15, 2018 is insufficient for the Corps to determine at this time whether a permit would be required for the proposed work. To receive a Corps permit determination (i.e. whether or not the project would require a Corps permit), please submit more detailed information about the proposed project including, but not limited to, the location of the proposed project within the public ROW using coordinates, TMKs, or similar boundary information; the boundaries of any proposed site access (roads) and utility lines that would be located on and/or off site to service the project; a description of any other work (e.g. staging, grading) proposed for location off-site; any project sketches and/or plans that illustrate the proposed project work; and the results of on-site investigations into the flora, soils, and observations about hydrology within the project site. If hydric soils and/or hydrophytic vegetation are found during on-site investigations on either of the parcels in the project site, consider conducting a wetland delineation.

Please feel free to contact me to discuss the project further.

The Regulatory Branch is committed to providing the highest level of customer service. I value your comments and appreciate you contacting me if you have any comments/concerns regarding our customer service.

Thank you,

Vera Koskelo
Biologist
Project Manager
Honolulu District
U.S. Army Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858-5440
808-835-4310
Vera.B.Koskelo@usace.army.mil

This message has been scanned for viruses and dangerous content using Worry-Free Mail Security and is believed to be clean.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01
June 22, 2018

Ms. Vera Koskelo, Biologist
U.S. Army Corps of Engineers, Honolulu District
Regulatory Branch
Building 230, Room 205
Fort Shafter, HI 96858

Vera.B.Koskelo@usace.army.mil

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment (POH-2018-0068)

Dear Ms. Koskelo:

Thank for your April 11, 2018 comment message regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will contain information regarding the project location, including the extent of the collection system within the right-of-way of County streets and the wastewater treatment and disposal site. As stated in the Project Summary, the proposed treatment and disposal system would occupy about 14 acres and consist of a headworks with screens to remove debris and an odor control unit, four lined aerated lagoons of about 0.3 acres each, an operations building with adjacent disinfection system to remove pathogens, an odor control unit, a subsurface flow constructed polishing wetland to remove nitrogen and two slow rate (SR) land treatment basins which will be surrounded by berms on all four sides. SR land treatment involves irrigation of plant material with the treated effluent. The Draft EA will provide descriptions and drawings related to these improvements. The County intends to locate the treatment and disposal site within an existing macadamia nut orchard that presently contains a surface mounted irrigation system.

As part of the Draft EA, a biological resources field survey will be conducted to identify flora and fauna present on the treatment and disposal site and any wetland conditions that may be present within the site.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

10349-01
4/24/18

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

CC: BC
RBS

In Reply Refer To:
01EPIF00-2018-TA-0275

April 23, 2018

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Subject: Comments for the Draft Environmental Assessment for the County of Hawaii Department of Environmental Management Pahala Community Large Capacity Cesspool Replacement, Paauau, Kau, Island and County of Hawaii

Dear Mr. Matsukawa:

The U.S. Fish and Wildlife Service (Service) received your correspondence on April 9, 2018, requesting technical assistance in the preparation for the Draft Environmental Assessment for the County of Hawaii Department of Environmental Management Pahala Community Large Capacity Cesspool (LCC) Replacement in Paauau, Kau, (TMK: 9-6-002: 018). The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

The County of Hawaii Department of Environmental Management (DEM) is proposing to construct wastewater system improvements to replace the current system servicing Pahala, now owned by the County. The wastewater system improvements would allow the County to comply with Environmental Protection Agency (EPA) regulations requiring closure of the LCC's and to construct a system meeting current State of Hawaii Department of Health and DEM design guidelines for the collection, treatment, and disposal of the treated effluent. The Pahala Community LCC closure project improvements would consists of a new wastewater collection system located within the public right-of-way and a treatment and disposal system located on a currently privately-owned parcel which would be acquired by the County. The Pahala LCC closure project would be funded by the EPA Special Appropriation Grant and by the State of Hawaii Clean Water State Revolving Fund loan program.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, eight (8) listed species that have the potential to either be in or fly through the vicinity of the project area: The federally endangered Hawaiian hoary bat *(Lasiurus cinereus semotus)*, Hawaiian hawk *(Buteo solitarius)*, Nene

Branta (=Nesochen) sandvicensis)), Hawaiian petrel (*Pterodroma sandwichensis*), Band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot, (*Fulica alai*).

Avoidance and Minimization Measures

Hawaiian hoary bat
The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend incorporating the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian hawk
The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

To avoid and minimize impacts to Hawaiian hawks we recommend you consider incorporating the following applicable measures into your project description:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, have a biologist familiar with the species conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
    - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, conduct another survey.
- No clearing of vegetation or construction activities within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest, as nests may be re-used during consecutive breeding seasons.

Nene
Nene are found on the islands of Hawaii, Maui, Molokai, and Kauai predominately, with a small population on Oahu. They are observed in a variety of habitats, but prefer open areas, such as

pastures, golf courses, wetlands, natural grasslands and shrublands, and lava flows. Threats to the species include introduced mammalian and avian predators, wind facilities, and vehicle strikes.

To avoid and minimize potential project impacts to Nene we recommend incorporating the following applicable measures into your project description:

- Do not approach, feed, or disturb Nene.
- If Nene are observed loafing or foraging within the project area during the Nene breeding season (September through April), have a biologist familiar with the nesting behavior of Nene survey for nests in and around the project area prior to the resumption of any work. Repeat surveys after any subsequent delay of work of three or more days (during which the birds may attempt to nest).
    - Cease all work immediately and contact the Service for further guidance if a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where Nene are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Hawaiian petrel, Band-rumped storm-petrel, and Newell's shearwater
Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Hawaiian stilt and Hawaiian coot
Listed Hawaiian waterbirds are found in fresh and brackish-water marshes and natural or man-made ponds. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation.

Based on the project details provided, our information suggests that your project may result in standing water or the creation of open water, thus attracting Hawaiian waterbirds to the site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g. any ponding water),

if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

To avoid and minimize potential project impacts to Hawaiian waterbirds we recommend you incorporate the following applicable measures into your project description:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design.
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
    - Contact the Service within 48 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.

Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Invasive Species
To avoid and minimize the risk of the road construction introducing harmful invasive pests including coqui, ants, and weeds into the project sites, we recommend the following measures be implemented by project contractors:

- Vehicles, machinery, and equipment must be thoroughly pressure washed and visibly free of mud, dirt, plant debris, frogs and frog eggs, insects and other debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds.
- The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats will be sanitized with a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.
- All work vehicles, machinery, and equipment may be subject to inspection.
- Any vehicles, machinery, and equipment that do not pass inspection will be turned away.
- Staging areas must be kept free of invasive pests.

Minimize Spread of Rapid Ohia Death
Rapid Ohia Death (ROD), a newly identified disease, has killed large numbers of mature ohia trees (*Metrosideros polymorpha*) in forests and residential areas of Hawaii Island. The disease is

caused by a vascular wilt fungus (*Ceratocystis fimbriata*). Crowns of an affected tree turn yellowish or brown within days to weeks and dead leaves typically remain on branches for some time. All ages of ohia trees can be affected and can have symptoms of browning of branches or leaves. As of early 2017 the disease has been confirmed in all districts except North and South Kohala. Additional information on ROD can be found at:

http://www2.ctahr.hawaii.edu/forestry/downloads/ROD-trifold-03.2016.pdf and
http://www2.ctahr.hawaii.edu/forestry/disease/ohia_wilt.html.

The following avoidance and minimization measures should be followed for projects working in ohia forests or at sites with ohia trees on Hawaii Island:

1) A survey of the proposed project site should be conducted within two weeks prior to any tree cutting to determine if there are any infected ohia trees. If infected ohia are suspected at the site, the following agencies should be contacted for further guidance.
   a. Service – please contact the name at the bottom of this letter.
   b. Dr. J.B. Friday, University of Hawaii Cooperative Extension Service, 808-969-8254 or jbfriday@hawaii.edu
   c. Dr. Flint Hughes, USDA Forest Service, 808-854-2617, fhughes@fs.fed.us
   d. Dr. Lisa Keith, USDA Agriculture Research Service, 808-959-4357, Lisa.Keith@ars.usda.gov

2) Both prior to cutting ohia and after the project is complete:
   a. Tools used for cutting infected ohia trees should be cleaned with a 70 percent rubbing alcohol solution. A freshly prepared 10 percent solution of chlorine bleach and water can be used as long as tools are oiled afterwards, as chlorine bleach will corrode metal tools. Chainsaw blades should be brushed clean, sprayed with cleaning solution, and run briefly to lubricate the chain.
   b. Vehicles used off-road in infected forest areas should be thoroughly cleaned. The tires and undercarriage of the vehicle should be cleaned with detergent if they have travelled from an area with ROD or travelled off-road. Use a pressure washer with soap to clean all soil off of the tires and vehicle undercarriage.
   c. Shoes and clothing used in infected forests should also be cleaned. Shoes should be decontaminated by dipping the soles in 70 percent rubbing alcohol to kill the ROD fungus. Other gear can be sprayed with the same cleaning solutions. Clothing can be washed in hot water and detergent.
   d. Wood of affected ohia trees should not be transported to other areas of Hawaii Island or interisland. All cut wood should be left on-site to avoid spreading the disease. The pathogen may remain viable for over a year in dead wood. The Hawaii Department of Agriculture has passed a quarantine rule that prohibits interisland movement, except by permit, of all ohia plant or plant parts.

If this project should receive federal funding, federal permit, or any federal authorization, it will require a Section 7 consultation with the Service. The Service only conducts Section 7 consultations with the federal action agency or their designated representative.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns regarding this consultation, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-284-0037, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference number: ***01EPIF00-2018-TA-0275***.

Sincerely,

JODI CHARRIER Digitally signed by JODI CHARRIER Date: 2018.04.23 08:04:41 -10'00'

Jodi Charrier
Acting Island Team Leader
Maui Nui and Hawaii Island

WILSON OKAMOTO
CORPORATION

10349-01
August 20, 2018

Ms. Jodi Charrier, Acting Team Leader
Maui Nui and Hawaii Island
Fish and Wildlife Service
U.S. Department of the Interior
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, HI 96850

Attention: Eldridge Naboa, Fish and Wildlife Biologist

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'ū Ka'u, Hawai'i
Response to Comment (01EPIF00-2018-TA-0275)

Dear Ms. Charrier:

Thank you for your April 23, 2018 comment letter (01EPIF00-2018-TA-0275) and the April 10, 2018 e-mail message from Eldridge Naboa regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. As stated in the Project Summary, the Pāhala Community Large Capacity Cesspool Replacement project would be funded by an Environmental Protection Agency (EPA) Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (CSRF) loan program. As such, we understand consultation will need to be conducted by a federal agency or by a designated non-federal representative.

On June 7, 2018, EPA Region 9 Water Division, designated Eastern Research Group, Inc. (ERG) as the non-federal representative for undertaking the consultation for this project.

As part of the Draft EA, in August 2018, botanical and biological field studies were undertaken along the streets and adjacent areas of wastewater collection system and at the 14.9-acre wastewater treatment and disposal facility project site. The results of the field surveys showed the collection system will be installed along already paved roadways within Pāhala. They also revealed that vegetation is located entirely within yards and consist of ornamental plants.

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The field survey showed 52 species of vascular plants: 2 ferns, one gymnosperm, and 49 species of angiosperms (flowering plants). Only two species (4%) are regarded as native to the Hawaiian Islands and both are indigenous (native, but also distributed elsewhere in the Pacific). Being widely distributed indigenous species, neither is listed as threatened or endangered or of any special concern.

The avian survey recorded a total of 175 individual birds of 13 species, representing nine separate families during station counts. Avian diversity and densities were very low, in keeping with the current usage of the site as a mature macadamia nut orchard, with minimal ground cover and few weedy or shrubby species. All of the species recorded during the course of the survey are established alien species. No native avian species were recorded during the course of this survey.

The field survey report indicated that, although not detected during the survey, the endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and Newell's Shearwater (*Puffinus newelli*) have been recorded over-flying the general area between April and the end of November each year. The petrel is listed as endangered, and the shearwater as threatened under both federal and State of Hawai'i endangered species statutes.

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes were recorded by the survey.

The Draft EA, will include a discussion of the avoidance and minimization measures as set forth in your April 23, 2108 letter.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director – Planning

cc: D. Beck, DEM
K. Rao, EPA
B. Rosen, ERG
C. Lekven, PE, BC

DAVID Y. IGE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
2385 WAIMANO HOME ROAD
ULUAKUPU BUILDING 4
PEARL CITY, HAWAII 96782-1400

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

10349-01
4/10/18
cc: BC

April 3, 2018

EM

RECEIVED
APR 05 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA), PRE-ASSESSMENT CONSULTATION FOR PAHALA COMMUNITY LARGE CAPACITY CESSPOOL REPLACEMENT PAAUAU, KAU, HAWAII

The Safe Drinking Water Branch (SDWB) has reviewed your March 15, 2018 request for comments as part of the Draft EA pre-assessment consultation for the subject project.

The project is located above the Underground Injection Control (UIC) line. Areas above the UIC line are considered to be on top of underground sources of drinking water. Sewage injection wells are not allowed to be constructed above the UIC line. There is an existing drinking water well located approximately one (1) mile mauka of the proposed wastewater disposal and treatment site. In consideration of the project's location and situation, wastewater disposal by land application appears to be a very sensible proposal.

If you have any questions regarding this response, please contact Mr. Norris Uehara, Supervisor of the Safe Drinking Water Branch UIC program at 586-4258.

Sincerely,

JOANNA L. SETO, P.E., CHIEF
Safe Drinking Water Branch

NU:cb

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01
June 21, 2018

Ms. Jonna Seto, Branch Chief
State of Hawai'i
Department of Health
Safe Drinking Water Branch
2385 Waimano Home Road
Pearl City, HI 96782

Attention: Norris Uehara

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Ms. Seto:

Thank for your April 3, 2018 comment letter (SDWS Pāhala LLC Replacement) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project.

The Draft Environmental Assessment (EA) will describe the project as located above the Underground Injection Control (UIC) line and, as such, will overlie underground sources of drinking water. Further, an existing drinking water well is located about 1 mile mauka of the treatment and disposal site. Lastly, the Draft EA will include that the project's disposal by slow land application is a very sensible proposal.

Thank you for your participation in the Draft EA process.

Sincerely,

FOR
Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

EM ✓
JS ✓
10341-01
4/16/18
cc: BC

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:
EPO 18-082

April 3, 2018

RECEIVED
APR 09 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Pre-Assessment Consultation Draft Environmental Assessment (PAC DEA) for Pahala Community Large Capacity Cesspool Replacement, Kau, Hawaii
TMK: 9-6-002:018

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PAC DEA to our office on March 20, 2018.

We understand from the project summary that *"the Pahala Community Large Capacity Cesspool Closure project improvements would consist of a new wastewater collection system located within the public right-of-way and a treatment and disposal system located on a currently privately-owned parcel (TMK: 9-6-002: 018) which will be acquired by the County."*

Hawaii's environmental review laws require Environmental Assessments (EAs) and Environmental Impact Statements (EISs) to consider health in the discussion and the mitigation measures to reduce negative impacts. In its definition of 'impacts,' §11-200-2, Hawaii Administrative Rules (HAR) includes health effects, whether primary (direct), secondary (indirect), or cumulative. Further, §11-200-12(b)(5), HAR, lists public health as one of the criteria for determining whether an action may have a significant impact on the environment.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments to support sustainable healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

We suggest you review the requirements of the Clean Water Branch (Hawaii Administrative Rules (HAR), Chapter 11-54-1.1, -3, 4-8) and/or the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55) at: http://health.hawaii.gov/cwb. If you have any questions, please contact the Clean Water Branch (CWB), Engineering Section at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov. If your project involves waters of the U.S., it is highly recommended that you contact the Army Corps of Engineers, Regulatory Branch at: (808) 835-4303.

Please note that all wastewater plans must conform to applicable provisions (HAR, Chapter 11-62, "Wastewater Systems"). We reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should

you have any questions, please review online guidance at: http://health.hawaii.gov/wastewater and contact the Planning and Design Section of the Wastewater Branch (WWB) at (808) 586-4294.

If temporary fugitive dust emissions could be emitted when the project site is prepared for construction and/or when construction activities occur, we recommend you review the need and/or requirements for a Clean Air Branch (CAB) permit (HAR, Chapter 11-60.1 "Air Pollution Control"). Effective air pollution control measures need to be provided to prevent or minimize any fugitive dust emissions caused by construction work from affecting the surrounding areas. This includes the off-site roadways used to enter/exit the project. The control measures could include, but are not limited to, the use of water wagons, sprinkler systems, and dust fences. For questions contact the Clean Air Branch via e-mail at: Cab.General@doh.hawaii.gov or call (808) 586-4200.

Any waste generated by the project (that is not a hazardous waste as defined in state hazardous waste laws and regulations), needs to be disposed of at a solid waste management facility that complies with the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The open burning of any of these wastes, on or off site, is strictly prohibited. You may wish you review the Minimizing Construction & Demolition Waste Management Guide at: http://health.hawaii.gov/shwb/files/2016/05/constdem16.pdf Additional information is accessible at: http://health.hawaii.gov/shwb. For specific questions call (808) 586-4226.

If noise created during the construction phase of the project may exceed the maximum allowable levels (HAR, Chapter 11-46, "Community Noise Control") then a noise permit may be required and needs to be obtained before the commencement of work. Relevant information is online at: http://health.hawaii.gov/irhb/noise EPO recommends you contact the Indoor and Radiological Health Branch (IRHB) at (808) 586-4700 with any specific questions.

To better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed an environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We hope this information is helpful. If you have any questions please contact us at DOH.epo@doh.hawaii.gov or call us at (808) 586-4337. Thank you for the opportunity to comment.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office

LM:nn

c: DOH: DHO HI, WWB (via email only)

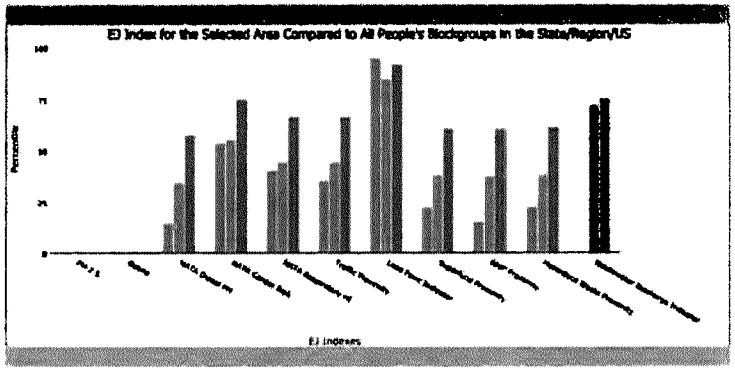
Attachment: U.S. EPA EJSCREEN Report for Project Area

1 mile Ring Centered at 19.189149,-155.479492, HAWAII, EPA Region 9

Approximate Population: 707

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	15	35	58
EJ Index for NATA* Air Toxics Cancer Risk	54	58	75
EJ Index for NATA* Respiratory Hazard Index	41	45	67
EJ Index for Traffic Proximity and Volume	36	46	67
EJ Index for Lead Paint Indicator	85	85	92
EJ Index for Superfund Proximity	23	39	61
EJ Index for RMP Proximity	16	36	61
EJ Index for Hazardous Waste Proximity	23	39	62
EJ Index for Wastewater Discharge Indicator	N/A	73	78



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EPA EJSCREEN Report (Version 2017)

1 mile Ring Centered at 19.189149,-155.479492, HAWAII, EPA Region 9

Approximate Population: 707

Input Area (sq. miles): 3.14

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2017)

1 mile Ring Centered at 19.189149,-155.479482, HAWAII, EPA Region 9

Approximate Population: 707

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.9	N/A	9.14	N/A
Ozone (ppb)	N/A	N/A	N/A	41.8	N/A	38.4	N/A
NATA* Diesel PM (µg/m³)	0.00371	0.149	0	0.978	<50th	0.938	<50th
NATA* Cancer Risk (lifetime risk per million)	24	34	0	43	<50th	40	<50th
NATA* Respiratory Hazard Index	0.47	1	0	2	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	13	1000	22	1100	14	590	20
Lead Paint Indicator (% Pre-1960 Housing)	0.56	0.16	95	0.24	81	0.29	79
Superfund Proximity (site count/km distance)	0.0028	0.1	4	0.15	0	0.13	0
RMP Proximity (facility count/km distance)	0.015	0.39	0	0.98	0	0.73	0
Hazardous Waste Proximity (facility count/km distance)	0.0029	0.1	4	0.12	0	0.093	0
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0	0.04	N/A	13	59	36	40
Demographic Indicators							
Demographic Index	66%	51%	89	47%	76	35%	88
Minority Population	68%	77%	64	59%	79	38%	89
Low Income Population	44%	26%	87	36%	85	34%	69
Linguistically Isolated Population	6%	8%	67	9%	52	5%	75
Population With Less Than High School Education	14%	9%	79	17%	52	13%	63
Population Under 5 years of age	8%	6%	70	7%	64	6%	67
Population over 64 years of age	19%	16%	70	13%	62	14%	78

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at https://www.epa.gov/national-air-toxics-assessment

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important Publications and uncertainties apply to this screening level information. So it is essential to understand the limitations on appropriate interpretation and application of these indicators. Please see EJSCREEN documentation for discussion of these issues before using report. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

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10349-01
June 21, 2018

Ms. Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office
State of Hawaii Department of Health
P.O. Box 3378
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Ms. McIntyre:

Thank you for your April 3, 2018 comment letter (EPO 18-082) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will be prepared to in accordance with the requirements of Chapter 343, HRS, as amended, and Hawai'i Administrative Rules (HAR) Title 11, State of Hawai'i Department of Health, Chapter 200, Environmental Impact Statement Rules, including an assessment according to HAR §11-200-12(b)(5).

The Draft EA will include a discussion of surface waters and erosion control measures related to construction storm water runoff, as may be required for a National Pollutant Discharge Elimination System (NPDES) permit. Also, the Draft EA will include a discussion of surface water sources in the area and potential discharge to waters of the U.S.

As part of the project description, the Draft EA will note the wastewater treatment plant must conform to applicable provisions (HAR, Chapter 11-62, "Wastewater Systems").

With respect to air quality, the Draft EA will discuss fugitive dust emissions and potential measures to mitigate emissions during construction activities and from the emergency generator in relation to the requirements of HAR, Chapter 11-60.1 "Air Pollution Control." Hazardous waste will be discussed in relation to construction activities and the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The Draft EA will state the open burning of any of these wastes, on or off site, is strictly prohibited.

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An analysis of noise created during the construction will also be included in the Draft EA. As noted in the Project Summary, the Pāhala Community Large Capacity Cesspool Replacement project would be funded by an EPA Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (SRF) loan program. As such, the Draft EA will include an environmental justice (EJ) discussion on the Pāhala community.

We appreciate your participation in the Draft EA process.

Sincerely,

For Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

DAVID Y. IGE
GOVERNOR OF HAWAII

RECEIVED
APR 09 2018
WILSON OKAMOTO CORPORATION

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD/CWB

04007CEC.18

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

April 4, 2018

Mr. Earl Matsukawa
Project Manager
Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Pre-Assessment Consultation Comments on
Pahala Community Large Capacity Cesspool Replacement
Paauau, Kau, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter dated March 15, 2018, requesting comments on subject County of Hawaii (COH), Department of Environmental Management (DEM) proposed project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. The City and County of Honolulu, Department of Environmental Services (Applicant) may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

A. General Comments

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. The COH-DEM may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If COH-DEM project involves work in, over, or under waters of the United States, it is highly recommended that they contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations (CFR), Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

4. Please note that all discharges related to the project construction and/or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards (WQS). Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source

of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

EC:ak

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10349-01
June 21, 2018

Mr. Alec Wong, P.E., Chief, Clean Water Branch
State of Hawai'i
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Wong:

Thank you for your April 4, 2018 comment letter (04007CEC.18) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will be prepared to in accordance with the requirements of Chapter 343, HRS, as amended, and Hawai'i Administrative Rules (HAR) Title 11, State of Hawai'i Department of Health, Chapter 200, Environmental Impact Statement Rules, including an assessment according to HAR §11-200-12(b)(5).

General Comments:

1. Based on the above, the Draft EA will include analysis of potential impacts to State waters including analysis measures necessary to protect the existing uses of the receiving State waters.

2. The Draft EA will include a discussion of surface waters and erosion control measures related to construction storm water runoff, as may be required for a National Pollutant Discharge Elimination System (NPDES) permit.

3. Also, the Draft EA will include a discussion of surface water sources in the area and potential discharges to waters of the U.S which might require approval by the Corps of Engineers and any associated need for a Section 401 Water Quality Certification (WQC).

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4. The Draft EA will note that all discharges related to the project construction and/or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards (WQS).

5. The Draft EA will include a discussion of possible uses of storm water runoff from the project site and related facilities, consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation, and various green building practices.

We appreciate your participation in the Draft EA process.

Sincerely,

for Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

10349-01
4/16/18
cc: BC

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to
File:

LUD – 3 9 6 002 G16
DEA Pahala Community-ID3968

April 10, 2018

BM ✓

RECEIVED
APR 11 '18

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
Pahala Community Large Capacity Cesspool Replacement
Paauau, Kau, Hawaii TMK (3) 9-6-002: 018
Request for Comment

Thank you for allowing us the opportunity to provide comments for the subject project. The subject project will be funded by the Hawaii Clean Water State Revolving Fund (CWSRF) Program. In order to comply with the Hawaii CWSRF Program requirements, the environmental assessment must address all applicable Federal environmental "cross-cutting" authorities, which can be found in the Hawaii State Environmental Review Process document.

Please be informed that the proposed wastewater systems for the community may have to include design considerations to address any effects associated with the construction of and/or discharges from the wastewater systems to any public trust, Native Hawaiian resources or the exercise of traditional cultural practices. In addition, all wastewater plans must conform to applicable provisions of the Hawaii Administrative Rules, Chapter 11-62, "Wastewater Systems."

Should you have any questions, please call Mr. Mark Tomomitsu at 586-4294.

Sincerely,

SINA PRUDER, P.E., CHIEF
Wastewater Branch

LM/MST:lm

c. Mr. Jonathan Nagato, DOH-WWB, PO-SRF
Ms. Laura McIntyre, DOH-EPO, via email
Ms. Amy Cook, DOH-WWB's Hilo Staff, via email
Mr. Dane Hiromasa, DOH-WWB's Kona Staff, via email

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10349-01
June 22, 2018

Ms. Sina Pruder, Branch Chief
Wastewater Branch
State of Hawai'i
Department of Health
2827 Waimano Home Road
Pearl City, HI 96782

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Ms. Pruder:

Thank you for your April 10, 2018 comment letter (LUD-396002 18) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will confirm that the project will use funds from the Hawai'i Clean Water State Revolving Fund (CWSRF) project and will include the various "cross cutter" authorities required as part of the State Environmental Review Process (SERP).

An archaeological inventory of survey will be conducted for the project and will include consultation with various governmental agencies, Native Hawaiian Organizations and interested parties to identify the concerns related to the project.

Lastly, the Draft EA will state the design of the collection system and the wastewater treatment and disposal system meets the requirements of Hawai'i Administrative Rules, Chapter 11-62.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

OFFICE OF PLANNING
STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

Telephone: (808) 587-2846
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Web: http://planning.hawaii.gov/

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APR 09 2018

DTS201804051430RI

April 5, 2018

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation; Pahala Community Large Capacity Cesspool Replacement, Paauau, Kau, Hawaii; TMK: (3) 9-6-002: 018

Thank you for the opportunity to provide comments on the pre-consultation request for the preparation of a Draft Environmental Assessment (Draft EA) on the Pahala Community cesspool replacement project. The pre-consultation review material was transmitted to our office via letter dated March 15, 2018.

It is our understanding that the County of Hawaii Department of Environmental Management (DEM) proposes the construction of a wastewater collection and treatment system to replace the current large capacity cesspools that currently serve the residents of Pahala. The new wastewater collection system would comply with U.S. Environmental Protection Agency (EPA) regulations. The new wastewater system would also meet State Department of Health guidelines for the collection, treatment, and disposal of treated effluent.

The site for the proposed wastewater treatment system is currently used to grow macadamia nut trees. The trees will be removed and the area cleared for the installation of the system. The wastewater system would consist of 11,000 linear feet of gravity flow piping on 14 acres of land. It will include headworks with screens to remove debris, an odor control unit, lined aerated lagoons, an operations building with a disinfection system to remove pathogens, a slow flow rate land treatment basin, and berms that will surround the system on all four sides.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. The Hawaii State Planning Act.
Pursuant to Hawaii Administrative Rules (HAR) § 11-200-10(4) – general description of the action's technical, economic, social, and environmental characteristics, this

project must demonstrate that it is consistent with state environmental, social, and economic goals and policies. Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Planning Act, provides goals, objectives, policies, planning coordination and implementation, and priority guidelines for growth, development, and the allocation of resources throughout the state.

The Draft EA should include a discussion on the project's ability to meet all parts of HRS Chapter 226. The analysis should examine consistency with these statutes or clarify where it is in conflict with them. If any of these statutes are not applicable to the project, the analysis should affirmatively state such determination, followed by discussion paragraphs.

2. Principles of Sustainability.

The Draft EA should include an examination on this cesspool removal project and its compatibility with Statewide sustainability goals. HRS § 226-108 – the priority guidelines on sustainability is the mainstay of sustainability policies for the State of Hawaii. An analysis on the project's consistency with this statute should be included in the Hawaii State Planning Act examination as noted above.

Clean water resources and the connection to a healthy environment are discussed within the Hawaii 2050 Sustainability Plan. As a reference, we recommend that DEM reviews the Hawaii 2050 Sustainability Plan. The closure of a cesspool and its replacement with a more environmentally friendly onsite wastewater collection and treatment system is consistent with the Hawaii 2050 Sustainability Plan's water quality goals.

3. Objectives and Policies of the Hawaii Coastal Zone Management (CZM) Program.
The CZM area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (HRS § 205A-1).

The Draft EA should include an assessment as to how the proposed action conforms to each of the goals and objectives as listed in HRS § 205A-2. Compliance with HRS § 205A-2 is an important component for satisfying the requirements of HRS Chapter 343.

4. State Land Use Agriculture District Permitted Uses.
The parcel in question is located within the State Land Use Agricultural District. Pursuant to HRS § 205-2(d), the proposed wastewater facility is not a permitted use.

Please consult with the County of Hawaii, Department of Planning on the need for a Special Permit for this project on approximately 14 acres.

5. Stormwater Runoff, Erosion, and Water Resources.
Pursuant to HAR § 11-200-10(6) – identification and summary of impacts and alternatives considered; to ensure that the surface water and nearshore marine resources near the coastal area of the Kau District remain protected, the negative effects of stormwater inundation from this cesspool closure and wastewater system construction action should be evaluated in the Draft EA.

Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, potential vulnerability of surface water resources, soil absorption characteristics of the area, risk of effluent seepage, and examining the amount of permeable versus impervious surfaces in the area. Developing mitigation measures for the protection for surface water resources and the coastal ecosystem should take this into account, pursuant to HAR § 11-200-10(7).

To assist in the development of stormwater runoff strategies, OP has developed guidance documents on this subject. We recommend consulting these stormwater evaluative tools when developing mitigation approaches for polluted runoff. They offer useful techniques to keep land-based pollutants and sediment in place, while considering the management practices best suited for the topography of the area and the types of contaminants potentially affecting nearby water resources. The evaluative tools that should be used during the design process include:

- Hawaii Watershed Guidance provides direction on mitigation strategies for urban development activities that will safeguard watersheds and implement watershed plans http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI Watershed Guidance Final.pdf
- Stormwater Impact Assessments can be used to identify and analyze information on hydrology, sensitivity of coastal and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area. http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_imapct/final_storm water_impact_assessments_guidance.pdf
- Low Impact Development (LID), A Practitioners Guide covers a range of structural BMPs for stormwater control management, onsite infiltration techniques, and water reuse methods that minimize negative environmental

impacts. http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01
June 21, 2018

Mr. Leo Asuncion, Director
State of Hawai'i
Department of Business, Economic Development and Tourism
Office of Planning
PO Box 2359
Honolulu, HI 96804

Attention: Joshua Hekekia

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Asuncion:

Thank you for your April 5, 2018 comment letter (DTS201804051430RI) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will be prepared to in accordance with the requirements of Chapter 343, HRS, as amended, and Hawaii Administrative Rules (HAR) Title 11, State of Hawai'i Department of Health, Chapter 200, Environmental Impact Statement Rules, including an assessment according to (HAR) § 11-200-10(4)

1. Hawai'i State Planning Act.
The Draft EA will include a discussion on the project's consistency with the Chapter 226, HRS, as amended.

2. Principles of Sustainability.
The Draft EA will include a discussion on the project's consistency with Statewide sustainability goals.

3. Objectives and Policies of the Hawai'i Coastal Zone Management (CZM) Program.
As stated above, the Draft EA will be prepared to in accordance with the requirements of Chapter 343, HRS, as amended, and Hawai'i Administrative Rules (HAR) Title 11, State of Hawai'i Department of Health, Chapter 200, Environmental Impact Statement Rules which includes an assessment as project's conformance to each of the goals and objectives as listed in Chapter 205A-2, HRS.

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4. State Land Use Agriculture District Permitted Uses.
The Draft EA will note the approximately 14.9-acre treatment and disposal project site is within the State Land Use Agricultural District and the project will require approval of a Special Use Permit from the County of Hawai'i Windward Planning Commission.

5. Stormwater Runoff, Erosion, and Water Resources.
As stated above, the Draft EA will be prepared to in accordance with the requirements of Chapter 343, HRS, as amended, and Hawai'i Administrative Rules (HAR) Title 11, State of Hawai'i Department of Health, Chapter 200, Environmental Impact Statement Rules, which includes discussion of impacts to surface water sources, the effect of rain events on the project and the amount of impervious surfaces created by the project.

We appreciate your participation in the Draft EA process.

Sincerely,

for Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

10349-01
4/10/18

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

DOUGLAS S. CHIN
LT. GOVERNOR
STATE OF HAWAII

JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.
DEPUTY TO THE CHAIRMAN

cc: DL

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

EM

March 27, 2018

RECEIVED
MAR 29 2018
WILSON OKAMOTO CORPORATION

Attention: Earl Matsukawa, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation; Pahala Community Large Capacity Cesspool Replacement; Paauau, Kau, Hawaii Request for Comment

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.

However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)native Hawaiian organizations when preparing environmental assessments in order to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.

Mahalo for the opportunity to provide comments. If you have any questions, please call Rae Ann Hyatt, at 620-9480 or contact via email at raeann.p.hyatt@hawaii.gov.

Sincerely,

M. Kaleo Manuel
Acting Planning Program Manager

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01
June 21, 2018

Mr. M. Kaleo Manuel, Acting Planning Program Manager
State of Hawai'i
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

Attention: Rae Ann Hyatt

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Manuel:

Thank you for your March 27, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will note that due to the project's lack of proximity to Hawaiian Home Lands, the Department of Hawaiian Home Lands does not anticipate any impacts to its lands or beneficiaries from the project.

As noted in the Project Summary, the Pāhala Community Large Capacity Cesspool Replacement project would be funded by an EPA Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (SRF) loan program. As such, the Draft EA will include consultation with Hawaiian Homestead community associations and other Native Hawaiian organizations to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.

We appreciate your participation in the Draft EA process.

Sincerely,

for Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

10345-01
4/10/18
CC PC

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 16, 2018

Wilson Okamoto Corporation
Attention: Mr. Earl Matsukawa, AICP
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

via email: woc@wilsonokamoto.com

Dear Mr. Matsukawa:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for the **Pahala Community Large Capacity Cesspool Replacement Project** located at Pa'au'au, Ka'u, Island of Hawaii; within the Public Right-of-Way and TMK: (3) 9-6-002:018

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

March 27, 2018

'18 MAR 27 PM 1:09 ENGINEERING

MEMORANDUM

~~TO:~~ FROM

DLNR Agencies:
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

~~FROM:~~ TO
SUBJECT: ~~Russell Y Tsuji, Land Administrator~~
Pre-Assessment Consultation for Draft Environmental Assessment for the **Pahala Community Large Capacity Cesspool Replacement Project**
LOCATION: Pa'au'au, Ka'u, Island of Hawaii; Within the Public Right-of-Way and TMK: (3) 9-6-002:018
APPLICANT: Wilson Okamoto Corporation on behalf of the County of Hawaii, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **April 12, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Date: 4/3/18

Attachments
cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: Pre-Assessment Consultation for Draft Environmental Assessment for the Pahala Community Large Capacity Cesspool Replacement Project, Pa'au'au, Ka'u, Island of Hawaii; Within the Public Right-of-Way and TMK: (3) 9-6-002:018

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 4/13/18

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2018 APR 13 AM 6:36
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2018 MAR 29 P 12:08
RECEIVED
LAND DIVISION
HILO, HAWAII

March 27, 2018

MEMORANDUM

From:
TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

To:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for the **Pahala Community Large Capacity Cesspool Replacement Project**
LOCATION: Pa'au'au, Ka'u, Island of Hawaii; Within the Public Right-of-Way and TMK: (3) 9-6-002:018
APPLICANT: Wilson Okamoto Corporation on behalf of the County of Hawaii, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **April 12, 2018.**

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Print Name: GORDON C. HEIT
Date: 4/12/18

4/13/18
Fax To: Darlene Nakamura (1 pg)
From: HDLO

Attachments
cc: Central Files

WILSON OKAMOTO CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
June 22, 2018

Mr. Russell Y. Tsuji, Land Administrator
Land Division
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street
Honolulu, HI 96813

Attention: Ms. Darlene Nakamura

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Tsuji:

Thank you for your April 16, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will include that the Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Further, the Land Division Hawaii District has no comment.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
4/18/18
CC: BC

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

CC' RK
4/24/18

Earl Matsukawa
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

April 18, 2018

Dear Earl Matsukawa,

The Department of Land and Natural Resource's Division of Forestry and Wildlife (DOFAW) has received your inquiry regarding the proposed Pāhala Community large capacity cesspool replacement located in Pā'au'au, Ka'u on the island of Hawai'i. The County of Hawaii Department of Environmental Management is proposing to construct wastewater system improvements to replace the current system servicing Pāhala. The new wastewater collection system would consist of 11,000 linear feet of gravity flow piping ranging from 8 to 12 inches in diameter. The proposed treatment and disposal system would occupy approximately 14 acres and consist of headworks with screens to remove debris and an odor control unit, four lined aerated lagoons of about 0.3 acres each, subsurface flow constructed polishing wetland and four land treatment basins. A security fence will be constructed along the perimeter of the site.

The State and Federally listed Hawaiian hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the proposed project. Hawaiian hoary bats roost in both exotic and native trees. DOFAW recommends avoiding the use of barbed wire, as bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight. Bats are also known to be attracted to water features and ponding of water. If any trees are planned for removal during the bat breeding season there is a risk of injury or mortality to juvenile bats. To minimize the potential for impacts to this species, site clearing should be timed to avoid disturbance to breeding Hawaiian hoary bats: woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15)

The endangered Hawaiian hawk or 'io (*Buteo solitaries*) may occur in the project vicinity. DOFAW recommends surveying the area to ensure no Hawaiian hawk nests are present if trees are to be cut. DOFAW would like to ensure that effective avoidance measures are in place to prevent adverse impacts to native seabirds. Artificial lighting can causing disorientation which could result in collision with manmade artifacts or grounding of birds. If nighttime lighting is required DOFAW recommends that any lights used be fully shielded to minimize impacts.

Construction of aerated lagoons, polishing wetland and land treatment basins are likely to attract endangered waterbirds such as the Hawaiian duck (*Anas wyvilliana*), Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica alai*), Hawaiian goose, or Nēnē (*Branta sandvicensis*) and Hawaiian moorhen (*Gallinula chloropus sandvicensis*) to the proposed project site. DOFAW requests that the project proponent initiate consultation with our office to further assess the impact of the project on endangered and threatened species.

We appreciate your efforts to work with our office for the conservation of our native species. If you have any questions, please contact James Cogswell, Wildlife Program Manager at (808) 587-4187 or James.M.Cogswell@hawaii.gov.

Sincerely,

James M. Cogswell
Wildlife Program Manager

WILSON OKAMOTO CORPORATION

10349-01
August 20, 2018

Mr. James Cogswell, Wildlife Program Manager
Division of Forestry and Wildlife
State of Hawai'i
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Cogswell:

Thank you for your April 18, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. As part of the Draft Environmental Assessment (EA), in August 2018, botanical and avian field studies were undertaken along the streets and adjacent areas of the wastewater collection system and at the wastewater treatment and disposal facility project site.

The avian survey recorded a total of 175 individual birds of 13 species, representing nine separate families during station counts. Avian diversity and densities were very low, in keeping with the current usage of the site as a mature macadamia nut orchard, with minimal ground cover and few weedy or shrubby species. All of the species recorded during the course of the survey are established alien species. No native avian species were recorded during the course of this survey.

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes were recorded by the survey.

The potential that the treatment and disposal facility could attract a listed species will be discussed in the Draft EA, along with the avoidance and minimization measures as set forth in your April 18, 2108 letter.

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director - Planning

cc: D. Beck, DEM
K. Rao, EPA
B. Rosen, ERG
C. Lekven, PE, BC

DAVID Y. IGE
GOVERNOR

10349-01
4/13/18
cc BC

JADE T. BUTAY
DIRECTOR

Deputy Directors
ROY CATALANI
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

IN REPLY REFER TO:
DIR 0327
STP 8.2379

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

April 10, 2018

EM

RECEIVED
APR 12 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Pahala Community Large Capacity Cesspool Replacement
Draft Environmental Assessment, Pre-Assessment Consultation
Paauau, Kau, Hawaii
TMK: (3) 9-6-002:018

The Department of Transportation (DOT) understands, The County of Hawai'i is proposing to construct wastewater system improvements to replace the current system servicing Pahala. The Pahala Community Large Capacity Cesspool Closure project improvements would consist of a new wastewater collection system located within the public right-of-way under the County jurisdiction and a treatment and disposal system located on a currently privately-owned parcel (TMK: 9-6-002:018) which will be acquired by the County. While the project location map reflects the subject project being adjacent to Mamalahoa Highway, we understand the project will be approximately 60 feet from the highway right of way.

Based on the information provided, the subject project is not expected to significantly impact the State highway facility.

If there are any questions, please contact Mr. Blayne Nikaido of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7979.

Sincerely,

JADE T. BUTAY
Director of Transportation

WILSON OKAMOTO CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
June 22, 2018

Mr. Jade Butay, Director
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

Attention. Blayne Nikaido

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Butay:

Thank you for your April 10, 2018 comment letter (DIR 0327 STP 8.2379) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will confirm the wastewater collection system and the treatment and disposal project site are located outside of the highway right of way.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
4/24/18
EM

DAVID Y. IGE
GOVERNOR

RODERICK K. BECKER
Comptroller

AUDREY HIDANO
Deputy Comptroller

CC: BC

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P) 1108.5

APR 20 2018

RECEIVED
APR 23 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
Pahala Community Large Capacity Cesspool Replacement
Paauau, Kau, Hawaii

Thank you for the opportunity to provide comments on the subject project. The project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call Mr. David DePonte of the Public Works Division at 586-0492.

Sincerely,

RODERICK K. BECKER
Comptroller

c: Mr. John Chung, DOE Facilities
Mr. Cory Kaizuka, DAGS Hawaii

WILSON OKAMOTO CORPORATION

10349-01
August 20, 2018

Mr. Roderick Becker, Comptroller
State of Hawai'i
Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, HI 96813

Attention: David DePonte

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Becker:

Thank you for your April 20, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. We acknowledge that the project does not impact any Department of Accounting and General Services projects or existing facilities.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director - Planning

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
4/16/18 cc: BC

Harry Kim
Mayor

Darren J. Rosario
Fire Chief

Raynick J. Victorino
Deputy Fire Chief

County of Hawai'i
HAWAI'I FIRE DEPARTMENT

25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720
(808) 932-2900 • Fax (808) 932-2928

April 13, 2018

Earl Matsukawa, AICP
Wilson Okamoto Corporation
Project Manager
1907 S. Beretania Street, Suite 400
Honolulu, Hawai'i 96826

Dear Mr Earl Matsukawa:

SUBJECT: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement, Paauau, Ka'ū Hawai'i

We are in receipt of your letter dated March 15, 2018 in regards to a draft Environmental Assessment and Anticipated finding of no significant Impact for the above listed subject.

The Hawai'i Fire Department has no issues or comments with regards to the request for draft Environmental Assessment, Pre-Assessment Consolation.

If you should have any questions, please feel free to contact my office at (808)932-2911.

Mahalo,

DARREN J. ROSARIO
Fire Chief

RP/ds

Hawai'i County is an Equal Opportunity Provider and Employer.

WILSON OKAMOTO CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
June 22, 2018

Chief Darren Rosario, Fire Chief
County of Hawai'i
Hawai'i Fire Department
25 Aupuni Street, Suite 2501
Hilo, HI 96720

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Chief Rosario:

Thank you for your April 13, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will note the Hawai'i Fire Department had no issues with the project.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

Harry Kim
Mayor

Paul K. Ferreira
Police Chief

Kenneth Bugado Jr.
Deputy Police Chief

(10349-01)
4/10/18
cc: BC

County of Hawai`i

POLICE DEPARTMENT

349 Kapi'olani Street • Hilo, Hawai'i 96720-3998
(808) 935-3311 • Fax (808) 961-2389

EM

April 2, 2018

RECEIVED
APR 05 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, PRE-ASSESSMENT CONSULTATION;
PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL REPLACEMENT
PĀ'AU'AU, KA'U, HAWAI'I
REQUEST FOR COMMENT

Dear Mr. Matsukawa:

Staff has reviewed the draft regarding the Pahala Cesspool Replacement Project. The Hawai'i Police Department does not have any comments or concerns at this time.

Thank you for allowing the Hawai'i Police Department the opportunity to provide input into this assessment.

Should you require additional assistance or input, please contact Captain Kenneth Quiocho, Commander of the Ka'u District, at (808) 939-2520 or via email at kenneth.quiocho@hawaiicounty.gov.

Sincerely,

PAUL K. FERREIRA
POLICE CHIEF

KQ

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01
June 21, 2018

Chief K. Paul Ferreira, Police Chief
County of Hawai'i
Police Department
349 Kapiolani Street
Hilo, HI 96720

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Chief Ferreira:

Thank you for your April 2, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will note the Hawai'i Police Department had no concerns at this time.

We appreciate your participation in the Draft EA process.

Sincerely,

for Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

Harry Kim
Mayor

Michael Yee
Director

Daryn Arai
Deputy Director

West Hawai'i Office
74-5044 Ane Keohokalole Hwy
Kailua-Kona, Hawai'i 96740
Phone (808) 323-4770
Fax (808) 327-3563

County of Hawai'i
PLANNING DEPARTMENT

East Hawai'i Office
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720
Phone (808) 961-8288
Fax (808) 961-8742

10349-01
4/30/18
cc BC
EM
JS

April 25, 2018

RECEIVED

Mr. Earl Matsukawa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Matsukawa:

SUBJECT: REVISED Draft Environmental Assessment, Pre-Assessment Consultation
Project: Pāhala Community Large Capacity Cesspool Replacement
TMK: (3) 9-6-002:018, Pā'au'au, Ka'ū, Hawai'i

Thank you for your letter dated March 15, 2018, requesting comments from this office regarding the preparation of a Draft Environmental Assessment (DEA) for the subject project. Please note, this letter replaces our previous response dated April 16, 2018.

The County of Hawai'i, Department of Environmental Management (DEM) is proposing to construct wastewater system improvements to replace the current County owned system servicing Pāhala. These wastewater system improvements would allow the County to comply with Environmental Protection Agency (EPA) regulations requiring closure of the large capacity Cesspools and to construct a system meeting current State of Hawai'i Department of Health (DOH) and DEM design guidelines for the collection, treatment, and disposal of the treated effluent. We would respectfully ask that you consider expanding the collection system to service the greater urban Pāhala area or design the treatment facilities capacity to ensure expansion is possible in the future.

The subject parcel consists of 42.5 acres and is zoned Agricultural (A-20a) by the County. It is located in the State Land Use Agricultural (A) district. In addition, the parcel is designated Low Density Urban (LDU) and Industrial (IND) by the Hawai'i County General Plan Land Use Pattern Allocation Guide (LUPAG) Map. The subject parcel is not located within the Special Management Area (SMA).

According to Hawai'i County Code (Zoning), Section 25-5-72(c), Public uses and structures, other than those necessary for agricultural practices are permitted in the Agricultural district, provided that a special permit is obtained for such use if the building site is located within the State land use agricultural district. Therefore, the treatment and disposal facility, considered a public use, would require a special permit.

In addition, the Land Study Bureau (LSB) classifies the subject parcel as B and D soils. Agricultural Lands of Importance to the State of Hawai'i (ALISH) classifies the subject parcel as a mix of Type 0 (Unclassified), Type 1 (Prime Lands), and Type 3 (Other). Hawai'i Revised Statutes (HRS) 205-4.5 (a) states *"Within the agricultural district, all lands with soil classified by the land study bureau's detailed land classification as overall productivity rating class A or B and for solar energy facilities, class B or C, shall be restricted to the following permitted uses:* (7) *Public, private, and quasi-public utility lines and roadways, transformer stations, communications equipment buildings, solid waste transfer stations, major water storage tanks, and appurtenant small buildings such as booster pumping stations,* ***but not including*** *offices or yards for equipment, material, vehicle storage, repair or maintenance,* ***treatment plants****, corporation yards, or other similar structures;"* Therefore, when considering the Special Permit application, it would be advisable to locate the treatment facility on the proposed property in the LSB D soil and ALISH Type 0 area.

The public utilities chapter of the County of Hawai'i General Plan 2005 (as amended), includes the following policy (11.6.2) pertinent to the proposed project:

c) *Immediate steps should be taken to designate treatment plant sites, sewerage pump station sites, and sewer easements according to facility plans to facilitate their acquisition.*

In the DEA, please describe how the proposed use is consistent with the policies, standards and courses of action of the County of Hawai'i General Plan.

The project site is located in the Ka'ū Community Development Plan (CDP) planning area and the DEA should include a discussion of the proposed project's alignment with the CDP, which can be found electronically at http://www.hawaiicountycdp.info/kau-cdp, including but not limited to:

- *Objective 2: Preserve prime and other viable agricultural lands and preserve and enhance viewscapes that exemplify Ka'ū's rural character.*
- *Objective 7: Identify viable sites for critical community infrastructure, including water, emergency services and educational facilities to serve both youth and adults.*

- *Policy 120: Extend the primary wastewater collection lines in Pāhala and Nā'ālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems.*

We recommend the DEA also describe the proposed project's consistency with Hawai'i Revised Statutes (HRS), Chapter 205A, Coastal Zone Management. More specifically, the DEA should describe the projects consistency with Policy (3)(B) to "*Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline.*"

Finally, given Ka'ū's rich heritage of natural and cultural resources, appropriate attention should be given to identifying any existing resources on the subject property or surrounding areas that may be impacted.

We have no further comments to offer at this time. However, please keep us informed and provide our department with a copy of the DEA for our review and comment.

Should you have any questions, please feel free to contact Keiko Mercado of this office at Keiko.Mercado@hawaiicounty.gov or (808) 961 8134.

Sincerely,

MICHAEL YEE
Planning Director

KM:bm:ja
\\COH33\planning\public\wpwin60\Keiko\EA-EIS Review\PreconsultationEA-Pahala.Large.Cesspool.Replacement.REVISED.doc

WILSON OKAMOTO CORPORATION

10349-01
August 20, 2018

Mr. Michael Yee, Director
County of Hawai'i
Planning Department
Aupuni Center, 101 Pauahi Street, Suite 3
Hilo, HI 96720

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Yee:

Thank you for your April 25, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. As stated in the Project Summary, the Pāhala Community Large Capacity Cesspool Replacement project would be funded by an Environmental Protection Agency (EPA) Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (CSRF) loan program administered by the Department of Health (DOH) Wastewater Branch. Both the EPA and DOH require preparation of an Environmental Assessment (EA) according to their respective guidelines.

The Draft Environmental Assessment (EA) will confirm that the treatment and disposal project site is zoned Agricultural (A-20a) by the County. It is located in the State Land Use Agricultural (A) district. In addition, the parcel is designated Low Density Urban (LOU) and Industrial (IND) by the Hawai 'i County General Plan Land Use Pattern Allocation Guide (LUPAG) Map. The project site parcel is not located within the Special Management Area (SMA).

According to Hawai'i County Code (Zoning), Section 25-5-72(c), Public uses and structures. other than those necessary for agricultural practices are permitted in the Agricultural district. provided that Special Permit is obtained for such use or building located within the State land use agricultural district. The treatment and disposal facility is considered a public use in the State Land Use Agricultural district and, therefore, would require a Special Permit.

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The Draft EA will note the Land Study Bureau (LSB) classifies the subject parcel as B and D soils. Agricultural Lands of Importance to the State of Hawai'i (ALISH) classifies the subject parcel as a mix of Type 0 (Unclassified), Type 1 (Prime Lands), and Type 3 (Other).

Hawai'i Revised Statutes (HRS) 205-4.5 (a) states *"Within the agricultural district, all lands with soil classified by the Land Study Bureau's detailed land classification as overall productivity rating class A or B and for solar energy facilities, class B or C, shall be restricted to the following permitted uses: Public, private, and quasi-public utility lines and roadways, transformer stations, communications equipment buildings, solid waste transfer stations, major water storage tanks, and appurtenant small buildings such as booster pumping stations, but not including offices or yards for equipment, material, vehicle storage, repair or maintenance, treatment plants, corporation yards, or other similar structures;"* Therefore, when considering the Special Permit application, it would be advisable to locate the treatment facility on the proposed property in the LSB D soil and ALISH Type 0 area.

The Draft EA will note HRS §205.46(b) states: *"Uses not expressly permitted in subsection (a) shall be prohibited except the uses permitted as provided in §205-6 (a) which states: subject to this section, the County Planning Commission may permit certain unusual and reasonable uses within agricultural and rural districts other than those for which the district is classified. Any person who desires to use the person's land within an agricultural or rural district other than for an agricultural or rural use, as the case may be, may petition the Planning Commission of the county within which the person's land is located for permission to use the person's land in the manner desired."* Accordingly, the Department of Environmental Management will submit a Special Permit application to the County Planning Commission for the Pāhala Community Large Capacity Cesspool Replacement project.

The Draft EA will be prepared to meet the DOH requirements which would include a discussion of plans and policies applicable to the project site and surrounding area. The discussion would cover the policies, standards and courses of action set forth in the County of Hawai'i General Plan.

The Draft EA will also discuss the Ka'u Community Development Plan (CDP) dated October 2017 Ordinance No. 2017-66. The various objectives and policies set forth in the plan, including those related to the wastewater collection system servicing areas not presently serviced by the LCC. The Draft EA will also discuss County of Hawai'i Code Chapter 21 related Article 2 Section 21-5 which states: ("(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice.") The Draft EA will also include a discussion the treatment and disposal system to service the entire Pāhala community.

As previously stated, the Draft EA will be prepared to meet the DOH requirements which would include a discussion of plans and policies applicable to the project site and surrounding area including Chapter 205A, Hawai'i Revised Statutes, Coastal Zone Management.

The Draft EA will discuss archaeological and cultural resources and consultation with the State of Hawai'i Department of Land and Natural Resources State Historic Preservation Division and various Native Hawai'ian Organizations as required by 54 U.S.C. §300101 and 54 §306108.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director - Planning

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

10349-01 4/17/18

cc: BC

Harry Kim
Mayor

Wil Okabe
Managing Director

Allan G. Simeon, P.E.
Director

Merrick H. Nishimoto
Deputy Director

County of Hawai'i
DEPARTMENT OF PUBLIC WORKS

Aupuni Center
101 Pauahi Street, Suite 7 · Hilo, Hawai'i 96720-4224
(808) 961-8321 · Fax (808) 961-8630
public_works@hawaiicounty.gov

APRIL 16, 2018

WILSON OKAMOTO CORPOARTION
1907 SOUTH BERETANIA STREET, SUITE 400
HONOLULU, HAWAII 96826
ATTN: EARL MATSUKAWA, AICP

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, PRE-ASSESSMENT CONSULATION; PAHALA COMMUNITY LARGE CAPACITY CESSPOOL REPLACEMENT
PA`AU`AU, KA`U, HAWAI`I
TMK: (3) 9-6-002:018 & Associated Streets

We received the subject dated March 15, 2018 and have the following comments:

The subject parcel is in an area designated as Zone X on the Flood Insurance Rate Map (FIRM) by the Federal Emergency Management Agency (FEMA). Zone X is an area determined to be outside the
500-year floodplain.

All activities shall comply with the requirements of Hawaii County Code (HCC), Chapter 10, Erosion and Sedimentary Control.

Construction within the County right-of-way shall comply with HCC, Chapter 22, County Streets.

Should there be any questions concerning this matter, please contact Ms. Robyn Matsumoto in our Engineering Division at (808) 961-8924.

BEN ISHII, Division Chief
Engineering Division

RM

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INNOVATORS · PLANNERS · ENGINEERS

10349-01
June 22, 2018

Mr. Ben Ishii, Division Chief
Engineering Divison
County of Hawai'i
Department of Public Works
Aupuni Center, 101 Pauahi Street, Suite 7
Hilo, HI 96720

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Ishii:

Thank you for your April 10, 2018 comment letter (LUD-396002 18) regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will show the collection system and wastewater treatment and disposal project will be located within the Zone X, area determined to be outside the 500-year floodplain, as designated by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM).

The Draft EA will indicate that the design plans will need to conform to Hawaii County Code, Chapter 10, Erosion and Sedimentary Control and Chapter 22, Streets.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

(10349-01) EM ✓
4/11/18 JS ✓
cc: BC

DEPARTMENT OF WATER SUPPLY · COUNTY OF HAWAI'I
345 KEKŪANAŌ'A STREET, SUITE 20 · HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 · FAX (808) 961-8657

April 5, 2018

RECEIVED
APR 09 2018
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Matsukawa:

Subject: Pre-Environmental Assessment Consultation
Pāhala Villages Large Capacity Cesspool Conversion Replacement
Pāhala, Ka'ū, Island of Hawai'i, Hawai'i
Tax Map Key (3) 9-6-002:018

This is in response to your Pre-Environmental Assessment letter dated March 15, 2018.

Please be informed that the subject parcel does not have an existing water service with the Department as the parcel is beyond the service limits of the Department's existing water system. The nearest point of connection is from an existing 6-inch waterline at the intersection of Huapala Street and Maile Street, approximately 2,000 feet northeast of the property.

The Department would request estimated maximum daily water usage calculations, prepared by a professional engineer, licensed in the State of Hawai'i, for review. After review of the calculations, the Department will determine if water is available and a water commitment can be issued, the water commitment deposit amount, facilities charges due, and water system improvements and other conditions for final approval.

The Department requests that the construction plans show, and the proposed sewer lines be installed with, the proper horizontal and vertical clearances from our existing water system facilities and concrete jacketing at waterline crossings, where necessary, as recommended by the Department's Water System Standards.

In addition, backflow prevention devices must be installed where there are connections to our water system at wastewater processing and treatment facilities.

Should there be any questions, please contact Mr. Ryan Quitoriano of our Water Resources and Planning Branch at 961-8070, extension 256.

Sincerely yours,

Keith K. Okamoto, P.E.
Manager-Chief Engineer

RQ:dmj

copy - County of Hawai'i, Department of Environmental Management, Wastewater Division

WILSON OKAMOTO CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
June 21, 2018

Mr. Keith Okamoto, Manager-Chief Engineer
County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, HI 96720

Attention: Ryan Quitoriano, Water Resources Planning Branch

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Response to Comment

Dear Mr. Okamoto:

Thank you for your April 5, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. The Draft Environmental Assessment (EA) will note the treatment and disposal project site parcel does not have an existing water service from the Department as the parcel is beyond the service limits of the Department's existing water system. The nearest point of connection is from an existing 6-inch waterline at the intersection of Huapala Street and Maile Street, approximately 2,000 feet northeast of the property.

The Draft EA will note that the project will require estimated maximum daily water usage calculations be prepared by a professional engineer, licensed in the State of Hawai'i. After review of the calculations, the Department will determine if water is available and a water commitment can be issued, the water commitment deposit amount, facilities charges due, and water system improvements and other conditions for final approval.

The construction plans will show proposed collection system lines and the horizontal and vertical clearances from water system lines.

We appreciate your participation in the Draft EA process.

Sincerely,

for Earl Matsukawa, AICP
Project Manager

cc: D. Beck, DEM
K. Rao, EPA
C. Lekven, PE, BC

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Appendix B
November 2019 Preliminary Engineering Report (PER)

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Pahala Wastewater Treatment Plant Preliminary Engineering Report

Prepared for

County of Hawaii, Department of Environmental Management

~~June 2018~~

November 2019

Pahala Wastewater Treatment Plant
Preliminary Engineering Report

Prepared for
County of Hawaii, Department of Environmental Management
~~June 2018~~
November 2019

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

April 30, 2020

Signature | Expiration Date of the License

Brown AND Caldwell
2261 Aupuni Street, Suite 201
Wailuku, Hawaii 96793

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List of Abbreviations

AB	aggregate base
AC	asphalt concrete
BMP	Best Management Practices
BOD_5	5-day biochemical oxygen demand
CCH	City and County of Honolulu
cfs	cubic feet per second
COH	County of Hawaii
CFR	Code of Federal Regulations
DNA	deoxyribonucleic acid
DEM	Department of Environmental Management
DOH	Department of Health
ELLF	end-of-lamp-life
FIRM	Flood Insurance Rate Map
FOG	fats, oils, and grease
ft^3	cubic feet
FTE	full-time equivalent
GAC	granular activated carbon
gpm	gallons per minute
H_2S	hydrogen sulfide
HAR	Hawaii Administrative Rules
HDPE	high density polyethylene
HELCO	Hawaii Electric Light Company
hp	horsepower
hp/Mgal	horsepower per million gallons
hr	hour
hp-hr	horsepower-hour
L	liter
lbs	pounds
LCC	large capacity cesspools
LPHO	low pressure high output
MBR	membrane bioreactor
Mg	milligrams
Mgal	million gallons
mm	millimeter
MSL	mean sea level
N	nitrogen
NPV	net present value
O&M	Operation and Maintenance
P	Phosphorus
Psi	pounds per square inch
RNA	ribonucleic acid
ROW	right-of-way
scfm	standard cubic feet
SCS	Soil Conservation Service
SR	slow rate
TSS	total suspended solids
UIC	Underground Injection Control
USEPA	United States Environmental Protection Agency
UV	ultraviolet
WQV	Water Quality Volume
WWTP	Wastewater Treatment Plant

Section 1

Introduction

1.1 Background

The town of Pahala is located in the Kau district of the Island of Hawaii. According to the 2010 United States Census, the town population is approximately 1,350 persons.

The Pahala community was established as the result of the sugar operations of the C. Brewer Company. A portion of the community is serviced by a sewer system that was privately built, owned, and operated by the C. Brewer Company. The wastewater collected by the sewer system discharges into large capacity "gang" cesspools. Many years after its establishment, the private sewer system ownership was conveyed to the County of Hawaii (COH) Department of Environmental Management (DEM).

In 1998, the U.S. Environmental Protection Agency (USEPA), promulgated regulations, 40 Code of Federal Regulations (CFR) 144.14, that require the elimination of large capacity "gang" cesspools (LCCs). The County intends to construct a new sewer collection system located within public right-of-way (ROW) and replace the existing LCCs with a wastewater treatment plant to address the wastewater treatment and disposal needs of the Pahala community.

This report summarizes a proposed wastewater treatment plant (WWTP) needed in order to treat and dispose of the wastewater flow that is currently discharged to the LCCs, plus additional sewer connections. The report presents the existing and estimated future flows and loads to the treatment plant, the proposed treatment processes, recommendation for the WWTP upgrades needed to meet the future treatment needs, and an initial opinion of the cost to construct the improvements project.

1.2 Existing System

Figure 1-1 shows the collection system network and service areas for the LCCs. The collection system is a network of gravity sewers that discharge to two existing LCCs. A detailed analysis of the existing wastewater collection system was completed by others (M&E Pacific, December 2004). The report concluded that the Pahala community existing sewer system consists of about 3,000 linear feet of 6-inch diameter and 10,000 linear feet of 4-inch diameter pipelines. Residential laterals connect to 4-inch sewers that discharge into 6-inch sewer mains, predominately found in private property, which transmit wastewater to the LCCs. There are approximately 8 manholes in the sewer system. There are no pump stations and the system is not designed to collect stormwater.

1.3 Report Contents

Section 2 presents flow and load projections for the new WWTP. Section 3 evaluates effluent management options, and the treatment requirements for the preferred option. Section 4 presents evaluations conducted to develop the preliminary design of the proposed WWTP, which is presented in Section 5. An implementation plan is briefly presented in Section 6, followed by discussion of other treatment options that were considered and evaluated. The report concludes with a site selection consideration in Section 8.

INSERT FIGURE

Figure 1-1. Pahala Existing Sewer Collection System and LCC Service Area

Section 2

Flow and Load Projections

This section summarizes the flow and load projections for the new WWTP.

2.1 Service Area

Within the town of Pahala, there is an existing wastewater collection that services approximately 109 properties. The collection system is currently located within easements in private properties and is treated and disposed through two LCCs. Figure 2-1 shows the service area for the new WWTP. The Kau Community Development plan indicates that the sewer system may eventually be expanded to service the entire community; however, the initial collection system and WWTP presented in this report will service the properties currently connected to the LCCs or located adjacent to the new collection system. Although this report does not include design for the full buildout service area, the proposed WWTP has been designed to accommodate modifications within the proposed 14.9-acre site for the anticipated future expansion of the service area.

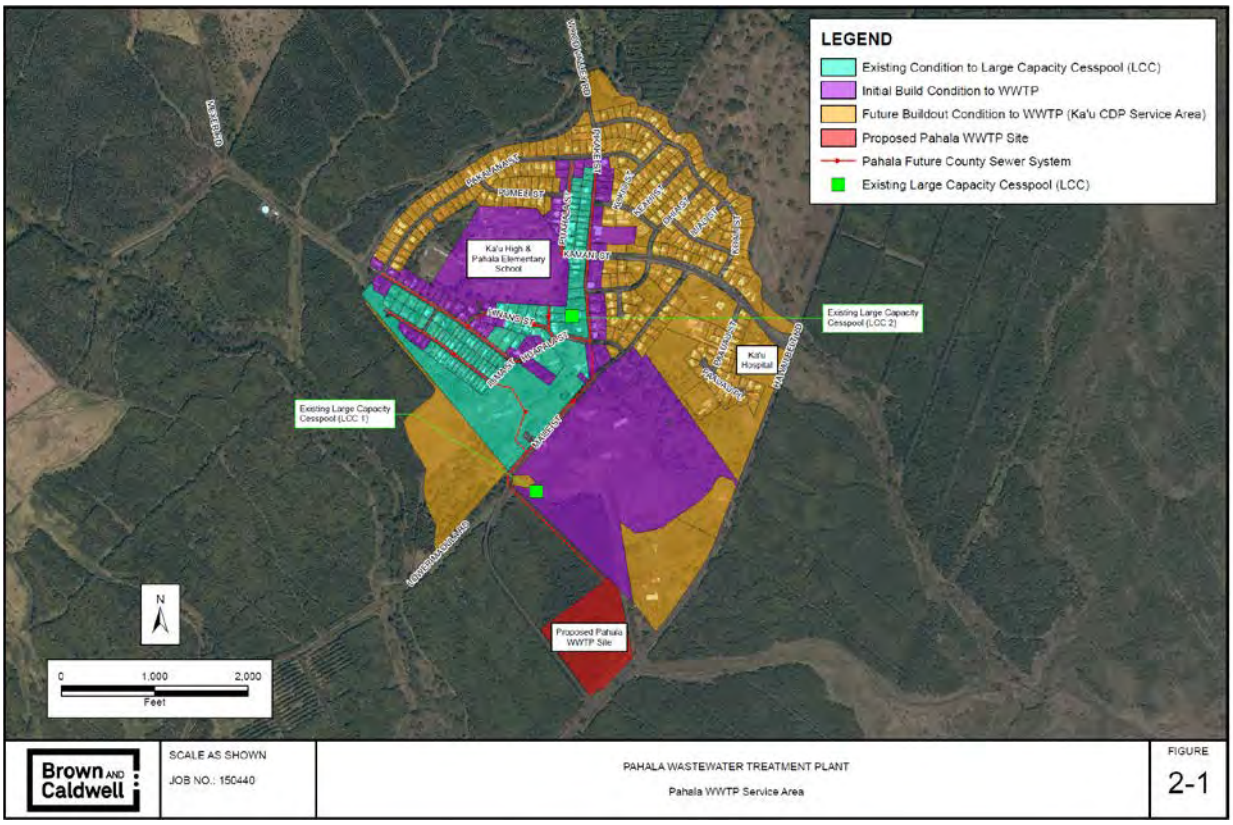

Figure 2-1. Pahala WWTP Service Area

2.2 Flow Projections

Wastewater flow projections were developed using the City and County of Honolulu's (CCH) current (2017) wastewater standards. Table 2-1 summarizes the flow projections.

Table 2-1. Pahala WWTP Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	189,000 gallons per day	1.0
Peak day wet weather flow	662,000 gallons per day	3.5
Peak hour wet weather flow	630 gallons per minute	4.8

The WWTP will be designed to provide an average dry weather flow capacity of 190,000 gallons per day.

2.3 Influent Characteristics

The properties within the existing service area are primarily residential, but do include several commercial, apartment, and industrial zoned parcels. The wastewater characteristics of the WWTP influent are assumed to be similar to typical domestic wastewater. Table 2-2 provides a summary of the assumed influent characteristics.

Table 2-2. Summary of Assumed Influent Characteristics

Parameter	Value
5-day biochemical oxygen demand (BOD_5)	300 mg/L
Total suspended solids (TSS)	300 mg/L
Total nitrogen	40 mg/L
Total phosphorus	7 mg/L

2.4 Influent Mass Loads

Table 2-3 summarizes the projected loads to the WWTP, based on the proposed average dry weather capacity of 190,000 gallons per day and the influent characteristics presented in Table 2-2.

Table 2-3. Projected Influent Mass Loads

Description	Value
BOD_5	480 lbs./day
TSS	480 lbs./day
Total nitrogen	60 lbs./day
Total phosphorus	10 lbs./day

2.5 Mass Loads to the Environment via Existing LCCs

Currently, 109 properties discharge without treatment to two LCCs, as shown in Figure 2-2. These types of cesspools are a public health and environmental concern because of their likelihood of releasing disease causing pathogens and other contaminants, such as nitrate, to groundwater. The current annual mass loads to the environment via the existing LCCs based on the flow projections and assumed wastewater characteristics presented above are summarized in Table 2-4.

Table 2-4. Mass Loads to the Environment via Existing LCCs

Parameter	Annual Load
BOD_5	174,000 lbs./year
TSS	174,000 lbs./year
Total N	23,000 lbs./year
Total P	4,000 lbs./year

Section 3

Effluent Management Options and Regulatory Requirements

Effluent management options are evaluated in this section, followed by an assessment of regulatory requirements for the recommended effluent management system.

3.1 Effluent Management Options

Effluent management options are evaluated below.

3.1.1 Ocean Discharge

Ocean discharge of treated effluent is not considered a viable option for this small community due to the long distance to the shoreline (approximately 3 miles), high cost to construct an outfall, stringent receiving water quality standards, high receiving water monitoring cost due to the distance to Hilo harbor, and difficulty and length of time required to secure the required permits.

The coastal waters in the Pahala area are classified as "AA" marine waters by DOH. HAR 11-54 does not allow zones of mixing in waters up to a distance of 300 meters (one thousand feet) off shore if there is no defined reef area and if the depth is greater than 18 meters (ten fathoms). The water quality criteria for nutrients for Class AA embayments are listed in Table 3-1. If a mixing zone is not provided, then a WWTP discharging to the coastal waters would be required to treat water to meet the applicable water quality criteria. Treatment to the specified levels is not feasible with current technologies. Therefore, ocean discharge is not feasible.

Table 3-1. Nutrient Water Quality Standards for Class AA Embayments

Parameter	Geometric mean not to exceed	Not to exceed the given value more than 10% of the time	Not to exceed the given value more than 2% of the time
Total nitrogen	200 µg/L	350 µg/L	500 µg/L
Ammonia nitrogen	6 µg/L	13 µg/L	20 µg/L
Nitrate + nitrate nitrogen	8 µg/L	20 µg/L	35 µg/L
Total phosphorus	25 µg/L	50 µg/L	75 µg/L

3.1.2 Subsurface Disposal via Injection Wells

Per Hawaii Administrative Rules (HAR), Title 11, Chapter 23, disposal to groundwater via an injection well is not allowed mauka of the State of Hawaii Department of Health (DOH) Underground Injection Control (UIC) line. Since the town of Pahala is located mauka of the UIC line, an injection well is not a viable option.

3.1.3 Water Recycling

An irrigation assessment was prepared to assess the viability of water recycling as the primary effluent management system, assuming the recycled water would be used to irrigate macadamia nut trees. Figure 3-1 is a summary of the assessment that shows there is typically no irrigation demand for six months of the year due to high rainfall. In addition, the DOH requires that all water recycling programs have a 100 percent backup disposal system in place to handle flow that does not meet recycled water quality standards or when recycled water supply exceeds demand. Therefore, water recycling is not a viable primary effluent management strategy for the community. However, water recycling treatment, storage, and distribution systems could be added in the future.

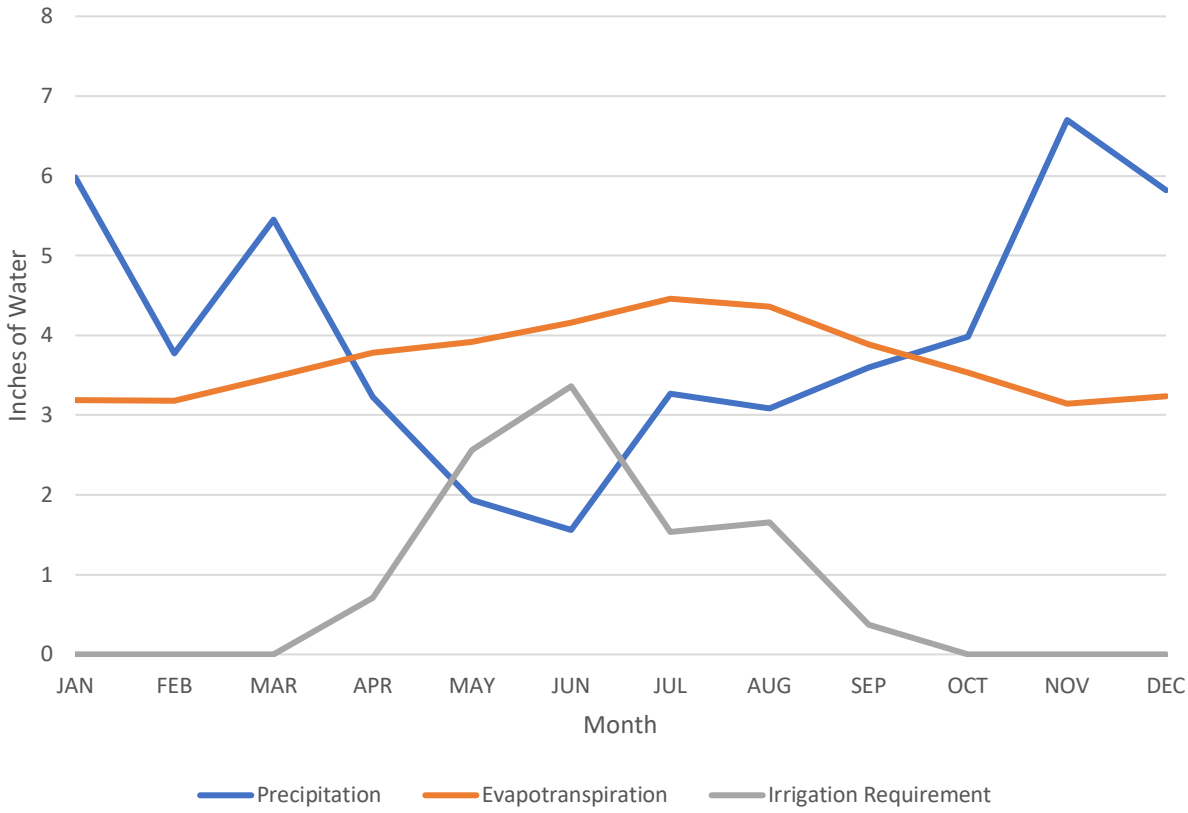

Figure 3-1. Irrigation Demand Assessment

3.1.4 Land Treatment

The USEPA defines land treatment as "the application of appropriately pre-treated municipal and industrial wastewater to the land at a controlled rate in a designed and engineered setting. The purpose of the activity is to obtain beneficial use of these materials, to improve environmental quality, and to achieve treatment goals in a cost-effective and environmentally sound manner" (USEPA, September 2006).

Land treatment systems rely on soil and vegetation to achieve treatment objectives, rather than energy-intensive mechanical equipment. As such, they are considered to be a form of "natural" treatment (Crites, et. al., 2014).

Land treatment is not a new concept. "Land application of wastewater was the first 'natural' technology to be rediscovered (after passage of the Clean Water Act of 1972). In the 1840s in England, it was recognized as avoiding water pollution as well as returning nutrients in wastewater back to the land. In the 19th century it was the only acceptable method for waste treatment, but it gradually slipped from use with the invention of modern devices" (Crites, et. al., 2014).

The soils at the proposed WWTP location are suitable for slow rate (SR) land treatment. SR land treatment consists of irrigation of land and vegetation with effluent. Significant treatment is provided as the water percolates through the soil. The vegetation uses the nutrients in the effluent as fertilizer, and transpires a portion of the applied water.

3.1.5 Drain Field

A drain field (i.e., leach field) could potentially be constructed for subsurface disposal of treated effluent. Preliminary assessment of the concept based on the site soil characteristics indicate approximately 20,000 linear feet of drain field trench would be required to accommodate the anticipated flow. It would be difficult to evenly distribute effluent throughout a drain field of this size. In addition, DOH regulations require a redundant drain field for subsurface disposal systems, making this option expensive to implement. This option is considered impractical for the community.

3.1.6 Recommendation

A slow rate land treatment system is recommended for effluent management for the community.

3.2 Treatment Requirements

The DOH regulates land treatment as "land disposal" per Hawaii Administrative Rules (HAR) 11-62. Table 3-2 lists the applicable effluent requirements for land disposal applicable to the project that were in effect at the time this report was prepared.

Table 3-2. Applicable HAR 11-62 Land Disposal Requirements

Description	Value	HAR Reference
BOD_5	30 mg/L monthly average 60 mg/L peak	11-62-26
TSS	30 mg/L monthly average 60 mg/L peak	11-62-26
Disinfection	Except for subsurface disposal systems, continuous disinfection of the treated effluent shall be provided	11-62-24
Setbacks	Treatment units shall be not less than 25 feet from property lines nor less than 10 feet from any building	11-62-23.1
Public accessibility control	6-foot-high fence surrounding treatment units	11-62-08

Section 4

Wastewater Treatment Evaluations

This section presents the evaluations conducted in development of the proposed WWTP.

4.1 Preliminary Treatment

The preliminary treatment system will include screening, influent flow measurement, and influent sampling equipment.

4.1.1 Screening

Screening is recommended to protect the downstream system operations from large objects, debris, and rags that can be present in wastewater. Aerated lagoon treatment systems require a minimum of coarse screens to protect the aeration equipment. The industry trend is towards finer screening systems that remove greater amounts of debris from the waste stream; screens with 6-millimeter (mm) (¼-inch) openings are frequently used for activated sludge treatment systems. An aerated lagoon treatment system can benefit from ¼-inch screening to reduce the amount of floatable debris on the lagoon shoreline, creating a cleaner facility that is less attractive to birds. Since the Pahala WWTP will not be continuously staffed, a screening process requiring minimal attention is desirable. Furthermore, the screenings volume is expected to be small, subsequently screenings disposal is expected to be infrequent; weekly at most. Therefore, the screenings must be washed of organic debris to prevent the accumulation of nuisance odors and flies in the screenings barrel or bag between screening disposal events.

4.1.1.1 In-channel cylindrical screen

We recommend an in-channel cylindrical screen for this installation. The in-channel cylindrical screen combines screening, screenings washing, dewatering, compacting, and bagging/disposal within a single unit. The screening portion consists of an inclined screen basket inserted into the wastewater channel. The screening basket can consist of bars, perforated plates or sieves, depending on the application and clear opening required. The controls can be set to allow a mat to build up on the screening surface, allowing finer screening of the wastewater. Controlled by head loss, a rake arm starts rotating within the screen basket, pushing the screenings off the rake and into a perforated screenings hopper located at the screen's central axis. A shafted auger along the screen axis conveys the screenings from the hopper through an inclined tube, which dewaters and compacts the screenings. The tube includes a perforated dewatering section. The discharged screenings are about 40-percent dry, and can be discharged into a bin or directly into a bagging system. Figure 4-1 illustrates the process. Manufacturers include Lakeside and Huber. The key benefit to this system is the integrated screenings washing system, minimizing additional screenings handling and odor potential.

For this installation, the headworks will include two in-channel cylindrical screens, one will be on-line when the other is redundant, plus a bypass channel with manually cleaned bar rack.

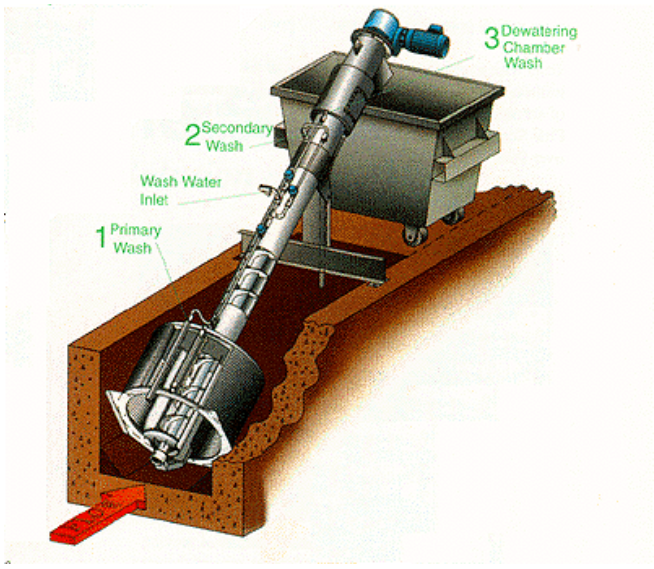

Figure 4-1. In-Channel Cylindrical Screen

4.1.2 Influent Flow Measurement

Influent flow measurement is recommended to allow assessment of flows and loads to the biological treatment process, and to assess the biological treatment process performance. A Parshall flume will be provided upstream of the screening system to continuously record influent flow rates. Parshall flumes work well for influent measurement because the flume can operate in an open-channel configuration, can accommodate wide ranges of flows, and is self-cleaning. A straight approach length of at least 20 times the flume throat width will be provided upstream of the flume to provide favorable hydraulic conditions.

4.1.3 Influent Flow Sampling

An automatic refrigerated composite sampler is recommended to allow influent composite samples to be collected. Influent composite samples, when combined with influent flow measurement, can be used to calculate influent mass loading rates to the WWTP to assess the treatment performance and optimization of aeration rates in the biological treatment process. Periodic influent sampling is also recommended to monitor for changes in the influent characteristics.

4.1.4 Preliminary Design of Headworks

Figure 4-2 shows a plan and section of the proposed headworks. Influent wastewater will enter the upstream end of the headworks channel. Stop plates will be used to divert the flow to one of the two the in-channel cylindrical screens, or to the manually-cleaned bar rack. The slide gates will be designed to allow automatic overflow to the other channels in the event of mechanical screen failure. The washed and compacted screenings will be deposited in a bag or 55-gallon drum for periodic disposal. The Parshall flume and automatic refrigerated composite sampler will be located upstream of the screens. The channels will be covered with fiberglass or aluminum plate to facilitate foul air collection, which will be conveyed to an odor control unit. In addition, a free-standing roof structure will be constructed over the headworks to protect the operators and equipment from rain and sun.

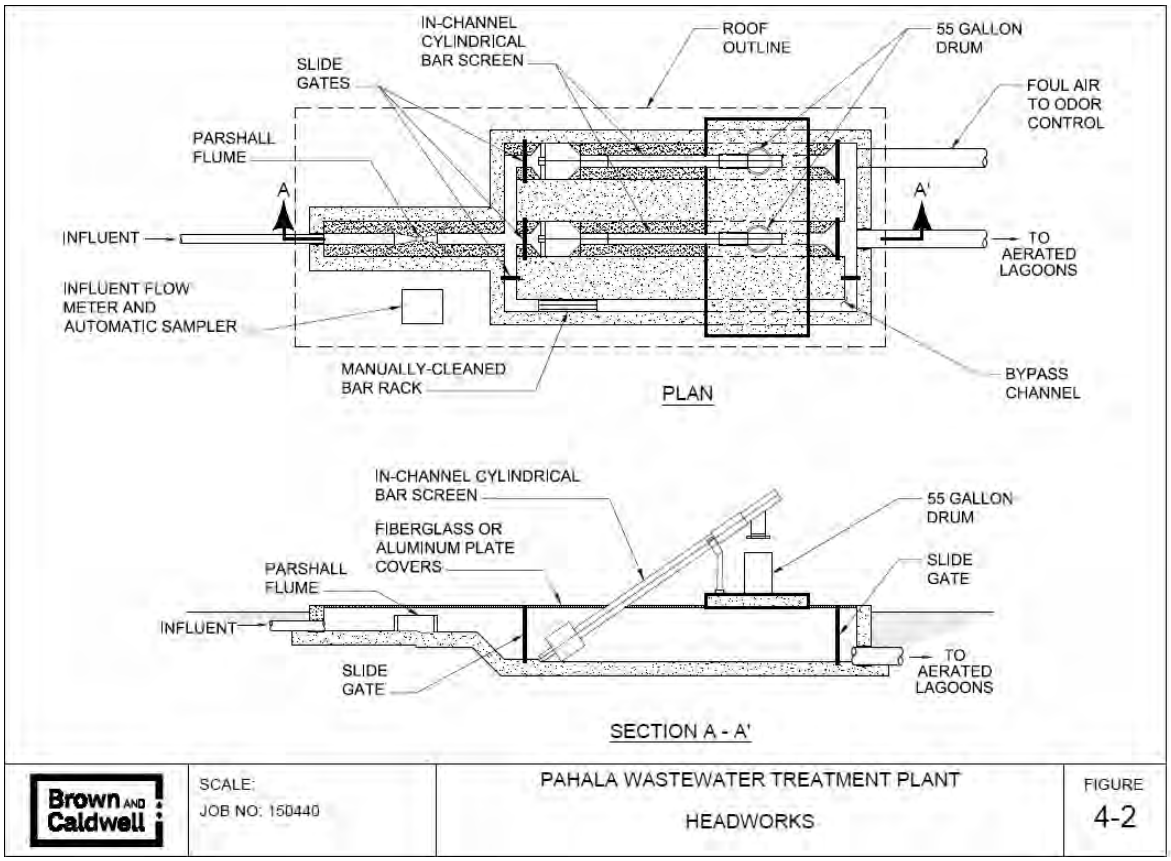

Figure 4-2. Headworks

4.1.5 Odor Control

A notorious location for foul odor is the headworks of a wastewater treatment plant. This odor is caused by hydrogen sulfide (H_2S), which is formed under anaerobic conditions of the wastewater collection system. Due to H_2S low solubility in wastewater, when there is an excessive concentration of H_2S in the wastewater or if there is turbulence, H_2S gas escapes into the atmosphere. This release produces the distinct rotten egg smell. In addition to H_2S, there are other foul odorous compounds that can be released from wastewater, such as ammonia, amines, diamines, mercaptans, skatole, and organic sulfides.

Treatment of foul odors can be approached in two ways: preventing odors through liquid treatment or controlling odors in the gas phase. While liquid treatment provides control of odors prior to their release, gas phase treatment involves the collection and treatment of gases once they have been released from wastewater. Treatment methods can be aimed at one type of odor, or can treat a range of odors.

4.1.5.1 Granular Activated Carbon

A granular activated carbon (GAC) scrubber is recommended for the Pahala WWTP headworks. A GAC scrubber passes odorous air through a bed of activated carbon, which adsorbs the odorous constituents within the pore spaces of the carbon.

Chemical oxidation or reduction of some compounds can also occur. As pore spaces become occupied, efficiency degrades, and the carbon must be replaced or regenerated. Carbon is most effective on higher molecular weight molecules such as the organic sulfur compounds, which makes it the technology of choice. Package GAC scrubbers are available for small headworks and vessels can be situated vertically, horizontally, or radially to optimize footprints and reduce structure elevation profiles. Figure 4-3 illustrates the process. The County currently operates GAC scrubbers at other facilities, and purchases the GAC media in bulk to reduce costs.

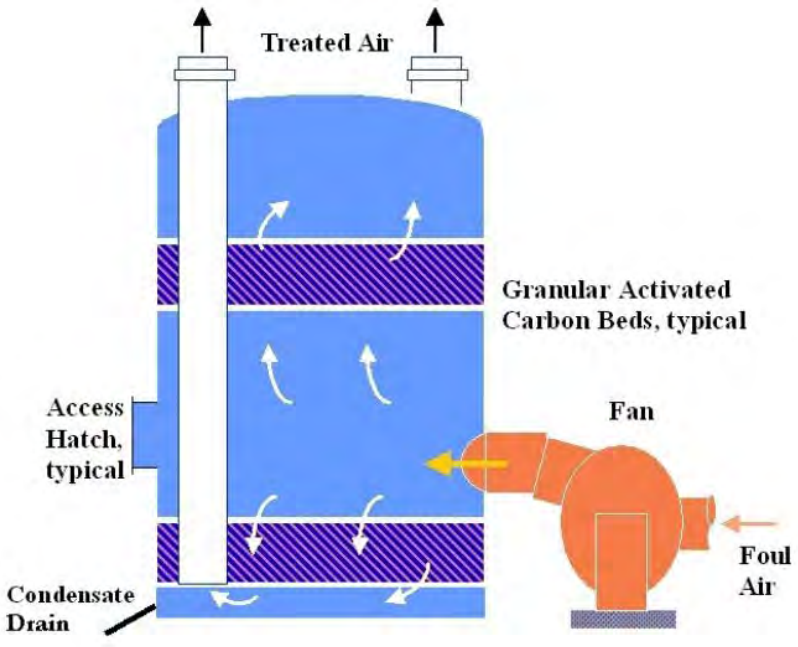

Figure 4-3. Activated Carbon Scrubber (GAC)

4.2 Aerated Lagoon Treatment System

The biological wastewater treatment needs at the Pahala WWTP will be met by a series of aerated lagoons. A floating cover will be installed on the last cell to reduce algae in the effluent. The preliminary design of the aerated lagoon treatment system is developed in this section.

4.2.1 Aerated Lagoon Kinetics

The Pahala WWTP design is reliant on partial mix aerated lagoon environments to provide the community's wastewater treatment needs for the initial buildout condition. Partial mix aerated lagoon kinetics are described below.

4.2.1.1 Partial mix model

Partial mix aerated lagoons are based on the concept of allowing solids to settle in lagoons while providing only enough aeration and mixing to meet the oxygen requirements of the naturally occurring micro-organisms in the system. The solids tend to settle in areas of the lagoon that are subject to less mixing energy, where they anaerobically decompose. Infrequent sludge removal is required to maintain sufficient lagoon treatment volume.

Removal of BOD_5 in partial-mix aerated lagoons depends on the hydraulic detention time. The design model for partial mixed ponds of equal size in series is (Crites, et. al., 2006):

$$\frac{Cn}{Co} = \frac{1}{[1+(kt/n)^n}$$

Where Cn = effluent BOD_5 concentration in cell $_n$, mg/L

Co = influent BOD_5 concentration, mg/L

$_k$ = partial-mix first-order reaction rate constant, day^{-1}

$_t$ = total hydraulic residence time in the lagoon system, day

$_n$ = number of cells in the series

If the lagoons in a system are of unequal size, then the equation must be applied to each lagoon in the series. The Ten-States Standards recommends using a value of 0.276 day^{-1} at 20 ºC for the reaction rate constant (Great Lakes – Upper Mississippi River Board, 1997).

4.2.1.2 Mixing in Lagoon Systems

The energy required for mixing in aerated lagoon systems is generally provided by the aeration system. For partial mix systems the aeration system is sized to provide enough oxygen to maintain aerobic conditions and no more. For mechanical aeration systems energy input of at least 30 horsepower per million gallons (hp/Mgal) of lagoon volume is required to keep solids in suspension (Rich, 1999).

4.2.2 Aeration in Lagoon Systems

Oxygen requirements in aerated lagoon systems are based on the organic loading entering the cell. Supplying oxygen at a rate of 1.5 times the BOD_5 mass entering the cell has been found to be sufficient to treat the wastewater. The following equation is used to estimate the oxygen transfer rate (Crites, et. al., 2006):

$$N = \frac{N_a}{\alpha\left[\frac{(C_{sw} - C_L)}{C_S}\right](1.025)^{(Tw-20)}}$$

Where N = Equivalent oxygen transfer to tap water at standard conditions (lbs/hr)

N_a = Oxygen required to treat the wastewater (lbs/hr)

α = (oxygen transfer in wastewater)/(oxygen transfer in tap water)

C_{sw} = $\beta(C_{ss})P$ = oxygen saturation value of the waste, mg/L

β = wastewater saturation value/tap water oxygen saturation value = 0.9

C_{ss} = tap water oxygen saturation value at temperature Tw

P = ratio of barometric pressure at the site to barometric pressure at sea level

C_L = minimum dissolved oxygen concentration to be maintained

C_S = oxygen saturation value of tap water at 20ºC and 1 atm pressure

T_w = wastewater temperature, ºC

Oxygen can be supplied to aerated lagoon systems using mechanical aerators or diffused aeration systems. Mechanical aerators are commonly rated by the number of pounds of oxygen the units will supply under standard conditions per horsepower-hour (lbs. O_2/hp-hr). Diffused air requirements are calculated using the following equation (Crites and Tchobanoglous, 1998):

$$Q_{air} = \frac{W_{oxygen}}{(AOTE)(O_2)(\gamma_{air})(1440)}$$

Where Q_{air} = Required air flow (ft^3/min)

W_{oxygen} = Oxygen requirements (lbs/day)

$AOTE$ = Actual oxygen transfer efficiency, expressed as a fraction

O_2 = Fractional percent of oxygen in air by weight (0.2315)

γ_{air} = Specific weight of air (0.075 lbs/ft^3 at 1 atmosphere and 20ºC

The oxygen transfer efficiency of a diffused air system is a function of the air bubble size and the depth of the water column. Smaller air bubbles result in higher oxygen transfer efficiencies than larger bubbles, as do diffusers that are set at deeper depths within the water column.

4.2.2.1 High speed floating aerators

High-speed floating aerators are commonly used for aerated lagoon systems. The units consist of a motor and impeller attached to a float. The units are typically anchored to the lagoon shore using cables. High-speed floating aerators are designed to pump water from the lagoon and spray it into the air, allowing oxygen to diffuse into the water droplets. The high-speed floating aerators can be

outfitted with draft tubes to enhance deep water lagoon mixing or anti-erosion plates to ensure water is drawn from the surface. Figure 4-4 shows a typical high-speed floating aerator.

Figure 4-4. High Speed Floating Aerator

Advantages of this system include low capital costs, relatively high oxygen transfer efficiency, good mixing efficiency, and simple operation and maintenance. The chief disadvantage of the system is the creation of aerosols as the lagoon water is sprayed into the air.

Manufacturers of this type of aerator include Aqua-Aerobics, Aerator Products and Europlec/Aeromix Systems Inc.

High-speed floating aerators are recommended for the Pahala WWTP due to their relatively high oxygen transfer efficiency, low capital cost, and simple operation and maintenance. High-speed floating aerators are easy to remove from service, and can be easily moved between lagoons or cells, if needed.

4.2.3 Aerated Lagoon Configuration

The normal operating condition for the Pahala WWTP will be to operate the four lagoon cells in series as partial mix environments. Figure 4-5 is a schematic representation of the normal operating mode. The fourth cell will be outfitted with a floating cover to preclude algae growth. Having four lagoons will allow the County to take a lagoon out of service for maintenance.

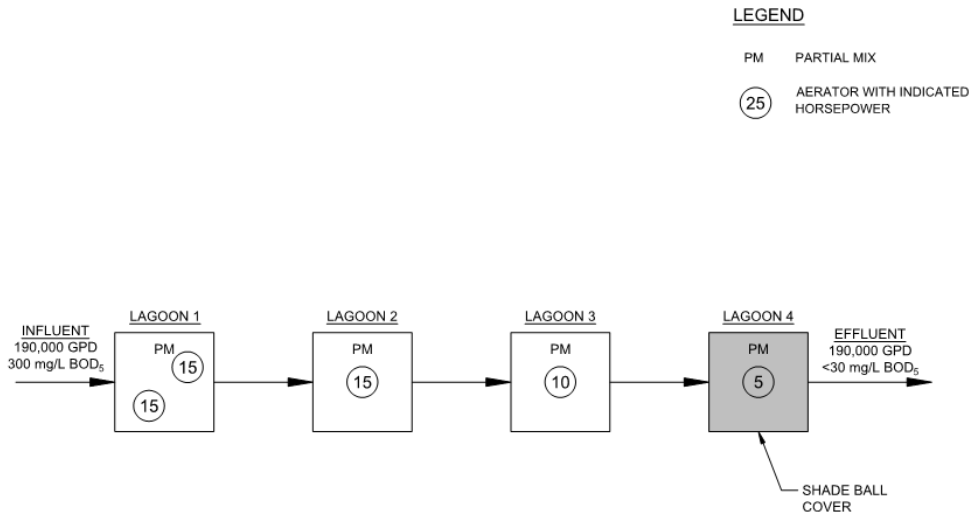

Figure 4-5. Normal Lagoon Configuration Schematic

Table 4-1 summarizes the results of the aeration and mixing calculations for the normal operational configuration treating the design average dry weather flow rate of 190,000 gallons per day. Comparison of the minimum aerator requirements shown in Table 4-1 with the proposed aerator layout shown in Figure 4-4 reveals that the aerator power supplied exceeds the minimum requirements. An aerator control system will be provided that will intermittently turn the aerators on and off in accordance with the operator settings to supply sufficient oxygen to the system.

Table 4-1. Normal Configuration Aeration and Mixing Requirements

Cell	Volume (gal)	Influent BOD_5 (mg/L)	Effluent BOD_5 (mg/L)	Minimum Aerator Requirement (hp)	Mixing Density (hp/Mgal)
1	80,000	300	139	27	34
2	80,000	139	64	13	16
3	80,000	64	30	6	7
4	80,000	30	<30	2	3

4.2.4 Lagoon Liner

Lagoon liners are required to prevent wastewater seepage into the ground. The liner will be exposed to sunlight, so resistance to ultraviolet light (UV) degradation is a key factor in the selection of the liner material, as is the compatibility of the material with typical domestic wastewater characteristics and ease of liner maintenance. An 80-mil textured high density polyethylene (HDPE) geomembrane is recommend for this application.

Textured HDPE is known to have excellent UV resistance, good chemical resistance, and generally is not affected by fats, oils, and grease (FOG). Maintenance of HDPE requires a specialty contractor who can complete fusion weld repairs. Unlike smooth HDPE, textured HDPE presents minimal slipping hazard to operations personnel. Furthermore, the anticipated useful service of an HDPE liner in typical Hawaii municipal wastewater treatment conditions is 25 to 30 years.

Alternatively, the lagoons may be constructed of concrete.

4.2.5 Lagoon Cover

In the normal operating mode, the final cell in the lagoon series will be covered in order to deprive algae of sunlight. This will reduce the algae concentration, which can increase total suspended solids (TSS) levels in the system effluent. The cover should float on the surface of the water, be UV resistant, suitable for windy environments, and allow for rainwater to pass through the cover to prevent ponding. A floating shade ball cover is proposed for this installation.

Floating shade balls covers have been used for decades in in the mining, water and wastewater treatment industries. Figure 4-6 shows the design elements of a typical shade ball, and Figure 4-7 shows how shade balls provide cover on a reservoir. In addition to reducing algae growth, shade ball covers deter waterfowl from storage ponds. The black, UV-stable HDPE resin has known to withstand a range of challenging chemical and environmental conditions. Table 4-2 summarizes technical data for the balls.

Table 4-2. Lagoon Shade Ball Cover Application Parameters

Requirement	Description
Algae Control	Balls – 90% shade coverage
Temperature	50^0C to 95^0C
Wind Resistance	Balls ballasted with potable water tested in winds of 120 mph (category 3 hurricane)
Waterfowl Safety	Waterfowl do not recognize ball-covered pond as a water body and will not nest on the unstable surface
Lifecycle/Warranty	The shade balls are warrantied for 10 years, with an expected resin life of 25+years
Operations and Maintenance	Self-cleaning, self-levelling and require little to no maintenance Balls will move out of the way of maintenance barge, and can be restrained with booms Little installation effort required Precipitation does not affect the cover
Sustainability	Resin is recyclable, paraben free and suitable for drinking water applications Ballast is potable water Resin can be made from recycled plastic
Environment	Balls have been installed in chemically harsh environments (mining industry), in drinking water reservoirs, and in tropical locations Balls reduce algae formation and corresponding disinfectant byproducts in chlorination applications

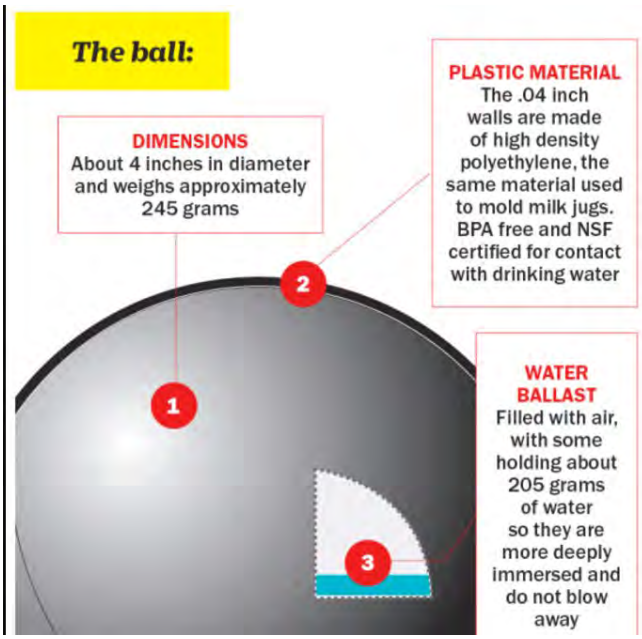

Figure 4-6. Floating HDPE Shade Balls

Figure 4-7. Floating shade balls with current and turbulence in reservoir.

4.2.6 Lagoon Sludge Management

Partial-mix aerated lagoons are designed to allow solids to settle to the bottom of the lagoon, forming a sludge layer. The sludge slowly anaerobically digests in the bottom of the lagoon. The mechanical aerators in the lagoon maintain an aerobic water cap at the surface of the lagoon that oxidizes any odors that are released from the anaerobic sludge layer at the bottom of the lagoon. Sludge is removed infrequently, typically every 15 to 30 years, when the sludge blanket thickness begins to affect treatment performance or in conjunction with lagoon liner replacement. Aerated lagoon operators typically monitor sludge blanket thicknesses semi-annually to assess sludge accumulation.

Sludge removal contractors are typically employed to dredge the solids, dewater, and haul to a landfill for disposal. Sludge from aerated lagoons is typically not offensive when dewatered due to the long residence time in the bottom of the lagoon.

Alternatively, the sludge can be recycled if a permitted land application site is available and the sludge meets State and Federal requirements for land application or composted with green waste at a permitted composting facility.

4.3 Subsurface Flow Constructed Wetland

A subsurface flow constructed wetland is recommended to provide additional treatment and polishing of the aerated lagoon effluent. It is anticipated that the aerated lagoon system will convert ammonia that is present in the wastewater influent into nitrate via a process called nitrification. A subsurface flow constructed wetland will remove this nitrogen from the wastewater via a process called denitrification. Reduction of nitrogen loading through the constructed wetland will decrease the area required for overland flow effluent management.

Subsurface flow wetlands consist of shallow lined basins that are filled with gravel media and planted with emergent wetland vegetation. Water is introduced to the gravel media layer and flows horizontally through the basin. The water level in the wetland is maintained below the gravel surface at all times. Treatment occurs through physical, chemical, and biological mechanisms as the water flows horizontally through the gravel media bed. Figure 4-8 is an illustration of the concept.

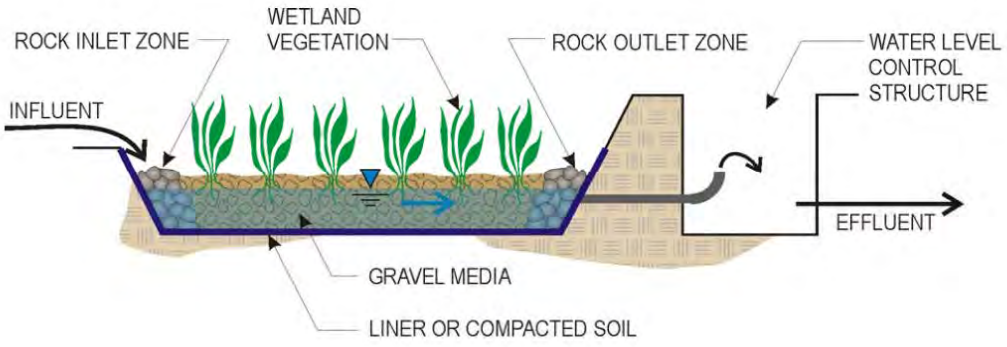

Figure 4-8. Subsurface Flow Constructed Wetland Concept

4.3.1 Denitrification in Subsurface Flow Constructed Wetlands

Denitrification is a biological process whereby nitrate molecules are transformed into nitrogen gas molecules by naturally-occurring bacteria. The denitrifying bacteria require five conditions for the process to occur:

- A place to grow.

- A source of nitrate.
- An anoxic (low-oxygen) environment.
- A source of carbon.
- Adequate water temperature.

The equation used to predict denitrification in subsurface flow constructed wetlands is shown below (Crites, et.al., 2014).

$$\frac{C_e}{C_o} = \exp(-K_T t)$$

where:

C_e = effluent nitrate-nitrogen concentration (mg/L)

C_o = influent nitrate-nitrogen concentration (mg/L)

K_T = temperature-dependent rate constant = $1.00(1.15)^{(T-20)}$ days^{-1} when T>1°C

t = hydraulic residence time (days)

Subsurface flow constructed wetlands are capable of providing additional treatment benefits beyond nitrogen reduction, such as removal of organic carbon, suspended solids, phosphorus, metals, trace organics, and pathogens. The additional treatment benefits are not primary design parameters, but should be considered as additional polishing treatment benefits that may be realized for the Pahala WWTP.

4.4 Disinfection

Disinfection processes selectively kill pathogens or render them incapable of reproduction or harm to humans. Disinfection at WWTPs is employed for the purposes of protection of public health, reduction of organic matter, inorganics, nutrients, odor, aesthetics, and maintaining waste-assimilative capacity of receiving water bodies. The protection of public health through the control of disease-causing microorganisms is the primary reason for wastewater disinfection (WEF, 1996). As the last barrier of protection from pathogenic organisms, disinfection at WWTPs is an important process. To address disinfection, both a calcium hypochlorite system and a UV system were evaluated.

4.4.1 Calcium Hypochlorite

Calcium hypochlorite is the most common solid form of hypochlorite used for disinfection. It can be found as a powder, granules, pellets, or as tablets in concentrations up to 70 percent. Calcium hypochlorite will degrade in strength at a rate of 3 to 5 percent per year. Once applied to the wastewater, the chemistry is similar to that for sodium hypochlorite. Calcium hypochlorite decomposes in an exothermic reaction if exposed to moisture.

The solid can be directly applied to wastewater at very small WWTPs. Figure 4-9 shows a typical calcium hypochlorite feed system.

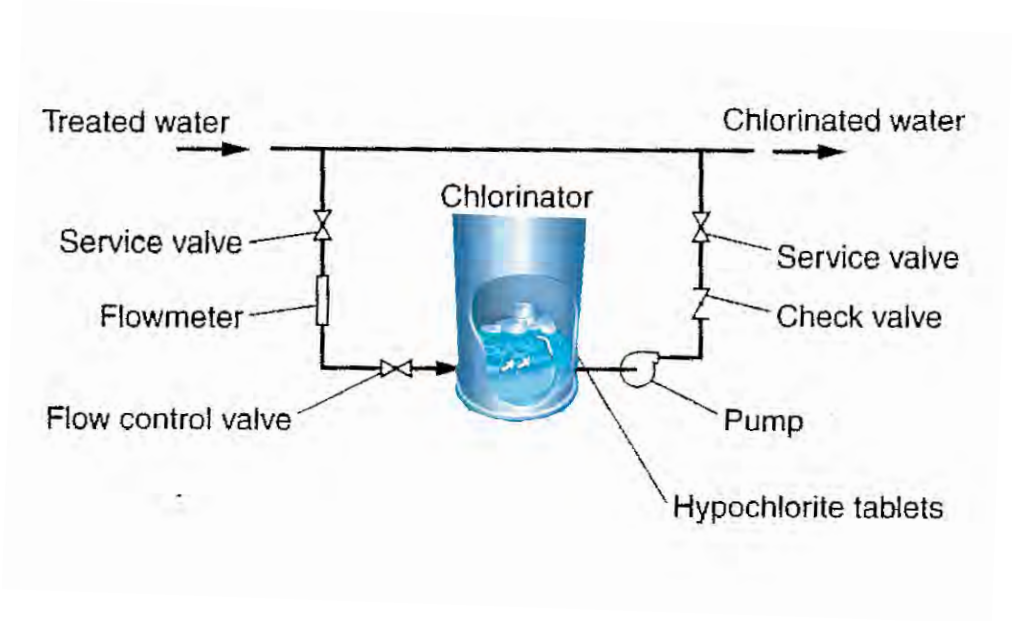

Figure 4-9. Typical Calcium Hypochlorite Feed System

The advantages of using calcium hypochlorite for disinfection at small, remote WWTPs is that it is available in concentrated form as powder, pellets, or tablets. This makes the transportation and storage of disinfectant optimal for small WWTPs. Table 4-3 summaries calcium hypochlorite characteristics.

Table 4-3. Calcium Hypochlorite Summary

Description	Characteristic
Transported form	Solid
Typical transported concentration	70%
Largest transported volume available	55 lb. pails
Decay Rate	Decays 3-5% per year
pH	N/A
Hazards	Toxic if ingested (usually through dust or liquid form)
Storage constraints	Must be stored in a cool, dry, dark place
Special equipment	Tablet feeder
Particular issues	Heats and combusts if not stored properly Scaling in pipes, Off gassing

4.4.1.1 Dose and Contact Time

The effectiveness of a chlorination system is highly dependent on the characteristics of the wastewater, the initial mixing and contact time, and the chlorine dose used. For nitrified effluent, the recommended dose is between 8 and 18 mg/L. The WWTP will discharge to a land application system during normal flow and wet weather periods when the secondary effluent will be diluted by precipitation falling onto the overland flow terraces. For planning purposes, a 10 mg/L dose was assumed to be sufficient for the WWTP for most circumstances, but equipment will be sized to

provide chemical feed at a rate of up to 100 lbs./day, which will ensure an adequate chlorine dose for peak wet weather discharge flows.

Table 4-4 lists the chlorine demand for various flow conditions.

Table 4-4. Chlorine Demand

Description	Flow	Chlorine Demand
Average dry weather flow	0.19 mgd	16 lbs./day
Peak day wet weather flow	0.662 mgd	55 lbs./day

The recommended minimum contact time for chlorination is 15 minutes (Ten States Standards Wastewater, Recommended Standards for Wastewater Facilities, 1997, Great Lakes – Upper Mississippi River Board of State and Provincial Public health and Environmental Managers). The size of the chlorine contact tank will need to accommodate a 15-minute contact time for the peak discharge rate. For this application, the peak discharge rate will be equal to the peak day wet weather flow, due to the flow equalization provided by the aerated lagoons. Table 4-5 summarizes the contact tank dimensions, while Figure 4-10 shows a conceptual contact tank configuration.

Table 4-5. Chlorine Contact Tank

Description	Value
Peak discharge rate	460 gpm
Minimum chlorine contact tank	15 minutes
Tank volume required	920 cubic feet
Channel water depth	5 feet
Channel width	3 feet
Tank channel total length	61 feet
Tank dimensions including channel walls	13 feet x 24 feet

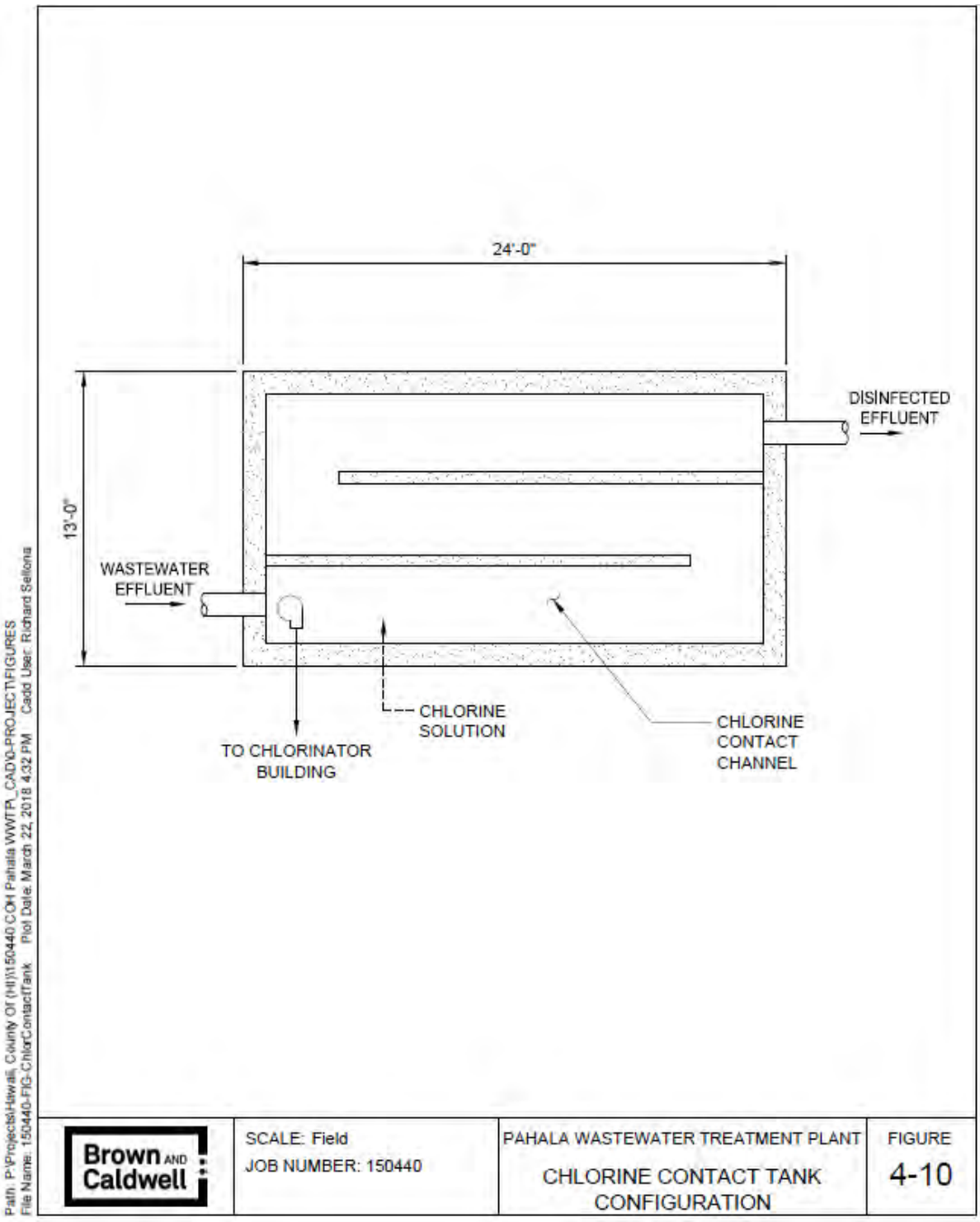

Figure 4-10. Chlorine Contact Tank Configuration

4.4.2 Ultraviolet Light (UV) Disinfection

A common alternative to a chlorine disinfection is ultraviolet light (UV). Ultraviolet systems destroy microorganisms by affecting their deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) and impeding their ability to reproduce. A UV disinfection system is comprised of lamps, a reactor, and control panel. Wastewater can flow either parallel or perpendicular to the lamps in the reactor, while the control box provides a starting voltage and maintains the continuous current needed. Currently, most systems are equipped with an automated lamp cleaning system, to maintain lamp efficiency levels.

A UV system's effectiveness is dependent on the characteristics of the wastewater, the dose, and the exposure time. In the case of UV radiation, the most important factor is the transmittance of the water, which has a direct effect on the ability of UV light to penetrate through the liquid and reach microorganisms present at the required intensity. Ideally, the discharge undergoing treatment should not have a transmittance lower than 55 percent, with the intensity decreasing the farther the microorganisms are from the lamp. The optimum wavelength to effectively inactivate microorganisms is between 250 and 270 nanometer.

The main types of UV lamps used for wastewater disinfection are conventional low-pressure lamps, low pressure high output (LPHO) lamps and medium pressure lamps. Several UV systems include lamps with automated sleeve cleaning.

4.4.3 UV System Design Summary

A UV disinfection system requires a about the same size footprint as chlorine. Disinfection occurs as the organism is exposed to the UV radiation as the water flows past the UV lightbulbs. The Trojan UV3000+ system is used at numerous facilities across the US, including some treatment plants in Hawaii. The estimated cost included in this report are based on an assumed UV transmittance of 65 percent. The amalgam lamp used with the UV3000+ system has an end-of-lamp-life factor (ELLF) of 0.98 indicating little loss in UV light output over the life of the lamp. This ELLF has been tested and approved by the State of California and is also accepted by the State of Hawaii for reuse applications. The system would use LPHO lamps with automatic sleeve cleaning. LPHO lamps are energy efficient and the UV300+ system is furnished with automatic sleeve cleaning devices to reduce labor requirements. Each UV lamp is enclosed in a quartz sleeve to separate it from the water medium. Each lamp draws 254 watts at full output and is driven by electronic ballast. The electronic ballast allows the lamps to be dimmed to conserve power based on a control signal from a flow meter. The LPHO lamps will have a minimum life of 12,000 hours when operated in an automatic mode and limited to a maximum of 4 on/off cycles per 24 hours. Table 4-6 summarizes the size and design criteria for the UV system required to treat the WWTP discharge.

Table 4-6. UV Disinfection Design Summary

Description	Value
Peak Hour Wet Weather Discharge	630 gpm
Minimum UV transmittance	65 percent
No. of UV channels	1
Design dose	35,000 µWs/cm2
Disinfection limit	30 e-coli per 100mL
Validation factors	0.98 end of lamp factor

4.4.4 Cost Evaluation

A summary of capital and life-cycle estimated costs for both chlorination and UV disinfection is presented in Table 4-7 for comparison.

The capital costs include the materials and equipment costs, construction costs, electrical, instrumentation and control, soft costs, and contingency. As shown in the table, the UV option incurs higher capital costs. The life cycle costs look at the impact of the capital costs along with the annual operations and maintenance costs, including power, materials, chemicals, and labor costs over the next 30 years. The life-cycle costs for chlorination option appear to be about 78 percent of the UV option.

Table 4-7. Estimated Disinfection Costs

Description	Chlorination	UV System
Capital Cost	$200,000	$800,000
Annual Operations and Maintenance	$15,000	$6,000
Life-cycle Cost (30-Year Net Present Value)	$746,000	$947,000

4.4.4.1 Non-Economic Evaluation

Table 4-8 presents a summary of advantages and disadvantages of using an ultraviolet light for disinfection.

Table 4-8. Ultraviolet Disinfection – Advantages and Disadvantages

Advantages	Disadvantages
Effective at inactivating most viruses, spores, and cysts	Low dosage may not be effective on some pathogens and some organisms can repair and reverse the destructive effects of UV
It's a physical process, instead of chemical – it eliminated the need to transport, handle, store toxic or corrosive chemicals	Turbidity and TSS in the wastewater can reduce UV disinfection effectiveness
No harmful residual compounds created that are toxic to humans or aquatic life	Will likely require more call-outs by operators due to alarms caused by "dirty power".
Shorter contact time (less than a minute)	The relative intensity of equipment maintenance requirements, including staffing training and on-island avaliablity.

4.4.5 Disinfection Recommendation

~~A tablet chlorination system is the recommended disinfection option over the UV system for the WWTP because it incurs lower capital and lifecycle costs. In addition, tablet chlorination will be more reliable than UV due to frequent "dirty power" conditions on the island.~~ *The County has elected to install a UV system at the Pahala WWTP, to reduce the use of chemicals at the facility. An uninterruptable power supply may be installed to address "dirty power" concerns.*

4.5 Effluent Management

For effluent management, a slow-rate land application system is proposed. The concept is to intermittently apply wastewater to crops growing in permeable soils. As the applied water percolates through the soil matrix or is taken up by the crop, it is treated by physical filtration and by biological mechanisms. After an application period or wetting period, the surface can dry and oxygen can enter the soil matrix, which aids aerobic biological treatment. The frequent wetting and drying also maintains the infiltration rate through the soil surface and minimizes soil clogging. This method of land application is an effective treatment process for BOD_5, TSS, trace organics, phosphorus, metals and pathogen removal. Furthermore, removal of nitrogen can be significant when system is managed for that objective.

4.5.1 Design

The slow-rate system site consists of a net area of approximately 5.5 acres. The 5.5 acres will be divided into 4 small groves of native trees, so that water application will be rotated to a different grove each day. ~~An additional small grove will be utilized as an emergency (overflow) or reserve when surface or distribution system maintenance is conducted.~~ By using one groove per day the wet/dry cycle will be 1-day wetting and 3-days drying.

The groves will be planted with native Hawaiian trees. Trees grown within the land application area will need to be water tolerant. Table 4-9 lists potential native tree species.

Table 4-9. Potential Land Application System Tree Species

Common Name	Genus Species	Salt Tolerance	Water Requirements	Rubbish and Maintenance	Preferred Elevation
Milo	Thespesia populnea	Very	Dry to Wet	Moderate	Low to Medium
Loulu	Pritchardia hillebrandii	Very	Dry to Wet	Low	Low
Aalii	Dodonaea viscosa	Very	Dry to Medium	Low	Low to High
Kou	Cordia subcordata	Very	Dry to Wet	Moderate	Low
Golden Loulu	Pritchardia arecina	Moderate	Dry to Wet	Low	Low to Medium
Wiliwili	Erythrina sandwicensis	Moderate	Dry to Medium	Moderate	Low

The distribution system will consist of gated piping located on the surface. The piping will have slots to allow the applied wastewater to uniformly be distributed over the grove surface. A perimeter fence will be installed to limit access. Access roads will surround each grove. Figure 4-11 reflects the proposed land application schematic.

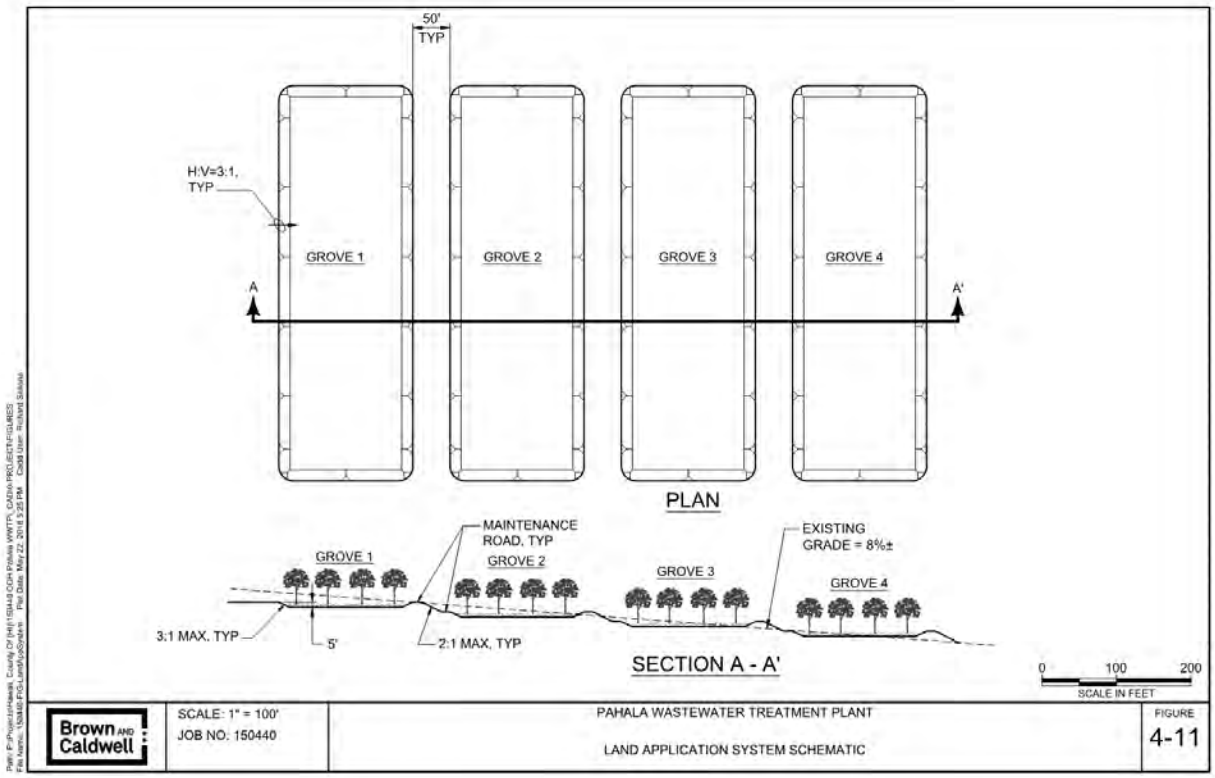

Figure 4-11. Land Application System Schematic

4.6 Ancillary Systems

4.6.1 Water

Potable water is not currently available at the site. The nearest potable water system is located uphill in town. Table 4-10 provides an initial assessment of the potential water demands at the WWTP. The water demands are either for process or potable uses. As shown in the table, the process water demands are significantly greater than the potable demands.

Table 4-10. Potential Water Demands

Description	Flow Rate	Type	Priority
Screenings washer	20 gpm for 10 min/hour 4,800 gpd	Process	Mandatory with screen
Hose bibs	10 gpm for 20 min/day 200 gpd	Process	Desirable to maintain facility
Emergency eye wash / shower	20 gal per use	Potable	Mandatory
Restroom	20 gpd	Potable	Recommended

To supply water to the WWTP, it is recommended to construct approximately 2,000 linear feet of pipe from the intersection of Huapala Street and Maile Street to the site and install a 1-inch water meter with 1 ½-inch backflow preventer.

A plant water system will be supplied by the County water meter. The on-site water system will be split into two branches, one for process water and one for potable water. The potable water will service the restroom and emergency eye wash/shower. A second backflow preventer will separate the process water uses from the potable connections.

4.6.2 Access Road

All weather access will be required to operate and maintain the WWTP. Access to the site will be provided by connection to Maile Street. A paved driveway apron is proposed at Maile Street and an all-weather driveway will extend into the site and provide access to and around the various WWTP infrastructure. Additionally, a turn-around area large enough to accommodate a fire truck will be provided.

Access road pavement options include aggregate base (AB) gravel, asphalt concrete (AC), or concrete. AB is the lowest cost option, but requires the most maintenance. AC pavement is not recommended for steep (greater than 12 percent) grades. Concrete is the highest cost option, but is the most durable and requires the least maintenance.

The recommended driveway pavement section is 2-inches of AC over 6-inches of aggregate base course. For portions of the driveway that exceed 12 percent slope, a concrete pavement section is recommended.

4.6.3 Stormwater Management

The overall goal of stormwater management is to mitigate the adverse impact of new construction on the environment. Stormwater management can generally be separated into two areas:

1. Stormwater Quantity: management of the quantity to prevent increased flows and volumes leaving the site on the downstream watercourses.
2. Stormwater Quality: management of the quality of stormwater runoff to prevent contaminants such as silt, trash, hydrocarbons, heavy metals, and pesticides from leaving the site through stormwater runoff.

4.6.4 Pre-development Stormwater Conditions

4.6.4.1 On-site

The majority of the proposed 42.5-acre site is currently utilized as macadamia nut orchards, consisting of trees or unimproved agricultural roads. The parcel is bound on two sides by improved county and state right-of-way and to the east by additional macadamia nut orchards.

The existing elevations range between 580 to 780 feet above mean sea level (MSL) and slopes in the southerly direction at an average rate of 8 percent. The soils in this area are described as Naalehu medial silty clay loam (NaC) by the Soils Conservation Service (SCS). These soils are considered well drained with low runoff and slight erosion hazard.

On-site stormwater run-off generally sheet flows in a southerly direction to off-site swales along the roadway frontages, Maile Street and Hawaiian Belt Road (also known as Mamalahoa Highway). There is no known on-site drainage collection system, see Figure 4-12.

4.6.4.2 Off-site

Swales that run and collect along the roadway frontages of the property are conveyed through a box culvert at the intersection of Maile Street and Hawaiian Belt Road and discharged makai. Similarly, running along the north property line is an abandoned concrete flume, which was previously utilized to discharge process water from the adjacent old sugar mill to agricultural land makai of Hawaiian Belt Road. Figure 4-12 conceptualizes the existing drainage system.

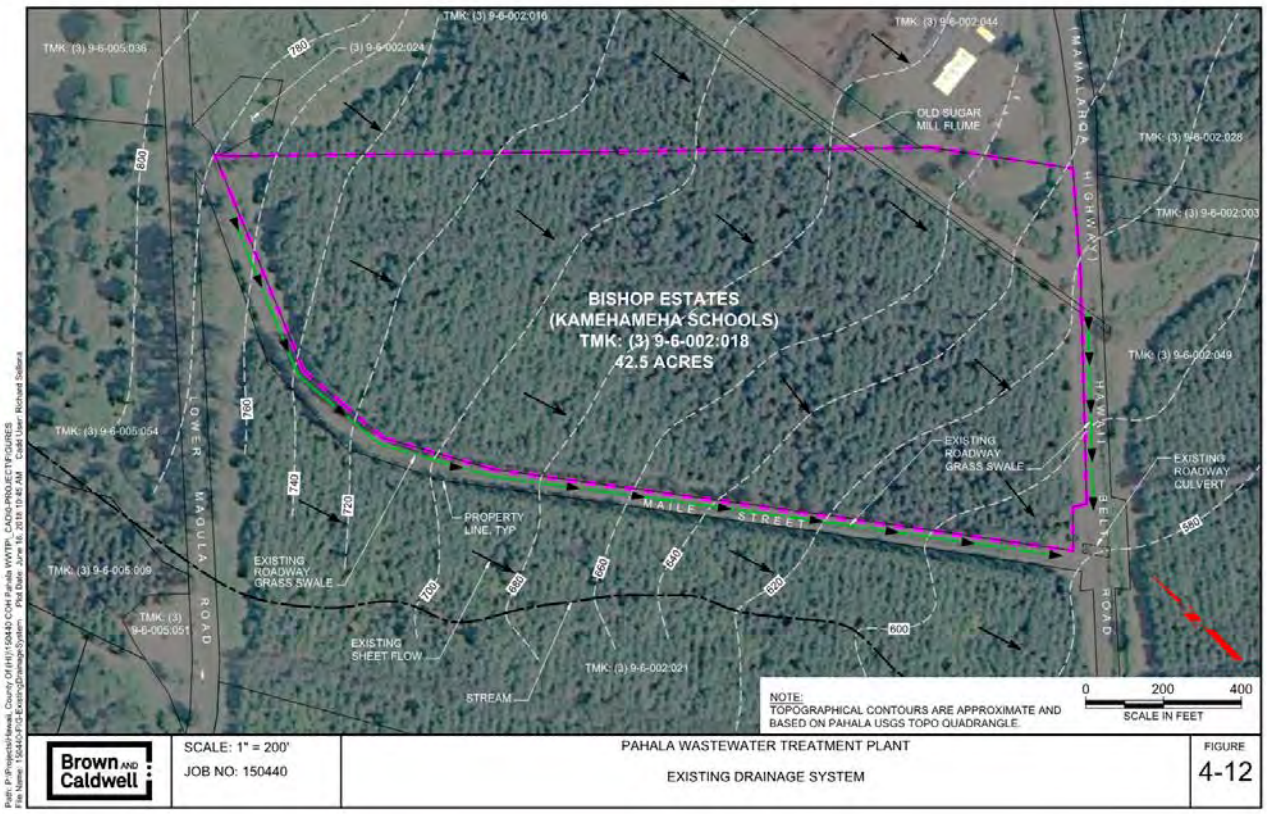

Figure 4-12. Existing Drainage System

4.6.4.3 Flood Hazards

The subject property flood zone is designated Zone X, area of minimal flood hazard corresponding to areas outside of the five-hundred-year flood plain, as indicated on the current September 29, 2017 Flood Insurance Rate Map (FIRM), Community Panel No. 1551661800F. Zone X designations are not subject to the requirements of the Standards of Floodways, Chapter 27, Section 22 of the Hawaii County Code. See Figure 4-13 for the Flood Insurance Rate Map.

On April 16, 2018, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as Zone X on the FIRM and is outside the 500-year floodplain.

The WWTP site slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of the site and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pāhala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during storm events.

Stormwater drainage flows generated from the existing orchard mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the WWTP facilities will not be located within the area of the culvert.

The on-site stormwater management system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins. Landscape buffers with dirt berms would also be constructed around most of the perimeter of the facility to act as secondary containment in the event of a large storm event. The on-site stormwater management system would meet the requirements of Hawai'i County Code, Chapter 27, Section 20, which mandates drainage plans to accommodate runoff caused by the facility for a 1-hour, 10-year storm event.

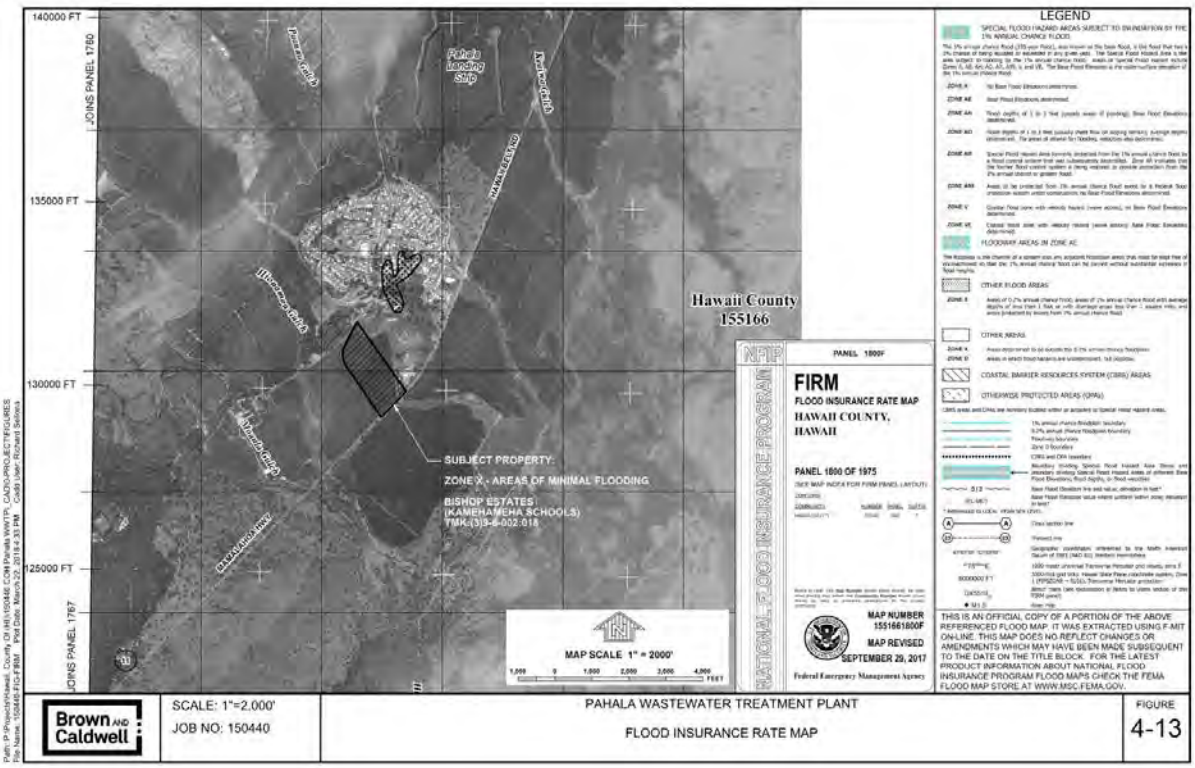

Figure 4-13. Flood Insurance Rate Map

4.6.4.4 Stormwater Quantity

The increase in peak flow and runoff volume is a function of the increase in impervious areas associated with the proposed improvements.

All exposed (not enclosed) treatment processes will be sized to include free-board depth to accommodate the 24-hour, 100-year storm event. Thus, no stormwater runoff from these areas is anticipated.

A drainage system will be designed to address stormwater surface run-off caused by impervious portions of the WWTP development. Per the Hawaii County Code, Chapter 27, Section 20, the site drainage plan shall accommodate the run-off caused by the proposed development, within the site boundaries, for a one-hour, ten-year storm event. The pre-development runoff (10-year, 1-hour storm) is approximately 23 cubic feet per second (cfs). The post-development runoff is approximated at 24.5 cfs, which is a net increase of 1.5 cfs.

To ensure that there is no adverse impact on adjacent or downstream properties due to post-development flows, an on-site drainage system will collect runoff via grated inlets or swales. These flows will be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins, to detain flows and volumes to their pre-development condition. Furthermore, landscape buffers with dirt berms will be constructed around most of the perimeter of the property acting as secondary containment in the event of a large storm event.

A complete analysis of the pre and post development drainage condition will be completed during the design phase. *The site drainage plan will be prepared to comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected one-hour, ten year storm event as shown in the department of public works "Storm Drainage Standards"." A geotechnical engineering assessment of berm stability will be conducted during the design process for any berms constructed to act as secondary containment in the event of a large storm event.*

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project site "shall not alter the general drainage pattern above or below the development". Thus, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage study will be prepared during the design process to evaluate the improvements necessary to comply with HCC requirements.

The wastewater treatment processes will be designed to accommodate the peak flows during wet weather events, including precipitation that falls on the area occupied by the aerated lagoon treatment system. Section 2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The aerated lagoons will be lined with high density polyethylene liners or concrete to prevent water seepage through the bottom and sides of the lagoons. The aerated lagoons will be designed with operational freeboard that will be available to contain and to equalize lagoon flows during peak wet weather events. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. This will be accomplished by constructing berms around the land application tree groves. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

4.6.4.5 Stormwater Quality

The quality of stormwater leaving the site is also a concern. Stormwater quality degrades with development and increased impervious surfaces, because various pollutants are introduced into the stormwater runoff.

The first half-inch of runoff during a storm is referred to as the Water Quality Volume (WQV) or the "first-flush" volume. This portion of the runoff from a storm contains measurably more suspended solids plus other contaminants per cubic foot than would be expected in runoff occurring later in the storm.

To mitigate the quality of runoff, the drainage system will incorporate permanent Best Management Practices (BMP's). Recommended permanent BMP include scheduled good-housekeeping, which will reduce litter and other constituents from being washed into the storm drain system, and detention basins and underground infiltration facilities that prevent the release of sediment and other pollutants to downstream waterways or adjacent properties. A full assessment of all available BMP's to optimize water quality will be provided during design of the project.

4.6.5 Electrical Systems

It will be necessary to bring electrical power to the WWTP site. It is anticipated that Hawaii Electric Light Company (HELCO) will bring overhead power lines to the site and supply 480-volt, 3 phase power to the WWTP via a pole-mounted transformer to a service panel with a meter.

The floating surface aerators will consume the majority of the electricity supplied to the site. An electrical room will house the electrical gear, plant control equipment and the chlorination system. Exterior lighting at the site will be limited to manually switched lights at the entrance to the electrical building and at the headworks area.

A standby power system will be provided in the form of a ~~pad-mounted~~ diesel generator and above-ground fuel tank with capacity to support three consecutive days of operation. In addition, the electrical service panel will be equipped with a manual transfer switch and generator receptacle to allow connection of a trailer-mounted generator in the event of emergency generator failure during an extended power outage.

4.6.6 Telemetry Systems

A land-line telephone telemetry system with auto-dialer will be provided to provide Hilo-based operation staff of alarm conditions and key operational parameters at the WWTP. Additionally, a cell phone will be available for backup.

4.6.7 Operations Building

An operations building will be constructed to include the electrical room, ~~chlorinator~~ generator room, restroom, and maintenance/storage room, as shown in Figure 4-14.

4.6.8 Site Fencing

The entire WWTP site, including the treatment systems and the land application system, will be fenced (6-foot high chain link) and posted to prevent public access.

4.6.9 Alternative Energy

The WWTP does not include utilizing alternative energy systems such as photovoltaic solar as a total replacement for connecting to the HELCO grid due to:

- *the need for consistent power supply;*
- *emergency backup power requirements;*
- *up front capital cost;*
- *full utilization of the 14.9-acre proposed site for the treatment and disposal facility;*
- *objective to minimize the amount of land area removed from agricultural production; and*
- *EPA-enforced project implementation schedule deadlines.*

Partial augmentation of traditional power utilizing photovoltaic solar panel arrays on the headworks and operations building rooftops will be further analyzed during the detailed design phase after loads, demand patterns, and roof orientation are better understood. Additional alternative energy systems can be added in the future if prioritized and funded by County Council, and the electrical systems will be designed to accept additional alternative energy input. The capital cost for rooftop photovoltaic solar is estimated to be approximately $13,000 per kW of peak capacity.

Methane gas is generated at wastewater treatment plants using a process called anaerobic digestion. The proposed WWTP is too small for anaerobic digestion to be economical; the design flow to the Pahala WWTP is 190,000 gallons per day, and anaerobic digestion is only economically attractive for WWTPs that treat at least 5 to 10 million gallons per day. In addition, the anaerobic digestion process requires primary clarifiers as part of the liquid treatment process, but primary clarifiers tend to be odorous in tropical climates, due to the relatively high wastewater temperatures. The proposed alternative relies on natural treatment systems that require relatively low energy input.

Small-scale wind generation systems require a high level of maintenance attention due to the mechanical systems required to convert wind energy into electricity, and is not appropriate for a small, remote wastewater treatment facility.

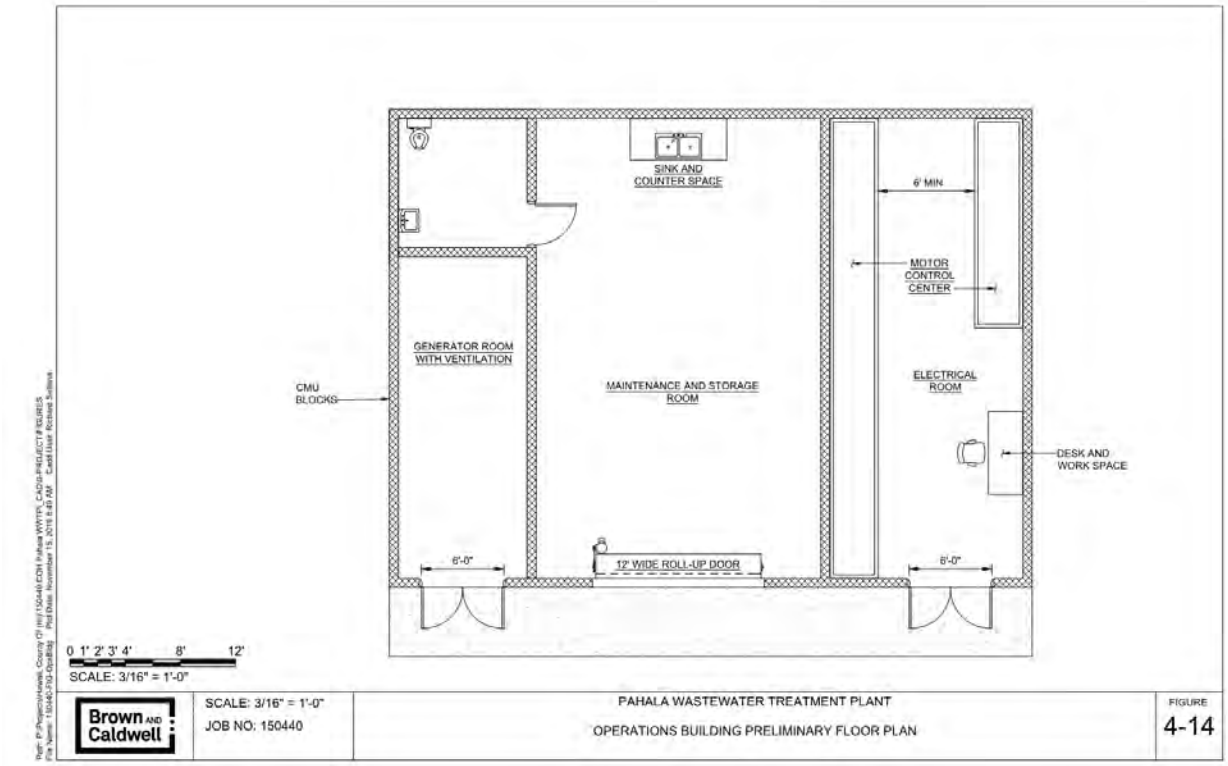

Figure 4-14. Operations Building Preliminary Floor Plan

Section 5

Preliminary Design of Improvements

The following is a summary of the preliminary design for the proposed Pahala WWTP.

5.1 Site Plan

The existing parcel is an active macadamia nut tree orchard. The prevailing grade is in the north to south direction at 5 to 10 percent slope. Approximately 14.9 acres of the land will be cleared for the construction of the proposed facility. Figure 5-1 presents a preliminary site plan for the WWTP.

5.2 Process Schematic

Figure 5-2 presents the recommended facilities process schematic.

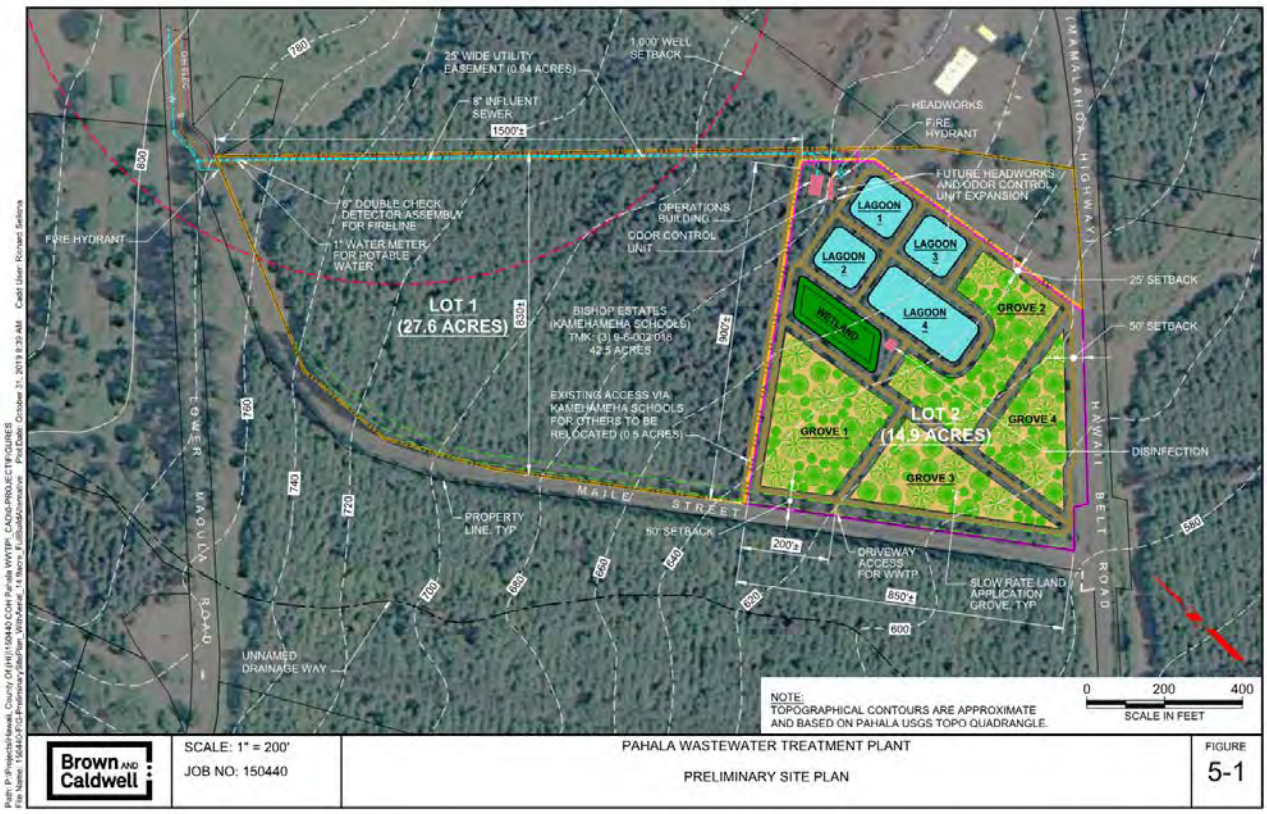

Figure 5-1. Preliminary Site Plan

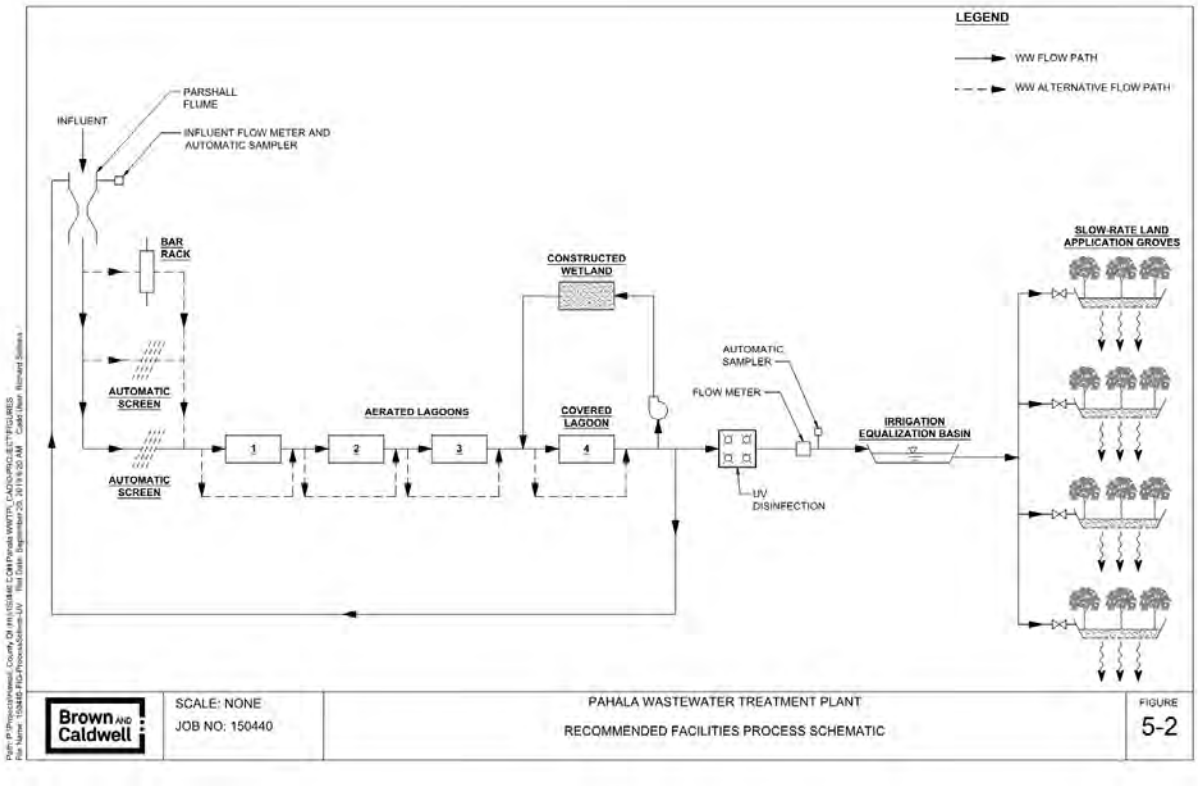

Figure 5-2. Recommended Facility Process Schematic

5.3 Design Criteria

Table 5-1 provides preliminary design criteria.

Table 5-1. Preliminary Design Criteria

Description	Value
Influent flows:	
• Average dry weather	190,000 gpd
• Peak day wet weather	662,000 gpd
• Peak hour wet weather	630 gpm
Influent characteristics	
• BOD_5	300 mg/L
• TSS	300 mg/L
Odor control – granular activated carbon	
• Airflow rate	500 cfm
• H_2S Inlet concentration	1-10 ppm
• H_2S removal efficiency	99%
• Media type	High-capacity carbon
• Vessel diameter	3 feet
• Vessel height	6 feet
• Minimum carbon quantity	570 lbs
• Minimum bed depth	3 feet
• Fan motor	2 hp
• Nominal inlet size	8 inches
Mechanical screens	
• Number of units	2
• Type	In-channel cylindrical
• Screen opening size	0.25 inch (6 mm)
• Maximum flow rate capacity	Greater than 625 gpm each
• Screening washing	Integral
• Screening compaction	Integral
• Screening wash water flow	20 gpm
• Screening wash water pressure	50 psi
Bypass screen	
• Type	Manually-cleaned bar rack
• Bar spacing	1 inch
• Rake	Interlocking with bars
Screenings receptacle	

Table 5-1. Preliminary Design Criteria continued	
• Type	55-gallon drum or bags
• Screenings volume per million gallons treated	5 ft^3/Mgal
• Estimated screenings quantity	1 ft^3/day
• Disposal frequency	1/week
Influent flow metering	
• Type	Parshall flume
• Maximum flow capacity	Greater than 630 gpm
• Minimum straight upstream channel section	20 times the throat width
Influent flow sampling	Refrigerated automatic composite sampler
Lagoon cells	
• Number of cells	4
• Maximum lagoon temperature	25°C
• Minimum lagoon temperature	20°C
• Freeboard	3 feet
• Working water depth	15 feet
• Allowance for sludge	3 feet
• Total water depth	18 feet
• Side slope	3(H) : 1(V)
• Working volume of lagoon 1 to 3	0.80 Mgal
• Working volume of lagoon 4	1.60 Mgal
Aerators	
• Type	Floating mechanical surface aerators
• Cell 1 aerators	30 hp (2 at 15 hp)
• Cell 2 aerator	15 hp
• Cell 3 aerator	10 hp
• Cell 4 aerator	5 hp aspirator style, floating ball cover for algae control
Constructed Wetland	
• Water temperature	25 degrees C
• Aerated lagoon effluent nitrate-N concentration	19 mg/l
• Aerated lagoon effluent ammonia-N concentration	1 mg/l
• Constructed wetland effluent total N concentration	15.3 mg/l
• Total constructed wetland surface area	0.25 acres
• Flow path length	50 feet
• Hydraulic application width	200 feet
• Media depth	24 inches
• Media type	Medium gravel, D_{10} = ¾ inch

Table 5-1. Preliminary Design Criteria continued	
• Media porosity	38 percent
• Percolation prevention system	60 mil high density polyethylene (HDPE) liner
• Vegetation	Native Hawaiian reeds and/or rushes, species to be determined
Disinfection system	
• Type	*UV*
~~• Form~~	~~Calcium hypochlorite tablets~~
~~• Design chlorine dose~~	~~10 mg/L~~
~~• Chlorine contact time~~	~~15 minutes minimum~~
Effluent flow metering	
• Type	Magnetic
Effluent sampler	
• Type	Refrigerated automatic composite
Effluent quality	
• BOD_5	Less than 30 mg/L monthly average Less than 60 mg/L peak
• TSS	Less than 30 mg/L monthly average Less than 60 mg/L peak
Effluent management system	
• Type	Slow-rate land application groves
• Number	4
• Minimum depth	5 feet
• Design percolation rate	0.0095 inches per minute
• Design application rate	8 percent of percolation rate
• Distribution system	Gated pipe
• Stormwater containment	100-year, 24-hour storm event
• Vegetation	Native Hawaiian trees
Stormwater site management	10-year, 1-hour storm

5.4 Environmental Benefits

A well-designed and managed land treatment system limits wastewater application to rates to minimize adverse impact to groundwater quality. The deep percolate from the SR land treatment system is expected to contain less than 1 mg/L of BOD_5 and TSS. While the State of Hawaii has not adopted formal groundwater quality standards, the drinking water standard for nitrate (10 mg/L as N) in the annual average deep percolate below the land treatment system was used as a performance target to design the land treatment site. Phosphorus adsorption is excellent in SR land treatment systems, and 99 percent or greater phosphorus removal is anticipated. Table 5-2 compares the current loads to the environment via the LCCs and the loads to the environment after the proposed project is implemented via the deep percolate from the land treatment system. Figure

5-3 provides a graphical representation of the environmental benefits of the proposed project compared to the status quo.

Table 5-2. Environmental Benefits of Proposed Project

Parameter	Current Annual Load to Environment via LCCs	Annual Load to Environment via Proposed Land Treatment System Deep Percolate	Reduction
BOD_5	174,000 lbs./year	600 lbs./year	>99%
TSS	174,000 lbs./year	600 lbs./year	>99%
Nitrogen	23,000 lbs./year	4,100 lbs./year	83%
Phosphorus	4,000 lbs./year	40 lbs./year	>99%

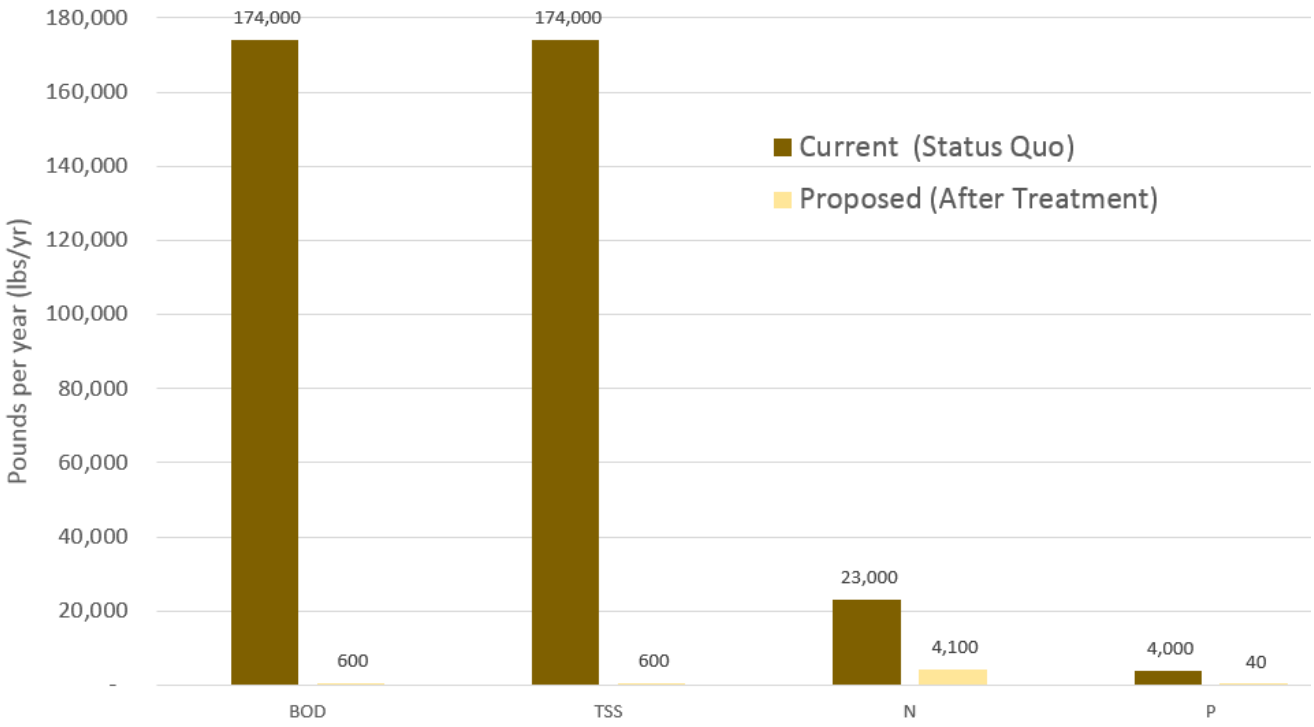

Figure 5-3. Environmental Benefits of Proposed Project

5.5 Cost Estimates

An order of magnitude probable construction is summarized in Table 5-3. The estimate includes a 25 percent estimating contingency. The detailed cost estimate is included as Appendix A.

Table 5-3. Pahala WWTP Order of Magnitude Construction Cost Estimate

Description	Estimated Construction Cost
Electrical and instrumentation	$1,976,000
Headworks	$906,000
Odor Control	$412,000
Lagoons	$2,222,000
Constructed Wetland	$611,000
Land Application	$925,000
On-site improvements	$6,325,000
Off-site improvements	$1,223,000
Total Estimated Construction Cost	$14,600,000

5.6 Future Expansion

5.6.1 Full Buildout Flows

Full buildout wastewater flow projections were developed using the Draft Ka'u Community Development Plan (March 2015) and the CCH's current (2017) wastewater standards. Table 5-4 summarizes the projected full buildout flows for the community, and Figure 2-1 shows the WWTP full buildout service area.

Table 5-4. Pahala WWTP Full Buildout Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	360,000 gallons per day	1.0
Peak day wet weather flow	1,260,000 gallons per day	3.5
Peak hour wet weather flow	1,200 gallons per minute	4.8

5.6.2 Improvements

To accommodate the flow increase anticipated from the full buildout of the Pahala wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the 14.9-acre site.

Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solids recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater

opportunity for contact between the naturally-occurring micro-organisms in the lagoon and dissolved organic matter. As a result, complete mix lagoons provide greater levels of treatment within a smaller volume than partial mix lagoons. However, facilities must be provided downstream of complete mixed lagoons to allow removal of settleable solids from the water column. To provide a place for solids settling, lagoons 2 through 4 will continue to act as partial mix aerated lagoons downstream of the complete mix lagoon 1. Lagoon 4 will require no aeration and will continue to be covered to deprive algae of sunlight and allow suspended solids to settle out of the system effluent.

Utilizing this lagoon system approach, the Pahala WWTP will require modifications at full buildout flows, but is not anticipated to expand beyond the initial build 14.9 acres.

Section 6

Implementation

Table 6-1 provides the implementation schedule for the WWTP. The LCCs will be closed following connection of the existing sewer system to the WWTP.

Table 6-1. Implementation Schedule

Description	Milestone
Complete design of WWTP	September 18, 2019
Complete construction of WWTP	May 20, 2021
Connect existing collection system to WWTP	June 30, 2021

Section 7

Alternative Treatment Options Evaluation

Several other treatment alternatives were considered for the Pahala WWTP, as summarized below.

7.1 Option Descriptions

7.1.1 Option 1: Aerated Lagoons/Constructed Wetland/Land Application

Option 1 consists of an aerated lagoon treatment system with a constructed wetland and disinfection, followed by land application for effluent management, as described previously throughout this report. Figure 7-1 is a schematic diagram for Option 1.

Figure 7-1. Option 1 Schematic Diagram

7.1.2 Option 2: R-1 Treatment/Land Application

Option 2 consists of constructing a membrane bioreactor (MBR) or an activated sludge treatment process followed by cloth media filtration, followed by UV disinfection, to produce recycled water that meets DOH R-1 recycled water criteria. R-1 recycled water is effluent that has undergone oxidation, filtration, and disinfection. R-1 is considered the highest grade of recycled water and can be used for irrigation of golf courses, parks, schools, and all types of agricultural crops. The R-1 treatment system would be followed by land application as per Option 1. Figure 7-2 is a schematic diagram for Option 2.

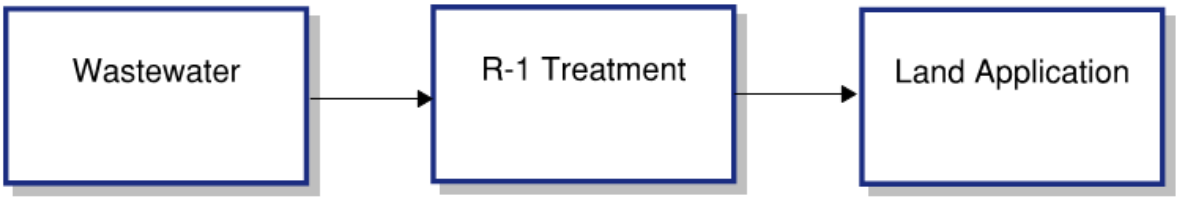

Figure 7-2. Option 2 Schematic Diagram

7.1.3 Option 3: R-1 Treatment/Seasonal Water Recycling

Option 3 consists of a treatment system similar to Option 2 to produce R-1 recycled water. The recycled water would be used to irrigate nearby macadamia nut orchards. Figure 7-3 provides a schematic diagram of Option 3.

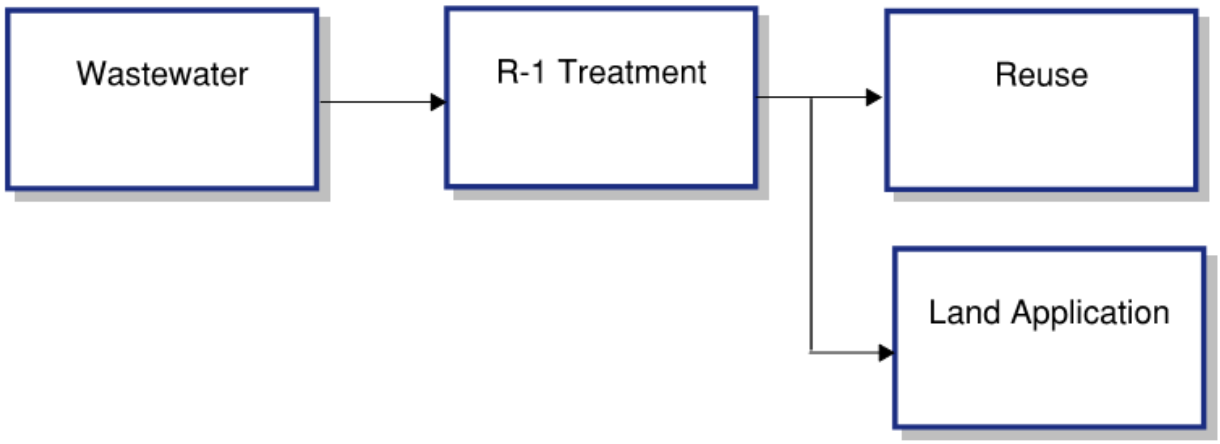

Figure 7-3. Option 3 Schematic Diagram

A water recycling analysis was prepared to assess the potential seasonal demand for recycled water produced by the WWTP. Figure 7-4 is an irrigation demand assessment for the Pahala area based on published climate data. The graph shows precipitation, estimated evapotranspiration, and the irrigation demand for each month of the year. As shown in the figure, irrigation is typically needed from April through September, reaching a peak demand in June. The graph shows that no irrigation is typically needed between October and March, because precipitation exceeds evaporation during those months.

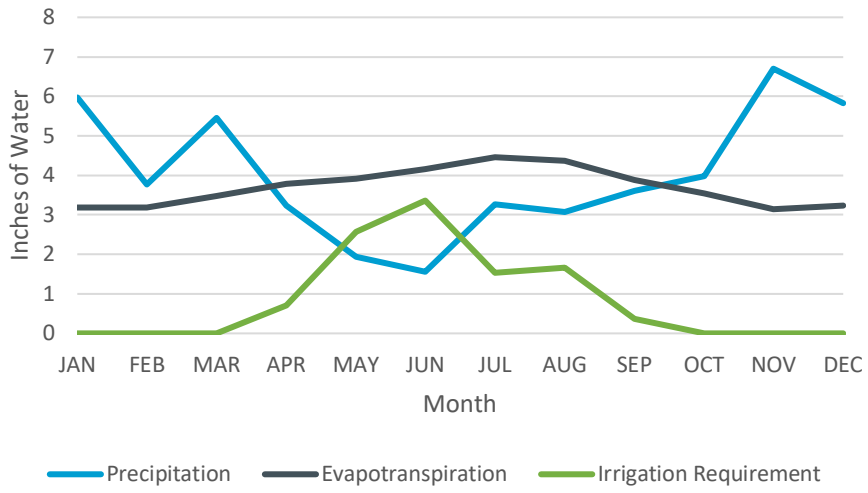

Figure 7-4. Irrigation Demand Assessment

The potential demand for recycled water produced by the Pahala WWTP was assessed, as shown in Figure 7-5. The WWTP could potentially provide irrigation water for approximately 62 acres, based on the peak month irrigation demand in June. During June, all the recycled water produced by the WWTP would be used on the 62 acres. During all other months the supply of recycled water will typically exceed the demand, and the excess water would be land applied on the WWTP property as per the previous alternatives.

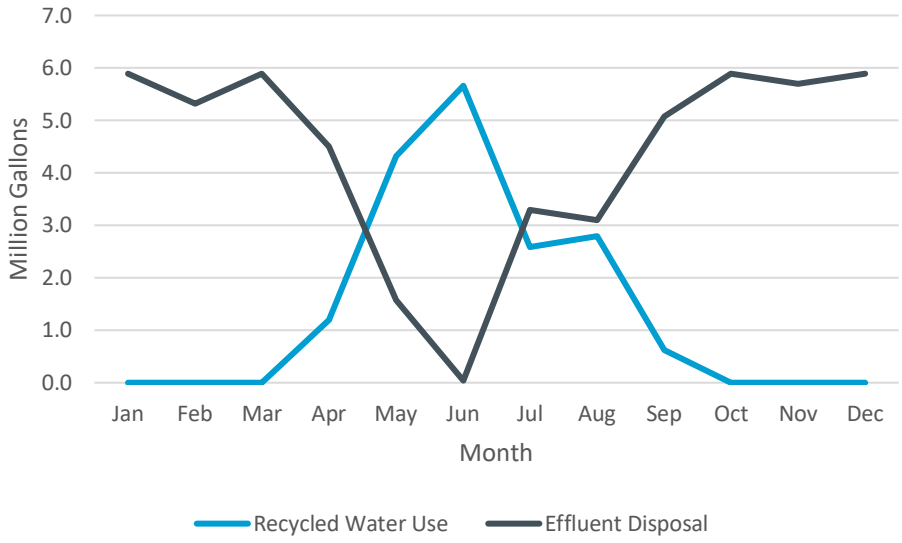

Figure 7-5. Option 3 Recycled Water Demand Assessment

The Pahala climate makes it possible to only recycle only about 25 percent of the annual flow in this scenario, due to the long wet season and relatively low evapotranspiration rate during the dry season. This is in stark contrast to the Kailua-Kona area on the leeward side of the island, where the climate will allow approximately 88 percent of the recycled water produced at the Kealakehe WWTP

throughout the year to be recycled. Figure 7-6 provides a comparison of the irrigation demand in Pahala with the irrigation demand at Kealakehe.

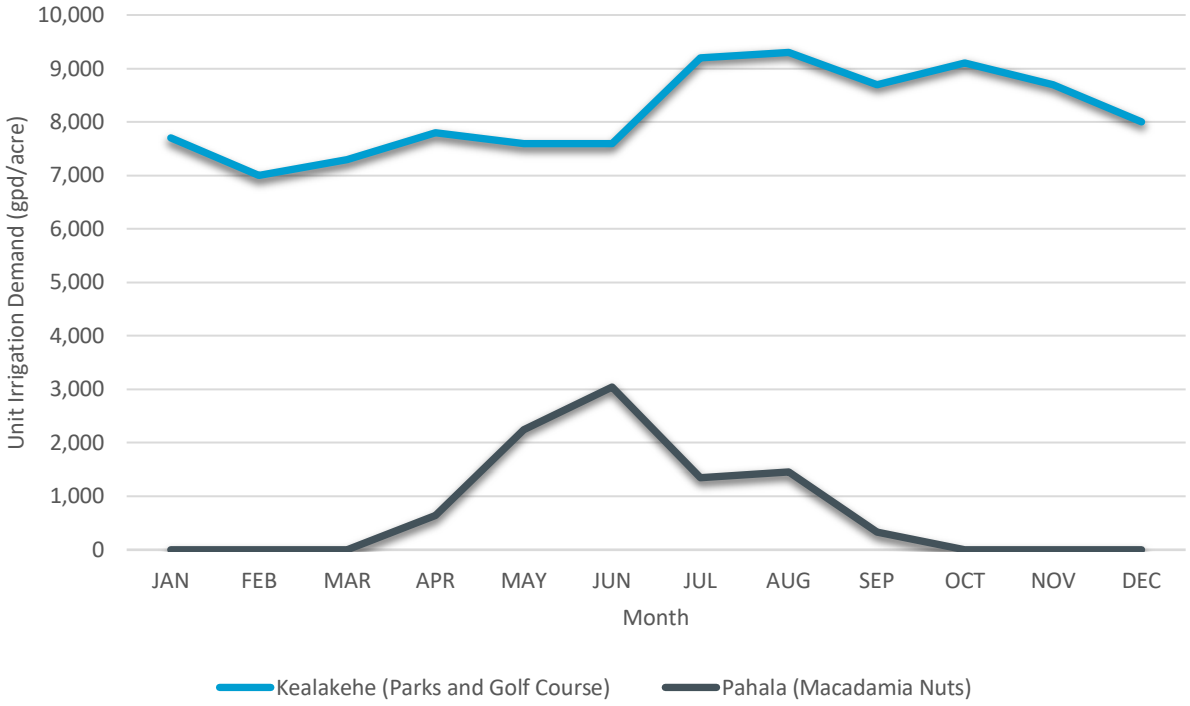

Figure 7-6. Comparison of Irrigation Demands at Pahala and Kealakehe

7.1.4 Option 4: R-1 Treatment and Storage for 100% Water Recycling

Option 4 adds a seasonal storage reservoir, as shown schematically in Figure 7-7.

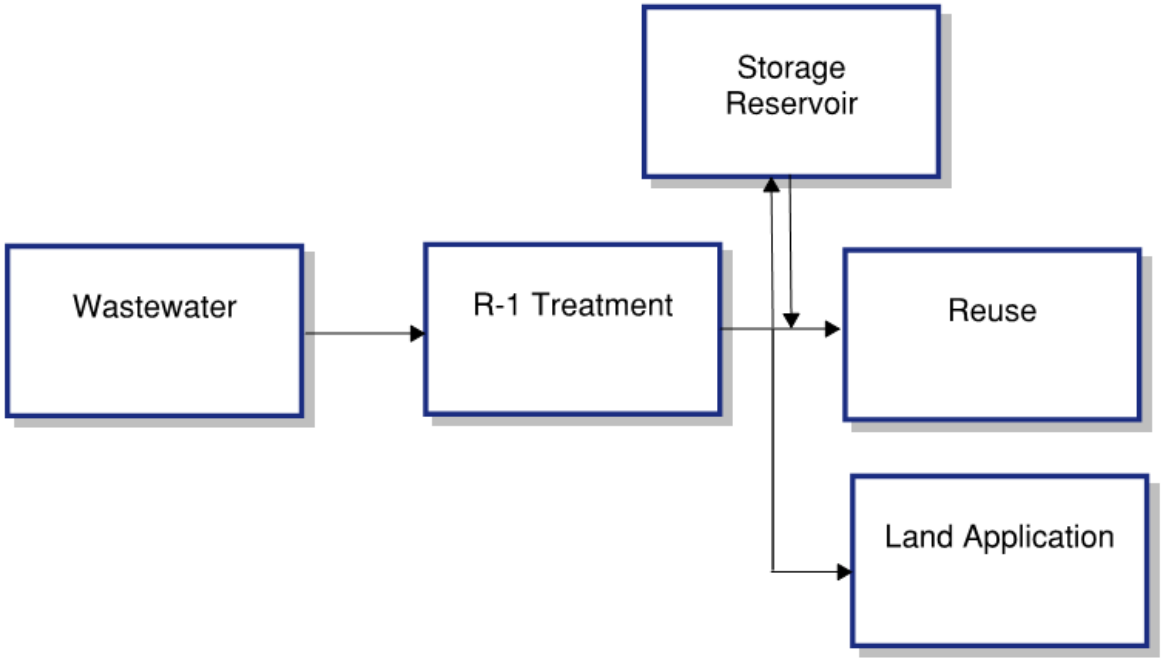

Figure 7-7. Option 4 Schematic Diagram

Implementation of a seasonal storage reservoir would make it possible to recycle 100 percent of the R-1 water produced by the Pahala WWTP in a typical year. The seasonal storage reservoir would make it possible to save recycled water produced during the wet season for use during the dry season. An annual water balance was prepared to assess the seasonal storage reservoir needs for the Pahala WWTP. Figure 7-8 provides a summary of the evaluation, and shows recycled water supply, use, and storage throughout a typical year. As shown in the graph, peak storage of approximately 40 million gallons (Mgal) would occur during April, and by August the storage reservoir would be dry and ready for another wet season. Under this scenario it would be possible to irrigate approximately 253 acres of macadamia nut trees. The lined, 20-foot-deep storage reservoir would have a water surface area of approximately 7 acres.

Storage of recycled water is not without its challenges. Recycled water contains nutrients that allow algae to grow. The algae can cause odors if stagnant water conditions are allowed to develop. Recycled water that is stored in open reservoirs must often be re-treated to improve the water quality characteristics. Recycled water reservoirs can be equipped with mixers to prevent stagnant water conditions, and/or be equipped with floating covers to block the sunlight that fosters algal growth.

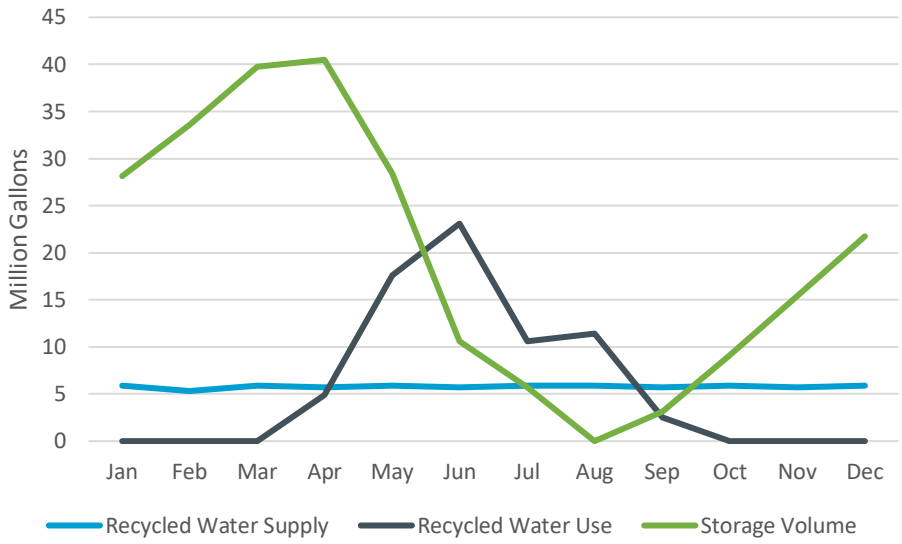

Figure 7-8. Seasonal Storage Reservoir Analysis

Implementation of a seasonal storage reservoir and recycling program would not eliminate the need for a land application system at the WWTP, as described previously. HAR 11-62 requires a disposal system for all recycled water system, to provide a means for disposal of water that does not meet R-1 standards or disposal of excess water should the seasonal storage reservoir capacity be exceeded during an exceptionally wet year.

7.1.5 Option 5: Maximum Practical Treatment

Option 5 consist of implementing advanced wastewater treatment processes that represent maximum practical treatment. The option is illustrated schematically in Figure 7-9. The process treatment train consists of a 5-stage Bardenpho activated sludge treatment process, followed by chemical addition and denitrifying filters to reliably reduce total nitrogen to less than 4 mg/L and total phosphorus to less than 0.1 mg/L. The treatment processes would be followed by a disinfection process to create R-1 recycled water. The recycled water produced would be used to irrigate macadamia nut trees as per Option 3. A seasonal storage reservoir could also be implemented at additional cost. A land application system would be required as per the previous Options.

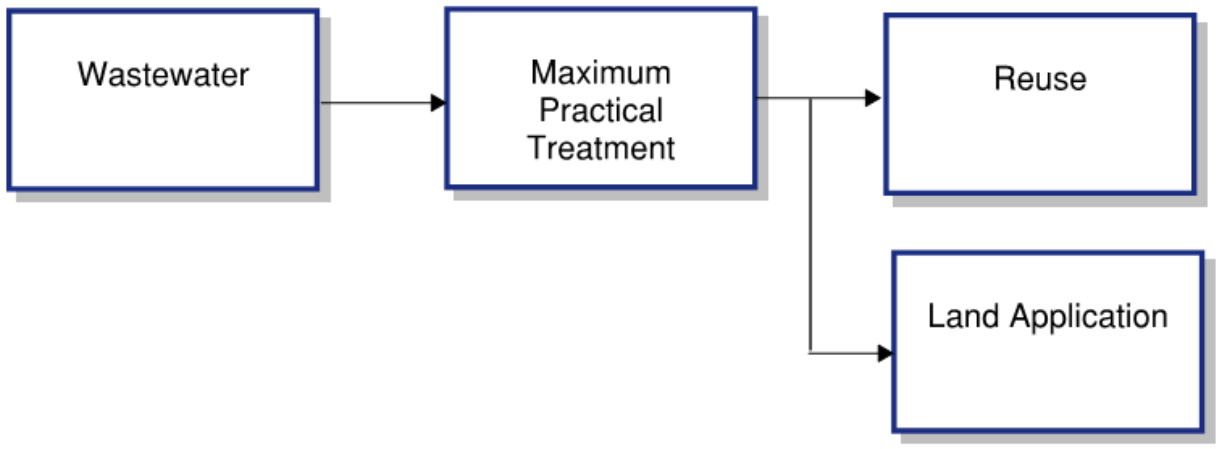

Figure 7-9. Option 5 Schematic Diagram

7.2 Cost Comparisons

Planning-level cost estimates were prepared for the five options, as described below.

7.2.1 Capital Costs

Table 7-1 summarizes the capital costs associated with the options described above. Additional detail can be found in Appendix A. The capital costs shown in the table do not include costs associated with collection system improvements or closure of the existing LCCs.

Table 7-1. Summary of Capital Cost Estimates

Option	Name	Estimated Capital Cost
1	Aerated lagoons/constructed wetland/land application	$14.6 million
2	R-1 treatment/land application	$18.4 million
3	R-1 treatment/seasonal water recycling	$20.2 million
4	R-1 treatment and storage for 100% water recycling	$30.4 million
5	Maximum practical treatment	$26.0 million

Comparison of options 1 and 2 shows that providing R-1 treatment instead of the aerated lagoon and wetland natural treatment system will increase the capital cost by approximately $3.8 million. Option 3 shows that addition of water recycling to reuse approximately 25 percent of the annual flow would add an additional $1.8 million in capital costs. Option 4 shows that constructing a seasonal storage reservoir to recycle 100 percent of the flow would add an additional $10 million in capital costs. Comparison of options 3 and 5 shows that providing maximum practical treatment instead of normal R-1 treatment would add $5.8 million in capital costs.

7.2.2 Operation and Maintenance Costs

Operation and maintenance (O&M) costs include labor, electricity, chemicals, spare parts, sludge management, and other costs required to operate and maintain the facility. Table 7-2 provides a

summary of the O&M cost estimates developed for the options. Additional details can be found in Appendix A.

Table 7-2. Summary of O&M Cost Estimates

Option	Name	Estimated Annual O&M Cost
1	Aerated lagoons/constructed wetland/land application	$236,000
2	R-1 treatment/land application	$1,052,000
3	R-1 treatment/seasonal water recycling	$1,055,000
4	R-1 treatment and storage for 100% water recycling	$1,063,000
5	Maximum practical treatment	$1,421,000

As shown in the table, option 1 incurs significantly lower O&M costs than the other options. The significant cost differential is due to the simple aerated lagoon natural treatment system that requires less labor, electricity, chemical, and maintenance that the other options.

7.2.3 Recycled Water Sale Proceeds

Options 3, 4, and 5 will produce a marketable product in the form of R-1 recycled water that could be sold to users for irrigation purposes. The value of recycled water is a function of the value of the water that it replaces. In general, recycled water is sold to users at a fraction of the price of the water that is being replaced to provide a financial incentive to use the product. The typical recycled water price is 25 percent to 90 percent of the water it replaces.

The Pahala WWTP will be located at elevation 750 feet MSL. The cost to pump groundwater from the basal lens to the ground surface at the WWTP is approximately $1,078 per million gallons. Table 7-3 provides a summary of a recycled water sales assessment of each option, assuming the recycled water is sold for 90 percent of the cost of the irrigation water it would replace. Additional detail is provided in Appendix A.

Table 7-3. Summary of Annual Recycled Water Sale Proceeds

Option	Name	Annual Volume Recycled (Mgal)	Maximum Annual Sales Proceeds
1	Aerated lagoons/constructed wetland/land application	0	$0
2	R-1 treatment/land application	0	$0
3	R-1 treatment/seasonal water recycling	17	$17,000
4	R-1 treatment and storage for 100% water recycling	70	$68,000
5	Maximum practical treatment	17	$17,000

7.2.4 Life-Cycle Costs

Life-cycle costs represent the total costs to the community to construct and operate the wastewater treatment system over a 30-year period. The life-cycle cost evaluation includes capital and O&M costs, and recycled water sales proceeds as described above. In addition, equipment replacement allowances are included after 20-years of operation. The life-cycle cost evaluation includes an

inflationary factor to account for long-term changes in the value of money. The life-cycle costs are expressed as the Net Present Value (NPV). The NPV represents the amount of money that the County would need to set aside now in an interest-bearing account to cover all of the costs over the defined life-cycle. Table 7-4 provide a summary of the life-cycle cost evaluation. Additional detail can be found in Appendix A.

Table 7-4. Summary of Life-Cycle Cost Estimates

Option	Name	Estimated Life-Cycle Cost
1	Aerated lagoons/constructed wetland/land application	$21.2 million
2	R-1 treatment/land application	$43.0 million
3	R-1 treatment/seasonal water recycling	$44.5 million
4	R-1 treatment and storage for 100% water recycling	$54.0 million
5	Maximum practical treatment	$59.0 million

As shown in the table, option 1 incurs the lowest life-cycle costs, and the other options would all incur over double to nearly triple the cost over the 30-year life-cycle. The life-cycle cost estimates are shown graphically in Figure 7-10. The operating costs shown in the figure include benefits (i.e., cost reductions) from recycled water sales where applicable.

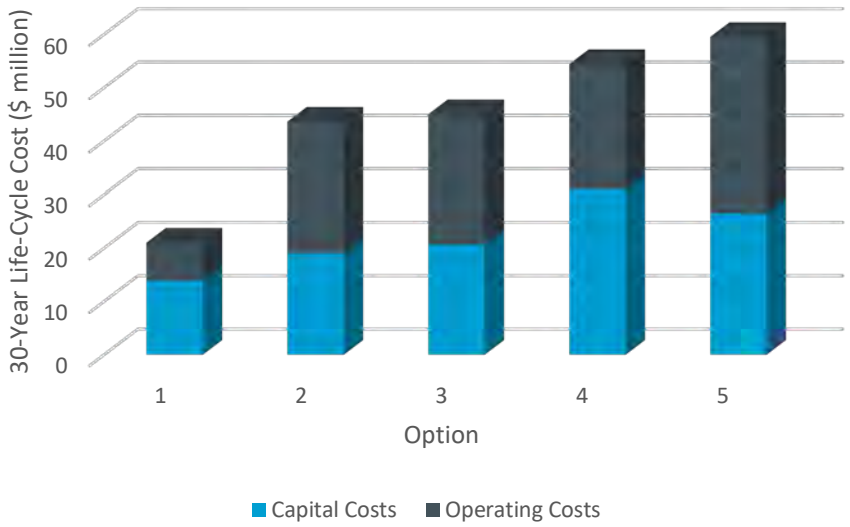

Figure 7-10. Life-Cycle Costs of Options

As shown in the graph, the operating cost differential between option 1 and the other options is the leading contributor to the lower life-cycle cost of option 1. The major operating cost differences are discussed below.

7.3 Non-Economic Discussion

The options are discussed on a non-economic basis below.

7.3.1 Labor Requirements

The Pahala WWTP will be operated by the COH DEM, Wastewater Division that is based in Hilo. The Hilo-based WWTP operators will regularly visit to facility to check the system status, make operational adjustments, and draw samples for required laboratory testing. In addition, maintenance personnel will visit the WWTP as needed to conduct equipment and electrical system repairs.

A major difference between option 1 and the other options is the frequency of routine operator visits required, and the number of personnel routinely required. Option 1 will require a single operator to normally visit the site once per week. The other options will require daily operator visits to conduct sampling that is required for R-1 compliance. In addition, options 2 through 5 consist of mechanical treatment technology that required more operator attention than option 1. Table 7-5 compares the operational labor differences for the options, as expressed as full-time equivalents (FTEs).

Table 7-5. Comparison of Operational Labor Requirements

Option	Name	Estimated Operational Labor Requirement (FTEs)
1	Aerated lagoons/constructed wetland/land application	0.3
2	R-1 treatment/land application	3.7
3	R-1 treatment/seasonal water recycling	3.7
4	R-1 treatment and storage for 100% water recycling	3.7
5	Maximum practical treatment	5.6

7.3.2 Operational Complexity

HAR 11-61 establishes operator certification requirements for WWTPs. The DOH requires that certified operators operate municipal WWTPs. The larger and/or more complex the wastewater treatment process, the higher grade of operator required at the facility. Options 1 through 5 were evaluated for operator certification requirements based on the criteria established in HAR 11-61. Table 7-6 summarizes the results of the evaluation. As shown in the table, option 1 would require a Grade I operator, while the other options would require a Grade IV operator (the highest grade). The higher requirements for options 2 through 5 are due to the complexity of the treatment processes compared to option 1. In general, the County has difficulty attracting and retaining Grade IV operators.

Table 7-6. Comparison of Operator Certification Requirements per HAR 11-61

Option	Name	Operator Certification Level Requirement
1	Aerated lagoons/constructed wetland/land application	I
2	R-1 treatment/land application	IV
3	R-1 treatment/seasonal water recycling	IV
4	R-1 treatment and storage for 100% water recycling	IV
5	Maximum practical treatment	IV

7.3.3 Energy Consumption

Figure 7-11 provides a comparison of the electrical energy requirements of the five options. As shown in the graph, option 1 will require significantly less electrical energy to operate, due to the use of natural treatment systems (aerated lagoons) instead of mechanical treatment processes that require more aeration and process pumping.

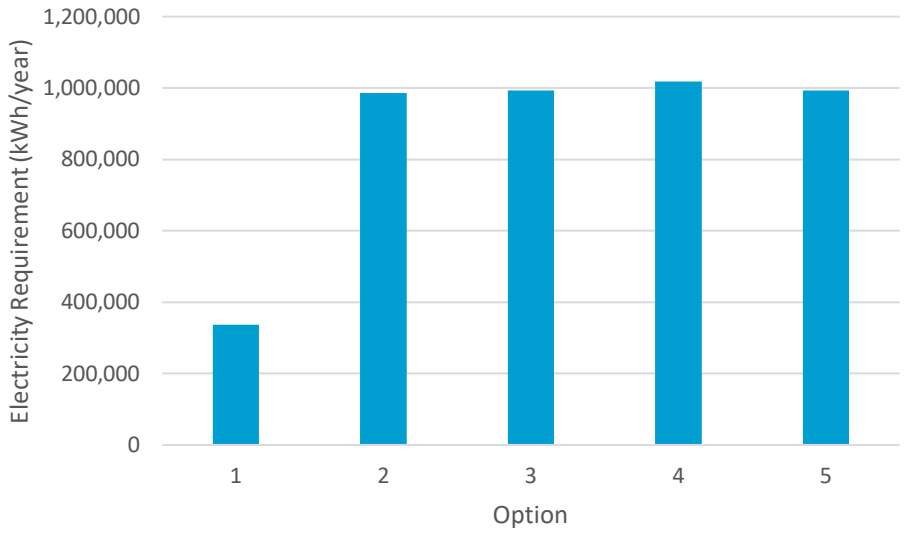

Figure 7-11. Comparison of Electrical Energy Requirements

7.3.4 Sludge Management

Sludge management for Option 1 is significantly different than the other options. The partial-mix aerated lagoon treatment system allows wastewater solids to accumulate at the bottom of the lagoon, forming a sludge blanket that slowly anaerobically digests. Sludge removal is infrequent, typically on the order once every 15 to 20 years. The resulting solids are well-digested and inoffensive due to the long retention time in the lagoons.

Options 2 through 5 would require an aerobic digester to stabilize and store waste solids from the activated sludge treatment process. The solids would need to be dewatered and trucked to a landfill on a weekly basis.

7.4 Living Machine®

Living Machine® technology was suggested during community outreach meetings. Living Machine® is a proprietary technology by Worrell Water Technologies that incorporates aerated tanks planted with vegetation to provide an attractive wastewater treatment process. In colder climates the aerated tanks are housed in a greenhouse for protection. In addition, subsurface flow wetlands with continuous and/or batch flow can be included in the process to provide desired treatment.

The Living Machine® technology has been implemented in “green” buildings like the San Francisco Public Utilities Commission building, the Port of Portland Headquarters, and others. Review of the company’s website did not reveal any municipal projects completed on the scale of what would be needed for Pahala. Therefore, the technology is considered to be not feasible.

It should be noted that the proposed non-proprietary treatment system (aerated lagoons and subsurface flow wetland) uses essentially the same natural treatment processes as the Living Machine®, but on a municipal scale.

7.5 Septic Tank Alternatives

A previous assessment recommended installation of a community septic tank and repurposing one of the existing LCCs to serve as a seepage pit (SSFM, July 2007), in accordance with Alternative 1 proposed to the community by the County in 2004 (County of Hawaii, November 5, 2004). This and other options that have been raised during the community outreach process that incorporate septic tank technology are discussed below.

7.5.1 Community Septic Tank

The effectiveness of a septic tank is directly related to the amount of hydraulic detention time provided by the tank volume. The previous study (SSFM, July 2007) suggested a 24-hour detention time would be adequate. Applying the current flow projections for the project indicate a 190,000-gallon tank would be appropriate if this criterion is used. However, for large community septic tanks it has been found that longer detention times are needed to optimize treatment performance, avoid the need for frequent septage pumping, and to account for peak flow rates that are developed by community wastewater collection systems. Applying appropriate design criteria (Crites and Tchobanoglous, 1998), to the project results in the need for an 800,000-gallon tank, which would require pumping on a 3-year interval. The area required for an appropriately-sized community septic tank would be approximately ¼ acre.

The use of a community septic tank would require the DOH to issue a variance to HAR 11-62, which requires WWTPs with design capacities greater than 100,000 gallons per day to produce effluent containing less than 30 mg/L of both BOD_5 and TSS – septic tanks are not able to produce effluent of this quality. A secondary treatment process is needed to comply with the effluent quality requirements contained in the DOH regulations. The County would need to reapply for the variance every 5-years, and if not renewed then secondary treatment would need to be provided.

Additionally, odors from a community septic tank present a significant concern. A septic tank is an anaerobic treatment process that produces hydrogen sulfide, reduced sulfur compounds, and other odorous gases. Odors emanating from septic tanks at individual residences are typically dispersed to the atmosphere throughout the community via the household plumbing roof vents. A community septic tank would concentrate the community's emissions to a single point source that would require foul air collection and treatment to avoid nuisance odor conditions. A dual-stage scrubber capable of treating approximately 3,600 cubic feet per minute of foul air would be required to avoid nuisance odor conditions. The dual-stage scrubber would consist of a biotrickling filter, followed by a granular activated scrubber.

7.5.2 Converting LCC to Seepage Pit

A previous study (SSFM, July 2007) suggested that the existing LCC located on the County-owned parcel TMK 9-6-002:024 could be converted to a seepage pit that would be regulated by DOH as an injection well. HAR 11-23-07 allows injection wells located mauka of the UIC line that were in existence prior to July 6, 1984 to continue to operate. However, the flow to the wells cannot increase, nor can a new well be constructed. Therefore, the earlier plan to convert the existing LCC to a seepage pit is not feasible for the following reasons:

- Closing LCC No. 2 that is located on private property would not be allowed, as it would increase the flow to LCC No. 1 (converted to a seepage pit that is regulated as an injection well) that is located on County property.

- The capacity, structure, and condition of the existing LCC No. 1 is not known. The LCC could either be a lava tube or a large conventional cesspool. A geotechnical investigation conducted on the site to depths of 30 to 35 feet did not reveal the presence of lava tubes (Masa Fujioka & Associates, January 9, 2007), therefore it is likely a large conventional cesspool. The County attempted to determine the structure and condition of the LCC via closed circuit TV inspection, but could not ascertain either due to technological limitations. It is not known if the LCC could accommodate the flow from the existing service area if LCC No. 2 is closed.
- HAR 11-62-25 requires new and proposed effluent disposal systems to have a backup disposal system capable of handling the peak flow. A second seepage pit cannot be constructed to comply with the regulatory requirement because the site is located mauka of the UIC line. If the existing seepage pit were to fail then a replacement cannot be constructed.
- The Kau Community Development Plan requires the County to provide for eventual construction of sewers throughout the community. Providing sewers for the entire community will increase wastewater flows considerably, as presented in Section 5. Increasing flow to the existing LCC (converted to a seepage pit) would not be allowed. Therefore, the use of the existing LCC as a disposal system could prevent the County from providing the community's desired future wastewater needs.

For these reasons, converting the existing LCC to a seepage pit is considered to be not feasible.

7.5.3 Leachfield Disposal

Leachfields are effluent disposal systems consisting of buried gravel-filled absorption trenches. Significant treatment occurs as septic tank effluent percolates through the soil surrounding the leachfield trenches. Leachfields are an integral part of residential septic systems, and DOH has established trench design criteria applicable to both residential and municipal-scale leachfields. In particular, HAR 11-62-34 requires trenches to be sized based on bottom area only. Application of the DOH criteria to the project yields a need for at least 30 acres of land to satisfy DOH hydraulic loading rate and redundancy requirements. Achieving even distribution of effluent over a leachfield of this size would be challenging at best. Therefore, leachfield disposal for the project is considered to be not feasible.

7.5.4 Conversion to Individual Wastewater Systems

The concept of a community wastewater system could be abandoned and all houses be required to construct individual wastewater systems comprised of a septic tank and leachfield. However, many of the lots in the community are small (less than 10,000 square feet) and significantly improved, making the feasibility of constructing individual wastewater systems on every lot uncertain. HAR 11-62-34 allows construction of seepage pits where there is insufficient land area to install absorption trenches (i.e., a leachfield), but prohibits construction in soils having percolation rates slower than 10 minutes per inch or where rapid percolation through such soils may result in contamination of water-bearing formations. The soils in the community are classified as Puueo-Naalehu complex, 3 to 10 percent slopes in the National Resource Conservation Service soil survey. This soil type consists of approximately 18 inches of extremely cobbly medial silt loam over cobbles and bedrock. This soil profile is too thin for conventional soil absorption trenches, so residents with sufficient space would be required to import fill soil to create elevated mound systems in accordance with HAR 11-62-34 to achieve adequate soil depth. Residents without sufficient space could potentially install seepage pits if suitable subsurface geology could be located. However, previous subsurface investigations in the community (Masa Fujioka & Associates, January 9, 2007, and Geolabs-Hawaii, September 23,

1998) revealed extremely permeable clinker layers and numerous lava tubes, both of which would not meet HAR 11-62-34 requirements for seepage pits. For these reasons, conversion to individual wastewater systems is considered to be not feasible.

7.5.5 Gray Water Systems/Composting Toilets

The DOH has published guidelines for the reuse of gray water (DOH, June 22, 2009). The DOH defines black water as wastewater discharged from toilets and urinals and kitchen sinks. Gray water is defined as wastewater discharged from showers and bathtubs, lavatories, wastewater that has not contacted toilet waste, sinks not used for food preparation.

Composting toilets are a type of dry toilet that treats human excreta by a biological process called composting. The process leads to the decomposition of organic matter and turns the human excreta into a compost-like material but does not destroy all pathogens. Composting toilets do not require a connection to a septic tank or sewer system (Wikipedia).

The combination of a gray water system and composting toilet cannot replace an individual wastewater system or a sewer connection, because black water from the kitchen sink in a residence requires either an individual wastewater system or sewer connection.

7.6 Package Plant

Package plants are commercially-available prefabricated wastewater treatment plants. Package plants are commonly used for small WWTPs with capacity requirements less than 250,000 gallons per day. Package plants are generally based on the extended aeration activated sludge process. Use of a package plant in lieu of aerated lagoons at Pahala could potentially save some capital cost but would require daily visits by WWTP operators to monitor and adjust the process, and to waste sludge. In addition, weekly or bi-weekly sludge dewatering and disposal would be required. The results of an economic analysis of a package plant alternative for Pahala are:

- *Capital cost: $12.6 million*
- *Annual O&M cost: $1.1 million*
- *Life-cycle cost: $37 million.*

Comparison of these values to the results shown in Tables 7-1, 7-2, and 7-4 show that a package plant at Pahala would incur significantly higher life-cycle costs compared to the recommended aerated lagoon approach.

Section 8

Alternative Site Evaluation

Nine sites were evaluated as potential locations for the Pahala WWTP. Each site was assessed for twenty-one criteria, in four broad categories: environmental, social and cultural; location and site; land use and availability; and collection system and service area.

8.1 Methodology

The site evaluation was performed according to the following process:

1. Potential sites for the Pahala WWTP were initially identified by the Department of Environmental Management. Additional sites were identified based on feedback from the Pahala community obtained during Community Outreach meetings that took place in December 2017.
2. Four general categories and twenty-one criteria were established and defined for the analysis.
3. Six "fatal flaw" conditions were identified. Sites with a fatal flaw were eliminated from further consideration.
4. Relative weighting factors were established for each category and criteria.
5. Sites were mapped using GIS. Data such as soil type, location of subsurface and surface water, topography, zoning and prevailing wind direction were determined.
6. Each site was evaluated and scored for the twenty-one criteria.
7. A weighted ranking was determined for each site, based on the weighting factors established in Step 4.
8. A preferred site was identified, based on the weighted high score.

8.2 Site Locations

Ownership, location, and proximity to the existing LCCs for all siting alternatives considered is illustrated in Figure 8-1.

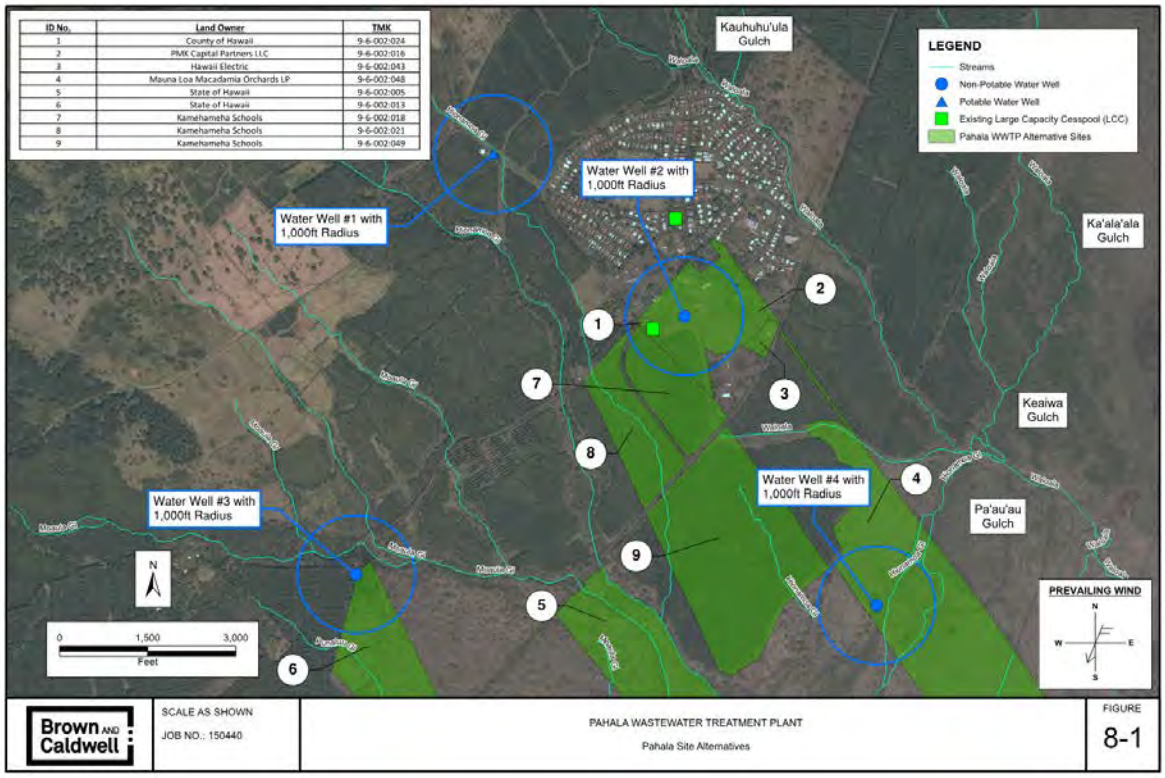

Figure 8-1. Pahala Site Alternatives

8.3 Criteria

The criteria used for the analysis are presented for each of four categories in Tables 8-1, 8-2, 8-3 and 8-4. A score was assigned to each criterion based on definitions included in the tables. A score of five represents a preferred or positive condition, and a score of one a less preferred or negative condition. A score of zero indicates a fatal flaw; six fatal flaw conditions were identified during the analysis are identified in the corresponding table.

Table 8-1 outlines the environmental, social, and cultural criteria considered in the analysis.

Table 8-1. Environmental, Social and Cultural Criteria

Criteria	Scoring and Definitions					
	5	4	3	2	1	0 = Fatal Flaw
Presence of or proximity to archaeological/cultural sites	No known or suspected sites	Confirmed or suspected sites and mitigatable	No information available	Suspected sites and mitigation ability unknown	Confirmed sites and mitigation ability unknown	Confirmed sites and unmitigatable
Proximity of treatment units to existing occupied buildings	More than 1000 ft. from any occupied building		Between 50 and 1000 ft. from non-school building	Between 50 and 1000 ft. of school	Less than 50 ft from any occupied building	
Prevailing wind direction	Site is downwind of most of the community		Site is central		Site is upwind of most of the community	
Biology	Endangered or threatened species not present		Presence of endangered or threatened species unknown		Endangered or threatened species known to be present	Endangered or threatened species known to be present and unmitigatable
Visual impact	Natural visual mitigation (hill, berm, vegetation, remoteness) exists		Visible location, mitigatable with trees or other engineered buffers		Visible location, unmitigatable	
Contamination from prior land use	No suspected industry-related contamination issues		Presence of contamination unknown		Suspected or confirmed contamination issues	
Previously disturbed or developed	Yes		Partial		No previous development or disturbance	

The circumstance where a cultural or historical site is known to exist within the treatment facility footprint and mitigation to relocate, protect, or preserve that site is not possible, was identified as a fatal flaw condition.

From an environmental perspective, the presence of endangered or threatened species was considered negative. A site previously disturbed or developed was viewed as positive, unless contamination from a previous land use was suspected.

Considerations specific to social impact include proximity to occupied buildings (including residences, school, commercial establishments and others), prevailing wind direction, and visual impact.

Table 8-2 outlines the location and site characteristics considered in the analysis.

Table 8-2. Location and Site Characteristics

Criteria	Scoring and Definitions					
	5	4	3	2	1	0 = Fatal Flaw
Parcel size	More than 14.9 acres					Less than 14.9 acres
Soils type	Good soil and in sufficient amounts in area of parcel useable for disposal		Good soil but over limited area and disposal modification required		Marginal soil in area of parcel useable for disposal	No soil in area of parcel useable for disposal
Topography	Gentle slopes (less than 8%)		Moderate slopes (8% - 18%) or localized high/low points		Steep slopes (18% - 20%)	Extreme slopes (greater than 20%)
Proximity to water well	Outside of both 1000 ft. radius and upgradient influence zone of any well		Outside of 1000 ft. but suspected within upgradient influence zone of non-potable well		Within 1000 ft. or within upgradient influence zone of non-potable well	Within 1000 ft. or within upgradient influence zone of potable well
Presence of lava tubes	None		Possible or unknown		Known	
Proximity to surface water, intermittent stream or coast line	Treatment and disposal more than 500 ft. away		Treatment and disposal between 50 to 500 ft.		Treatment and disposal less than 50 ft. away	
Flood control / drainage	No risk of flooding		Flood risk unknown		Prone to flooding or within flood zone	
Vehicle access	Vehicle access currently exists		Existing easement, but new road or significant road upgrades required in or via county/private right if way	Existing easement, but new road or significant road upgrades required in or via state right-of-way	No current vehicle access or easement, access legally restricted, or significant obstruction to access	
Power and potable water availability	Utilities currently available at property line and within 400 ft. of site, no new easement required, no known significant obstructions (i.e. - culverts, streams, cultural sites)		Utilities available within 400 yds. of property or unknown		Potable water and/or power not currently available within 400 yds. of property and/or significant obstruction to utility construction	

Three fatal flaw conditions were identified for the location and site characteristics category in Table 8-2:

- Sites less than 14.9 acres in size, which is the least amount of land needed for treatment, disposal, and future growth.
- Average slopes greater than 20 percent, which significantly increase the cost of construction and limit design options.
- Location within a 1000-foot radius surrounding a potable water well, which is prohibited by HAR 11-62 for the protection of drinking water in the State of Hawaii.

Table 8-3 outlines the collection system and service area characteristics considered in the analysis.

Table 8-3. Collection System and Service Area Criteria

Criteria	Scoring and Definitions				
	5	4	3	2	1
Distance from LCC collection area	Parcel is adjacent to existing LCC or less than 0.25 miles away	Parcel is 0.25-0.5 mile away from existing LCC	Parcel is 0.5-1.0 miles away from existing LCC	Parcel is 1.0 – 1.5 miles away from existing LCC	Parcel is more than 1.5 miles away from existing LCC
Gravity flow possible or pumping required	Gravity flow possible				Pumping required for wastewater transmission from collection area to site
Number of properties newly accessible	Commercial areas become accessible		Additional individual residential properties become accessible outside of LCC service area		No additional properties become accessible

A site location requiring large transmission distances of more than two miles are less preferable due to both initial capital cost and future operations and maintenance requirements. Similarly, sites where wastewater can flow via gravity from the collection area are preferable to those requiring a pump station.

Newly accessible refers to properties within the service area that are not currently connected to the LCC, but will become accessible to the County-owned sewer system when the collection lines are relocated into the roadways fronting the property. Hawaii County Code requires connection of these properties once the new collection system is constructed, and their individual wastewater systems (cesspools or septic tanks) properly removed from service. All individual cesspools in the State of Hawaii must be converted or closed by the year 2050.

Table 8-4 outlines the land use and availability characteristics considered in the analysis.

Table 8-4. Land Use and Availability Criteria

Criteria	Scoring and Definitions				
	5	4	3	2	1
Current zoning and land use	WWTP currently permitted in zoning without Special Permit		WWTP possible onsite Special Permit required		WWTP not recommended on site
Land availability	Owner willing and able to sell or land currently government (state, county) owned	Subdivision required or friendly condemnation required	Difficult or lengthy approval process expected or owner willingness to sell unknown	Owner unwilling to sell or unfriendly condemnation of land required (private corporate owner)	Owner unwilling to sell or unfriendly condemnation required (private family owner)

Although public facilities are permitted in any zoning in the County of Hawaii, construction of a wastewater treatment facility requires a Special Permit within some zones. No fatal flaws were identified for the land use and availability category.

8.4 Criteria Weighting Factors

To consider the relative importance to the categories and criteria, each was assigned a weighting factor for the analysis. Weighting allows for appropriate consideration of all factors - both the technical and non-technical - associated with siting. Relative weighting is summarized in Table 8-5.

Table 8-5. Relative Weighting Factors

Category	Category Weight	Criteria	Criteria Weight
Environmental, social and cultural	35%	Presence of and/or proximity to archaeological/cultural sites	25%
		Proximity of treatment units to existing occupied buildings	25%
		Prevailing wind direction	25%
		Biology	10%
		Visual impact	5%
		Contamination from prior land use	5%
		Previously disturbed or developed	5%
			100%
Location and site characteristics	35%	Parcel size	25%
		Soils type	25%
		Topography	15%
		Proximity to water well	10%
		Presence of lava tubes	8%
		Proximity to surface water, intermittent stream or coast line	6%
		Flood control / drainage	5%
		Existing vehicle access	3%
		Power and potable water availability	3%
			100%
Collection system and service area	20%	Distance from LCC collection area	50%
		Gravity flow possible or pumping required	30%
		Number of properties newly accessible	20%
			100%
Land use and availability	10%	Current ownership	55%
		Current zoning and land use	45%
			100%

8.5 Raw Scores

For the nine sites identified in Figure 8-1, raw scores were assigned for each of the twenty-one criteria according to the definitions in Section 8.3. The results are presented in Table 8-6.

Table 8-6. Alternatives Analysis – Raw Scores

Category	Criteria	Site Raw Score								
		1	2	3	4	5	6	7	8	9
Environmental, social and cultural	Presence of and/or proximity to archaeological/cultural sites	5	1	2	3	3	3	4	3	3
	Proximity of treatment units to existing occupied buildings	3	3	5	5	5	5	5	5	5
	Prevailing wind direction	5	5	5	5	5	5	5	5	5
	Biology	3	3	3	3	3	3	3	3	3
	Visual impact	3	3	3	5	5	5	3	3	3
	Contamination from prior land use	3	1	3	1	3	3	3	3	3
	Previously disturbed or developed	5	5	5	3	3	3	5	5	5
Location and site characteristics	Parcel size [a]	0	5	0	5	5	5	5	5	5
	Soils type	5	1	1	3	5	1	5	5	5
	Topography	3	5	3	5	3	5	3	3	5
	Proximity to water well [b]	0	5	5	3	5	5	5	5	5
	Presence of lava tubes	1	1	3	3	3	3	3	3	3
	Proximity to surface water, intermittent stream or coast line	5	5	5	5	3	5	5	1	5
	Flood control / drainage	3	3	3	3	3	1	3	3	3
	Existing vehicle access	5	5	2	2	2	5	5	5	2
	Power and potable water availability	3	3	3	1	1	1	3	3	1
Collection system and service area	Distance from LCC collection area	5	5	4	3	3	2	5	4	3
	Gravity flow possible or pumping required	5	5	5	5	1	1	5	5	5
	Number of properties newly accessible	3	3	3	3	3	3	3	3	3
Land use and availability	Current zoning and land use	3	3	3	3	3	3	3	3	3
	Current ownership	5	5	3	3	5	5	4	4	4
	Raw score totals (maximum possible = 105)	***FF***	***75***	***FF***	***72***	***72***	***72***	***85***	***79***	***79***

[a] *Fatal flaw condition for Sites 1 and 3.*

[b] *Fatal flaw condition for Site 1.*

As indicated in Table 8-6, fatal flaw conditions were identified for Site 1 (due to both parcel size and proximity to a drinking water well) and Site 3 (due to parcel size). These two sites were removed from further analysis.

8.6 Weighted Analysis

The weighted analysis is presented in Table 8-7.

Table 8-7. Alternatives Analysis – Weighted Scoring

Category	Criteria	Site Weighted Score								
		1	2	3	4	5	6	7	8	9
Environmental, social and cultural	Presence of and/or proximity to archaeological/cultural sites		0.25		0.75	0.75	0.75	1.00	0.75	0.75
	Proximity of treatment units to existing occupied buildings		0.75		1.25	1.25	1.25	1.25	1.25	1.25
	Prevailing wind direction		1.25		1.25	1.25	1.25	1.25	1.25	1.25
	Biology		0.30		0.30	0.30	0.30	0.30	0.30	0.30
	Visual impact		0.15		0.25	0.25	0.25	0.15	0.15	0.15
	Contamination from prior land use		0.05		0.05	0.15	0.15	0.15	0.15	0.15
	Previously disturbed or developed		0.25		0.15	0.15	0.15	0.25	0.25	0.25
Location and site characteristics	Parcel size [a]		1.25		1.25	1.25	1.25	1.25	1.25	1.25
	Soils type		0.25		0.75	1.25	0.25	1.25	1.25	1.25
	Topography		0.75		0.75	0.45	0.75	0.45	0.45	0.75
	Proximity to water well [b]		0.50		0.30	0.50	0.50	0.50	0.50	0.50
	Presence of lava tubes		0.08		0.24	0.24	0.24	0.24	0.24	0.24
	Proximity to surface water, intermittent stream or coast line		0.30		0.30	0.18	0.30	0.30	0.18	0.30
	Flood control / drainage		0.15		0.15	0.15	0.05	0.15	0.15	0.15
	Existing vehicle access		0.15		0.06	0.06	0.15	0.15	0.15	0.06
	Power and potable water availability		0.09		0.03	0.03	0.03	0.09	0.09	0.03
Collection system and service area	Distance from LCC collection area		2.50		1.50	1.50	1.00	2.50	2.00	1.50
	Gravity flow possible or pumping required		1.50		1.50	0.30	0.30	1.50	1.50	1.50
	Number of properties newly accessible		0.60		0.60	0.60	0.60	0.60	0.60	0.60
Land use and availability	Current zoning and land use		1.35		1.35	1.35	1.35	1.35	1.35	1.35
	Current ownership		2.75		1.65	2.75	2.75	2.20	2.20	2.20
	Overall weighted totals (maximum possible = 5)	***FF***	***3.61***	***FF***	***3.76***	***3.76***	***3.46***	***4.33***	***4.06***	***4.10***

[a] *Fatal flaw condition for Sites 1 and 3.*

[b] *Fatal flaw condition for Site 1.*

8.7 Results

The results of the analysis are presented in Table 8-8. Two sites were identified as having fatal flaws and the remaining seven were ranked in accordance with the overall weighted score.

Table 8-8. Alternative Site Ranking

Rank	Site
1	7
2	9
3	8
4	5
5	4
6	2
7	6
FF	1
FF	3

The top three sites for the Pahala WWTP are:

1. Site 7 (TMK 9-6-002:18)
2. Site 9 (TMK 9-6-002:49)
3. Site 8 (TMK 9-6-002:21)

Site 7 is preferred to the second and third ranked sites for the following reasons:

- A preliminary Archaeological Inventory Survey has been performed for Site 7, indicating no unmitigable cultural sites on the property.
- Site 8 is bisected by an intermittent stream bed, and a steep gulch borders the property to the west.
- Site 7 is closer to the existing collection area than both Site 8 and Site 9.
- Power and potable water are more readily available to Site 7. Site 9 will require the utilities to cross the highway.

8.8 Conclusion

Based on the analysis, Site 7 (TMK 9-6-002:18) was selected as the preferred location for the Pahala WWTP.

Section 9

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Appendix A: Cost Estimates

County of Hawaii Department of Environmental Management

Pahala WWTP
Preliminary Design - Order of Magnitude Construction Cost

Electrical and instrumentation	$	1,976,000
Headworks	$	906,000
Odor Control	$	412,000
Lagoons	$	2,222,000
Wetland	$	611,000
Land Application	$	925,000
On-site improvements	$	6,325,000
Off-site improvements	$	1,223,000
Total Estimated Construction Cost	**$**	**14,600,000**

Description	Quantity	Units	Unit Cost	Extension
Clear and grub	18.0	AC	$5,995	$107,910
BMP's	18.0	AC	$13,080	$235,440
Archaeological Monitoring	18	AC	$2,507	$45,126
Earthwork	52,000	CY	$25	$1,300,000
Sewerline extension	700	LF	$218	$152,600
Operations building	1,500	SF	$500	$750,000
Generator and tank	1	LS	$250,000	$250,000
Fencing	3,200	LF	$164	$523,200
Paving	38,000	SY	$55	$2,071,000
Off-site waterline	2,500	LF	$327	$817,500
On-site waterline	900	LF	$164	$147,150
On-site fireline	750	LF	$218	$163,500
Off-site overhead electrical	1	LS	$50,000	$50,000
Trees (landscaping & Irrigation)	10	EA	$2,500	$25,000
Headworks	1	EA	$501,339	$501,339
Odor control unit	1	EA	$329,797	$329,797
Lagoons	1	LS	$1,816,902	$1,816,902
Constructed Wetland	1	LS	$489,000	$489,000
Chlorine contact tank	1	LS	$150,000	$150,000
Chlorine feed system	1	LS	$26,577	$26,577
Land Application piping	2,700	LF	$125	$337,500
Land Application trees/ground cover	5.5	AC	$5,000	$27,500
Effluent flow meter and sampler	1	LS	$154,780	$154,780
			Subtotal	$10,472,000
		On-site electrical	15%	$1,570,800
		Mobilization/Demoblization	1.0%	$104,720
			Total	$12,148,000
		Contingency	20%	$2,430,000
TOTAL ORDER OF MAGNITUDE CONSTRUCTION COST				**$14,600,000.00**

County of Hawaii Department of Environmental Management

Pahala WWTP
Preliminary Options Assessment - Capital Costs

Wetlands

Description	Quantity	Units	Unit Cost	Extension
linear	13,100	SF	$4	$52,400
gravel	1,000	CY	$50	$50,000
piping	500	LF	$100	$50,000
Effluent Structure	1	EA	$50,000	$50,000
Standpipe	1	EA	$25,000	$25,000
plantings	13,100	sf	$20	$262,000
			Subtotal	$489,000

County of Hawaii Department of Environmental Management

Pahala WWTP
Options Assessment Cost Summary

Capital Costs

Option No.	Treatment	Disposal	Recycling	Capital Cost ($M)								Total ($M)
				Lagoons	R-1	Limit of TT	Disposal	Reservoir	Diurnal Tank	R-1 Pumps	R-1 Pipelines	
1	Aerated lagoons/wetland/disinfection	Land application	None	10.8			3.8					**14.6**
2	MBR (R-1)	Land application	None		14.6		3.8					**18.4**
3	MBR (R-1)	Land application	Seasonal (25% of total annual flow)		14.6		3.8		0.8	0.5	0.5	**20.2**
4	MBR (R-1)	Land application	Annual storage reservoir (100% of flow)		14.6		3.8	6.1	3.5	1.0	1.5	**30.4**
5	Limit of treatment technology	Land application	Seasonal (25% of total annual flow)			20.4	3.8		0.8	0.5	0.5	**26.0**

Annual O&M Costs

No.	Treatment	Disposal	Recycling	Annual O&M Costs ($)					
				Labor	Electricity	Chemicals	Maintenance	Sludge Mgmt	Total
1	Aerated lagoons/wetland/disinfection	Land application	None	$42,000	$118,000	$12,000	$54,000	$10,000	$236,000
2	MBR (R-1)	Land application	None	$582,000	$345,000	$10,000	$73,000	$42,000	$1,052,000
3	MBR (R-1)	Land application	Seasonal (25% of total annual flow)	$582,000	$348,000	$10,000	$73,000	$42,000	$1,055,000
4	MBR (R-1)	Land application	Annual storage reservoir (100% of flow)	$582,000	$356,000	$10,000	$73,000	$42,000	$1,063,000
5	Limit of treatment technology	Land application	Seasonal (25% of total annual flow)	$874,000	$348,000	$35,000	$102,000	$62,000	$1,421,000

Annual Recycled Water Sales

No.	Treatment	Disposal	Recycling	Annual R-1 Water Sales	
				High Price	Low Price
1	Aerated lagoons/wetland/disinfection	Land application	None	$0	$0
2	MBR (R-1)	Land application	None	$0	$0
3	MBR (R-1)	Land application	Seasonal (25% of total annual flow)	$17,000	$9,000
4	MBR (R-1)	Land application	Annual storage reservoir (100% of flow)	$68,000	$38,000
5	Limit of treatment technology	Land application	Seasonal (25% of total annual flow)	$17,000	$9,000

Equipment Replacement at 20-Years

No.	Treatment	Disposal	Recycling	Equipment Replacement
1	Aerated lagoons/wetland/disinfection	Land application	None	$2,693,000
2	MBR (R-1)	Land application	None	$3,653,000
3	MBR (R-1)	Land application	Seasonal (25% of total annual flow)	$3,653,000
4	MBR (R-1)	Land application	Annual storage reservoir (100% of flow)	$3,653,000
5	Limit of treatment technology	Land application	Seasonal (25% of total annual flow)	$5,097,000

County of Hawaii Department of Environmental Management
Pahala WWTP
Preliminary Options Assessment - Capital Costs

Common Capital Inputs

Current ENRCCI:	10870
Area markup factor:	30%
Contingency factor:	20%
Project soft costs factor:	25%

Lagoon-Wetland Treatment

Description	Quantity	Units	Unit Cost	Extension
Clear and grub	8	AC	$15,000	$120,000
BMPs	8	AC	$13,000	$104,000
Earthwork	9,500	CY	$25	$237,500
Sewer extension	700	LF	$160	$112,000
Headworks	1	EA	$500,000	$500,000
Lagoons	1	LS	$1,800,000	$1,800,000
Wetlands	1	LS	$350,000	$350,000
Chlorine contact tank	1	LS	$100,000	$100,000
Chlorine feed system	1	LS	$30,000	$30,000
Operations building	1,500	SF	$500	$750,000
Generator and tank	1	LS	$250,000	$250,000
Fencing	1,500	LF	$100	$150,000
Paving	15,000	SY	$55	$825,000
Water line extension	1,500	LF	$160	$240,000
Yard piping	1	LS	$200,000	$200,000
Miscellaneous site work	1	LS	100,000	$100,000
HELCO power	1	LS	50,000	$50,000
Hawaiian Telcom	1	LS	20,000	$20,000
Archeological monitoring	8	AC	2,500	$20,000
Visual buffer trees and irrigation	10	EA	2,500	$25,000
Subtotal				$5,983,500
Electrical and instrumentation			20%	$1,196,700
Total construction				$7,180,200
Contingency				$1,436,040
Total construction				$8,616,240
Project soft costs				$2,154,060
Total project cost:				**$10.770 million**

Land Application

Description	Quantity	Units	Unit Cost	Extension
Clear and grub	6	AC	$15,000	$82,500
BMPs	6	AC	$13,000	$71,500
Earthwork	33,500	CY	$25	$837,500
Fencing	1,700	LF	$100	$170,000
Paving	23,000	SY	$30	$690,000
Yard piping	3,500	LF	$160	$560,000
Planting	6	AC	10,000	$60,000
Effluent flow meter and sampler	1	LS	50,000	$50,000
Archeological monitoring	6	AC	2,500	$15,000
Subtotal				$2,536,500
Electrical and instrumentation			0%	$0
Total construction				$2,536,500
Contingency				$507,300
Total construction				$3,043,800
Project soft costs				$760,950
Total project cost:				**$3.805 million**

R-1 Treatment

Capacity:	0.19	mgd	
Mainland cost at current ENRCCI:	$39.44	/gpd	from R-1 WWRF capital regression. y=24.003*(x^-0.299)
Local construction cost:	$51.27	/gpd	
Construction estimate:	$9.7	million	
Contingency:	$1.9	million	
Total construction cost:	$11.7	million	
Project soft costs:	$2.9	million	
Total project cost:	**$14.6**	**million**	

Limit of Treatment Technology

ENRCCI of estimate:	8952		
10 mgd WWTP cost:	$13.80	/gpd	
10 mgd WWTP cost at current ENRCCI:	$16.76	/gpd	
Local 10 mgd WWTP cost:	$21.78	/gpd	
Small flow escalation:	$71.54	/gpd	y=43.47x^-0.3 Per WERF analysis. BNR + advanced nutrient removal
Construction estimate:	$13.6	million	
Contingency:	$2.7	million	
Total construction cost:	$16.3	million	
Project soft costs:	$4.1	million	
Total project cost:	**$20.4**	**million**	

Seasonal Storage Reservoir

Volume:	124	ac-ft	
Mainland construction cost:	$25,000	/ac-ft	
Subtotal:	$3.1	million	
Local construction cost:	$4.0	million	
Contingency:	$0.8	million	
Total construction cost:	$4.8	million	
Project soft costs:	$1.2	million	
Total project cost:	**$6.1**	**million**	

Diurnal R-1 Tank - Seasonal Program

Volume:	0.19	mgal	1 peak day
Local construction cost:	$3.00	/gallon	
Subtotal:	$0.6	million	
Contingency:	$0.1	million	
Total construction cost:	$0.7	million	
Project soft costs:	$0.1	million	
Total project cost:	$0.8	million	

Diurnal R-1 Tank - Reservoir Program

Volume:	0.77	mgal	1 peak day
Local construction cost:	$3.00	/gallon	
Subtotal:	$2.3	million	
Contingency:	$0.5	million	
Total construction cost:	$2.8	million	
Project soft costs:	$0.69	million	
Total project cost:	$3.5	million	

R-1 Delivery Pumps - Seasonal Program

Peak day flow	0.19	mgal
Delivery time:	8	hours
Pumping capacity:	396	gpm
Mainland construction cost @ ENRCCI 4500:	$100,000	
Current mainland construction cost:	$242,000	
Local construction cost:	$315,000	
Contingency:	$63,000	
Total construction cost:	$378,000	
Project soft costs:	$94,500	
Total project cost:	$0.5	million

R-1 Delivery Pumps - Reservoir Storage

Peak day flow	0.77	mgal
Delivery time:	8	hours
Pumping capacity:	1604	gpm
Mainland construction cost @ ENRCCI 4500:	$200,000	
Current mainland construction cost:	$483,000	
Local construction cost:	$628,000	
Contingency:	$125,600	
Total construction cost:	$753,600	
Project soft costs:	$188,400	
Total project cost:	$1.0	million

R-1 Pipelines - Seasonal Program

Peak delivery rate:	396	gpm
Pipeline diameter:	6	inches
Hawaii construction cost:	$25	/in-ft
Estimated length:	2000	feet
Local construction cost:	$300,000	
Contingency:	$60,000	
Total construction cost:	$360,000	
Project soft costs:	$90,000	
Total project cost:	$0.5	million

R-1 Pipelines - Reservoir Storage

Peak delivery rate:	1604	gpm
Pipeline diameter:	10	inches
Hawaii construction cost:	$25	/in-ft
Estimated length:	4000	feet
Local construction cost:	$1,000,000	
Contingency:	$200,000	
Total construction cost:	$1,200,000	
Project soft costs:	$300,000	
Total project cost:	$1.5	million

County of Hawaii Department of Environmental Management

Pahala WWTP
Preliminary Options Assessment
O&M Costs

Common O&M Inputs

Labor cost:	$100	/hr (loaded)
FTE effective labor:	1,560	hours/year
Chlorine tab cost:	$4	/lb
Alum cost:	$2	/lb
Electricity cost:	$0.35	/kWh
Maintenance cost:	2%	/year of equipment capital
Sludge management cost:	$1,500	/dry ton, dewatering, hauling, tip fee
Average flow:	0.19	mgd

Lagoon Treatment/Wetlands/Disinfection

Labor

Normal requirement:	1	visit/week
Operators/visit:	1	
Time per visit:	8	hours/visit
Weekly labor hours:	8	hours/week
Annual labor hours:	416	hours/year
FTEs:	0.3	FTEs
Annual labor cost:	**$41,600**	/yr

Electricity

Load	Equiv hp	Percent	kWhr/mo	$/month
Aerators	50	100%	26,845	$9,396
Screens	2	10%	107	$38
Chlorine pumps	0.5	30%	81	$28
Effluent pumps	2	100%	1,074	$376
Totals				$9,837

Annual power cost:	**$118,049**		
Annual power consumption:		337283	kWh/yr

Chemicals

Chlorine dose:	5	mg/L
Daily use:	8	lbs/d
Annual use:	2892	lbs/d
Annual cost:	**$11,568**	/yr

Maintenance

Equipment cost:	$2,692,575	(assume 25% of capital cost)
Annual maintenance:	**$53,852**	/yr

Sludge Management

Production rate:	0.1	dry tons/mgal
Annual production:	6.935	/dry tons
Sludge management cost:	$10,403	/year (deferred for 20 years)

R-1 Treatment

Labor

Normal requirement:	7	visits/week
Operators/visit:	2	
Time per visit:	8	hours/visit
Weekly labor hours:	112	hours/week
Annual labor hours:	5824	hours/year
FTEs:	3.7	FTEs
Annual labor cost:	**$582,400**	

Electricity

Daily power use:	2,700	kWh/d
Annual power use:	985,500	kWh/yr
Annual power cost:	**$344,925**	/yr

Chemicals

Annual chemical cost:	$10,000	

Maintenance

Equipment cost:	$3,652,973	(assume 25% of capital cost)
Annual maintenance:	**$73,059**	/yr

Sludge Management

Sludge production:	0.4	dry tons/mgal
Annual production:	28	/dry tons
Sludge management cost:	**$41,610**	/year

Limit of Treatment Technology

Labor

Normal requirement:	7	visits/week
Operators/visit:	3	
Time per visit:	8	hours/visit
Weekly labor hours:	168	hours/week
Annual labor hours:	8736	hours/year
FTEs:	5.6	FTEs
Annual labor cost:	**$873,600**	

Electricity

Daily power use:	2,700	kWh/d
Annual power use:	985,500	kWh/yr
Annual power cost:	**$344,925**	/yr

Chemicals

Alum dose	30	mg/L
Alum use:	48	lbs/d
Alum cost:	**$34,703**	/yr

Maintenance

Equipment cost:	$5,097,397	(assume 25% of capital cost)
Annual maintenance:	**$101,948**	/yr

Sludge Management

Sludge production:	0.6	dry tons/mgal
Annual production:	42	/dry tons
Sludge management cost:	**$62,415**	/year

Seasonal Water Recycling (25%)

Load	Equiv hp	Percent	kWhr/mo	$/month
R-1 delivery pumps	5	25%	671	$235
Totals				$235

Annual power cost:	**$2,819**	
Annual power consumption:	8054	kWh/yr

Annual Water Recycling (100%)

Load	Equiv hp	Percent	kWhr/mo	$/month
R-1 delivery pumps	5	100%	2,685	$940
Totals				$940

Annual power cost:	**$11,275**	
Annual power consumption:	32214	kWh/yr

County of Hawaii Department of Environmental Management
Pahala WWTP

R-1 Sales Assessment

Avoided Cost of Pumping Irrigation Water

Assume pumping from basal lens

Elevation at WWTP:	750	feet MSL
Flow rate:	1000	gpm
	2.2	cfs
Pump efficiency:	85%	
Motor efficiency:	90%	
Power cost:	$0.35	/kWh
BHP:	223	hp
Motor draw:	185	kW
Unit volume:	1	mgal
Time to pump unit vol:	16.7	hours
Power to pump unit vol:	3080	kWh
Cost to pump unit vol:	$1,078	

Recycled Water Pricing

High price:	90%	of avoided cost
Low price:	50%	of avoided cost

Recycled Water Sales

High price:	$970	/mgal
Low price:	$539	/mgal

Seasonal Recycling Sales

Annual reuse volume:	17	mgal
High price sales:	$16,661	/year
Low price sales:	$9,256	/year

100% Recycling Sales

Annual reuse volume:	70	mgal
High price sales:	$67,987	/year
Low price sales:	$37,770	/year

County of Hawaii, DEM
Pahala WWTP Options Assessment
Alternatives Net Present Value Analysis

			Sensitivity Adjustments (%)			Results		
Agency:	County of Hawaii, DEM							
Project/Problem:	Pahala WWTP Options Assessment	Risk Premium	Benefits	Capital Costs	Other Costs	Capital Cost	30-year NPV	Benefit over Status Quo
Alternative 1	Lagoons / wetlands/ disinfection / land application					$14,600,000	($21,196,947)	
Alternative 2	R-1 treatment / land application					$18,400,000	($42,993,152)	($21,796,205)
Alternative 3	R-1 treatment / seasonal recycling (25%)					$20,200,000	($44,496,467)	($23,299,520)
Alternative 4	R-1 treatment / annual storage res (100%)					$30,400,000	($53,785,222)	($32,588,276)
Alternative 5	Limit of treatment technology / 25% recycle					$26,000,000	($58,961,593)	($37,764,647)
Alternative 6								
Alternative 7								
Alternative 8								
Alternative 9								
Alternative 10								
Alternative 11								
Alternative 12								

Year of analysis:	2017
Escalation rate:	3.20%
Discount rate:	5.50%

Select one
- (●) All entries in dollars
- ( ) All entries in thousands of dollars

Note: "Status quo" refers to Alternative 1

Make entries in yellow cells only

County of Hawaii Department of Environmental Management

Pahala WWTP
Preliminary Options Assessment
Operator Requirement Evaluation

No.	Treatment	Disposal	Recycling
1	Aerated lagoons/disinfection	Land application	None
2	MBR (R-1)	Land application	None
3	MBR (R-1)	Land application	Seasonal (25% of total annual flow)
4	MBR (R-1)	Land application	Annual storage reservoir (100% of flow)
5	Limit of treatment technology	Land application	Seasonal (25% of total annual flow)

	Option				
Criteria per HAR 11-61	1	2	3	4	5
Population served	1	1	1	1	1
Design average flow	1	1	1	1	1
Effluent discharge	2	2	6	6	6
Variation on raw wastes	0	0	0	0	0
Pretreatment	5	10	10	10	10
Primary treatment	0	0	0	0	0
Secondary treatment	8	15	15	15	20
Advanced waste treatment	0	12	12	12	22
Additional treatment processes	7	7	7	7	7
Solids handling	0	19	19	19	19
Disinfection	5	10	10	10	10
Laboratory control bacteriological	0	0	0	0	0
Laboratory control chemical/physical	0	0	0	0	0
Total points	29	77	81	81	96
WWTP Classification per 11-61	I	IV	IV	IV	IV

County of Hawaii Department of Environmental Management
Pahala WWTP
Water Recycling Assessments

Seasonal Recycling with Disposal

Average flow: 0.19 mgd
Irrigated acreage: 62 acres

Month	Days	WW Flow (mgal)	Irrig Demand (gpd/ac)	Irrig Demand (mgal)	Disposal (mgal)
Jan	31	5.9	0	0.0	5.9
Feb	28	5.3	0	0.0	5.3
Mar	31	5.9	0	0.0	5.9
Apr	30	5.7	644	1.2	4.5
May	31	5.9	2,244	4.3	1.6
Jun	30	5.7	3,043	5.7	0.0
Jul	31	5.9	1,348	2.6	3.3
Aug	31	5.9	1,452	2.8	3.1
Sep	30	5.7	334	0.6	5.1
Oct	31	5.9	0	0.0	5.9
Nov	30	5.7	0	0.0	5.7
Dec	31	5.9	0	0.0	5.9
Totals	365	69.35		17	52

Recycling efficiency: **25%**

Recycling with Annual Storage Reservoir

Average flow: 0.19 mgd
Irrigated acreage: 253 acres
Reservoir surface area: 6.4 acres
Reservoir pan coefficient: 0.7

Month	Days	WW Flow (mgal)	Irrig Demand (gpd/ac)	Irrig Demand (mgal)	WW in (mgal)	Precipitation in (inches)	Precipitation in (mgal)	Pan Evap (inches)	Evap out Inches	Evap out (mgal)	Delta Storage (mgal)	Reservoir Storage Cumulative Storage (mgal)	Reservoir Storage Cumulative Storage (ac-ft)	Reservoir Storage Water Depth (feet)
Jan	31	5.9	0	0.0	5.9	5.98	1.0	4.55	3.2	0.6	6.4	28.1	86.3	13.5
Feb	28	5.3	0	0.0	5.3	3.77	0.7	4.54	3.2	0.6	5.4	33.5	102.9	16.1
Mar	31	5.9	0	0.0	5.9	5.45	0.9	4.97	3.5	0.6	6.2	39.8	122.0	19.1
Apr	30	5.7	644	4.9	0.8	3.23	0.6	5.4	3.8	0.7	0.7	40.5	124.2	19.4
May	31	5.9	2244	17.6	-11.7	1.94	0.3	5.6	3.9	0.7	-12.1	28.4	87.3	13.6
Jun	30	5.7	3043	23.1	-17.4	1.56	0.3	5.94	4.2	0.7	-17.8	10.6	32.5	5.1
Jul	31	5.9	1348	10.6	-4.7	3.27	0.6	6.37	4.5	0.8	-4.9	5.7	17.5	2.7
Aug	31	5.9	1452	11.4	-5.5	3.08	0.5	6.23	4.4	0.8	-5.7	0.0	0.0	0.0
Sep	30	5.7	334	2.5	3.2	3.6	0.6	5.55	3.9	0.7	3.1	3.1	9.6	1.5
Oct	31	5.9	0	0.0	5.9	3.98	0.7	5.05	3.5	0.6	6.0	9.1	27.9	4.4
Nov	30	5.7	0	0.0	5.7	6.7	1.2	4.49	3.1	0.5	6.3	15.4	47.3	7.4
Dec	31	5.9	0	0.0	5.9	5.82	1.0	4.62	3.2	0.6	6.3	21.7	66.7	10.4
Totals	365	69.35		70		48.4	8.4	63.3		7.7	0.0			

Recycling efficiency: **101%**

Max Volume: 40 Mgal
124 ac ft

Peak demand: 23.1 mgal/mo
0.77 mgd

Appendix B: Collection System Plan

FUKUNAGA & ASSOCIATES, INC.
CONSULTING ENGINEERS

MEMORANDUM

TO: Michelle Sorensen, Brown and Caldwell
Craig Lekven, Brown and Caldwell

FROM: Andrew Amuro

DATE: June 20, 2018

SUBJECT: Pahala Collection System Description
County of Hawaii

1. GENERAL PROJECT DESCRIPTION

This County of Hawaii (COH) is scheduled to close two large capacity cesspools (LCCs) in the town of Pahala on the southeast side of the Big Island. To accomplish the closure, the COH has tasked Brown and Caldwell (B&C) with designing a wastewater treatment plant (WWTP) to serve the properties impacted by the LCC closure. Fukunaga and Associates, Inc. (FAI) has been tasked with designing the collection system to convey the wastewater from the impacted properties to the proposed WWTP. The collection system and properties to be served is shown on Figure 1. The County will be the owner of the collection system; therefore, the sewer system must meet County standards and must be accessible for maintenance. Preference is to construct sewers within the County right-of-way as much as possible unless other factors make placing the pipes within easements much more practical from economic and engineering standpoints. In addition, the County will not allow construction of sewers in smaller residential "backyard" easements. These easements are difficult to access for maintenance and can also hinder the home owner's ability to enjoy or benefit from their property as they see fit.

The focus of the project is to close the LCCs as expediently and economically as possible; however, the COH desires to eventually expand the wastewater system of this project to service the entire community of Pahala. Therefore, the collection system will be sized to accommodate the anticipated wastewater from the entire community to the extent that can be reasonably predicted at this early stage in the system development. The benefit of flexibility for future plans outweighs the cost of providing larger pipes at this time.

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2. PROJECT PHASING

The project will be implemented in two phases to expedite the LCC closure. The collection system phasing is indicated on Figure 2 and 3.

Phase 1 consists of the portions of the collection system required to divert wastewater from the LCCs to the proposed WWTP. To accomplish this as quickly as possible, the existing collection system will be intercepted before entering the LCCs and diverted into the new Phase 1 collection system. There will be a portion of the sewer within an existing roadway (Pikake St. extension) on private property owned by Edmund Olsen. The County will obtain an easement for the approximately 350 linear feet of sewer within this private road. The LCC closures will be part of the Phase 1 work.

Phase 2 will consist of the necessary sewers and pumps needed to de-commission the aging plantation collection system and construct a municipal sewer system that meets current County standards. The plantation system crosses through private properties and under some residences, making the system difficult to access for maintenance. This phase will place the new sewers mostly within the County right-of-way for ease of access and connect the individual properties impacted by the LCC closures to these sewers. There will be an 1,100 linear feet portion of the sewer that follows the existing plantation sewer route within an industrial area between Ilima and Maile Streets. The property at TMK 9-6-005:036 is owned by Edmund Olsen and leased to M L Macadamia Orchards. The County will obtain an easement within this area to maintain the sewer.

3. TOPOGRAPHY AND SOILS

Pahala slopes down at about 6-percent from the northwest to the southeast, from an elevation of 1000 ft above mean sea level (MSL) to 800 ft MSL over a distance of 3,500 feet. A topographic map of the area is provided in Figure 4. Available information on soil condition indicates shallow soils in the residential areas over basalt. Soils as shallow as 12” are reported in some areas. The soil cover appears to get deeper in the downhill direction.

Several roads in Pahala roughly follow contour lines to maintain level or appropriately sloped grades for vehicles. This is the case for Hinano Street and Pikake Street. This results in houses on the downhill side of the roads to be several feet below the road surface while uphill houses are several feet above the road surface. The laterals coming from downhill dwellings would result in a deep gravity sewer in these areas. If it is not feasible to construct deep sewers in these streets due to unavoidable subsurface conditions or unreasonably deep pipes and manholes, an alternative such as individual pump stations or different sewering method may be needed. A more detailed discussion of the areas requiring pumps is presented in the next section.

4. PUMP STATIONS

The design of the collection system will minimize the use of pump stations as much as possible. This will serve to enhance reliability and minimize operation and maintenance costs. There is one property currently connected to the sewer system that will require a pump station. The Methodist preschool located at TMK 9-6-015:033 is located on the downhill side of Huapala Street, approximately 20 feet below the elevation of the street. It would not be practical to lower the sewer to this extent to service this property.

There are also four properties on the downhill side of Hinano Street that are connected to the sewer system that may require pumps. The intent of the design is to lower the sewer on Hinano Street to service these properties by gravity; however, the subsurface conditions will have to be verified before a final determination can be made.

There are also several newly accessible properties on Pikake Street that require pumps if the sewer is not constructed deep. Based on what has been reported of subsurface conditions at the Kau High School, it is suspected that the sewer on Pikake Street would not be able to be set low enough to serve these properties; therefore, the assumption is most of the newly accessible properties east of Pikake Street will require pumps.

5. PIPE SIZING

Sewer pipe sizing is based on the flow estimates provided by B&C and a best guess of how the entire community will be eventually serviced. It is assumed that the sewer on Maile Street will eventually convey the flow from the entire community. It is also anticipated that the sewer on Pikake Street will eventually have other sewers feeding into them from surrounding areas. Similarly, for the sewers to be constructed in Phase 2, there will be surrounding areas eventually feeding into the sewers on Puahala/Kamani Streets. It is assumed future sewers would not be feeding into Huapala Street. It is assumed the areas northeast of Huapala Street can be served by the sewers system to the east; therefore, the sewer is not up-sized for future flows. A summary of the estimated pipe sizes and lengths is presented in Table 1.

Table 1: Approximate Pipe Size and Lengths

	Location	Start	End	Size	Length
Phase 1					
Waterline	Pikake St	Pikake	WWTP	6	2200
SL A	Maile St (deep to normal)	Huapala	WWTP	16	1730
SL C1	Pikake St Ph 1	Ohia	Maile	14	780
Phase 2					
SL B-1	Ilima St	Huapala	Ilima	8	335
SL B-2	Huapala St	Hinano	Pikake	8	410
SL C2	Pikake St	Pakalana	Ohia	14	1569
SL D	Puahala St & Kamani St	Pakalana	Pikake	12	1150
SL E	Hinano St (deep)	Hapu	Huapala	8	700
SL F	Hala St	End	Hinano	8	250
SL G	Huapala St	Pakalana	Ilima	8	1650
SL H	Ilima St	End	Huapala	8	1750
SL I	Easement thru Olson Land	Ilima	Maile	12	875

Pipe material will be AWWA C900 PVC for corrosion resistance. Although this application is for gravity service, the thick wall C900 pressure pipe is preferred for durability in service and during installation.

6. COST

The 0% cost estimates for Phase 1 and Phase 2 are based on recent bid tabs. Costs from a recent project were much higher than originally anticipated. Phase 1 using recent bid cost is approximately $4 million. Phase 2 using the same basis is $9 million. These costs will be refined further as the design is develop.

User Name: llam

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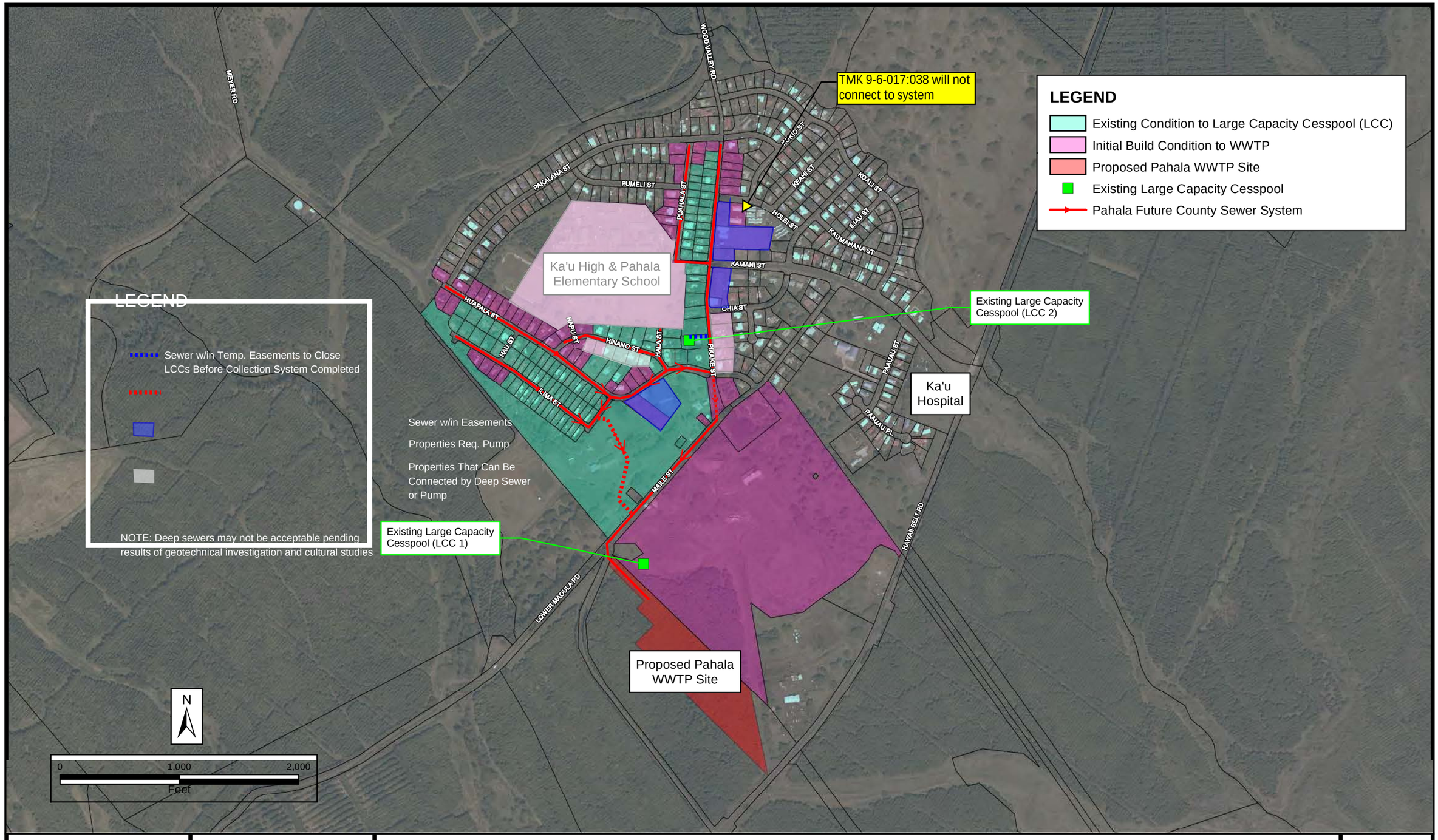


Brown AND Caldwell	SCALE: AS SHOWN JOB NO: 150440	PAHALA WASTEWATER TREATMENT PLANT PAHALA WWTP SERVICE AREA	FIGURE 2-1

Intercept existing sewer
(temporary easement)

LCC 2

Easement
Intercept existing sewers

Phase 1 Sewers (Purple)

LCC 1

Legend

- Naalehu-Pahala LCCs
- Naalehu-Pahala Sewer Manholes
- Naalehu-Pahala Sewer Lines
- Elec Permits Pahala "Cancelled" (1)
- Elec Permits Pahala "Complete" (4)
- Plumbing Permits Pahala "Cancelled" (1)
- Plumbing Permits Pahala "Complete" (93)
- Plumbing Permits Pahala "No Record" (4)
- Parcels

Services

Status

- Connected (1)
- Assumed Connection (100)
- Not Connected (0)

N W E S

0 100 200 400 600 800 Feet

PERMIT STATUS

Electrical (Transfer Switch & Pump) and Plumbing

Pahala

Figure 2
Collection System Phase 1

Oct. 05, 2016

Phase 2 Sewers (Green)

Deep sewers

Easements

LCC 2

LCC 1

Legend

- Naalehu-Pahala LCCs
- Naalehu-Pahala Sewer Manholes
- Naalehu-Pahala Sewer Lines
- Elec Permits Pahala "Cancelled" (1)
- Elec Permits Pahala "Complete" (4)
- Plumbing Permits Pahala "Cancelled" (1)
- Plumbing Permits Pahala "Complete" (93)
- Plumbing Permits Pahala "No Record" (4)
- Parcels

Services

Status

- Connected (1)
- Assumed Connection (100)
- Not Connected (0)

N W E S

0 100 200 400 600 800 Feet

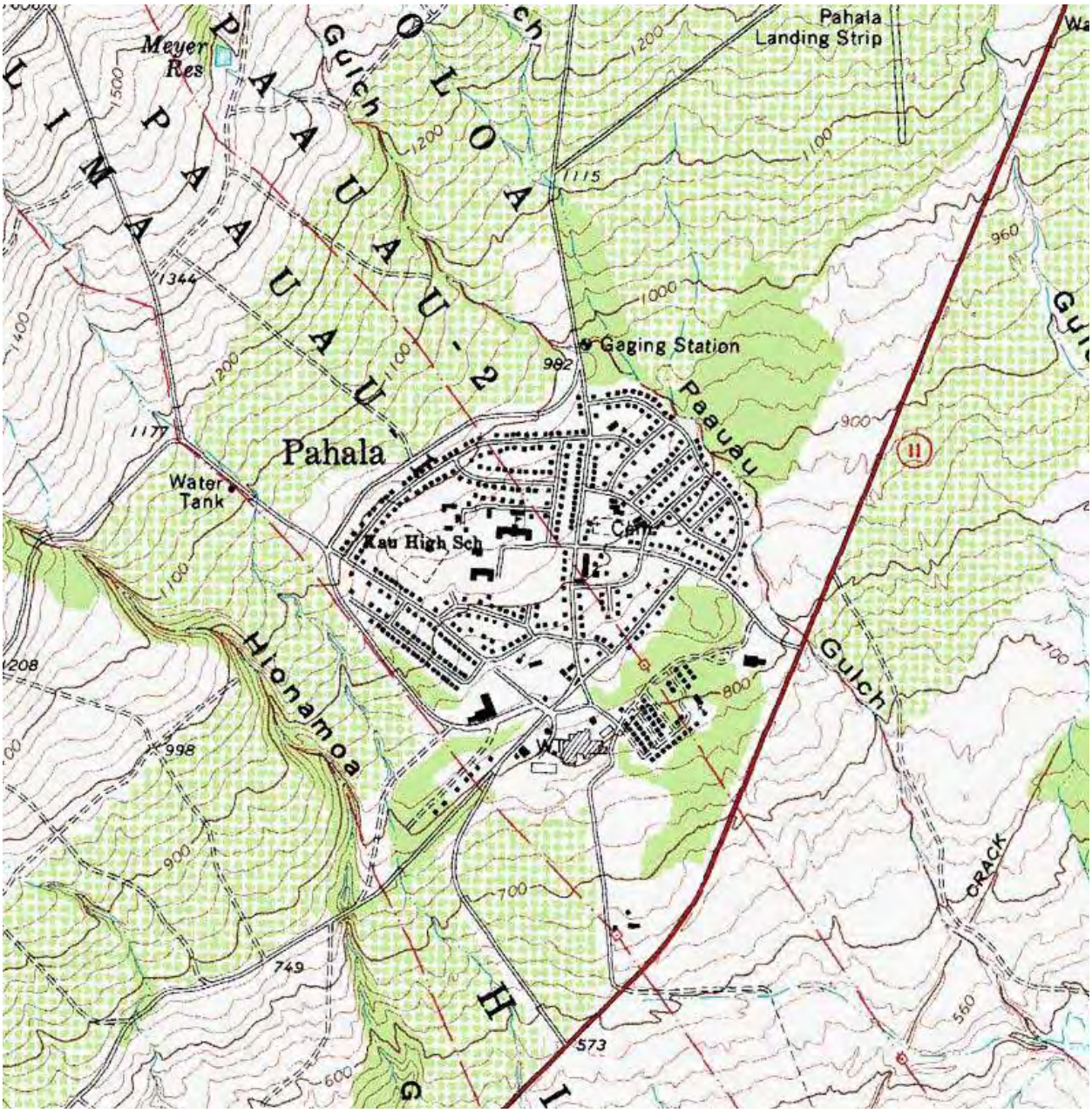
PERMIT STATUS

Electrical (Transfer Switch & Pump) and Plumbing

Pahala

Figure 3
Collection System Phase 2

Oct. 05, 2016



Approx Scale: 1” = 1500 feet

Figure 4
Topographic Map

Cost Estimate
Pahala Phase 1, Option B
Connect Brewer Collection System to WWTP, Olson Easements, Minimal Plans for Future Connections

	QTY	UM	MATERIAL	LABOR	EQUIPMENT	UNIT COST	TOTAL
GENERAL							
Mobilization	1	LS				$ 220,000.00	$ 220,000.00
Traffic Control	1	LS				$ 30,000.00	$ 30,000.00
Staging Area	1	LS				$ 25,000.00	$ 25,000.00
BMPs, Erosion Control	1	LS				$ 65,000.00	$ 65,000.00
Archaeological Monitoring	260	day	$ 2.00	$ 880.00	$ 5.00	$ 887.00	$ 230,620.00
Job Shack and Supplies	24	mo	$ 250.00	$ 10,000.00	$ 250.00	$ 10,500.00	$ 252,000.00
Temp Utilities	24	mo				$ 3,000.00	$ 72,000.00
Demobilization	1	LS				$ 30,000.00	$ 30,000.00
WATER DISTRIBUTION							
Trenching	916.67	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 618,750.00
Haul Exc Material	916.67	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 18,819.17
Bedding	306.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 26,625.06
Backfill	610.67	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 29,562.53
Haul to Job Site	916.67	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 18,819.24
6" DI Pipe	2200	lf	$ 40.66	$ 25.19	$ 3.80	$ 69.65	$ 153,230.00
Fittings	1200	lb	$ 6.19	$ 2.20	$ 0.33	$ 8.72	$ 10,464.00
Valves, ARVs	4	ea	$ 3,065.25	$ 2,882.30	$ 436.51	$ 6,384.06	$ 25,536.24
Temp Trench Patch	5500	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 88,000.00
SEWERLINE A							
Trenching	1174.69	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 792,916.67
Haul Exc Material	1174.69	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 24,116.41
Bedding	500.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 43,505.00
Backfill	674.69	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 32,661.81
Haul to Job Site	1174.69	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 24,116.41
16" PVC Pipe	1730	lf	$ 28.60	$ 6.47	$ 1.47	$ 36.54	$ 63,214.20
Manhole	7	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 178,500.00
Temp Trench Patch	5800	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 92,800.00

Intercept Exist Sewers	3	ea	$ 1,200.00	$ 2,000.00	$ 200.00	$ 3,400.00	$ 10,200.00
SEWERLINE C1							
Trenching	686.11	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 463,125.00
Haul Exc Material	686.11	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 14,085.86
Bedding	198.25	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 17,249.73
Backfill	487.86	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 23,617.36
Haul to Job Site	686.11	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 14,085.86
14" PVC Pipe	780	lf	$ 21.00	$ 4.85	$ 1.11	$ 26.96	$ 21,028.80
Manhole	3	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 76,500.00
Temp Trench Patch	2470	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 39,520.00
Intercept Exist Sewers	1	ea	$ 1,800.00	$ 2,000.00	$ 200.00	$ 4,000.00	$ 4,000.00
LCC 1 CLOSURE							
Clearing and grubbing	300	sq ft	$ -	$ 5.50	$ 1.50	$ 7.00	$ 2,100.00
Excavation	130.00	cy	$ -	$ 23.00	$ 9.60	$ 32.60	$ 4,238.00
Clean LCC	24.00	hr	$ -	$ 300.00	$ 90.00	$ 390.00	$ 9,360.00
LCC Residue Disposal	3000.00	gal	$ -	$ 6.00	$ 0.75	$ 6.75	$ 20,250.00
Fill (3B)	90.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 7,830.90
Geotextile Barrier	300.00	sq ft	$ 10.00	$ 25.00	$ 5.00	$ 40.00	$ 12,000.00
Backfill	130	cy		$ 28.56	$ 11.85	$ 40.41	$ 5,253.30
Haul to Job Site	90	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 1,847.70
Cut and Plug Piping	1	ea	$ 70.00	$ 160.00	$ 20.00	$ 250.00	$ 250.00
Final Completion Report	1	ea	$ -	$ 4,000.00	$ 100.00	$ 4,100.00	$ 4,100.00
Landscaping	300	sf	$ 1.75	$ 2.50	$ 1.00	$ 5.25	$ 1,575.00
LCC 2 CLOSURE							
Clearing and grubbing	300	sq ft	$ -	$ 5.50	$ 1.50	$ 7.00	$ 2,100.00
Excavation	130.00	cy	$ -	$ 23.00	$ 9.60	$ 32.60	$ 4,238.00
Clean LCC	8.00	hr	$ -	$ 300.00	$ 90.00	$ 390.00	$ 3,120.00
LCC Residue Disposal	500.00	gal	$ -	$ 6.00	$ 0.75	$ 6.75	$ 3,375.00
Top Slab (12" thk)	8.33	cy	$ 750.00	$ 225.00	$ 12.00	$ 987.00	$ 8,221.71
Backfill	130	cy		$ 28.56	$ 11.85	$ 40.41	$ 5,253.30
Cut and Plug Piping	2	ea	$ 70.00	$ 160.00	$ 20.00	$ 250.00	$ 500.00

Final Completion Report	1	ea	$ -	$ 4,000.00	$ 100.00	$ 4,100.00	$ 4,100.00
Landscaping	300	sf	$ 1.75	$ 2.50	$ 1.00	$ 5.25	$ 1,575.00
SITE RESTORATION							
Remove Temp Trench Patch	13770	sf	$ -	$ 2.50	$ 1.65	$ 4.15	$ 57,145.50
Haul Exc Material	255.00	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 5,235.15
Subbase & Base Course	255.00	cy	$ 50.00	$ 100.00	$ 35.00	$ 185.00	$ 47,175.00
AC Pavement	1530	sy	$ 30.00	$ 5.00	$ 3.00	$ 38.00	$ 58,140.00
SUBTOTAL							$ 4,118,652.91

Cost Estimate
Pahala Phase 2, Option B
Connect Brewer Properties to New Sewer System, Olson Easements
Use Deep Sewers on Hinano St, Olson Easements, Minimal Plans for Future Connections

	QTY	UM	MATERIAL	LABOR	EQUIPMENT	UNIT COST	TOTAL
GENERAL							
Mobilization	1	LS				$ 220,000.00	$ 220,000.00
Traffic Control	1	LS				$ 30,000.00	$ 30,000.00
Staging Area	1	LS				$ 25,000.00	$ 25,000.00
BMPs, Erosion Control	1	LS				$ 65,000.00	$ 65,000.00
Archaeological Monitoring	260	day	$ 2.00	$ 880.00	$ 5.00	$ 887.00	$ 230,620.00
Job Shack and Supplies	24	mo	$ 250.00	$ 10,000.00	$ 250.00	$ 10,500.00	$ 252,000.00
Temp Utilities	24	mo				$ 3,000.00	$ 72,000.00
Demobilization	1	LS				$ 30,000.00	$ 30,000.00
SEWERLINE B-1							
Trenching	248.98	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 168,058.33
Haul Exc Material	248.98	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 5,111.46
Bedding	56.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 4,872.56
Backfill	192.98	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 9,341.93
Haul to Job Site	248.98	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 5,111.46
8" PVC Pipe	335	lf	$ 21.00	$ 4.85	$ 1.11	$ 26.96	$ 9,031.60
Manhole	2	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 51,000.00
Temp Trench Patch	894	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 14,304.00
SEWERLINE B-2							
Trenching	263.21	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 177,666.67
Haul Exc Material	263.21	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 5,403.70
Bedding	68.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 5,916.68
Backfill	195.21	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 9,450.11
Haul to Job Site	263.21	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 5,403.70
8" PVC Pipe	410	lf	$ 21.00	$ 4.85	$ 1.11	$ 26.96	$ 11,053.60
Manhole	2	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 51,000.00
Temp Trench Patch	1094	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 17,504.00

SEWERLINE C2							
Trenching	1380.14	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 931,593.75
Haul Exc Material	1380.14	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 28,334.25
Bedding	307.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 26,712.07
Backfill	1073.14	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 51,950.65
Haul to Job Site	1380.14	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 28,334.25
14" PVC Pipe	1569.00	lf	$ 21.00	$ 4.85	$ 1.11	$ 26.96	$ 42,300.24
Manhole	6	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 153,000.00
Temp Trench Patch	4968.5	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 79,496.00
SEWERLINE D							
Trenching	702.78	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 474,375.00
Haul Exc Material	702.78	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 14,428.03
Bedding	256.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 22,274.56
Backfill	446.78	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 21,628.51
Haul to Job Site	702.78	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 14,428.03
12" PVC Pipe	1150.00	lf	$ 21.00	$ 4.85	$ 1.11	$ 26.96	$ 31,004.00
Manhole	4	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 102,000.00
Temp Trench Patch	3450	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 55,200.00
SEWERLINE E							
Trenching	1035.31	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 698,833.33
Haul Exc Material	1035.31	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 21,254.89
Bedding	115.23	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 10,026.16
Backfill	920.08	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 44,541.01
Haul to Job Site	1035.31	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 21,254.89
8" PVC Pipe	700.00	lf	$ 9.70	$ 2.91	$ 0.66	$ 13.27	$ 9,289.00
Manhole	2	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 51,000.00
Temp Trench Patch	1867	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 29,872.00
SEWERLINE F							
Trenching	234.57	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 158,333.33
Haul Exc Material	234.57	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 4,815.68

Bedding	41.15	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 3,580.46
Backfill	193.42	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 9,363.36
Haul to Job Site	234.57	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 4,815.68
8" PVC Pipe	250.00	lf	$ 9.70	$ 2.91	$ 0.66	$ 13.27	$ 3,317.50
Manhole	1	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 25,500.00
Temp Trench Patch	792	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 12,672.00
SEWERLINE G							
Trenching	1140.74	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 770,000.00
Haul Exc Material	1140.74	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 23,419.41
Bedding	322.53	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 28,063.34
Backfill	818.21	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 39,609.58
Haul to Job Site	1140.74	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 23,419.41
8" PVC Pipe	1650.00	lf	$ 9.70	$ 2.91	$ 0.66	$ 13.27	$ 21,895.50
Manhole	6	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 153,000.00
Temp Trench Patch	4400	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 70,400.00
SEWERLINE H							
Trenching	755.56	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 510,000.00
Haul Exc Material	755.56	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 15,511.56
Bedding	224.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 19,490.24
Backfill	531.56	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 25,732.60
Haul to Job Site	755.56	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 15,511.56
8" PVC Pipe	1360.00	lf	$ 9.70	$ 2.91	$ 0.66	$ 13.27	$ 18,047.20
Manhole	6	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 153,000.00
Temp Trench Patch	3627	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 58,032.00
SEWERLINE I							
Trenching	607.10	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 409,791.67
Haul Exc Material	607.10	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 12,463.74
Bedding	195.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 16,966.95
Backfill	412.10	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 19,949.70
Haul to Job Site	607.10	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 12,463.74
12" PVC Pipe	875.00	lf	$ 9.70	$ 2.91	$ 0.66	$ 13.27	$ 11,611.25

Manhole	5	ea	$ 12,000.00	$ 7,500.00	$ 6,000.00	$ 25,500.00	$ 127,500.00
Temp Trench Patch	2625	sf	$ 8.00	$ 5.00	$ 3.00	$ 16.00	$ 42,000.00
INSTALL PUMP STATION AT PRESCHOOL							
Excavation	235	cy	$ -	$ 500.00	$ 175.00	$ 675.00	$ 158,625.00
Haul Exc Material	235	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 4,824.55
Bedding	23.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 2,001.23
Backfill	12.00	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 580.92
Pump Housing	1.00	ea	$ 8,000.00	$ 6,400.00	$ 3,500.00	$ 17,900.00	$ 17,900.00
Pumps	2.00	ea	$ 900.00	$ 280.00	$ 85.00	$ 1,265.00	$ 2,530.00
Electrical	1.00	ls	$ 3,000.00	$ 7,500.00	$ 1,200.00	$ 11,700.00	$ 11,700.00
LATERAL CONNECTIONS							
Trenching (18" cover, no rock)	1157.00	cy	$ -	$ 23.00	$ 9.60	$ 32.60	$ 37,718.20
Haul Exc Material	1157.00	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 23,753.21
Bedding	694.00	cy	$ 46.60	$ 28.56	$ 11.85	$ 87.01	$ 60,384.94
Backfill	463.00	cy	$ 8.00	$ 28.56	$ 11.85	$ 48.41	$ 22,413.83
Haul to Job Site	694.00	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 14,247.82
4" Lateral, house to street	8325	lf	$ 5.62	$ 75.00	$ 2.00	$ 82.62	$ 687,811.50
Connect 6" Laterals	111	ea	$ 1,800.00	$ 2,000.00	$ 200.00	$ 4,000.00	$ 444,000.00
SITE RESTORATION							
Remove Temp Trench Patch	23717.5	sf	$ -	$ 2.50	$ 1.65	$ 4.15	$ 98,427.63
Haul Exc Material	439.21	cy	$ -	$ 13.00	$ 7.53	$ 20.53	$ 9,017.04
Subbase & Base Course	439.21	cy	$ 50.00	$ 100.00	$ 35.00	$ 185.00	$ 81,254.40
AC Pavement	2635.278	sy	$ 30.00	$ 5.00	$ 3.00	$ 38.00	$ 100,140.56
SUBTOTAL							$ 9,035,588.69

Appendix C: Wastewater Flow Calculations

Pahala WWTP Flows 2017 STDS.

	Calculated Flows		Design Flows			Status Quo - Envirnomental Loadings								Service Area Summary				
	Avgerage Daily Dry Weather Flow	*Peak Wet Weather Flow*	*Average Dry Weather Flow*	*Peak day wet weather flow (peaking factor = 3.5)*	*Peak hour wet weather flow (peaking factor = 4.8)*	*BOD_5*		*TSS*		*N*		*P*		*Persons*	*Total Area*	*Dwellings*	*Lots*	**Comments/Assumptions**
	gpd	*gpd*	*gpd*	*gpd*	*gpm*	*lbs/year*	*lbs/day*	*lbs/year*	*lbs/day*	*lbs/year*	*lbs/day*	*lbs/year*			*acres*			
Existing Condition	*45,780*	*248,183*	*50,000*	175,000	167	*45,675*		*45,675*		*6,090*		*1,066*						CCH WW STDS 2017
Initial Condition	138,165	796,146	140,000	490,000	467	*127,890*	*350*	*127,890*	*350*	*17,052*	*50*	*2,984*	*10*	1,564	178	293	177	• Without loading of applicable Industrial Lots • 1 dwelling/RS • Agricultural lots will have IWS and not contribute • 2010 census shows population at 1356
Initial Buildout	189,130	900,300	190,000	661,955	630	*173,565*	*480*	*173,565*	*480*	*23,142*	*60*	*4,050*	*10*	2,007	178	293	177	• With loading of Industrial Lots, assuming 800 gal/acre
Full Buildout	359,380	1,814,258	360,000	1,260,000	1,200	*328,860*	*900*	*328,860*		*43,848*		*7,673*		3,699	335	636	488	

Influent BOD5	TSS	N	P
mg/l	mg/l	mg/l	mg/l
300	300	40	7

Assumes that waste characteristics are based on section 43.3, Vol 2, 0.2LBS/cap-day

Pahala WWTP
Initial Flows

		Dwelling	School
Pahala WWTP	WW per capita (gpd)	70	25
	Population Initial		
	w/o industrial	1564	
Project 150440	1 dwelling/RS		
	*****2010 census shows population at 1356*		

	Dry I/I	Wet I/I
	~~5~~	~~1250~~
~~Above GWT (gpcd) / (gad)~~		
2017 WWDS	35	3000

QUANTITY OF WASTEWATER: Per CCH WWTP Stds 1993, chpt 20.

AVERAGE DAILY PER CAPITA FLOW:

Average Daily Flow: 80 gal/day/capita

Residential SF occupancy: 4 capita/dwelling

**per Craig assume Residential lots are 1 dwelling/lot ONLY*

Apartment MF occupancy: 2.8 capita/dwelling

AVERAGE DAILY PER LAND USE:

Neighborhood Business: 40 capita per acre

General Industry 100 capita per acre - NOT INCLUDED

School: 25 gal/capita/day

Institution: 200 gal/capita/day

Agricultural: assume IWS

per Vol 2: average ww flow rate during 24-hour period

is the highest instantaneous wastewater flow rate during prolonged period of wet weather

				178		*293*	*1,564*	*83,425*	*2.5*	*208,563*	*54,740*	*138,165*	*532,843*	*796,146*
LOT COUNT	**notes**	**TMK**	**Area (sqft)**	**Acreage (Tax Acres)**	**LUO**	**Dwellings**	**Capita**	**Avg Flow (gpd)**	**Max Flow Factor**	**Max Flow (gpd)**	**Dry I/I (gpd)**	**Design Avg Flow (gpd)** *(avg WW flow + dry i/i) aka* Average dry weather flow	**Wet I/I (gpd)**	**Design Peak Flow (gpd)** *(max WW flow + dry i/i + wet i/i) aka* *Peak Wet weather flow*
1	*assumed Neighborhood Business 40 Capita per acre	396016034	41395.068	0.9503	CV-10	-	38	2660	2.5	6650	1330	3990	2850.9	10830.9
2		396016035	7657.848	0.1758	CV-10	-	7	490	2.5	1225	245	735	527.4	1997.4
3		396017001	16339.356	0.3751	CV-7.5	-	15	1050	2.5	2625	525	1575	1125.3	4275.3
4		396015034	5140.08	0.118	ML-20	-		0	2.5	0	0	0	354	354
5		396005049	2888.028	0.0663	ML-20	-		0	2.5	0	0	0	198.9	198.9
6		396015032	44953.92	1.032	ML-20	-		0	2.5	0	0	0	3096	3096
								0	2.5	0	0	0	0	0
7	*Google earth image: lot looks semi developed with possible farm facility.*	396005036	1104246	25.35	-	-	-	-	-	-	-	-	-	-
	*assume neighborhood business		552123	12.675	ML-20	-		0	2.5	0	0	0	38025	38025
	*assumed 1 dwelling per lot		441698.4	10.14	RS-10	1	4	280	2.5	700	140	420	30420	31260
	*used RS-10 assumptions, since open defined by adjacent land use		110424.6	2.535	Open	1	4	280	2.5	700	140	420	7605	8445
8		396002024	17859.6	0.41	MG-1a		0	0	2.5	0	0	0	1230	1230
9	*assumed apartment 2.8 per dwelling	396017002	88078.32	2.022	RM-1.5	59	165	11550	2.5	28875	5775	17325	6066	40716
10		396017003	22899.492	0.5257	RM-1.5	15	42	2940	2.5	7350	1470	4410	1577.1	10397.1
11		396017038	26806.824	0.6154	RM-1.5	18	50	3500	2.5	8750	1750	5250	1846.2	12346.2
12		396005044	21505.572	0.4937	ROAD	-	-	-	-	-	-	-	-	-
13		396021031	12736.944	0.2924	RS-10	1	4	280	2.5	700	140	420	877.2	1717.2
14		396015033	58021.92	1.332	RS-10	1	4	280	2.5	700	140	420	3996	4836
15		396014069	11961.576	0.2746	RS-10	1	4	280	2.5	700	140	420	823.8	1663.8
16		396014070	13290.156	0.3051	RS-10	1	4	280	2.5	700	140	420	915.3	1755.3
17		396014071	15002.064	0.3444	RS-10	1	4	280	2.5	700	140	420	1033.2	1873.2
18		396014072	16452.612	0.3777	RS-10	1	4	280	2.5	700	140	420	1133.1	1973.1
19		396021001	13629.924	0.3129	RS-10	1	4	280	2.5	700	140	420	938.7	1778.7
20		396020031	13673.484	0.3139	RS-15	1	4	280	2.5	700	140	420	941.7	1781.7
21		396020032	13381.632	0.3072	RS-15	1	4	280	2.5	700	140	420	921.6	1761.6
22		396014053	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
23		396014054	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
24		396014055	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
25		396014056	13128.984	0.3014	RS-15	1	4	280	2.5	700	140	420	904.2	1744.2
26		396014057	12462.516	0.2861	RS-15	1	4	280	2.5	700	140	420	858.3	1698.3
27		396014058	16896.924	0.3879	RS-15	1	4	280	2.5	700	140	420	1163.7	2003.7
28		396014059	12000.78	0.2755	RS-15	1	4	280	2.5	700	140	420	826.5	1666.5
29		396014060	12000.78	0.2755	RS-15	1	4	280	2.5	700	140	420	826.5	1666.5
30		396014061	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
31		396014062	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
32		396014063	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
33		396014064	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
34		396014065	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
35		396020033	9822.78	0.2255	RS-15	1	4	280	2.5	700	140	420	676.5	1516.5
36		396020034	11007.612	0.2527	RS-15	1	4	280	2.5	700	140	420	758.1	1598.1
37		396016036	17424	0.4	RS-15	1	4	280	2.5	700	140	420	1200	2040
38		396016039	13142.052	0.3017	RS-15	1	4	280	2.5	700	140	420	905.1	1745.1
39		396016040	28775.736	0.6606	RS-15	1	4	280	2.5	700	140	420	1981.8	2821.8
40		396016041	27264.204	0.6259	RS-15	1	4	280	2.5	700	140	420	1877.7	2717.7
41		396016042	27887.112	0.6402	RS-15	1	4	280	2.5	700	140	420	1920.6	2760.6
42		396016043	18700.308	0.4293	RS-15	1	4	280	2.5	700	140	420	1287.9	2127.9

43		396016044	18526.068	0.4253	RS-15	1	4	280	2.5	700	140	420	1275.9	2115.9
44		396016045	15672.888	0.3598	RS-15	1	4	280	2.5	700	140	420	1079.4	1919.4
45		396016046	10990.188	0.2523	RS-15	1	4	280	2.5	700	140	420	756.9	1596.9
46		396015018	11412.72	0.262	RS-15	1	4	280	2.5	700	140	420	786	1626
47		396015019	8738.136	0.2006	RS-15	1	4	280	2.5	700	140	420	601.8	1441.8
48		396015020	14170.068	0.3253	RS-15	1	4	280	2.5	700	140	420	975.9	1815.9
49		396015021	15437.664	0.3544	RS-15	1	4	280	2.5	700	140	420	1063.2	1903.2
50		396015022	12540.924	0.2879	RS-15	1	4	280	2.5	700	140	420	863.7	1703.7
51		396016011	32683.068	0.7503	RS-15	1	4	280	2.5	700	140	420	2250.9	3090.9
52		396015011	9740.016	0.2236	RS-15	1	4	280	2.5	700	140	420	670.8	1510.8
53		396015012	9835.848	0.2258	RS-15	1	4	280	2.5	700	140	420	677.4	1517.4
54		396015013	7984.548	0.1833	RS-15	1	4	280	2.5	700	140	420	549.9	1389.9
55		396015014	9543.996	0.2191	RS-15	1	4	280	2.5	700	140	420	657.3	1497.3
56		396015015	9892.476	0.2271	RS-15	1	4	280	2.5	700	140	420	681.3	1521.3
57		396015016	9892.476	0.2271	RS-15	1	4	280	2.5	700	140	420	681.3	1521.3
58		396015009	27943.74	0.6415	RS-15	1	4	280	2.5	700	140	420	1924.5	2764.5
59		396015005	12066.12	0.277	RS-15	1	4	280	2.5	700	140	420	831	1671
60		396015006	15089.184	0.3464	RS-15	1	4	280	2.5	700	140	420	1039.2	1879.2
61		396015007	7239.672	0.1662	RS-15	1	4	280	2.5	700	140	420	498.6	1338.6
62		396015008	24685.452	0.5667	RS-15	1	4	280	2.5	700	140	420	1700.1	2540.1
63		396020058	14936.724	0.3429	RS-15	1	4	280	2.5	700	140	420	1028.7	1868.7
64		396015017	12802.284	0.2939	RS-15	1	4	280	2.5	700	140	420	881.7	1721.7
65		396020030	10419.552	0.2392	RS-15	1	4	280	2.5	700	140	420	717.6	1557.6
66		396015003	13068	0.3	RS-15	1	4	280	2.5	700	140	420	900	1740
67		396015004	11173.14	0.2565	RS-15	1	4	280	2.5	700	140	420	769.5	1609.5
68		396020056	12806.64	0.294	RS-15	1	4	280	2.5	700	140	420	882	1722
69		396020057	10737.54	0.2465	RS-15	1	4	280	2.5	700	140	420	739.5	1579.5
70		396016023	14971.572	0.3437	RS-15	1	4	280	2.5	700	140	420	1031.1	1871.1
71		396016024	16565.868	0.3803	RS-15	1	4	280	2.5	700	140	420	1140.9	1980.9
72		396016025	15341.832	0.3522	RS-15	1	4	280	2.5	700	140	420	1056.6	1896.6
73		396016026	19946.124	0.4579	RS-15	1	4	280	2.5	700	140	420	1373.7	2213.7
74		396016027	16404.696	0.3766	RS-15	1	4	280	2.5	700	140	420	1129.8	1969.8
75		396002056	149018.76	3.421	RS-15	1	4	280	2.5	700	140	420	10263	11103
76		396002016	2906279.64	66.719	Multiple			-	-	-	-	-	-	-
			72656.991	1.667975	RS-10	1	4	280	2.5	700	140	420	5003.925	5843.925
			72656.991	1.667975	RS-15	1	4	280	2.5	700	140	420	5003.925	5843.925
	**assume Ag utilizes IWS. No connection to municipal sewer		1307825.838	30.02355	A-1a	30		0	2.5	0	0	0	90070.65	90070.65
			145313.982	3.33595	A-20a	3		0	2.5	0	0	0	10007.85	10007.85
			1307825.838	30.02355	MG-1a			0	2.5	0	0	0	90070.65	90070.65
77		396015023	14143.932	0.3247	RS-15	1	4	280	2.5	700	140	420	974.1	1814.1
78		396015024	10641.708	0.2443	RS-15	1	4	280	2.5	700	140	420	732.9	1572.9
79		396015025	16679.124	0.3829	RS-15	1	4	280	2.5	700	140	420	1148.7	1988.7
80		396015026	15180.66	0.3485	RS-15	1	4	280	2.5	700	140	420	1045.5	1885.5
81		396015027	12802.284	0.2939	RS-15	1	4	280	2.5	700	140	420	881.7	1721.7
82		396015028	12283.92	0.282	RS-15	1	4	280	2.5	700	140	420	846	1686
83		396015029	13886.928	0.3188	RS-15	1	4	280	2.5	700	140	420	956.4	1796.4
84		396015030	11804.76	0.271	RS-15	1	4	280	2.5	700	140	420	813	1653
85		396015031	12236.004	0.2809	RS-15	1	4	280	2.5	700	140	420	842.7	1682.7
86		396014066	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
87		396014067	12754.368	0.2928	RS-15	1	4	280	2.5	700	140	420	878.4	1718.4
88		396015001	10619.928	0.2438	RS-15	1	4	280	2.5	700	140	420	731.4	1571.4
89		396015002	9888.12	0.227	RS-15	1	4	280	2.5	700	140	420	681	1521
90		396015010	11800.404	0.2709	RS-15	1	4	280	2.5	700	140	420	812.7	1652.7
91		396014048	12462.516	0.2861	RS-15	1	4	280	2.5	700	140	420	858.3	1698.3
92		396014049	13128.984	0.3014	RS-15	1	4	280	2.5	700	140	420	904.2	1744.2
93		396014050	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
94		396014051	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
95		396014052	13385.988	0.3073	RS-15	1	4	280	2.5	700	140	420	921.9	1761.9
									2.5	0	0	0	0	0
95	*used School Assumptions based on CH2MHill (502 students and 77 staff)	396005008	1172896.56	26.926	RS-15	1	579	14475	2.5	36187.5	20265	34740	80778	137230.5
96	*Park/ball field next to Ka'u School; assume its contribution is accounted for in school, since calculations provided annotate both TMKs	396005039	280613.52	6.442	RS-10							0	19326	19326
97		396014020	6930.396	0.1591	RS-7.5	1	4	280	2.5	700	140	420	477.3	1317.3
98		396014021	7187.4	0.165	RS-7.5	1	4	280	2.5	700	140	420	495	1335
99		396014022	7204.824	0.1654	RS-7.5	1	4	280	2.5	700	140	420	496.2	1336.2
100		396014023	7196.112	0.1652	RS-7.5	1	4	280	2.5	700	140	420	495.6	1335.6
101		396014024	7082.856	0.1626	RS-7.5	1	4	280	2.5	700	140	420	487.8	1327.8
102		396014025	7287.588	0.1673	RS-7.5	1	4	280	2.5	700	140	420	501.9	1341.9
103		396014026	7169.976	0.1646	RS-7.5	1	4	280	2.5	700	140	420	493.8	1333.8
104		396014002	7540.236	0.1731	RS-7.5	1	4	280	2.5	700	140	420	519.3	1359.3
105		396014003	7758.036	0.1781	RS-7.5	1	4	280	2.5	700	140	420	534.3	1374.3
106		396014004	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
107		396014005	7683.984	0.1764	RS-7.5	1	4	280	2.5	700	140	420	529.2	1369.2
108		396014006	7727.544	0.1774	RS-7.5	1	4	280	2.5	700	140	420	532.2	1372.2
109		396018001	13303.224	0.3054	RS-7.5	1	4	280	2.5	700	140	420	916.2	1756.2
110		396018002	11356.092	0.2607	RS-7.5	1	4	280	2.5	700	140	420	782.1	1622.1
111		396018003	11996.424	0.2754	RS-7.5	1	4	280	2.5	700	140	420	826.2	1666.2
112		396018004	10785.456	0.2476	RS-7.5	1	4	280	2.5	700	140	420	742.8	1582.8

113	396018028	14244.12	0.327	RS-7.5	1	4	280	2.5	700	140	420	981	1821
114	396018029	12519.144	0.2874	RS-7.5	1	4	280	2.5	700	140	420	862.2	1702.2
115	396014001	7466.184	0.1714	RS-7.5	1	4	280	2.5	700	140	420	514.2	1354.2
116	396014027	7161.264	0.1644	RS-7.5	1	4	280	2.5	700	140	420	493.2	1333.2
117	396014028	7287.588	0.1673	RS-7.5	1	4	280	2.5	700	140	420	501.9	1341.9
118	396014029	7335.504	0.1684	RS-7.5	1	4	280	2.5	700	140	420	505.2	1345.2
119	396014030	7148.196	0.1641	RS-7.5	1	4	280	2.5	700	140	420	492.3	1332.3
120	396014031	7082.856	0.1626	RS-7.5	1	4	280	2.5	700	140	420	487.8	1327.8
121	396014032	7034.94	0.1615	RS-7.5	1	4	280	2.5	700	140	420	484.5	1324.5
122	396014033	6865.056	0.1576	RS-7.5	1	4	280	2.5	700	140	420	472.8	1312.8
123	396014034	6886.836	0.1581	RS-7.5	1	4	280	2.5	700	140	420	474.3	1314.3
124	396014035	7087.212	0.1627	RS-7.5	1	4	280	2.5	700	140	420	488.1	1328.1
125	396014036	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
126	396014037	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
127	396014038	7222.248	0.1658	RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
128	396014039	7222.248	0.1658	RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
129	396014040	7257.096	0.1666	RS-7.5	1	4	280	2.5	700	140	420	499.8	1339.8
130	396020014	8842.68	0.203	RS-7.5	1	4	280	2.5	700	140	420	609	1449
131	396020015	9740.016	0.2236	RS-7.5	1	4	280	2.5	700	140	420	670.8	1510.8
132	396020016	10794.168	0.2478	RS-7.5	1	4	280	2.5	700	140	420	743.4	1583.4
133	396020017	9618.048	0.2208	RS-7.5	1	4	280	2.5	700	140	420	662.4	1502.4
134	396020018	9648.54	0.2215	RS-7.5	1	4	280	2.5	700	140	420	664.5	1504.5
135	396020019	6747.444	0.1549	RS-7.5	1	4	280	2.5	700	140	420	464.7	1304.7
136	396020020	6512.22	0.1495	RS-7.5	1	4	280	2.5	700	140	420	448.5	1288.5
137	396020021	7008.804	0.1609	RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
138	396020022	6529.644	0.1499	RS-7.5	1	4	280	2.5	700	140	420	449.7	1289.7
139	396020023	7230.96	0.166	RS-7.5	1	4	280	2.5	700	140	420	498	1338
140	396020010	7400.844	0.1699	RS-7.5	1	4	280	2.5	700	140	420	509.7	1349.7
141	396020011	7235.316	0.1661	RS-7.5	1	4	280	2.5	700	140	420	498.3	1338.3
142	396020012	7305.012	0.1677	RS-7.5	1	4	280	2.5	700	140	420	503.1	1343.1
143	396020013	7113.348	0.1633	RS-7.5	1	4	280	2.5	700	140	420	489.9	1329.9
144	396014007	7583.796	0.1741	RS-7.5	1	4	280	2.5	700	140	420	522.3	1362.3
145	396014008	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
146	396014009	7801.596	0.1791	RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
147	396014010	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
148	396014011	7801.596	0.1791	RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
149	396014012	7901.784	0.1814	RS-7.5	1	4	280	2.5	700	140	420	544.2	1384.2
150	396014013	10903.068	0.2503	RS-7.5	1	4	280	2.5	700	140	420	750.9	1590.9
151	396014014	9382.824	0.2154	RS-7.5	1	4	280	2.5	700	140	420	646.2	1486.2
152	396014015	9792.288	0.2248	RS-7.5	1	4	280	2.5	700	140	420	674.4	1514.4
153	396014016	8302.536	0.1906	RS-7.5	1	4	280	2.5	700	140	420	571.8	1411.8
154	396014017	13429.548	0.3083	RS-7.5	1	4	280	2.5	700	140	420	924.9	1764.9
155	396014018	7008.804	0.1609	RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
156	396014019	6799.716	0.1561	RS-7.5	1	4	280	2.5	700	140	420	468.3	1308.3
157	396020024	6808.428	0.1563	RS-7.5	1	4	280	2.5	700	140	420	468.9	1308.9
158	396020025	6934.752	0.1592	RS-7.5	1	4	280	2.5	700	140	420	477.6	1317.6
159	396020026	8790.408	0.2018	RS-7.5	1	4	280	2.5	700	140	420	605.4	1445.4
160	396020027	8903.664	0.2044	RS-7.5	1	4	280	2.5	700	140	420	613.2	1453.2
161	396020028	9056.124	0.2079	RS-7.5	1	4	280	2.5	700	140	420	623.7	1463.7
162	396020001	8306.892	0.1907	RS-7.5	1	4	280	2.5	700	140	420	572.1	1412.1
163	396020004	7845.156	0.1801	RS-7.5	1	4	280	2.5	700	140	420	540.3	1380.3
164	396020005	7784.172	0.1787	RS-7.5	1	4	280	2.5	700	140	420	536.1	1376.1
165	396020006	7792.884	0.1789	RS-7.5	1	4	280	2.5	700	140	420	536.7	1376.7
166	396020003	8084.736	0.1856	RS-7.5	1	4	280	2.5	700	140	420	556.8	1396.8
167	396014043	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
168	396014044	7318.08	0.168	RS-7.5	1	4	280	2.5	700	140	420	504	1344
169	396014045	10798.524	0.2479	RS-7.5	1	4	280	2.5	700	140	420	743.7	1583.7
170	396014046	10606.86	0.2435	RS-7.5	1	4	280	2.5	700	140	420	730.5	1570.5
171	396014047	12763.08	0.293	RS-7.5	1	4	280	2.5	700	140	420	879	1719
172	396014041	7322.436	0.1681	RS-7.5	1	4	280	2.5	700	140	420	504.3	1344.3
173	396014042	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
174	396020002	8015.04	0.184	RS-7.5	1	4	280	2.5	700	140	420	552	1392
175	396020007	7701.408	0.1768	RS-7.5	1	4	280	2.5	700	140	420	530.4	1370.4
176	396020008	7487.964	0.1719	RS-7.5	1	4	280	2.5	700	140	420	515.7	1355.7
177	396020009	7548.948	0.1733	RS-7.5	1	4	280	2.5	700	140	420	519.9	1359.9

Pahala WWTP
Initial Buildout Flows

		Dwelling	School
Pahala WWTP	WW per capita (gpd)	70	25
	Population Initial w/industrial @ 40capita/ac	2007	
Project 150440	1 dwelling/RS		

	Dry I/I	Wet I/I
	~~5~~	~~1250~~
~~Above GWT (gpcd) / (gad)~~		
2017 WWDS	35	3000

Small and Decentralized WW Management Systems, Crites

QUANTITY OF WASTEWATER: Per CCH WWTP Stds 1993, chpt 20.

AVERAGE DAILY PER CAPITA FLOW:
Average Daily Flow: 80 gal/day/capita
Residential SF occupancy: 4 capita/dwelling
Apartment MF occupancy: 2.8 capita/dwelling

page 170, Commerical Areas of Unknown Use: 800 gal/acre

Table 4-3, Hospital, bed : 165 gcd, employee: 10 gcd

AVERAGE DAILY PER LAND USE:
Neighborhood Business: 40 capita per acre
School: 25 gal/capita/day
Agricultural: assume IWS

per Vol 2: average ww flow rate during 24-hour period

is the highest instantaneous wastewater flow rate during prolonged period of wet weather

				178		*293*	*2,007*	*118,885*	*2.50*	*297,212*	*70,245*	*189,130*	*532,843*	*900,300*
LOT COUNT	**notes**	**TMK**	**Area (sqft)**	**Acreage (Tax Acres)**	**LUO**	**Dwellings**	**Capita**	**Avg Flow (gpd)**	**Max Flow Factor**	**Max Flow (gpd)**	**Dry I/I (gpd)**	**Design Avg Flow (gpd)** *(avg WW flow + dry i/i)* *aka* Average dry weather flow	**Wet I/I (gpd)**	**Design Peak Flow (gpd)** *(max WW flow + dry i/I + wet i/I)* *aka* *Peak Wet weather flow*
1	*assumed Neighborhood Business 40 Capita per acre	396016034	41395.068	0.9503	CV-10	-	38	2660	2.5	6650	1330	3990	2850.9	10830.9
2		396016035	7657.848	0.1758	CV-10	-	7	490	2.5	1225	245	735	527.4	1997.4
3		396017001	16339.356	0.3751	CV-7.5	-	15	1050	2.5	2625	525	1575	1125.3	4275.3
4		396015034	5140.08	0.118	ML-20	-	1	94.4	2.5	236	35	129.4	354	625
5		396005049	2888.028	0.0663	ML-20	-	1	53.04	2.5	132.6	35	88.04	198.9	366.5
6		396015032	44953.92	1.032	ML-20	-	10	825.6	2.5	2064	350	1175.6	3096	5510
								0	2.5	0	0	0	0	0
7	*Google earth image: lot looks semi developed with possible farm facility.*	396005036	1104246	25.35	-	-	-	-	-	-	-	-	-	-
			552123	12.675	ML-20		127	10140	2.5	25350	4445	14585	38025	67820
	*assumed 1 dwelling per lot		441698.4	10.14	RS-10	1	4	280	2.5	700	140	420	30420	31260
	*used RS-10 assumptions, since open defined by adjacent land use		110424.6	2.535	Open	1	4	280	2.5	700	140	420	7605	8445
8		396002024	17859.6	0.41	MG-1a		4	328	2.5	820	140	468	1230	2190
9	*assumed apartment 2.8 per dwelling	396017002	88078.32	2.022	RM-1.5	59	165	11550	2.5	28875	5775	17325	6066	40716
10		396017003	22899.492	0.5257	RM-1.5	15	42	2940	2.5	7350	1470	4410	1577.1	10397.1
11		396017038	26806.824	0.6154	RM-1.5	18	50	3500	2.5	8750	1750	5250	1846.2	12346.2
11		396005044	21505.572	0.4937	ROAD	-	-	-	-	-	-	-	-	-
12		396021031	12736.944	0.2924	RS-10	1	4	280	2.5	700	140	420	877.2	1717.2
13		396015033	58021.92	1.332	RS-10	1	4	280	2.5	700	140	420	3996	4836
14		396014069	11961.576	0.2746	RS-10	1	4	280	2.5	700	140	420	823.8	1663.8
15		396014070	13290.156	0.3051	RS-10	1	4	280	2.5	700	140	420	915.3	1755.3
16		396014071	15002.064	0.3444	RS-10	1	4	280	2.5	700	140	420	1033.2	1873.2
17		396014072	16452.612	0.3777	RS-10	1	4	280	2.5	700	140	420	1133.1	1973.1
18		396021001	13629.924	0.3129	RS-10	1	4	280	2.5	700	140	420	938.7	1778.7
19		396020031	13673.484	0.3139	RS-15	1	4	280	2.5	700	140	420	941.7	1781.7
20		396020032	13381.632	0.3072	RS-15	1	4	280	2.5	700	140	420	921.6	1761.6
21		396014053	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5

22	396014054	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
23	396014055	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
24	396014056	13128.984	0.3014	RS-15	1	4	280	2.5	700	140	420	904.2	1744.2
25	396014057	12462.516	0.2861	RS-15	1	4	280	2.5	700	140	420	858.3	1698.3
26	396014058	16896.924	0.3879	RS-15	1	4	280	2.5	700	140	420	1163.7	2003.7
27	396014059	12000.78	0.2755	RS-15	1	4	280	2.5	700	140	420	826.5	1666.5
28	396014060	12000.78	0.2755	RS-15	1	4	280	2.5	700	140	420	826.5	1666.5
29	396014061	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
30	396014062	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
31	396014063	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
32	396014064	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
33	396014065	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
34	396020033	9822.78	0.2255	RS-15	1	4	280	2.5	700	140	420	676.5	1516.5
35	396020034	11007.612	0.2527	RS-15	1	4	280	2.5	700	140	420	758.1	1598.1
36	396016036	17424	0.4	RS-15	1	4	280	2.5	700	140	420	1200	2040
37	396016039	13142.052	0.3017	RS-15	1	4	280	2.5	700	140	420	905.1	1745.1
38	396016040	28775.736	0.6606	RS-15	1	4	280	2.5	700	140	420	1981.8	2821.8
39	396016041	27264.204	0.6259	RS-15	1	4	280	2.5	700	140	420	1877.7	2717.7
40	396016042	27887.112	0.6402	RS-15	1	4	280	2.5	700	140	420	1920.6	2760.6
41	396016043	18700.308	0.4293	RS-15	1	4	280	2.5	700	140	420	1287.9	2127.9
42	396016044	18526.068	0.4253	RS-15	1	4	280	2.5	700	140	420	1275.9	2115.9
43	396016045	15672.888	0.3598	RS-15	1	4	280	2.5	700	140	420	1079.4	1919.4
44	396016046	10990.188	0.2523	RS-15	1	4	280	2.5	700	140	420	756.9	1596.9
45	396015018	11412.72	0.262	RS-15	1	4	280	2.5	700	140	420	786	1626
46	396015019	8738.136	0.2006	RS-15	1	4	280	2.5	700	140	420	601.8	1441.8
47	396015020	14170.068	0.3253	RS-15	1	4	280	2.5	700	140	420	975.9	1815.9
48	396015021	15437.664	0.3544	RS-15	1	4	280	2.5	700	140	420	1063.2	1903.2
49	396015022	12540.924	0.2879	RS-15	1	4	280	2.5	700	140	420	863.7	1703.7
50	396016011	32683.068	0.7503	RS-15	1	4	280	2.5	700	140	420	2250.9	3090.9
51	396015011	9740.016	0.2236	RS-15	1	4	280	2.5	700	140	420	670.8	1510.8
52	396015012	9835.848	0.2258	RS-15	1	4	280	2.5	700	140	420	677.4	1517.4
53	396015013	7984.548	0.1833	RS-15	1	4	280	2.5	700	140	420	549.9	1389.9
54	396015014	9543.996	0.2191	RS-15	1	4	280	2.5	700	140	420	657.3	1497.3
55	396015015	9892.476	0.2271	RS-15	1	4	280	2.5	700	140	420	681.3	1521.3
56	396015016	9892.476	0.2271	RS-15	1	4	280	2.5	700	140	420	681.3	1521.3
57	396015009	27943.74	0.6415	RS-15	1	4	280	2.5	700	140	420	1924.5	2764.5
58	396015005	12066.12	0.277	RS-15	1	4	280	2.5	700	140	420	831	1671
59	396015006	15089.184	0.3464	RS-15	1	4	280	2.5	700	140	420	1039.2	1879.2
60	396015007	7239.672	0.1662	RS-15	1	4	280	2.5	700	140	420	498.6	1338.6
61	396015008	24685.452	0.5667	RS-15	1	4	280	2.5	700	140	420	1700.1	2540.1
62	396020058	14936.724	0.3429	RS-15	1	4	280	2.5	700	140	420	1028.7	1868.7
63	396015017	12802.284	0.2939	RS-15	1	4	280	2.5	700	140	420	881.7	1721.7
64	396020030	10419.552	0.2392	RS-15	1	4	280	2.5	700	140	420	717.6	1557.6
65	396015003	13068	0.3	RS-15	1	4	280	2.5	700	140	420	900	1740
66	396015004	11173.14	0.2565	RS-15	1	4	280	2.5	700	140	420	769.5	1609.5
67	396020056	12806.64	0.294	RS-15	1	4	280	2.5	700	140	420	882	1722
68	396020057	10737.54	0.2465	RS-15	1	4	280	2.5	700	140	420	739.5	1579.5
69	396016023	14971.572	0.3437	RS-15	1	4	280	2.5	700	140	420	1031.1	1871.1
70	396016024	16565.868	0.3803	RS-15	1	4	280	2.5	700	140	420	1140.9	1980.9
71	396016025	15341.832	0.3522	RS-15	1	4	280	2.5	700	140	420	1056.6	1896.6
72	396016026	19946.124	0.4579	RS-15	1	4	280	2.5	700	140	420	1373.7	2213.7
73	396016027	16404.696	0.3766	RS-15	1	4	280	2.5	700	140	420	1129.8	1969.8
74	396002056	149018.76	3.421	RS-15	1	4	280	2.5	700	140	420	10263	11103
75	396002016	2906279.64	66.719	Multiple			-	-	-	-	-	-	-
		72656.991	1.667975	RS-10	1	4	280	2.5	700	140	420	5003.925	5843.925
		72656.991	1.667975	RS-15	1	4	280	2.5	700	140	420	5003.925	5843.925
**assume Ag utilizes IWS. No connection to municipal sewer		1307825.838	30.02355	A-1a	30		0	2.5	0	0	0	90070.65	90070.65
		145313.982	3.33595	A-20a	3		0	2.5	0	0	0	10007.85	10007.85
		1307825.838	30.02355	MG-1a	-	300	24018.84	2.5	60047.1	10500	34518.84	90070.65	160617.75
76	396015023	14143.932	0.3247	RS-15	1	4	280	2.5	700	140	420	974.1	1814.1
77	396015024	10641.708	0.2443	RS-15	1	4	280	2.5	700	140	420	732.9	1572.9
78	396015025	16679.124	0.3829	RS-15	1	4	280	2.5	700	140	420	1148.7	1988.7
79	396015026	15180.66	0.3485	RS-15	1	4	280	2.5	700	140	420	1045.5	1885.5
80	396015027	12802.284	0.2939	RS-15	1	4	280	2.5	700	140	420	881.7	1721.7
81	396015028	12283.92	0.282	RS-15	1	4	280	2.5	700	140	420	846	1686
82	396015029	13886.928	0.3188	RS-15	1	4	280	2.5	700	140	420	956.4	1796.4
83	396015030	11804.76	0.271	RS-15	1	4	280	2.5	700	140	420	813	1653
84	396015031	12236.004	0.2809	RS-15	1	4	280	2.5	700	140	420	842.7	1682.7
85	396014066	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
86	396014067	12754.368	0.2928	RS-15	1	4	280	2.5	700	140	420	878.4	1718.4
87	396015001	10619.928	0.2438	RS-15	1	4	280	2.5	700	140	420	731.4	1571.4
88	396015002	9888.12	0.227	RS-15	1	4	280	2.5	700	140	420	681	1521
89	396015010	11800.404	0.2709	RS-15	1	4	280	2.5	700	140	420	812.7	1652.7

90		396014048	12462.516	0.2861	RS-15	1	4	280	2.5	700	140	420	858.3	1698.3
91		396014049	13128.984	0.3014	RS-15	1	4	280	2.5	700	140	420	904.2	1744.2
92		396014050	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
93		396014051	14440.14	0.3315	RS-15	1	4	280	2.5	700	140	420	994.5	1834.5
94		396014052	13385.988	0.3073	RS-15	1	4	280	2.5	700	140	420	921.9	1761.9
									2.5	0	0	0	0	0
95	*used School Assumptions based on CH2MHill (502 students and 77 staff)	396005008	1172896.56	26.926	RS-15	1	579	14475	2.5	36187.5	20265	34740	80778	137230.5
96	*Park/ball field next to Ka'u School; assume its contribution is accounted for in school, since calculations provided annotate both TMKs	396005039	280613.52	6.442	RS-10							0	19326	19326
97		396014020	6930.396	0.1591	RS-7.5	1	4	280	2.5	700	140	420	477.3	1317.3
98		396014021	7187.4	0.165	RS-7.5	1	4	280	2.5	700	140	420	495	1335
99		396014022	7204.824	0.1654	RS-7.5	1	4	280	2.5	700	140	420	496.2	1336.2
100		396014023	7196.112	0.1652	RS-7.5	1	4	280	2.5	700	140	420	495.6	1335.6
101		396014024	7082.856	0.1626	RS-7.5	1	4	280	2.5	700	140	420	487.8	1327.8
102		396014025	7287.588	0.1673	RS-7.5	1	4	280	2.5	700	140	420	501.9	1341.9
103		396014026	7169.976	0.1646	RS-7.5	1	4	280	2.5	700	140	420	493.8	1333.8
104		396014002	7540.236	0.1731	RS-7.5	1	4	280	2.5	700	140	420	519.3	1359.3
105		396014003	7758.036	0.1781	RS-7.5	1	4	280	2.5	700	140	420	534.3	1374.3
106		396014004	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
107		396014005	7683.984	0.1764	RS-7.5	1	4	280	2.5	700	140	420	529.2	1369.2
108		396014006	7727.544	0.1774	RS-7.5	1	4	280	2.5	700	140	420	532.2	1372.2
109		396018001	13303.224	0.3054	RS-7.5	1	4	280	2.5	700	140	420	916.2	1756.2
110		396018002	11356.092	0.2607	RS-7.5	1	4	280	2.5	700	140	420	782.1	1622.1
111		396018003	11996.424	0.2754	RS-7.5	1	4	280	2.5	700	140	420	826.2	1666.2
112		396018004	10785.456	0.2476	RS-7.5	1	4	280	2.5	700	140	420	742.8	1582.8
113		396018028	14244.12	0.327	RS-7.5	1	4	280	2.5	700	140	420	981	1821
114		396018029	12519.144	0.2874	RS-7.5	1	4	280	2.5	700	140	420	862.2	1702.2
115		396014001	7466.184	0.1714	RS-7.5	1	4	280	2.5	700	140	420	514.2	1354.2
116		396014027	7161.264	0.1644	RS-7.5	1	4	280	2.5	700	140	420	493.2	1333.2
117		396014028	7287.588	0.1673	RS-7.5	1	4	280	2.5	700	140	420	501.9	1341.9
118		396014029	7335.504	0.1684	RS-7.5	1	4	280	2.5	700	140	420	505.2	1345.2
119		396014030	7148.196	0.1641	RS-7.5	1	4	280	2.5	700	140	420	492.3	1332.3
120		396014031	7082.856	0.1626	RS-7.5	1	4	280	2.5	700	140	420	487.8	1327.8
121		396014032	7034.94	0.1615	RS-7.5	1	4	280	2.5	700	140	420	484.5	1324.5
122		396014033	6865.056	0.1576	RS-7.5	1	4	280	2.5	700	140	420	472.8	1312.8
123		396014034	6886.836	0.1581	RS-7.5	1	4	280	2.5	700	140	420	474.3	1314.3
124		396014035	7087.212	0.1627	RS-7.5	1	4	280	2.5	700	140	420	488.1	1328.1
125		396014036	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
126		396014037	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
127		396014038	7222.248	0.1658	RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
128		396014039	7222.248	0.1658	RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
129		396014040	7257.096	0.1666	RS-7.5	1	4	280	2.5	700	140	420	499.8	1339.8
130		396020014	8842.68	0.203	RS-7.5	1	4	280	2.5	700	140	420	609	1449
131		396020015	9740.016	0.2236	RS-7.5	1	4	280	2.5	700	140	420	670.8	1510.8
132		396020016	10794.168	0.2478	RS-7.5	1	4	280	2.5	700	140	420	743.4	1583.4
133		396020017	9618.048	0.2208	RS-7.5	1	4	280	2.5	700	140	420	662.4	1502.4
134		396020018	9648.54	0.2215	RS-7.5	1	4	280	2.5	700	140	420	664.5	1504.5
135		396020019	6747.444	0.1549	RS-7.5	1	4	280	2.5	700	140	420	464.7	1304.7
136		396020020	6512.22	0.1495	RS-7.5	1	4	280	2.5	700	140	420	448.5	1288.5
137		396020021	7008.804	0.1609	RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
138		396020022	6529.644	0.1499	RS-7.5	1	4	280	2.5	700	140	420	449.7	1289.7
139		396020023	7230.96	0.166	RS-7.5	1	4	280	2.5	700	140	420	498	1338
140		396020010	7400.844	0.1699	RS-7.5	1	4	280	2.5	700	140	420	509.7	1349.7
141		396020011	7235.316	0.1661	RS-7.5	1	4	280	2.5	700	140	420	498.3	1338.3
142		396020012	7305.012	0.1677	RS-7.5	1	4	280	2.5	700	140	420	503.1	1343.1
143		396020013	7113.348	0.1633	RS-7.5	1	4	280	2.5	700	140	420	489.9	1329.9
144		396014007	7583.796	0.1741	RS-7.5	1	4	280	2.5	700	140	420	522.3	1362.3
145		396014008	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
146		396014009	7801.596	0.1791	RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
147		396014010	7832.088	0.1798	RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
148		396014011	7801.596	0.1791	RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
149		396014012	7901.784	0.1814	RS-7.5	1	4	280	2.5	700	140	420	544.2	1384.2
150		396014013	10903.068	0.2503	RS-7.5	1	4	280	2.5	700	140	420	750.9	1590.9
151		396014014	9382.824	0.2154	RS-7.5	1	4	280	2.5	700	140	420	646.2	1486.2
152		396014015	9792.288	0.2248	RS-7.5	1	4	280	2.5	700	140	420	674.4	1514.4
153		396014016	8302.536	0.1906	RS-7.5	1	4	280	2.5	700	140	420	571.8	1411.8
154		396014017	13429.548	0.3083	RS-7.5	1	4	280	2.5	700	140	420	924.9	1764.9
155		396014018	7008.804	0.1609	RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
156		396014019	6799.716	0.1561	RS-7.5	1	4	280	2.5	700	140	420	468.3	1308.3
157		396020024	6808.428	0.1563	RS-7.5	1	4	280	2.5	700	140	420	468.9	1308.9

158	396020025	6934.752	0.1592	RS-7.5	1	4	280	2.5	700	140	420	477.6	1317.6
159	396020026	8790.408	0.2018	RS-7.5	1	4	280	2.5	700	140	420	605.4	1445.4
160	396020027	8903.664	0.2044	RS-7.5	1	4	280	2.5	700	140	420	613.2	1453.2
161	396020028	9056.124	0.2079	RS-7.5	1	4	280	2.5	700	140	420	623.7	1463.7
162	396020001	8306.892	0.1907	RS-7.5	1	4	280	2.5	700	140	420	572.1	1412.1
163	396020004	7845.156	0.1801	RS-7.5	1	4	280	2.5	700	140	420	540.3	1380.3
164	396020005	7784.172	0.1787	RS-7.5	1	4	280	2.5	700	140	420	536.1	1376.1
165	396020006	7792.884	0.1789	RS-7.5	1	4	280	2.5	700	140	420	536.7	1376.7
166	396020003	8084.736	0.1856	RS-7.5	1	4	280	2.5	700	140	420	556.8	1396.8
167	396014043	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
168	396014044	7318.08	0.168	RS-7.5	1	4	280	2.5	700	140	420	504	1344
169	396014045	10798.524	0.2479	RS-7.5	1	4	280	2.5	700	140	420	743.7	1583.7
170	396014046	10606.86	0.2435	RS-7.5	1	4	280	2.5	700	140	420	730.5	1570.5
171	396014047	12763.08	0.293	RS-7.5	1	4	280	2.5	700	140	420	879	1719
172	396014041	7322.436	0.1681	RS-7.5	1	4	280	2.5	700	140	420	504.3	1344.3
173	396014042	7291.944	0.1674	RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
174	396020002	8015.04	0.184	RS-7.5	1	4	280	2.5	700	140	420	552	1392
175	396020007	7701.408	0.1768	RS-7.5	1	4	280	2.5	700	140	420	530.4	1370.4
176	396020008	7487.964	0.1719	RS-7.5	1	4	280	2.5	700	140	420	515.7	1355.7
177	396020009	7548.948	0.1733	RS-7.5	1	4	280	2.5	700	140	420	519.9	1359.9

Pahala WWTP
Full Buildout Flows

Pahala WWTP
Project 150440

	Dwelling	School
WW per capita (gpd)	70	25
Population Initial	2007	
Population Full	3699	
w/industrial @ 40capita/ac		
1 dwelling/RS		

	Dry I/I	Wet I/I
~~Above GWT (gpcd) / (gad)~~	~~5~~	~~1250~~
2017 WWDS	35	3000

QUANTITY OF WASTEWATER: Per CCH WWTP Stds 1993, chpt 20.
AVERAGE DAILY PER CAPITA FLOW:
Average Daily Flow: 80 gal/day/capita
Residential SF occupancy: 4 capita/dwelling
Apartment MF occupancy: 2.8 capita/dwelling

AVERAGE DAILY PER LAND USE:
Neighborhood Business: 40 capita per acre
General Industry 100 capita per acre
School: 25 gal/capita/day
Institution: 200 gal/capita/day

Small and Decentralized WW Management Systems, Crites

page 170, Commerical Areas of Unknown Use: 800 gal/acre

Table 4-3, Hospital, bed : 240 gcd, employee: 15 gcd

per Vol 2: average ww flow rate during 24-hour period

is the highest instantaneous wastewater flow rate during prolonged period of wet weather

						335		*636*	*3,699*	*229,915*	*2.5*	*574,787*	*129,465*	*359,380*	*1,110,006*	*1,814,258*
LOT COUNT	**notes**	**TMK**	**Area (sqft)**	**Acreage (Tax Acres)**	**LUO**	**Dwellings**			**Capita**	**Avg Flow (gpd)**	**Max Flow Factor**	**Max Flow (gpd)**	**Dry I/I (gpd)**	**Design Avg Flow (gpd)** *(avg WW flow + dry i/i) aka* Average dry weather flow	**Wet I/I (gpd)**	**Design Peak Flow (gpd)** *(max WW flow + dry i/I + wet i/i) aka Peak Wet weather flow*
1		396002044	658670.76	15.121	A-1a				0	0	2.5	0	0	0	45363	45363
2		396002043	195845.76	4.496	A-1a				0	0	2.5	0	0	0	13488	13488
3		396023035	90879.228	2.0863	A-1a				0	0	2.5	0	0	0	6258.9	6258.9
											2.5	0	0	0	0	0
4		396005054	972433.44	22.324	Multiple						2.5	0	0	0	66972	66972
	*assumed 1 dweling		486216.72	11.162	A-20a				0	0	2.5	0	0	0	33486	33486
			486216.72	11.162	RS-10	1			4	280	2.5	700	140	420	33486	34326
											2.5	0	0	0	0	0
5	*assumed Neighborhood Business 40 Capita per acre	396016033	23513.688	0.5398	CV-10	-			22	1540	2.5	3850	770	2310	1619.4	6239.4
6		396016037	17267.184	0.3964	CV-10	-			16	1120	2.5	2800	560	1680	1189.2	4549.2
7		396016038	14300.748	0.3283	CV-10	-			13	910	2.5	2275	455	1365	984.9	3714.9
8		396016032	32665.644	0.7499	CV-10	-			30	2100	2.5	5250	1050	3150	2249.7	8549.7
9		396016003	30605.256	0.7026	CV-10	-			28	1960	2.5	4900	980	2940	2107.8	7987.8
10		396017006	10114.632	0.2322	CV-7.5	-			9	630	2.5	1575	315	945	696.6	2586.6
11		396017007	9809.712	0.2252	CV-7.5	-			9	630	2.5	1575	315	945	675.6	2565.6
12		396017008	9483.012	0.2177	CV-7.5	-			9	630	2.5	1575	315	945	653.1	2543.1
13		396017009	9705.168	0.2228	CV-7.5	-			9	630	2.5	1575	315	945	668.4	2558.4
											2.5	0	0	0	0	0
14		396021032	8150.076	0.1871	ROAD					0	2.5	0	0	0	561.3	561.3
											2.5	0	0	0	0	0
15																
											2.5	0	0	0	0	0
16	2.8capita/dwelling	396017036	14779.908	0.3393	RM-1.5	10			28	1960	2.5	4900	980	2940	1017.9	6897.9
17		396017037	62491.176	1.4346	RM-1.5	42			118	8260	2.5	20650	4130	12390	4303.8	29083.8
											2.5	0	0	0	0	0
18		396023019	11338.668	0.2603	RS-10	1			4	280	2.5	700	140	420	780.9	1620.9
19		396023020	15272.136	0.3506	RS-10	1			4	280	2.5	700	140	420	1051.8	1891.8
20		396023021	11377.872	0.2612	RS-10	1			4	280	2.5	700	140	420	783.6	1623.6
21	*Obtain Ka'u Hospital Patient and Staff Info *assume 25 beds , 212*	396023043	250121.52	5.742	RS-10*				25	6000	2.5	15000	875	6875	17226	33101
									212	3180	2.5	7950	7420	10600	0	15370
22		396021009	11721.996	0.2691	RS-10	1			4	280	2.5	700	140	420	807.3	1647.3
23		396021011	16496.172	0.3787	RS-10	1			4	280	2.5	700	140	420	1136.1	1976.1
24		396021022	11282.04	0.259	RS-10	1			4	280	2.5	700	140	420	777	1617

25		396021023	11299.464	0.2594	RS-10	1	4	280	2.5	700	140	420	778.2	1618.2
26		396023022	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
27		396023023	10502.316	0.2411	RS-10	1	4	280	2.5	700	140	420	723.3	1563.3
28		396023024	12148.884	0.2789	RS-10	1	4	280	2.5	700	140	420	836.7	1676.7
29		396023025	12493.008	0.2868	RS-10	1	4	280	2.5	700	140	420	860.4	1700.4
30		396023026	12418.956	0.2851	RS-10	1	4	280	2.5	700	140	420	855.3	1695.3
31		396023027	13063.644	0.2999	RS-10	1	4	280	2.5	700	140	420	899.7	1739.7
32		396023028	11112.156	0.2551	RS-10	1	4	280	2.5	700	140	420	765.3	1605.3
33		396023029	11020.68	0.253	RS-10	1	4	280	2.5	700	140	420	759	1599
34		396023030	10532.808	0.2418	RS-10	1	4	280	2.5	700	140	420	725.4	1565.4
35		396023031	10532.808	0.2418	RS-10	1	4	280	2.5	700	140	420	725.4	1565.4
36		396023032	15324.408	0.3518	RS-10	1	4	280	2.5	700	140	420	1055.4	1895.4
37		396021010	12645.468	0.2903	RS-10	1	4	280	2.5	700	140	420	870.9	1710.9
38	*Can be subdivided in the future	396023044	227339.64	5.219	RS-10	1	4	280	2.5	700	140	420	15657	16497
39		396021030	10798.524	0.2479	RS-10	1	4	280	2.5	700	140	420	743.7	1583.7
41		396023001	10384.704	0.2384	RS-10	1	4	280	2.5	700	140	420	715.2	1555.2
42		396023002	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
43		396023003	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
44		396023004	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
45		396023005	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
46		396023006	10005.732	0.2297	RS-10	1	4	280	2.5	700	140	420	689.1	1529.1
47		396021024	10389.06	0.2385	RS-10	1	4	280	2.5	700	140	420	715.5	1555.5
48		396021025	10389.06	0.2385	RS-10	1	4	280	2.5	700	140	420	715.5	1555.5
49		396021026	10389.06	0.2385	RS-10	1	4	280	2.5	700	140	420	715.5	1555.5
50		396021027	12824.064	0.2944	RS-10	1	4	280	2.5	700	140	420	883.2	1723.2
51		396021028	10833.372	0.2487	RS-10	1	4	280	2.5	700	140	420	746.1	1586.1
52		396021029	10798.524	0.2479	RS-10	1	4	280	2.5	700	140	420	743.7	1583.7
53		396021012	11769.912	0.2702	RS-10	1	4	280	2.5	700	140	420	810.6	1650.6
54		396021013	11251.548	0.2583	RS-10	1	4	280	2.5	700	140	420	774.9	1614.9
55		396021014	11251.548	0.2583	RS-10	1	4	280	2.5	700	140	420	774.9	1614.9
56		396021015	11251.548	0.2583	RS-10	1	4	280	2.5	700	140	420	774.9	1614.9
57		396021016	11251.548	0.2583	RS-10	1	4	280	2.5	700	140	420	774.9	1614.9
58		396021017	10328.076	0.2371	RS-10	1	4	280	2.5	700	140	420	711.3	1551.3
59		396021018	10328.076	0.2371	RS-10	1	4	280	2.5	700	140	420	711.3	1551.3
60		396021019	10328.076	0.2371	RS-10	1	4	280	2.5	700	140	420	711.3	1551.3
61		396021020	10328.076	0.2371	RS-10	1	4	280	2.5	700	140	420	711.3	1551.3
62		396021021	10341.144	0.2374	RS-10	1	4	280	2.5	700	140	420	712.2	1552.2
63		396021002	12000.78	0.2755	RS-10	1	4	280	2.5	700	140	420	826.5	1666.5
64		396021003	12000.78	0.2755	RS-10	1	4	280	2.5	700	140	420	826.5	1666.5
65		396021004	12083.544	0.2774	RS-10	1	4	280	2.5	700	140	420	832.2	1672.2
66		396021005	14387.868	0.3303	RS-10	1	4	280	2.5	700	140	420	990.9	1830.9
67		396021006	12423.312	0.2852	RS-10	1	4	280	2.5	700	140	420	855.6	1695.6
68		396021007	12519.144	0.2874	RS-10	1	4	280	2.5	700	140	420	862.2	1702.2
69		396021008	11600.028	0.2663	RS-10	1	4	280	2.5	700	140	420	798.9	1638.9
70	*Church	396023045	100632.312	2.3102	RS-10	1	4	280	2.5	700	140	420	6930.6	7770.6
71		396023007	10001.376	0.2296	RS-10	1	4	280	2.5	700	140	420	688.8	1528.8
72		396023008	10001.376	0.2296	RS-10	1	4	280	2.5	700	140	420	688.8	1528.8
73		396023009	10328.076	0.2371	RS-10	1	4	280	2.5	700	140	420	711.3	1551.3
74		396023010	10367.28	0.238	RS-10	1	4	280	2.5	700	140	420	714	1554
75		396023011	10001.376	0.2296	RS-10	1	4	280	2.5	700	140	420	688.8	1528.8
76		396023012	10001.376	0.2296	RS-10	1	4	280	2.5	700	140	420	688.8	1528.8
77		396023013	10166.904	0.2334	RS-10	1	4	280	2.5	700	140	420	700.2	1540.2
78		396023014	10206.108	0.2343	RS-10	1	4	280	2.5	700	140	420	702.9	1542.9
79		396023015	10933.56	0.251	RS-10	1	4	280	2.5	700	140	420	753	1593
80		396023016	11586.96	0.266	RS-10	1	4	280	2.5	700	140	420	798	1638
81		396023017	13220.46	0.3035	RS-10	1	4	280	2.5	700	140	420	910.5	1750.5
82		396023018	10097.208	0.2318	RS-10	1	4	280	2.5	700	140	420	695.4	1535.4
									2.5	0	0	0	0	0
83		396023034	572779.152	13.1492	Multiple			0	2.5	0	0	0	39447.6	39447.6
			286389.576	6.5746	RS-10	1	4	280	2.5	700	140	420	19723.8	20563.8
			286389.576	6.5746	A-1a		0	0	2.5	0	0	0	19723.8	19723.8
									2.5	0	0	0	0	0
84		396020035	12858.912	0.2952	RS-15	1	4	280	2.5	700	140	420	885.6	1725.6
85		396020036	13320.648	0.3058	RS-15	1	4	280	2.5	700	140	420	917.4	1757.4
86		396020037	10123.344	0.2324	RS-15	1	4	280	2.5	700	140	420	697.2	1537.2
87		396020038	10123.344	0.2324	RS-15	1	4	280	2.5	700	140	420	697.2	1537.2
88		396020039	10123.344	0.2324	RS-15	1	4	280	2.5	700	140	420	697.2	1537.2
89		396020040	10123.344	0.2324	RS-15	1	4	280	2.5	700	140	420	697.2	1537.2
90		396020041	10123.344	0.2324	RS-15	1	4	280	2.5	700	140	420	697.2	1537.2
91		396020042	9905.544	0.2274	RS-15	1	4	280	2.5	700	140	420	682.2	1522.2
92		396020043	13538.448	0.3108	RS-15	1	4	280	2.5	700	140	420	932.4	1772.4

93	396019012	11848.32	0.272	RS-15	1	4	280	2.5	700	140	420	816	1656
94	396019013	11922.372	0.2737	RS-15	1	4	280	2.5	700	140	420	821.1	1661.1
95	396019014	11970.288	0.2748	RS-15	1	4	280	2.5	700	140	420	824.4	1664.4
96	396019015	12305.7	0.2825	RS-15	1	4	280	2.5	700	140	420	847.5	1687.5
97	396019016	12493.008	0.2868	RS-15	1	4	280	2.5	700	140	420	860.4	1700.4
98	396019017	12519.144	0.2874	RS-15	1	4	280	2.5	700	140	420	862.2	1702.2
99	396016005	20399.148	0.4683	RS-15	1	4	280	2.5	700	140	420	1404.9	2244.9
100	396016006	17402.22	0.3995	RS-15	1	4	280	2.5	700	140	420	1198.5	2038.5
101	396016007	13477.464	0.3094	RS-15	1	4	280	2.5	700	140	420	928.2	1768.2
102	396016008	14644.872	0.3362	RS-15	1	4	280	2.5	700	140	420	1008.6	1848.6
103	396016009	11613.096	0.2666	RS-15	1	4	280	2.5	700	140	420	799.8	1639.8
104	396016010	12357.972	0.2837	RS-15	1	4	280	2.5	700	140	420	851.1	1691.1
105	396019001	15912.468	0.3653	RS-15	1	4	280	2.5	700	140	420	1095.9	1935.9
106	396019002	17484.984	0.4014	RS-15	1	4	280	2.5	700	140	420	1204.2	2044.2
107	396019003	17698.428	0.4063	RS-15	1	4	280	2.5	700	140	420	1218.9	2058.9
108	396019004	13359.852	0.3067	RS-15	1	4	280	2.5	700	140	420	920.1	1760.1
109	396019005	11190.564	0.2569	RS-15	1	4	280	2.5	700	140	420	770.7	1610.7
110	396019006	11190.564	0.2569	RS-15	1	4	280	2.5	700	140	420	770.7	1610.7
111	396020044	15672.888	0.3598	RS-15	1	4	280	2.5	700	140	420	1079.4	1919.4
112	396020045	15141.456	0.3476	RS-15	1	4	280	2.5	700	140	420	1042.8	1882.8
113	396020046	13294.512	0.3052	RS-15	1	4	280	2.5	700	140	420	915.6	1755.6
114	396020047	10271.448	0.2358	RS-15	1	4	280	2.5	700	140	420	707.4	1547.4
115	396020048	9983.952	0.2292	RS-15	1	4	280	2.5	700	140	420	687.6	1527.6
116	396020049	10497.96	0.241	RS-15	1	4	280	2.5	700	140	420	723	1563
117	396019007	19780.596	0.4541	RS-15	1	4	280	2.5	700	140	420	1362.3	2202.3
118	396019008	16605.072	0.3812	RS-15	1	4	280	2.5	700	140	420	1143.6	1983.6
119	396019009	14653.584	0.3364	RS-15	1	4	280	2.5	700	140	420	1009.2	1849.2
120	396019010	13150.764	0.3019	RS-15	1	4	280	2.5	700	140	420	905.7	1745.7
121	396019011	12501.72	0.287	RS-15	1	4	280	2.5	700	140	420	861	1701
122	396016031	11752.488	0.2698	RS-15	1	4	280	2.5	700	140	420	809.4	1649.4
123	396020050	11356.092	0.2607	RS-15	1	4	280	2.5	700	140	420	782.1	1622.1
124	396020051	11486.772	0.2637	RS-15	1	4	280	2.5	700	140	420	791.1	1631.1
125	396016004	57412.08	1.318	RS-15	1	4	280	2.5	700	140	420	3954	4794
126	396023036	17302.032	0.3972	RS-15	1	4	280	2.5	700	140	420	1191.6	2031.6
127	396023037	15002.064	0.3444	RS-15	1	4	280	2.5	700	140	420	1033.2	1873.2
128	396023038	15002.064	0.3444	RS-15	1	4	280	2.5	700	140	420	1033.2	1873.2
129	396023039	15002.064	0.3444	RS-15	1	4	280	2.5	700	140	420	1033.2	1873.2
130	396023040	15002.064	0.3444	RS-15	1	4	280	2.5	700	140	420	1033.2	1873.2
131	396023041	14740.704	0.3384	RS-15	1	4	280	2.5	700	140	420	1015.2	1855.2
132	396023042	18138.384	0.4164	RS-15	1	4	280	2.5	700	140	420	1249.2	2089.2
133	396019018	12532.212	0.2877	RS-15	1	4	280	2.5	700	140	420	863.1	1703.1
134	396019019	11251.548	0.2583	RS-15	1	4	280	2.5	700	140	420	774.9	1614.9
135	396019020	11251.548	0.2583	RS-15	1	4	280	2.5	700	140	420	774.9	1614.9
136	396019021	11251.548	0.2583	RS-15	1	4	280	2.5	700	140	420	774.9	1614.9
137	396019022	11308.176	0.2596	RS-15	1	4	280	2.5	700	140	420	778.8	1618.8
138	396016029	11774.268	0.2703	RS-15	1	4	280	2.5	700	140	420	810.9	1650.9
139	396016030	11721.996	0.2691	RS-15	1	4	280	2.5	700	140	420	807.3	1647.3
140	396016002	12614.976	0.2896	RS-15	1	4	280	2.5	700	140	420	868.8	1708.8
141	396020059	12928.608	0.2968	RS-15	1	4	280	2.5	700	140	420	890.4	1730.4
142	396020060	12532.212	0.2877	RS-15	1	4	280	2.5	700	140	420	863.1	1703.1
143	396020061	12135.816	0.2786	RS-15	1	4	280	2.5	700	140	420	835.8	1675.8
144	396016001	12445.092	0.2857	RS-15	1	4	280	2.5	700	140	420	857.1	1697.1
145	396016012	11268.972	0.2587	RS-15	1	4	280	2.5	700	140	420	776.1	1616.1
146	396016013	18508.644	0.4249	RS-15	1	4	280	2.5	700	140	420	1274.7	2114.7
147	396016014	14932.368	0.3428	RS-15	1	4	280	2.5	700	140	420	1028.4	1868.4
148	396016015	15559.632	0.3572	RS-15	1	4	280	2.5	700	140	420	1071.6	1911.6
149	396016016	15681.6	0.36	RS-15	1	4	280	2.5	700	140	420	1080	1920
150	396020055	12026.916	0.2761	RS-15	1	4	280	2.5	700	140	420	828.3	1668.3
151	396016017	13381.632	0.3072	RS-15	1	4	280	2.5	700	140	420	921.6	1761.6
152	396016018	12161.952	0.2792	RS-15	1	4	280	2.5	700	140	420	837.6	1677.6
153	396016019	10402.128	0.2388	RS-15	1	4	280	2.5	700	140	420	716.4	1556.4
154	396016020	9866.34	0.2265	RS-15	1	4	280	2.5	700	140	420	679.5	1519.5
155	396016022	11077.308	0.2543	RS-15	1	4	280	2.5	700	140	420	762.9	1602.9
156	396016028	13817.232	0.3172	RS-15	1	4	280	2.5	700	140	420	951.6	1791.6
157	396020062	11421.432	0.2622	RS-15	1	4	280	2.5	700	140	420	786.6	1626.6
158	396020063	11586.96	0.266	RS-15	1	4	280	2.5	700	140	420	798	1638
159	396020064	10728.828	0.2463	RS-15	1	4	280	2.5	700	140	420	738.9	1578.9
160	396020065	10240.956	0.2351	RS-15	1	4	280	2.5	700	140	420	705.3	1545.3
161	396020066	10445.688	0.2398	RS-15	1	4	280	2.5	700	140	420	719.4	1559.4
162	396020052	11621.808	0.2668	RS-15	1	4	280	2.5	700	140	420	800.4	1640.4
163	396020053	11756.844	0.2699	RS-15	1	4	280	2.5	700	140	420	809.7	1649.7
164	396020054	11891.88	0.273	RS-15	1	4	280	2.5	700	140	420	819	1659

165	396005059	1698.84	0.039	RS-7.5	1	4	280	2.5	700	140	420	117	957
166	396022031	9604.98	0.2205	RS-7.5	1	4	280	2.5	700	140	420	661.5	1501.5
167	396018043	10680.912	0.2452	RS-7.5	1	4	280	2.5	700	140	420	735.6	1575.6
168	396018044	9740.016	0.2236	RS-7.5	1	4	280	2.5	700	140	420	670.8	1510.8
169	396022012	10232.244	0.2349	RS-7.5	1	4	280	2.5	700	140	420	704.7	1544.7
170	396022013	9522.216	0.2186	RS-7.5	1	4	280	2.5	700	140	420	655.8	1495.8
171	396018052	12070.476	0.2771	RS-7.5	1	4	280	2.5	700	140	420	831.3	1671.3
172	396018053	12484.296	0.2866	RS-7.5	1	4	280	2.5	700	140	420	859.8	1699.8
173	396018054	13098.492	0.3007	RS-7.5	1	4	280	2.5	700	140	420	902.1	1742.1
174	396018059	12292.632	0.2822	RS-7.5	1	4	280	2.5	700	140	420	846.6	1686.6
175	396018060	435.6	0.01	RS-7.5	1	4	280	2.5	700	140	420	30	870
176	396022021	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
177	396022022	10053.648	0.2308	RS-7.5	1	4	280	2.5	700	140	420	692.4	1532.4
178	396022023	8877.528	0.2038	RS-7.5	1	4	280	2.5	700	140	420	611.4	1451.4
179	396018046	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
180	396018047	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
181	396018048	10315.008	0.2368	RS-7.5	1	4	280	2.5	700	140	420	710.4	1550.4
182	396018049	10615.572	0.2437	RS-7.5	1	4	280	2.5	700	140	420	731.1	1571.1
183	396022014	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
184	396017040	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
185	396017041	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
186	396017042	9513.504	0.2184	RS-7.5	1	4	280	2.5	700	140	420	655.2	1495.2
187	396017043	9535.284	0.2189	RS-7.5	1	4	280	2.5	700	140	420	656.7	1496.7
188	396017044	9186.804	0.2109	RS-7.5	1	4	280	2.5	700	140	420	632.7	1472.7
189	396017045	19758.816	0.4536	RS-7.5	1	4	280	2.5	700	140	420	1360.8	2200.8
190	396017046	10663.488	0.2448	RS-7.5	1	4	280	2.5	700	140	420	734.4	1574.4
191	396018009	32155.992	0.7382	RS-7.5	1	4	280	2.5	700	140	420	2214.6	3054.6
192	396018011	10323.72	0.237	RS-7.5	1	4	280	2.5	700	140	420	711	1551
193	396018012	9779.22	0.2245	RS-7.5	1	4	280	2.5	700	140	420	673.5	1513.5
194	396018013	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
195	396018014	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
196	396018015	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
197	396018016	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
198	396018017	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
199	396018018	10598.148	0.2433	RS-7.5	1	4	280	2.5	700	140	420	729.9	1569.9
200	396018019	11194.92	0.257	RS-7.5	1	4	280	2.5	700	140	420	771	1611
201	396018020	11029.392	0.2532	RS-7.5	1	4	280	2.5	700	140	420	759.6	1599.6
202	396018021	10545.876	0.2421	RS-7.5	1	4	280	2.5	700	140	420	726.3	1566.3
203	396018022	10850.796	0.2491	RS-7.5	1	4	280	2.5	700	140	420	747.3	1587.3
204	396018023	11482.416	0.2636	RS-7.5	1	4	280	2.5	700	140	420	790.8	1630.8
205	396018024	10724.472	0.2462	RS-7.5	1	4	280	2.5	700	140	420	738.6	1578.6
206	396018025	10014.444	0.2299	RS-7.5	1	4	280	2.5	700	140	420	689.7	1529.7
207	396018026	10088.496	0.2316	RS-7.5	1	4	280	2.5	700	140	420	694.8	1534.8
208	396018027	11290.752	0.2592	RS-7.5	1	4	280	2.5	700	140	420	777.6	1617.6
209	396018030	9870.696	0.2266	RS-7.5	1	4	280	2.5	700	140	420	679.8	1519.8
210	396018031	11068.596	0.2541	RS-7.5	1	4	280	2.5	700	140	420	762.3	1602.3
211	396018032	12166.308	0.2793	RS-7.5	1	4	280	2.5	700	140	420	837.9	1677.9
212	396018033	9025.632	0.2072	RS-7.5	1	4	280	2.5	700	140	420	621.6	1461.6
213	396022045	10380.348	0.2383	RS-7.5	1	4	280	2.5	700	140	420	714.9	1554.9
214	396017031	13677.84	0.314	RS-7.5	1	4	280	2.5	700	140	420	942	1782
215	396017032	14370.444	0.3299	RS-7.5	1	4	280	2.5	700	140	420	989.7	1829.7
216	396017026	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
217	396017027	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
218	396017028	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
219	396017029	9726.948	0.2233	RS-7.5	1	4	280	2.5	700	140	420	669.9	1509.9
220	396017030	10550.232	0.2422	RS-7.5	1	4	280	2.5	700	140	420	726.6	1566.6
221	396022016	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
222	396022017	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
223	396022018	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
224	396022019	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
225	396022020	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
226	396022038	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
227	396022039	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
228	396018055	10829.016	0.2486	RS-7.5	1	4	280	2.5	700	140	420	745.8	1585.8
229	396018056	9622.404	0.2209	RS-7.5	1	4	280	2.5	700	140	420	662.7	1502.7
230	396018057	9718.236	0.2231	RS-7.5	1	4	280	2.5	700	140	420	669.3	1509.3
231	396018058	13229.172	0.3037	RS-7.5	1	4	280	2.5	700	140	420	911.1	1751.1
232	396022010	9021.276	0.2071	RS-7.5	1	4	280	2.5	700	140	420	621.3	1461.3
233	396022015	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
234	396017033	9587.556	0.2201	RS-7.5	1	4	280	2.5	700	140	420	660.3	1500.3
235	396017034	9600.624	0.2204	RS-7.5	1	4	280	2.5	700	140	420	661.2	1501.2
236	396017035	12140.172	0.2787	RS-7.5	1	4	280	2.5	700	140	420	836.1	1676.1

237	396017039	10384.704	0.2384	RS-7.5	1	4	280	2.5	700	140	420	715.2	1555.2
238	396018034	9713.88	0.223	RS-7.5	1	4	280	2.5	700	140	420	669	1509
239	396018035	9273.924	0.2129	RS-7.5	1	4	280	2.5	700	140	420	638.7	1478.7
240	396018036	9404.604	0.2159	RS-7.5	1	4	280	2.5	700	140	420	647.7	1487.7
241	396018037	11186.208	0.2568	RS-7.5	1	4	280	2.5	700	140	420	770.4	1610.4
242	396018038	12188.088	0.2798	RS-7.5	1	4	280	2.5	700	140	420	839.4	1679.4
243	396018039	12641.112	0.2902	RS-7.5	1	4	280	2.5	700	140	420	870.6	1710.6
244	396018040	12540.924	0.2879	RS-7.5	1	4	280	2.5	700	140	420	863.7	1703.7
245	396018041	12236.004	0.2809	RS-7.5	1	4	280	2.5	700	140	420	842.7	1682.7
246	396005058	50355.36	1.156	RS-7.5	1	4	280	2.5	700	140	420	3468	4308
247	396005046	37200.24	0.854	RS-7.5	1	4	280	2.5	700	140	420	2562	3402
248	396018042	11299.464	0.2594	RS-7.5	1	4	280	2.5	700	140	420	778.2	1618.2
249	396022011	9021.276	0.2071	RS-7.5	1	4	280	2.5	700	140	420	621.3	1461.3
250	396022030	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
251	396018045	9517.86	0.2185	RS-7.5	1	4	280	2.5	700	140	420	655.5	1495.5
252	396022049	11726.352	0.2692	RS-7.5	1	4	280	2.5	700	140	420	807.6	1647.6
253	396022050	16422.12	0.377	RS-7.5	1	4	280	2.5	700	140	420	1131	1971
254	396022051	16504.884	0.3789	RS-7.5	1	4	280	2.5	700	140	420	1136.7	1976.7
255	396022052	13943.556	0.3201	RS-7.5	1	4	280	2.5	700	140	420	960.3	1800.3
256	396022053	14035.032	0.3222	RS-7.5	1	4	280	2.5	700	140	420	966.6	1806.6
257	396022054	12188.088	0.2798	RS-7.5	1	4	280	2.5	700	140	420	839.4	1679.4
258	396022055	10323.72	0.237	RS-7.5	1	4	280	2.5	700	140	420	711	1551
259	396022056	10423.908	0.2393	RS-7.5	1	4	280	2.5	700	140	420	717.9	1557.9
260	396022057	6912.972	0.1587	RS-7.5	1	4	280	2.5	700	140	420	476.1	1316.1
261	396022024	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
262	396022025	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
263	396022026	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
264	396022027	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
265	396022028	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
266	396022029	9239.076	0.2121	RS-7.5	1	4	280	2.5	700	140	420	636.3	1476.3
267	396022032	9426.384	0.2164	RS-7.5	1	4	280	2.5	700	140	420	649.2	1489.2
268	396022048	10432.62	0.2395	RS-7.5	1	4	280	2.5	700	140	420	718.5	1558.5
269	396005045	134426.16	3.086	RS-7.5	1	4	280	2.5	700	140	420	9258	10098
270	396022035	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
271	396022036	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
272	396022037	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
273	396018050	12074.832	0.2772	RS-7.5	1	4	280	2.5	700	140	420	831.6	1671.6
274	396018051	11761.2	0.27	RS-7.5	1	4	280	2.5	700	140	420	810	1650
275	396022040	9840.204	0.2259	RS-7.5	1	4	280	2.5	700	140	420	677.7	1517.7
276	396022041	9456.876	0.2171	RS-7.5	1	4	280	2.5	700	140	420	651.3	1491.3
277	396022042	12135.816	0.2786	RS-7.5	1	4	280	2.5	700	140	420	835.8	1675.8
278	396022043	11482.416	0.2636	RS-7.5	1	4	280	2.5	700	140	420	790.8	1630.8
279	396022044	9774.864	0.2244	RS-7.5	1	4	280	2.5	700	140	420	673.2	1513.2
280	396022046	13634.28	0.313	RS-7.5	1	4	280	2.5	700	140	420	939	1779
281	396022047	12819.708	0.2943	RS-7.5	1	4	280	2.5	700	140	420	882.9	1722.9
282	396022033	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
283	396022034	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
284	396017010	11983.356	0.2751	RS-7.5	1	4	280	2.5	700	140	420	825.3	1665.3
285	396017011	11730.708	0.2693	RS-7.5	1	4	280	2.5	700	140	420	807.9	1647.9
286	396017012	11125.224	0.2554	RS-7.5	1	4	280	2.5	700	140	420	766.2	1606.2
287	396017019	12270.852	0.2817	RS-7.5	1	4	280	2.5	700	140	420	845.1	1685.1
288	396017020	13385.988	0.3073	RS-7.5	1	4	280	2.5	700	140	420	921.9	1761.9
289	396017021	15537.852	0.3567	RS-7.5	1	4	280	2.5	700	140	420	1070.1	1910.1
290	396017022	21740.796	0.4991	RS-7.5	1	4	280	2.5	700	140	420	1497.3	2337.3
291	396017023	19031.364	0.4369	RS-7.5	1	4	280	2.5	700	140	420	1310.7	2150.7
292	396017024	13011.372	0.2987	RS-7.5	1	4	280	2.5	700	140	420	896.1	1736.1
293	396017025	9901.188	0.2273	RS-7.5	1	4	280	2.5	700	140	420	681.9	1521.9
294	396022001	10598.148	0.2433	RS-7.5	1	4	280	2.5	700	140	420	729.9	1569.9
295	396022002	12667.248	0.2908	RS-7.5	1	4	280	2.5	700	140	420	872.4	1712.4
296	396022003	10023.156	0.2301	RS-7.5	1	4	280	2.5	700	140	420	690.3	1530.3
297	396022004	10606.86	0.2435	RS-7.5	1	4	280	2.5	700	140	420	730.5	1570.5
298	396022005	9374.112	0.2152	RS-7.5	1	4	280	2.5	700	140	420	645.6	1485.6
299	396022006	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
300	396022007	8999.496	0.2066	RS-7.5	1	4	280	2.5	700	140	420	619.8	1459.8
301	396022008	9021.276	0.2071	RS-7.5	1	4	280	2.5	700	140	420	621.3	1461.3
302	396022009	9021.276	0.2071	RS-7.5	1	4	280	2.5	700	140	420	621.3	1461.3
303	396017013	10450.044	0.2399	RS-7.5	1	4	280	2.5	700	140	420	719.7	1559.7
304	396017014	10097.208	0.2318	RS-7.5	1	4	280	2.5	700	140	420	695.4	1535.4
305	396017015	10066.716	0.2311	RS-7.5	1	4	280	2.5	700	140	420	693.3	1533.3
306	396017016	10358.568	0.2378	RS-7.5	1	4	280	2.5	700	140	420	713.4	1553.4
307	396017017	10972.764	0.2519	RS-7.5	1	4	280	2.5	700	140	420	755.7	1595.7
308	396017018	12693.384	0.2914	RS-7.5	1	4	280	2.5	700	140	420	874.2	1714.2

309		396022058	1224.036	0.0281	RS-7.5	1	4	280	2.5	700	140	420	84.3	924.3
						Initial Flow								
	*assumed Neighborhood													
310	Business 40 Capita per acre	396016034	41395.068	0.9503	CV-10	-	38	2660	2.5	6650	1330	3990	2850.9	10830.9
311	0	396016035	7657.848	0.1758	CV-10	-	7	490	2.5	1225	245	735	527.4	1997.4
312	0	396017001	16339.356	0.3751	CV-7.5	-	15	1050	2.5	2625	525	1575	1125.3	4275.3
313	0	396015034	5140.08	0.118	ML-20	-	1	94.4	2.5	236	35	129.4	354	625
314	0	396005049	2888.028	0.0663	ML-20	-	1	53.04	2.5	132.6	35	88.04	198.9	366.5
315	0	396015032	44953.92	1.032	ML-20	-	10	825.6	2.5	2064	350	1175.6	3096	5510
316	0	0	0	0		0	0	0	2.5	0	0	0	0	0
	Google earth image: lot looks semi developed with possible								2.5	-	-	-	-	-
317	farm facility.	396005036	1104246	25.35	-	-	-	-						
	0	0	552123	12.675	ML-20		0	127	10140	2.5	25350	4445	14585	38025	67820
	*assumed 1 dwelling per lot	0	441698.4	10.14	RS-10		1	4	280	2.5	700	140	420	30420	31260
	*used RS-10 assumptions, since open defined by adjacent								2.5	700	140	420	7605	8445
318	land use	0	110424.6	2.535	Open		1	4	280					
	0	396002024	17859.6	0.41	MG-1a		0	4	328	2.5	820	140	468	1230	2190
	*assumed apartment 2.8 per								2.5	28875	5775	17325	6066	40716
319	dwelling	396017002	88078.32	2.022	RM-1.5		59	165	11550					
320	0	396017003	22899.492	0.5257	RM-1.5		15	42	2940	2.5	7350	1470	4410	1577.1	10397.1
321	0	396017038	26806.824	0.6154	RM-1.5		18	50	3500	2.5	8750	1750	5250	1846.2	12346.2
	0	0	0	0		0	0	0	0	2.5	0	0	0	0	0
322	0	396005044	21505.572	0.4937	ROAD	-	-	-		2.5					
	0	0	0	0		0	0	0	0	2.5	0	0	0	0	0
323	0	396021031	12736.944	0.2924	RS-10		1	4	280	2.5	700	140	420	877.2	1717.2
324	0	396015033	58021.92	1.332	RS-10		1	4	280	2.5	700	140	420	3996	4836
325	0	396014069	11961.576	0.2746	RS-10		1	4	280	2.5	700	140	420	823.8	1663.8
326	0	396014070	13290.156	0.3051	RS-10		1	4	280	2.5	700	140	420	915.3	1755.3
327	0	396014071	15002.064	0.3444	RS-10		1	4	280	2.5	700	140	420	1033.2	1873.2
328	0	396014072	16452.612	0.3777	RS-10		1	4	280	2.5	700	140	420	1133.1	1973.1
329	0	396021001	13629.924	0.3129	RS-10		1	4	280	2.5	700	140	420	938.7	1778.7
330	0	396020031	13673.484	0.3139	RS-15		1	4	280	2.5	700	140	420	941.7	1781.7
331	0	396020032	13381.632	0.3072	RS-15		1	4	280	2.5	700	140	420	921.6	1761.6
332	0	396014053	14440.14	0.3315	RS-15		1	4	280	2.5	700	140	420	994.5	1834.5
333	0	396014054	14440.14	0.3315	RS-15		1	4	280	2.5	700	140	420	994.5	1834.5
334	0	396014055	14440.14	0.3315	RS-15		1	4	280	2.5	700	140	420	994.5	1834.5
335	0	396014056	13128.984	0.3014	RS-15		1	4	280	2.5	700	140	420	904.2	1744.2
336	0	396014057	12462.516	0.2861	RS-15		1	4	280	2.5	700	140	420	858.3	1698.3
337	0	396014058	16896.924	0.3879	RS-15		1	4	280	2.5	700	140	420	1163.7	2003.7
338	0	396014059	12000.78	0.2755	RS-15		1	4	280	2.5	700	140	420	826.5	1666.5
339	0	396014060	12000.78	0.2755	RS-15		1	4	280	2.5	700	140	420	826.5	1666.5
340	0	396014061	10497.96	0.241	RS-15		1	4	280	2.5	700	140	420	723	1563
341	0	396014062	10497.96	0.241	RS-15		1	4	280	2.5	700	140	420	723	1563
342	0	396014063	10497.96	0.241	RS-15		1	4	280	2.5	700	140	420	723	1563
343	0	396014064	10497.96	0.241	RS-15		1	4	280	2.5	700	140	420	723	1563
344	0	396014065	10497.96	0.241	RS-15		1	4	280	2.5	700	140	420	723	1563
345	0	396020033	9822.78	0.2255	RS-15		1	4	280	2.5	700	140	420	676.5	1516.5
346	0	396020034	11007.612	0.2527	RS-15		1	4	280	2.5	700	140	420	758.1	1598.1
347	0	396016036	17424	0.4	RS-15		1	4	280	2.5	700	140	420	1200	2040
348	0	396016039	13142.052	0.3017	RS-15		1	4	280	2.5	700	140	420	905.1	1745.1
349	0	396016040	28775.736	0.6606	RS-15		1	4	280	2.5	700	140	420	1981.8	2821.8
350	0	396016041	27264.204	0.6259	RS-15		1	4	280	2.5	700	140	420	1877.7	2717.7
351	0	396016042	27887.112	0.6402	RS-15		1	4	280	2.5	700	140	420	1920.6	2760.6
352	0	396016043	18700.308	0.4293	RS-15		1	4	280	2.5	700	140	420	1287.9	2127.9
353	0	396016044	18526.068	0.4253	RS-15		1	4	280	2.5	700	140	420	1275.9	2115.9
354	0	396016045	15672.888	0.3598	RS-15		1	4	280	2.5	700	140	420	1079.4	1919.4
355	0	396016046	10990.188	0.2523	RS-15		1	4	280	2.5	700	140	420	756.9	1596.9
356	0	396015018	11412.72	0.262	RS-15		1	4	280	2.5	700	140	420	786	1626
357	0	396015019	8738.136	0.2006	RS-15		1	4	280	2.5	700	140	420	601.8	1441.8
358	0	396015020	14170.068	0.3253	RS-15		1	4	280	2.5	700	140	420	975.9	1815.9
359	0	396015021	15437.664	0.3544	RS-15		1	4	280	2.5	700	140	420	1063.2	1903.2
360	0	396015022	12540.924	0.2879	RS-15		1	4	280	2.5	700	140	420	863.7	1703.7
361	0	396016011	32683.068	0.7503	RS-15		1	4	280	2.5	700	140	420	2250.9	3090.9
362	0	396015011	9740.016	0.2236	RS-15		1	4	280	2.5	700	140	420	670.8	1510.8
363	0	396015012	9835.848	0.2258	RS-15		1	4	280	2.5	700	140	420	677.4	1517.4
364	0	396015013	7984.548	0.1833	RS-15		1	4	280	2.5	700	140	420	549.9	1389.9
365	0	396015014	9543.996	0.2191	RS-15		1	4	280	2.5	700	140	420	657.3	1497.3
366	0	396015015	9892.476	0.2271	RS-15		1	4	280	2.5	700	140	420	681.3	1521.3
367	0	396015016	9892.476	0.2271	RS-15		1	4	280	2.5	700	140	420	681.3	1521.3

368	0	396015009	27943.74	0.6415 RS-15		1	4	280	2.5	700	140	420	1924.5	2764.5
369	0	396015005	12066.12	0.277 RS-15		1	4	280	2.5	700	140	420	831	1671
370	0	396015006	15089.184	0.3464 RS-15		1	4	280	2.5	700	140	420	1039.2	1879.2
371	0	396015007	7239.672	0.1662 RS-15		1	4	280	2.5	700	140	420	498.6	1338.6
372	0	396015008	24685.452	0.5667 RS-15		1	4	280	2.5	700	140	420	1700.1	2540.1
373	0	396020058	14936.724	0.3429 RS-15		1	4	280	2.5	700	140	420	1028.7	1868.7
374	0	396015017	12802.284	0.2939 RS-15		1	4	280	2.5	700	140	420	881.7	1721.7
375	0	396020030	10419.552	0.2392 RS-15		1	4	280	2.5	700	140	420	717.6	1557.6
376	0	396015003	13068	0.3 RS-15		1	4	280	2.5	700	140	420	900	1740
377	0	396015004	11173.14	0.2565 RS-15		1	4	280	2.5	700	140	420	769.5	1609.5
378	0	396020056	12806.64	0.294 RS-15		1	4	280	2.5	700	140	420	882	1722
379	0	396020057	10737.54	0.2465 RS-15		1	4	280	2.5	700	140	420	739.5	1579.5
380	0	396016023	14971.572	0.3437 RS-15		1	4	280	2.5	700	140	420	1031.1	1871.1
381	0	396016024	16565.868	0.3803 RS-15		1	4	280	2.5	700	140	420	1140.9	1980.9
382	0	396016025	15341.832	0.3522 RS-15		1	4	280	2.5	700	140	420	1056.6	1896.6
383	0	396016026	19946.124	0.4579 RS-15		1	4	280	2.5	700	140	420	1373.7	2213.7
384	0	396016027	16404.696	0.3766 RS-15		1	4	280	2.5	700	140	420	1129.8	1969.8
385	0	396002056	149018.76	3.421 RS-15		1	4	280	2.5	700	140	420	10263	11103
	0	0	0	0	0	0	0	0	2.5	0	0	0	0	0
386	0	396002016	2906279.64	66.719 Multiple		0	0	-	2.5	-	-	-	-	-
	0	0	72656.991	1.667975 RS-10		1	4	280	2.5	700	140	420	5003.925	5843.925
	0	0	72656.991	1.667975 RS-15		1	4	280	2.5	700	140	420	5003.925	5843.925
**assume Ag utilizes IWS. No connection to municipal sewer	0	1307825.838		30.02355 A-1a		30	0	0	2.5	0	0	0	90070.65	90070.65
	0	0	145313.982	3.33595 A-20a		3	0	0	2.5	0	0	0	10007.85	10007.85
	0	0	1307825.838	30.02355 MG-1a	-		300	24018.84	2.5	60047.1	10500	34518.84	90070.65	160617.75
	0	0	0	0	0	0	0	0	2.5	0	0	0	0	0
387	0	396015023	14143.932	0.3247 RS-15		1	4	280	2.5	700	140	420	974.1	1814.1
388	0	396015024	10641.708	0.2443 RS-15		1	4	280	2.5	700	140	420	732.9	1572.9
389	0	396015025	16679.124	0.3829 RS-15		1	4	280	2.5	700	140	420	1148.7	1988.7
390	0	396015026	15180.66	0.3485 RS-15		1	4	280	2.5	700	140	420	1045.5	1885.5
391	0	396015027	12802.284	0.2939 RS-15		1	4	280	2.5	700	140	420	881.7	1721.7
392	0	396015028	12283.92	0.282 RS-15		1	4	280	2.5	700	140	420	846	1686
393	0	396015029	13886.928	0.3188 RS-15		1	4	280	2.5	700	140	420	956.4	1796.4
394	0	396015030	11804.76	0.271 RS-15		1	4	280	2.5	700	140	420	813	1653
395	0	396015031	12236.004	0.2809 RS-15		1	4	280	2.5	700	140	420	842.7	1682.7
396	0	396014066	10497.96	0.241 RS-15		1	4	280	2.5	700	140	420	723	1563
397	0	396014067	12754.368	0.2928 RS-15		1	4	280	2.5	700	140	420	878.4	1718.4
398	0	396015001	10619.928	0.2438 RS-15		1	4	280	2.5	700	140	420	731.4	1571.4
399	0	396015002	9888.12	0.227 RS-15		1	4	280	2.5	700	140	420	681	1521
400	0	396015010	11800.404	0.2709 RS-15		1	4	280	2.5	700	140	420	812.7	1652.7
401	0	396014048	12462.516	0.2861 RS-15		1	4	280	2.5	700	140	420	858.3	1698.3
402	0	396014049	13128.984	0.3014 RS-15		1	4	280	2.5	700	140	420	904.2	1744.2
403	0	396014050	14440.14	0.3315 RS-15		1	4	280	2.5	700	140	420	994.5	1834.5
404	0	396014051	14440.14	0.3315 RS-15		1	4	280	2.5	700	140	420	994.5	1834.5
405	0	396014052	13385.988	0.3073 RS-15		1	4	280	2.5	700	140	420	921.9	1761.9
	0	0	0	0	0	0	0	0	2.5	0	0	0	0	0
406 *used School Assumptions based on CH2MHill (502 students and 77 staff)		396005008	1172896.56	26.926 RS-15		1	579	14475	2.5	36187.5	20265	34740	80778	137230.5
407 *Park/ball field next to Ka'u School; assume its contribution is accounted for in school, since calculations provided annotate both TMKs		396005039	280613.52	6.442 RS-10		0	0	0	2.5	0	0	0	19326	19326
	0	0	0	0	0	0	0	0	2.5	0	0	0	0	0
408	0	396014020	6930.396	0.1591 RS-7.5		1	4	280	2.5	700	140	420	477.3	1317.3
409	0	396014021	7187.4	0.165 RS-7.5		1	4	280	2.5	700	140	420	495	1335
410	0	396014022	7204.824	0.1654 RS-7.5		1	4	280	2.5	700	140	420	496.2	1336.2
411	0	396014023	7196.112	0.1652 RS-7.5		1	4	280	2.5	700	140	420	495.6	1335.6
412	0	396014024	7082.856	0.1626 RS-7.5		1	4	280	2.5	700	140	420	487.8	1327.8
413	0	396014025	7287.588	0.1673 RS-7.5		1	4	280	2.5	700	140	420	501.9	1341.9
414	0	396014026	7169.976	0.1646 RS-7.5		1	4	280	2.5	700	140	420	493.8	1333.8
415	0	396014002	7540.236	0.1731 RS-7.5		1	4	280	2.5	700	140	420	519.3	1359.3
416	0	396014003	7758.036	0.1781 RS-7.5		1	4	280	2.5	700	140	420	534.3	1374.3
417	0	396014004	7832.088	0.1798 RS-7.5		1	4	280	2.5	700	140	420	539.4	1379.4
418	0	396014005	7683.984	0.1764 RS-7.5		1	4	280	2.5	700	140	420	529.2	1369.2
419	0	396014006	7727.544	0.1774 RS-7.5		1	4	280	2.5	700	140	420	532.2	1372.2
420	0	396018001	13303.224	0.3054 RS-7.5		1	4	280	2.5	700	140	420	916.2	1756.2
421	0	396018002	11356.092	0.2607 RS-7.5		1	4	280	2.5	700	140	420	782.1	1622.1
422	0	396018003	11996.424	0.2754 RS-7.5		1	4	280	2.5	700	140	420	826.2	1666.2
423	0	396018004	10785.456	0.2476 RS-7.5		1	4	280	2.5	700	140	420	742.8	1582.8

424	0	396018028	14244.12	0.327 RS-7.5	1	4	280	2.5	700	140	420	981	1821
425	0	396018029	12519.144	0.2874 RS-7.5	1	4	280	2.5	700	140	420	862.2	1702.2
426	0	396014001	7466.184	0.1714 RS-7.5	1	4	280	2.5	700	140	420	514.2	1354.2
427	0	396014027	7161.264	0.1644 RS-7.5	1	4	280	2.5	700	140	420	493.2	1333.2
428	0	396014028	7287.588	0.1673 RS-7.5	1	4	280	2.5	700	140	420	501.9	1341.9
429	0	396014029	7335.504	0.1684 RS-7.5	1	4	280	2.5	700	140	420	505.2	1345.2
430	0	396014030	7148.196	0.1641 RS-7.5	1	4	280	2.5	700	140	420	492.3	1332.3
431	0	396014031	7082.856	0.1626 RS-7.5	1	4	280	2.5	700	140	420	487.8	1327.8
432	0	396014032	7034.94	0.1615 RS-7.5	1	4	280	2.5	700	140	420	484.5	1324.5
433	0	396014033	6865.056	0.1576 RS-7.5	1	4	280	2.5	700	140	420	472.8	1312.8
434	0	396014034	6886.836	0.1581 RS-7.5	1	4	280	2.5	700	140	420	474.3	1314.3
435	0	396014035	7087.212	0.1627 RS-7.5	1	4	280	2.5	700	140	420	488.1	1328.1
436	0	396014036	7291.944	0.1674 RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
437	0	396014037	7291.944	0.1674 RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
438	0	396014038	7222.248	0.1658 RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
439	0	396014039	7222.248	0.1658 RS-7.5	1	4	280	2.5	700	140	420	497.4	1337.4
440	0	396014040	7257.096	0.1666 RS-7.5	1	4	280	2.5	700	140	420	499.8	1339.8
441	0	396020014	8842.68	0.203 RS-7.5	1	4	280	2.5	700	140	420	609	1449
442	0	396020015	9740.016	0.2236 RS-7.5	1	4	280	2.5	700	140	420	670.8	1510.8
443	0	396020016	10794.168	0.2478 RS-7.5	1	4	280	2.5	700	140	420	743.4	1583.4
444	0	396020017	9618.048	0.2208 RS-7.5	1	4	280	2.5	700	140	420	662.4	1502.4
445	0	396020018	9648.54	0.2215 RS-7.5	1	4	280	2.5	700	140	420	664.5	1504.5
446	0	396020019	6747.444	0.1549 RS-7.5	1	4	280	2.5	700	140	420	464.7	1304.7
447	0	396020020	6512.22	0.1495 RS-7.5	1	4	280	2.5	700	140	420	448.5	1288.5
448	0	396020021	7008.804	0.1609 RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
449	0	396020022	6529.644	0.1499 RS-7.5	1	4	280	2.5	700	140	420	449.7	1289.7
450	0	396020023	7230.96	0.166 RS-7.5	1	4	280	2.5	700	140	420	498	1338
451	0	396020010	7400.844	0.1699 RS-7.5	1	4	280	2.5	700	140	420	509.7	1349.7
452	0	396020011	7235.316	0.1661 RS-7.5	1	4	280	2.5	700	140	420	498.3	1338.3
453	0	396020012	7305.012	0.1677 RS-7.5	1	4	280	2.5	700	140	420	503.1	1343.1
454	0	396020013	7113.348	0.1633 RS-7.5	1	4	280	2.5	700	140	420	489.9	1329.9
455	0	396014007	7583.796	0.1741 RS-7.5	1	4	280	2.5	700	140	420	522.3	1362.3
456	0	396014008	7832.088	0.1798 RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
457	0	396014009	7801.596	0.1791 RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
458	0	396014010	7832.088	0.1798 RS-7.5	1	4	280	2.5	700	140	420	539.4	1379.4
459	0	396014011	7801.596	0.1791 RS-7.5	1	4	280	2.5	700	140	420	537.3	1377.3
460	0	396014012	7901.784	0.1814 RS-7.5	1	4	280	2.5	700	140	420	544.2	1384.2
461	0	396014013	10903.068	0.2503 RS-7.5	1	4	280	2.5	700	140	420	750.9	1590.9
462	0	396014014	9382.824	0.2154 RS-7.5	1	4	280	2.5	700	140	420	646.2	1486.2
463	0	396014015	9792.288	0.2248 RS-7.5	1	4	280	2.5	700	140	420	674.4	1514.4
464	0	396014016	8302.536	0.1906 RS-7.5	1	4	280	2.5	700	140	420	571.8	1411.8
465	0	396014017	13429.548	0.3083 RS-7.5	1	4	280	2.5	700	140	420	924.9	1764.9
466	0	396014018	7008.804	0.1609 RS-7.5	1	4	280	2.5	700	140	420	482.7	1322.7
467	0	396014019	6799.716	0.1561 RS-7.5	1	4	280	2.5	700	140	420	468.3	1308.3
468	0	396020024	6808.428	0.1563 RS-7.5	1	4	280	2.5	700	140	420	468.9	1308.9
469	0	396020025	6934.752	0.1592 RS-7.5	1	4	280	2.5	700	140	420	477.6	1317.6
470	0	396020026	8790.408	0.2018 RS-7.5	1	4	280	2.5	700	140	420	605.4	1445.4
471	0	396020027	8903.664	0.2044 RS-7.5	1	4	280	2.5	700	140	420	613.2	1453.2
472	0	396020028	9056.124	0.2079 RS-7.5	1	4	280	2.5	700	140	420	623.7	1463.7
473	0	396020001	8306.892	0.1907 RS-7.5	1	4	280	2.5	700	140	420	572.1	1412.1
474	0	396020004	7845.156	0.1801 RS-7.5	1	4	280	2.5	700	140	420	540.3	1380.3
475	0	396020005	7784.172	0.1787 RS-7.5	1	4	280	2.5	700	140	420	536.1	1376.1
476	0	396020006	7792.884	0.1789 RS-7.5	1	4	280	2.5	700	140	420	536.7	1376.7
477	0	396020003	8084.736	0.1856 RS-7.5	1	4	280	2.5	700	140	420	556.8	1396.8
478	0	396014043	7291.944	0.1674 RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
479	0	396014044	7318.08	0.168 RS-7.5	1	4	280	2.5	700	140	420	504	1344
480	0	396014045	10798.524	0.2479 RS-7.5	1	4	280	2.5	700	140	420	743.7	1583.7
481	0	396014046	10606.86	0.2435 RS-7.5	1	4	280	2.5	700	140	420	730.5	1570.5
482	0	396014047	12763.08	0.293 RS-7.5	1	4	280	2.5	700	140	420	879	1719
483	0	396014041	7322.436	0.1681 RS-7.5	1	4	280	2.5	700	140	420	504.3	1344.3
484	0	396014042	7291.944	0.1674 RS-7.5	1	4	280	2.5	700	140	420	502.2	1342.2
485	0	396020002	8015.04	0.184 RS-7.5	1	4	280	2.5	700	140	420	552	1392
486	0	396020007	7701.408	0.1768 RS-7.5	1	4	280	2.5	700	140	420	530.4	1370.4
487	0	396020008	7487.964	0.1719 RS-7.5	1	4	280	2.5	700	140	420	515.7	1355.7
488	0	396020009	7548.948	0.1733 RS-7.5	1	4	280	2.5	700	140	420	519.9	1359.9

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Appendix C
August 2018 Biological Survey Report

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AECOS No. 1545

Biological survey for the Pāhala Community Large Capacity Cesspool Closure Project on lot TMK: 9-6-002:018, Kaʻū District, Hawaiʻi Island

Prepared by:

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August 16, 2018

Biological survey for the Pāhala Community Large Capacity Cesspool Closure Project on lot TMK: 9-6-002:018, Kaʻū District, Hawaiʻi Island

August 16, 2018 | ***Draft*** | *AECOS* No. 1545

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Introduction

The Hawaiʻi County Department of Environmental Management, Wastewater Division is proposing to construct a wastewater treatment and disposal system ("Project") to treat sewage collected in Pāhala, Kaʻū District. The treatment and disposal system will be located on a property identified as TMK: 9-6-002:018, north of the intersection of Hawaii Belt Road (Māmalahoa Highway) and Maile Street. This report describes methods used and results of a biological survey conducted in the Project area in August 2018. The primary purpose of the survey was to determine whether any species currently proposed or listed as threatened or endangered under either federal or state endangered species statutes occur on, or could utilize resources within, the Project area.

Project and Site Descriptions

The WWTP site encompasses the lower, approximately 15 ac (6 ha) of the subject parcel (TMK: 9-6-002:018). Presently the entire parcel is a macadamia nut (*Macadamia integrifolia*) orchard, but with the margins and two narrow windbreak tree lines dominated by other species of trees and herbaceous plants dividing the orchard into northwest-southeast trending units. In addition to the WWTP site, a proposed transmission pipe would be constructed to the northwest through the orchard up to Maile Street. From Maile Street a collection system is planned for many of the streets within Pāhala town (see Figure 1).

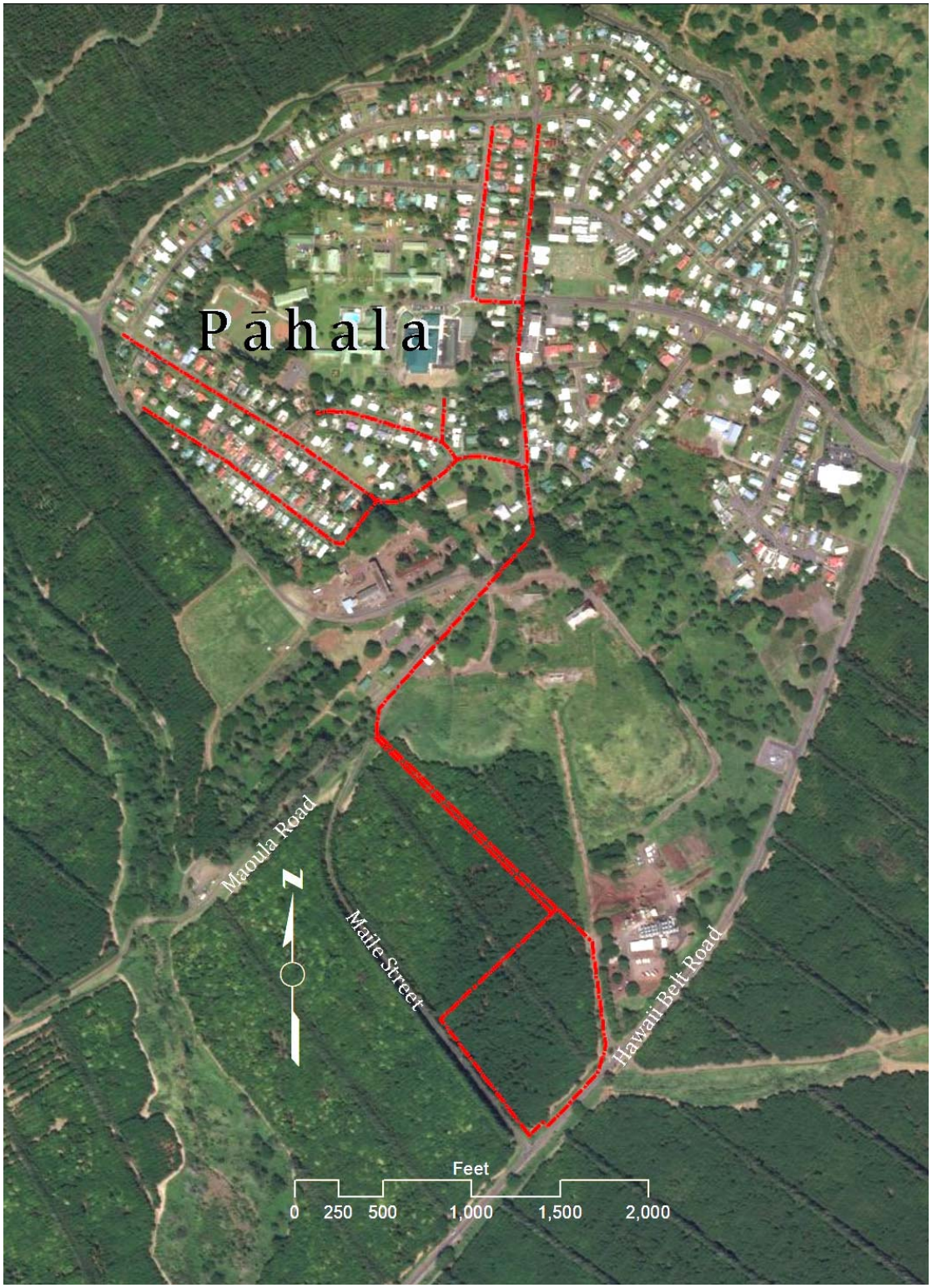

Figure 1. Project and survey areas marked in red, Pāhala.

Macadamia nut trees form a closed crown of dense leaf growth (see cover photo), creating deep shade within most parts of the grove. The dominant understory in these deeply shaded areas is germinating mac nut trees.

Methods

Botanical Survey

The botanical survey was undertaken on August 13, 2018 and entailed a wandering pedestrian transect that traversed the subject property, including the area extending north to Maile Road proposed for installation of a collector main. A "windshield" survey was conducted along all the streets proposed for the collection system beyond the surveyed parcel. Plant species were identified as they were encountered and notations made in a field notebook, which was used to develop qualitative abundance values for each species as the survey progressed. On a strictly area basis, only macadamia nut trees, Guinea grass (*Megathyrsus maximus*), and perhaps a couple of other species would have a ranking above uncommon. So, abundance values in this report are relative to areas that support species other than the macadamia nut trees, such as the road verges and other areas surrounding the orchard, unmaintained areas within the orchard, including narrow windbreak lanes that divide the orchard plots into units. The survey period encompassed the early dry season, but most of the vegetation was in a relatively healthy state (the orchard is irrigated as needed). However, early in the dry season found most trees and shrubs absent fruit or flower. This slight limitation did not compromise the discovery of native species of plants.

Plant names used herein follow *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawai'i's Ferns and Fern Allies* (Palmer, 2003) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental and crop plants. More recent name changes for naturalized plant species follow Imada (2012).

Avian Survey

Six avian count stations were sited roughly equidistant from each other, four within the WWTP area and two along the collection pipe route upslope to Maile Street. Stations were sited approximately 150 m (490 ft) apart from each other. A single eight-minute avian point count was made at each of the count stations. Field observations were made with the aid of Leica 8 X 42 binoculars and by

listening for vocalizations. The avian counts were conducted in the early morning hours. Time not spent counting at point-count stations was used to search the site for species and habitats not observed during the point counts. Weather conditions were excellent with winds of between 1 and 5 kph and no precipitation.

The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North American Birds* (American Ornithologists' Union, 1998), and the 42nd through the 59th supplements to the Check-List (American Ornithologists' Union, 1998, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008; Chesser et al., 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018).

Mammalian Survey

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) or *ʻōpeʻapeʻa*, all terrestrial mammals currently found on the Island of Hawai'i are alien species, and most are ubiquitous. The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all terrestrial mammalian species detected within the project area.

Results

Vegetation

Vegetation within the areas surveyed comprises a macadamia nut orchard of mature trees, unmaintained areas dominated outside the orchard by Guinea grass, lanes of windbreak trees oriented between orchard units, and (mostly) mowed road verge areas. Within the orchard are scattered small plots of ruderal herbaceous plants, in most cases dominated by nodeweed (*Synedrella nodiflora*), but if generally only lightly shaded, a number of other herbaceous species. The windbreak lanes consist of two rows of trees: silk oak (*Grevelia robusta*) and paperbark (*Melaleuca quinquenervia*) and are used in orchard maintenance to stack cut branches and logs. These lanes support many of the herbaceous plants recorded from the orchard. The proposed sewerage collection system will be installed along already paved roadways within Pāhala. The survey in these areas revealed the vegetation to be entirely maintained yards of ornamental plants.

Flora

A listing of the plant species recorded during the August 2018 survey is provided as Table 1. In all, the listing has 52 species of vascular plants: 2 ferns, one gymnosperm, and 49 species of angiosperms (flowering plants). Only two species (4%) are regarded as native to the Hawaiian Islands and both are indigenous (native, but also distributed elsewhere in the Pacific). Found in low numbers are the ubiquitous, ruderal *ʻuhaloa* (*Waltheria indica*) and the common blue- or purple-flowered morning glory vine: *koali ʻawa* (*Ipomoea indica*). Being widely distributed indigenous species, neither is listed as threatened or endangered or of any special concern.

Table 1. Plant species identified during the August 13, 2018 survey of TMK: 9-6-002:018, Pāhala, Kaʻū District, Hawaiʻi.

Species listed by family	Common name	Status	Abundance	Notes
FERNS				
NEPHROLEPIDACEAE				
Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton	sword fern	Nat	R	
PTERIDACEAE				
Pityrogramma calomelanos (L.) Link	silver fern	Nat	R	<1>
GYMNOSPERMS				
ARAUCARIACEAE				
Araucaria columnaris (G. Forst.) J.D. Hook.	Cook pine	Nat	O	<1>
FLOWERING PLANTS DICOTYLEDONS				
AMERANTHACEAE				
Amaranthus spinosus L.	spiny amaranth	Nat	R	
APOCYNACEAE				
Carissa macrocarpa (Ecklon) A. de Cand.	natal plum	Orn	R	
Nerium oleander L.	olreander	Orn	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	umbrella tree	Nat	U	
ASTERACEAE (COMPOSITAE)				
Ageratum conyzoides L.	*maile hohono*	Nat	R	<1>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
ASTERACEAE (cont.)				
Bidens pilosa L.	*ki*; beggartick	Nat	U	<2>
Calyptocarpus vialis Less.	---	Nat	O	<1>
Conyza bonariensis (L.) Cronq.	hairy horseweed	Nat	C	<2>
Crassocephalum crepidioides (Benth.) S. Moore	---	Nat	R	
Cyanthillium cinereum L.	little ironweed	Nat	U	<1>
Lactuca serriola L.	prickly lettuce	Nat	U	<1>
Indet.	ruderal weed	Nat	R	<3>
Synedrella nodiflora (L.) Gaertn.	nodeweed	Nat	AA	<2>
BASELLACEAE				
Anredera cordifolia (Ten.) Steenis	Madeira vine	Nat	R	<3>
BRASSICACEAE				
Lepidium virginicum L.	---	Nat	R	<2>
CAPPARACEAE				
Cleome gynandra L.	wild spider flower	Nat	O	<1>
CONVOLVULACEAE				
Ipomoea indica (J. Burm.) Merr.	*koali ʻawa*	**Ind**	R	
Ipomoea obscura (L.) Ker-Gawl.	---	Nat	O	
Merremia tuberosa (L.) J. Rendle	wood rose	Nat	R	
CUCURBITACEAE				
Momordica charantia L.	wild bitter melon	Nat	O	
EUPHORBIACEAE				
Euphorbia heterophylla L.	*kaliko*	Nat	U	<1>
Euphorbia hirta L.	garden spurge	Nat	O	<2>
Ricinus communis L.	castor bean	Nat	C	<2>
FABACEAE				
Acacia confusa Merr.	Formosan *koa*	Nat	R	
Leucaena leucocephala (Lam.) deWit	*koa haole*	Nat	R	<2>
Macroptilium atropurpureum (DC.) Urb.	---	Nat	U	<1>
Neonotonia wightii (Wight & Arnott) Lackey	glycine vine	Nat	AA	<2>
LAMIACEAE				
Leonotis nepetifolia (L.) R. Br.	lion's ear	Nat	O	<2>
MALVACEAE				
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	Nat	R	
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	O	<2>
Sida rhombifolia L.	Cuba jute	Nat	C	<2>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
MALVACEAE (cont.)				
Sida spinosa L.	prickly sida	Nat	R	
Waltheria indica L.	*ʻuhaloa*	**Ind**	U	
MORACEAE				
Ficus microcarpa L. f.	Chinese banyan	Nat	R	<2>
MYRTACEAE				
Melaleuca quinquenervia (Cav.) S.T. Blake	paperbark	Nat	C	
Syzygium cumini (L.) Skeels	Java plum	Nat	U	<2>
PHYTOLACCACEAE				
Rivina humilis L.	coral berry	Nat	U	
PROTEACEAE				
Grevillea robusta A. Cunn. ex R. Br.	silk oak	Nat	C	<2>
Macadamia integrifolia Maiden & Berche	macadamia nut	Nat	AA	
RUBIACEAE				
Spermacoce assurgens Ruiz & Pav.	buttonweed	Nat	C	<1>
	MONOCOTYLEDONS			
COMMELINACEAE				
Commelina benghalensis L.	hairy *honohono*	Nat	R	<1>
CYPERACEAE				
Cyperus gracilis R. Br.	McCoy grass	Nat	U	
POACEAE				
Axonopus compressus (Swartz) P. Beauv.	brd.-lvd. carpet grass	Nat	C	<1>
Cenchrus purpureus (Schumach.) Morrone	elephant grass	Nat	U	
Chloris barbata (L.) Sw.	swollen fingergrass	Nat	R	
Digiteria sp.	---	Nat	R	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	A	<2>
Megathyrsus maximus Jacq.	Guinea grass	Nat	AA	<2>
Setaria verticillata (L.) P. Beauv.	bristly foxtail	Nat	R	

Legend to Table 1:

Status = distributional status

Ind = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.

Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778 and well-established outside of cultivation.

Orn = ornamental; crop or landscape plant not established outside of cultivation.

Abundance = occurrence ratings for plants on property in July 2013.

R – Rare - only one or two plants seen.

Table 1 – Legend (continued).

U - Uncommon - several to a dozen plants observed.
O - Occasional - found regularly, but not abundant anywhere.
C - Common - considered an important part of the vegetation and observed numerous times.
A - Abundant - found in large numbers; may be locally dominant.
AA - Abundant - very abundant and dominant; defining vegetation type.

Notes:
<1> Characteristic or found only in the road verge immediately adjacent to the site.
<2> Species also reported from close by in David & Guinther (2013).
<3> Plant lacking flowers or fruit at time of survey; identification uncertain.

Avian Survey

A total of 175 individual birds of 13 species, representing nine separate families, was recorded during station counts (Table 2). Avian diversity and densities were very low, in keeping with the current usage of the site as a mature macadamia nut orchard, with minimal ground cover and few weedy or shrubby species. A closed canopy keeps areas beneath the trees in perpetual twilight. Four species, Northern Cardinal (*Cardinalis cardinalis*), Japanese White-eye (*Zosterops japonicus*), Yellow-fronted Canary (*Ceithagra mozambica*), and Red-billed Leiothrix (*Leiothrix lutea*), accounted for 52% of all birds recorded during station counts. The most frequently recorded species was Northern Cardinal, which accounted for 16% of the total number of individual birds recorded during station point counts. All of the species recorded during the course of this survey are established alien species.

Table 2. Avian species detected during point-counts for the Pāhala Community WWTP Project

Common Name	Scientific Name	**ST**	***RA***
	PHASIANIDAE - Pheasants & Partridges		
	Meleagridinae -Turkeys		
Wild Turkey	*Meleagris gallopavo*	A	2.00
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	3.17
Zebra Dove	*Geopelia striata*	A	2.00

Table 2 (continued).

Common Name	Scientific Name	ST	RA
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	3.67
	TIMALIIDAE - Babblers		
Chinese Hwamei	*Garrulax canorus*	A	2.00
Red-billed Leiothrix	*Leiothrix lutea*	A	3.33
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	0.17
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
	Carduelinae - Carduline Finches and Hawaiian Honeycreepers		
House Finch	*Haemorhous mexicanus*	A	1.33
Yellow-fronted Canary	*Ceithagra mozambica*	A	1.50
	CARDINALIDAE - Cardinals & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	4.67
	THRAUPIDAE - Tanagers		
	Thraupinae - Core Tanagers		
Yellow-billed Cardinal	*Paroaria capitata*	A	1.50
Saffron Finch	*Sicalis flaveola*	A	1.67
	ESTRILDIDAE - Estrildid Finches		
Scaly-breasted Munia	*Lonchura punctulata*	A	0.17

Key to Table 2

ST Status.

A Alien – Introduced to the Hawaiian Islands by humans.

RA Relative Abundance – Number of birds detected divided by the number of count stations (6).

Mammalian Survey

Rather remarkably, we recorded no mammalian species within the survey area. Indeed, there was no indication that pigs (*Sus scrofa*) utilize the Project area.

Discussion

Botanical Resources

Although some unmaintained or infrequently maintained areas exist on the subject parcel, the entire Project is proposed for land that is highly modified and the flora present subject to alterations, including mowing. Thus, there is no expectation for the site to support remnants of a native forest flora and minimal

opportunity for native plants to become established, the *ʻuhaloa* and *koali ʻawa* being exceptions due to their ability to grow in highly disturbed environments. A previous biological survey (David and Guinther, 2013) conducted on 5 ac (2 ha) of land close by to the east yielded only 25 species of plants, the most abundant being white shrimp plant (*Justicia betonica*), glycine vine, and Guinea grass. Because that area had been highly disturbed, then not disturbed for a long time, species such as the shrimp plant and particularly Guinea grass had become well-established to the exclusion of other species. Sixteen species (24% of the combined species list) were common to both surveys.

Obviously, the macadamia nut orchard is a valuable botanical resource, but a commercial one and not an environmentally sensitive one. The same can be said for the Cook pines (*Araucaria columnaris*) that line Maile Street along the southwestern side of the parcel. These old trees are an important community landscape element to be retained in place by the Project.

Avian Resources

The findings of the avian survey are consistent with the location of the site, and the monoculture of macadamia nut trees present on it. No native avian species were recorded during the course of this survey.

Although not detected during this survey, endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and Newell's Shearwater (*Puffinus newelli*) have been recorded over-flying the general Project area between April and the end of November each year. The petrel is listed as endangered, and the shearwater as threatened under both federal and State of Hawaiʻi endangered species statutes. The primary cause of mortality in both Hawaiian Petrel and Newell's Shearwater is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered to be second-most significant cause of mortality of these seabirds in Hawaiʻi. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds can collide with man-made structures and, if not killed outright, dazed or injured birds become prey to feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al., 1998; Ainley et al., 2001; Hue et al., 2001; Day et al., 2003). Neither nesting colonies nor appropriate nesting habitat for either of these listed seabird species occur within or close to the current Project site.

Mammalian Resources

No Hawaiian hoary bats were detected during the course of this survey. It is possible that bats use resources within orchard part of the Project. Although, no rodents were recorded during the course of this survey, it is likely that one or more of the four alien Murida*e* established on Hawai'i Island—European house mouse (*Mus musculus domesticus*), roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and black rat (*Rattus exulans hawaiiensis*)—use various resources found within the general Project area on a seasonal basis, especially in the macadamia nut orchard. These human commensal species are drawn to areas of human habitation and activity and all are deleterious to native ecosystems and their dependent native fauna.

Jurisdictional Waters

The subject parcel slopes down to the southwest corner. A street culvert at that location carries runoff in the area under Māmalahoa Highway (Hawaii Belt Road). The National Wetlands Inventory (NWI) Wetlands Mapper (USFW, nd (a)) shows no features occurring on the parcel and no streams are shown on USGS topographic maps (USGS, 1923). Streams in the Pāhala area of the Island do not flow all the way to the sea, but terminate on Keone'ele'ele Flat to the southwest.

Critical Habitat

Federally delineated Critical Habitat is not present in Pāhala area (USFWS, 2012). Thus, the Project will not impinge on federally designated Critical Habitat. No equivalent designation exists under state law

Potential Impacts to Protected Species

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes (DLNR 1998, 2015; USFWS, nd (b)) were recorded by this survey. Three faunal species not observed, may occur in the general vicinity and are discussed here.

Seabirds

The principal potential impact that the construction of the project poses to protected seabirds is the increased threat that birds will be downed after becoming disoriented by lights associated with the proposed action during the

nesting season. The two activities that could pose a threat to these nocturnally flying seabirds are: a) if during construction, it is deemed expedient or necessary to conduct night-time construction activities during the seabird fledging season (which runs from September 15 through December 15); or b) exterior lighting is installed as part of the WWTP facilities. Impacts can be minimized if all external lighting is made dark sky compliant (HDLNR-DOFAW, 2016).

Hawaiian hoary bat

The potential impact that Project construction poses to the endangered Hawaiian hoary bat would be from clearing and grubbing of the macadamia nut orchard. Trimming or removal of trees within the construction areas may temporarily displace bats using this vegetation for roosting. Hawaiian bats use multiple roosts within their home territories, so the disturbance resulting from removal of trees is likely to be minimal. However, during pupping season, female bats carrying pups may be less able to rapidly vacate a roost site when the tree is felled. Additionally, adult female bats sometimes leave their pups in the roost tree while they themselves forage, and very small pups may be unable to flee a tree that is being felled. Adverse effects from such disturbance can be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft), between June 1 and September 15, the bat pupping season.

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Appendix C-1
Endangered Species Act Section 7 Consultation

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December 21, 2018

Eldridge Naboa, Fish and Wildlife Biologist
U.S. Department of the Interior
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, HI 96850

Subject: **Pāhala Large Capacity Cesspool (LCC) Replacement Project; Pāhala, Kaʻū District, Hawaiʻi (01EPIF00-2018-TA-0275) – Request for Concurrence**

Dear Mr. Naboa:

On behalf of the United States Environmental Protection Agency (EPA) and the County of Hawaiʻi (County), and as the designated non-Federal representative for consultations under Section 7 of the Endangered Species Act, we respectfully request concurrence from the U.S. Fish and Wildlife Service (FWS) that the above-referenced project is *not likely to adversely affect* federally-listed threatened and endangered species or critical habitat. This consultation addresses the project's potential impacts to the following eight species that were identified in correspondence with FWS dated April 23, 2018 as having the potential to occur in the vicinity of the project area: Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian Hawk (*Buteo solitarius*), Nēnē (*Branta sandvicensis*), Hawaiian Petrel (*Pterodroma sandwichensis*), Band-rumped Storm-Petrel (*Oceanodroma castro*), Newell's Shearwater (*Puffinus newelli*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), and Hawaiian Coot (*Fulica alai*).

The proposed project is located in Pāhala, Kaʻū District, Hawaiʻi. Funding for this project is provided by a Special Appropriation Grant from EPA and a loan from the State of Hawaiʻi Clean Water State Revolving Fund (SRF). The project involves replacing two large-capacity cesspools (LCCs) with a new County-owned wastewater collection system to be constructed primarily within the existing public right-of-way (ROW); a treatment and disposal system that will occupy a 14.9-acre site that is currently a privately-owned macadamia nut plantation; and closure of the two LCCs. See enclosed map of project location for reference (Site 7 on the attached Figure 1).

Project Description/Action Area

The proposed project is located in the community of Pāhala, a former sugar farming and processing operation, in the Kaʻū District, Island of Hawaiʻi. In 1999, pursuant to the Safe Drinking Water Act, EPA promulgated regulations (40 CFR 144.14) requiring the elimination or closure of all LCCs by April 2005. In 2010, the C. Brewer company transferred the ownership and operation of the LCCs to the County, which is bringing these wastewater systems into compliance with the Safe Drinking Water Act.

The proposed project will consist of constructing a new wastewater collection system primarily within the public ROW and a treatment and disposal system located on a 14.9-acre parcel that is currently privately owned (TMK: 9-6-002: 018), but will be acquired by the County (Figure 1). The wastewater collection system will consist of approximately 12,150 linear feet of 8 to 16-inch gravity-flow piping located within eight public streets. The treatment and disposal facility will be a land-based system consisting of a headworks with screens to remove debris and an odor control unit; a series of three 0.4-acre aerated lagoons and a fourth, 0.8-acre aerated lagoon; an operations building with adjacent disinfection system; a subsurface flow constructed wetland; and four slow-rate (SR) land treatment basins, which will be surrounded by berms on all sides (Figure 2). SR land treatment involves irrigation of land and vegetation with treated wastewater effluent. Significant additional treatment occurs as the water percolates through the soil. The facility's treatment capacity will be approximately 190,000 gallons per day. The property will be cleared of trees and will be enclosed by a 6-foot-high chain link security fence (Figure 2). No more than two Cook pines (*Araucaria columnaris*) along Maile Street will be removed to accommodate the new driveway to the treatment and disposal facility.

Once the new system is in place, the County will close and abandon the existing LCCs. This system includes some lines located in the backyards of residential lots and some within public streets; therefore, abandoning the lines in place will minimize impacts related to their excavation and removal. The cut ends of the abandoned laterals to the collection system will be plugged with concrete to prevent unauthorized use of the old system and to avoid the need to maintain an unused underground hydraulic conduit. The two LCCs will also be abandoned and closed; the specific closure methods have not yet been determined but will be consistent with the requirements set forth in Hawai'i Administrative Rules §11-23-19.

Consultation History with FWS

Representatives of EPA and the County have conferred with FWS regarding this project. In the process of preparing the Draft Environmental Assessment (EA), the County's representative (Wilson Okamoto Corporation) submitted a written request for comments to FWS in a letter dated March 15, 2018. In a letter dated April 23, 2018, FWS identified the eight federally-listed species having the potential to occur in the vicinity of the project area, as well as FWS's recommended impact avoidance and minimization measures for each species. The project team subsequently provided a written summary of the botanical and biological field studies that were undertaken as part of the Draft EA in a letter to FWS dated August 20, 2018. Copies of the three corresponding letters are enclosed. The project team also held a conference call with FWS on October 17, 2018 and has incorporated feedback from the phone call into our assessment of potential impacts and planned avoidance and mitigation measures.

Summary of August 2018 Biological Field Survey

Botanical and biological field surveys were conducted in August 2018 within the proposed project area, including the streets and adjacent areas of the proposed wastewater collection system and the 14.9-acre wastewater treatment and disposal facility site. The field surveys confirmed that the collection system will be installed along roadways within Pāhala that are already paved, and that vegetation that will be impacted consists of ornamental plants in private yards.

Surveys of the wastewater treatment and disposal facility site documented 52 species of vascular plants; however, only two species are considered native to the Hawaiian Islands and both are widely-distributed indigenous species that are not listed as threatened, endangered, or of special

concern. An avian survey of the project site recorded 13 bird species, all of which are established alien species. While not documented during the field survey of the project area, the field survey contractor noted in their survey report that the Hawaiian Petrel and Newell's Shearwater have been observed flying over the general project area between April and the end of November each year.

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes were recorded by the survey.

Federally-designated Critical Habitat

ERG reviewed the FWS Environmental Conservation Online System (ECOS) and contacted FWS by email in November 2018 to determine whether any proposed or final critical habitat of federally listed threatened or endangered species has been designated in the vicinity of the project area. Per ECOS, critical habitat is designated at several locations throughout the County; however, no proposed or final critical habitat has been designated at or in the immediate vicinity of the project area. This finding was confirmed by FWS in email correspondence dated November 29, 2018. The project area is located approximately 3.1 miles northwest of the nearest critical habitat along the island's shoreline, which has been designated for the federally and state-endangered Hawaiian monk seal (*Monachus schauinslandi*). Based on the distance, the 600- to 900 feet elevation of the project area, and the nature of project activities, impacts to this or other critical habitats in the County are not anticipated.

Anticipated Impacts to Federally-listed Species and Proposed Avoidance Measures

Hawaiian Hoary Bat

Potential impacts to Hawaiian hoary bat from construction and operation of the project include injury or mortality of young bats if woody vegetation is cleared during the pupping season and entanglement in barbed wire fencing.

All clearing activities of trees taller than 15 feet will be scheduled to take place outside the pupping season of the Hawaiian hoary bat, which lasts from June 1 to September 15. Additionally, to avoid adverse impacts to Hawaiian hoary bats no barbed wire will be used on the security fence or elsewhere on the project site.

Hawaiian Hawk

Potential impacts to Hawaiian Hawk from construction and operation of the project include destruction of a nest by cutting a tree in which a nest is located, either during or outside of the breeding season. Noise-related disturbance resulting from construction activities (including tree clearing and facility construction) in the vicinity of a nest during the breeding season is a second potential impact. Noise-related disturbance in close proximity to a nest has the potential to result in nest failure due to adult nest abandonment and increased exposure of chicks and juveniles to inclement weather or predators.

The 14.9-acre parcel proposed for the treatment and disposal facility is currently a monotypic macadamia nut plantation. The existing macadamia nut plantation likely does not provide suitable nesting habitat for Hawaiian Hawks; therefore, tree clearing within this area (whether during or outside the breeding season) is not expected to directly harm or destroy Hawaiian Hawk nests. Additionally, the Cook pines along Maile Street are not expected to provide suitable nesting habitat

for Hawaiian Hawks, due in part to their location alongside a road. Removal of the one or two Cook pines as necessary to accommodate the new driveway is not expected to directly harm or destroy Hawaiian Hawk nests. Regardless of the time of year, no trimming or cutting of trees that contain a Hawaiian Hawk nest will be performed.

If feasible, to avoid noise-related disturbance during the Hawaiian Hawk breeding season (which lasts from March 1 to September 30), all tree clearing activities will be scheduled to occur outside the breeding season. If, however, tree clearing will occur during the breeding season, the County will seek technical assistance from FWS regarding appropriate survey methods to determine whether nesting Hawaiian Hawks are present near the area to be cleared. Depending on the timing of the survey, methods may include visual nest searches and/or callback surveys by a qualified biological monitor. If surveys document the presence of an active Hawaiian Hawk nest during the breeding season within 1,600 feet of the area to be cleared, the County will postpone tree clearing activities until after the breeding season or until authorized in writing by FWS that activities may proceed.

Additionally, if site preparation, construction, or other substantial noise-generating activities (following the completion of tree clearing) will occur during the Hawaiian Hawk breeding season, the County will seek technical assistance from FWS regarding whether any surveys of the surrounding area are necessary. If surveys document the presence of an active Hawaiian Hawk nest during the breeding season within 1,600 feet of the footprint of site preparation and construction activities, the County will seek technical assistance from FWS to ensure that any noise-generating activities do not have the potential to result in nest abandonment.

Waterbirds

Potential impacts to Nēnē, Hawaiian Stilt, and Hawaiian Coot are primarily related to the creation of suboptimal habitat at the treatment and disposal facility. Specifically, the constructed lagoons may represent an attractive nuisance due to the potential for spread of botulism, and the presence of waterbirds and their nests at the facility may attract non-native mammalian predators to the area.

Several measures are proposed to discourage and monitor waterbird use of the facility and exclude predators from the area. Design elements of the proposed facility expected to discourage waterbird use of the area include the following: the total proposed acreage of new lagoon surface (approximately 2 acres) is relatively small, as compared to approximately 20 acres of lagoons at the Kealakehe Wastewater Treatment Plant in Kailua-Kona, Hawai‘i; the subsurface-flow-constructed-wetland will not have areas of open water, which would attract waterbird prey; asphalt rather than gravel will be used to provide access around the lagoons; the lagoons will be lined with a high-density polyethylene (HDPE) liner, rather than with substrate that would support vegetation growth; shade balls will be used in the largest lagoon (Lagoon 4) to discourage algal growth, and are also expected to discourage use of the lagoon by waterbirds; and the lagoons will be bordered by groves rather than bare land. In addition, the security fence around the perimeter of the treatment and disposal facility is expected to exclude larger non-native mammalian predators including dogs and wild pigs.

For the first year following completion of construction, the County will provide for a biological monitor to assess waterbird use of the facility on a weekly basis. Weekly post-construction monitoring will include checking for predators, sick or dead waterbirds, and the presence of threatened and endangered species. Following the completion of construction, the County will coordinate with FWS to determine the specific approach for communicating the monitoring results.

Seabirds

Potential impacts to Hawaiian Petrel, Band-rumped Storm-Petrel, and Newell's Shearwater from the construction and operation of the project include potential adverse effects resulting from nighttime lighting at the facility. Outdoor, nighttime lighting during construction and operation of the facility could result in seabird disorientation, fallout, and injury or mortality.

To avoid adverse impacts to seabirds during the construction period, the construction contract will include a blanket statement prohibiting construction activities after dark. To avoid impacts to seabirds during the operation of the facility, the proposed facility includes use of a down-shielded light exterior fixture mounted below the roof overhang. The light fixture near the headworks will also be down-shielded. The exterior lights will be used at night only in the event of an emergency that requires an immediate response. All fixtures will meet requirements for outdoor lighting as set forth in Hawai'i Code Chapter 14 (General Welfare).

Summary

The FWS has identified eight federally-listed threatened and endangered species which have the potential to occur in the vicinity of the project area. The impact avoidance and minimization measures described above have been specifically developed for the project in consultation with FWS. EPA has reviewed and concurred with the analysis conducted and proposed measures. Therefore, on behalf of EPA and the County, we respectfully request concurrence from the FWS that the project is *not likely to adversely affect* the eight federally-listed threatened and endangered species which have the potential to occur in the vicinity of the project area.

We greatly appreciate your input during this consultation. If you have any questions, please feel free to contact me at (703) 615-4371 or by email at patrick.goodwin@erg.com.

Sincerely,

Patrick Goodwin

Patrick Goodwin
Environmental Scientist

Enclosures

Figure 1 – Project Location Map

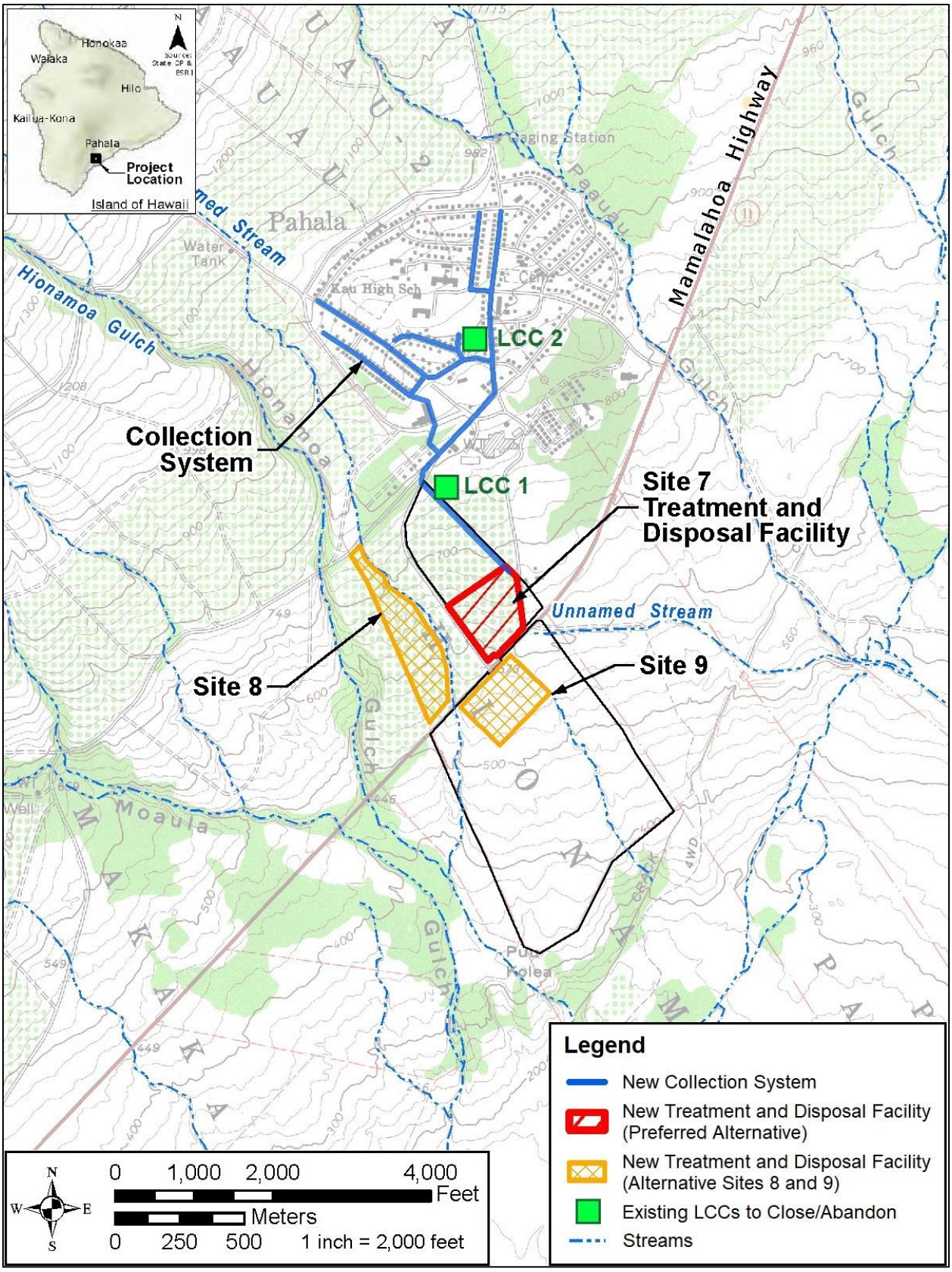

Figure 1. Project Location Map (Site 7)

Figure 2. Preliminary Site Plan for New Wastewater Treatment and Disposal Facility at Site 7

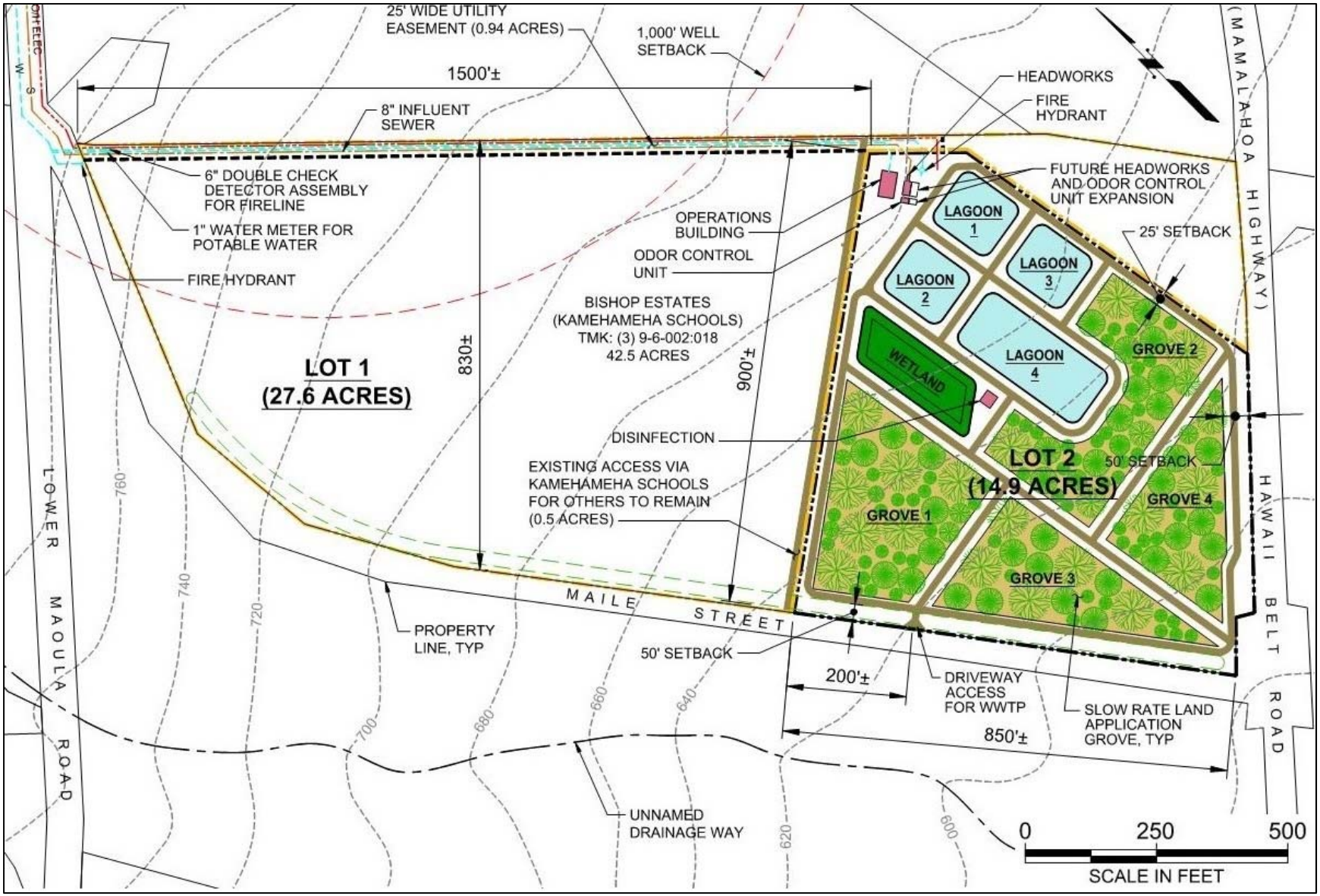

Figure 2. Preliminary Site Plan for New Wastewater Treatment and Disposal Facility at Site 7

Pre-consultation Letter to FWS, March 15, 2018

WILSON OKAMOTO
CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
4/11/18

cc: ERG
BC

10349-01
March 15, 2018

Ms. Mary Abrams, Field Supervisor
U.S. Department of the Interior
Fish and Wildlife Service
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, HI 96850

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Request for Comment

Dear Ms. Abrams:

Wilson Okamoto Corporation is preparing a Draft Environmental Assessment (EA) for the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement, Pā'au'au, Ka'u, Hawai'i project. The Pāhala Community Large Capacity Cesspool Replacement project will be funded by a U.S. Environmental Protection Agency (EPA) Special Appropriation Grant and by the State of Hawaii Clean Water State Revolving Fund (SRF) loan program. A project summary sheet and location map are enclosed for your information.

As part of the Draft EA pre-assessment consultation process, we are soliciting comments you may have on the proposed Pāhala Community Large Capacity Cesspool Replacement project. Please submit your comments to:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
Attn: Earl Matsukawa, AICP

We would appreciate your comments by April 16, 2018. If you have any questions, please call me at 808.946.2277 or fax to 808.946.2253.

Sincerely,

Earl Matsukawa, AICP
Project Manager

Enclosures
cc: D. Beck, DEM (w/o encl.)
K. Rao, EPA (w/o encl.)
C. Lekven, PE, BC (w/o encl.)

PROJECT SUMMARY
Pāhala Community Large Capacity Cesspool Closure
Pā'au'au, Ka'u, Island of Hawai'i
Tax Map Key: 9-6-002:018

1. Introduction

The community of Pāhala is located about 52 miles southeast of Hilo, in the Ka'u District, Island of Hawai'i. Pāhala is located west (mauka) of Māmalahoa Highway (State Route 11) about 3.8 miles from the shoreline with most of the community lying between 980 feet mean sea level (msl) on the western end and approximately 800 feet msl on the eastern end. See Figure 1. The Pāhala community had its start in 1876 with establishment of the Hawaiian Agricultural Company to develop the sugar industry in Hawai'i. For the next 120 years or so, Pāhala was a major sugar producing area. However, by the early 1990s there was a major downturn in the sugar market. Thus, beginning in 1994, the sugar mill in the town was shut down and dismantled. By 1996, the Ka'u Sugar Company, the successor to the Hawaiian Agricultural Company, closed and, subsequently, the sugar cane fields were cleared and the lands now grow macadamia nut and coffee trees. The population in Pāhala was approximately 1,405 persons in 2016, the most current estimate.

Founded in 1826, C. Brewer was both the oldest company in Hawai'i and a major developer of the sugar industry in Pāhala. For about the last 60 years, approximately 50 percent of the residential units in Pāhala have been serviced by a wastewater collection and disposal system constructed, operated and maintained by C. Brewer. The collection system consisted of sewer lines, some of which were located in the streets and others routed in the backyards of private parcels. The disposal system consisted of two large capacity cesspools (LCCs) within the community.

In 1998, the US Environmental Protection Agency (EPA) issued regulations (40 CFR 144.14) requiring the elimination or closure of all large capacity cesspools used for wastewater disposal by April 5, 2005. In 2003, C. Brewer requested assistance from the County to close their LCCs. Subsequently, the County held a community meeting to present sewer system replacement alternatives. Voting took place by mail to choose the preferred sewer improvement alternative, resulting in 87 percent of returned ballots in favor of installing a new sewer collection, treatment and disposal system to be operated and maintained by the County.

In 2006, in anticipation of its dissolution, C. Brewer requested the County construct and maintain a new community sewer system. The County subsequently agreed by way of a County Council Resolution, to enter into a formal agreement to assume ownership of the C. Brewer constructed collection system and the two LCCs by April 30, 2010 and to construct and maintain a new community sewer system. As part of the County's agreement, C. Brewer agreed to install laterals to certain of the residential properties.

In 2007, the County proposed a new collection system and a wastewater treatment system, consisting of large capacity septic tanks and converting the existing LCCs into seepage pits for disposal of the treated effluent. In 2008, the combination of the LCCs being in poor and failing condition and the poor results from soil percolation tests influenced the County to consider acquiring a larger land area to construct a secondary treatment system. Such a system could allow a higher level of wastewater treatment and disposal, as well as accommodate existing Pāhala properties not currently served by the LCC system in addition to expanding the system to accommodate possible community growth.

2. Project Description

The County of Hawai'i. Department of Environmental Management (DEM) is proposing to construct wastewater system improvements to replace the current system servicing Pāhala, now owned by the County. The wastewater system improvements would allow the County to comply with EPA

regulations requiring closure of the LCCs and to construct a system meeting current State of Hawai'i Department of Health (DOH) and DEM design guidelines for the collection, treatment and disposal of the treated effluent. The Pāhala Community Large Capacity Cesspool Closure project improvements would consist of a new wastewater collection system located within the public right-of-way and a treatment and disposal system located on a currently privately-owned parcel (TMK: 9-6-002: 018) which will be acquired by the County. The Pāhala Community Large Capacity Cesspool Closure project would be funded by an EPA Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (SRF) loan program.

The wastewater collection system would be located within 7 public streets; Maile Street; 'Ilima Street; Huapala Street; Hīnano Street; Hala Street; all located in the southern portion of the community and Puahala Street; and Pīkake Street located on the eastern end. These streets serve the residential areas and have two travel lanes with unpaved shoulders and no improved sidewalks. The collection system would consist of approximately 11,000 linear feet of gravity flow piping ranging from 8 to 12 inches in diameter. The collection system is not anticipated to include pump stations, nor will the system collect stormwater runoff. The number of manholes in the system will be determined during the detail design phase. The County's sewer standards show the trenches for sewer lines would require at least 4 feet of cover from the top of the pipe to grade and 12 inches of cushion material on both sides of the line and 6 inches below the line. Therefore, the typical sewer trenches will be 3 feet wide and at least 6 feet deep.

The treatment and disposal system would be a land-based system located southeast of the developed community and would be designed to treat flows of approximately 190,000 gallons per day. The EPA defines land treatment as "the application of appropriately pre-treated municipal and industrial wastewater to the land at a controlled rate in a designed and engineered setting. The purpose of the activity is to obtain beneficial use of these materials, to improve environmental quality, and to achieve treatment goals in a cost-effective and environmentally sound manner".

The proposed treatment and disposal system would occupy about 14 acres and consist of a headworks with screens to remove debris and an odor control unit, four lined aerated lagoons of about 0.3 acres each, an operations building with adjacent disinfection system to remove pathogens, a subsurface flow constructed polishing wetland to remove nitrogen and four slow rate (SR) land treatment basins which will be surrounded by berms on all four sides. SR land treatment involves irrigation of land and vegetation with the treated effluent. Significant additional treatment is provided as the water percolates through the soil. The vegetation uptakes the nutrients in the effluent as fertilizer, and transpires a portion of the applied water. A security fence will be constructed along the perimeter of the site.

3. Anticipated Impacts

Project impacts would be primarily related to construction of the trenches for placement of the collection system lines and construction of the land-based treatment and disposal system. These activities would create dust and noise while work occurs in the streets and in the area of the land treatment and disposal system, which will include removal of existing macadamia nut trees within the 14 acre project site. As the collection system is constructed, the streets will be restored for vehicle travel. Upon completion of the treatment and disposal facilities, the project will operate without the need for DEM employees to be on-site. Weekly monitoring visits will be sufficient to insure routine proper operation, and a telemetry system will alert DEM employees of abnormal conditions to allow timely response when they occur.

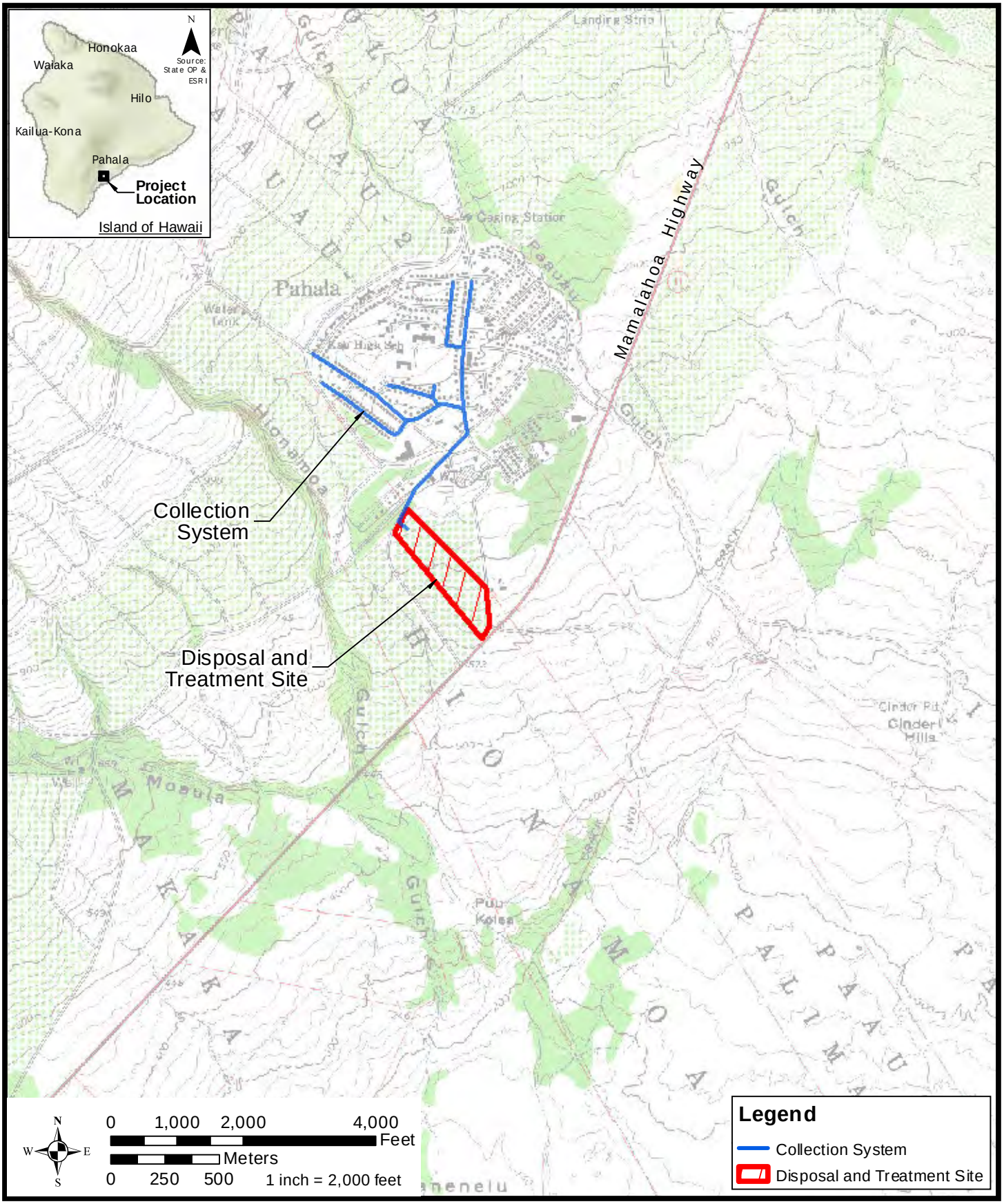

FIGURE 1

PROJECT LOCATION MAP

PAHALA COMMUNITY LARGE CAPACITY CESSPOOL CLOSURE PROJECT
COUNTY OF HAWAII DEPARTMENT OF ENVIRONMENTAL MANAGMENT

WILSON OKAMOTO CORPORATION

Pre-consultation Comments from FWS, April 23, 2018

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2018-TA-0275

April 23, 2018

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Subject: Comments for the Draft Environmental Assessment for the County of Hawaii Department of Environmental Management Pahala Community Large Capacity Cesspool Replacement, Paauau, Kau, Island and County of Hawaii

Dear Mr. Matsukawa:

The U.S. Fish and Wildlife Service (Service) received your correspondence on April 9, 2018, requesting technical assistance in the preparation for the Draft Environmental Assessment for the County of Hawaii Department of Environmental Management Pahala Community Large Capacity Cesspool (LCC) Replacement in Paauau, Kau, (TMK: 9-6-002: 018). The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

The County of Hawaii Department of Environmental Management (DEM) is proposing to construct wastewater system improvements to replace the current system servicing Pahala, now owned by the County. The wastewater system improvements would allow the County to comply with Environmental Protection Agency (EPA) regulations requiring closure of the LCC's and to construct a system meeting current State of Hawaii Department of Health and DEM design guidelines for the collection, treatment, and disposal of the treated effluent. The Pahala Community LCC closure project improvements would consists of a new wastewater collection system located within the public right-of-way and a treatment and disposal system located on a currently privately-owned parcel which would be acquired by the County. The Pahala LCC closure project would be funded by the EPA Special Appropriation Grant and by the State of Hawaii Clean Water State Revolving Fund loan program.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, eight (8) listed species that have the potential to either be in or fly through the vicinity of the project area: The federally endangered Hawaiian hoary bat *(Lasiurus cinereus semotus)*, Hawaiian hawk *(Buteo solitarius)*, Nene

Branta (=Nesochen) sandvicensis)), Hawaiian petrel (*Pterodroma sandwichensis*), Band-rumped storm-petrel (*Oceanodroma castro*), the threatened Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and the Hawaiian coot, (*Fulica alai*).

Avoidance and Minimization Measures

Hawaiian hoary bat
The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend incorporating the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian hawk
The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

To avoid and minimize impacts to Hawaiian hawks we recommend you consider incorporating the following applicable measures into your project description:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, have a biologist familiar with the species conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
    - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, conduct another survey.
- No clearing of vegetation or construction activities within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest, as nests may be re-used during consecutive breeding seasons.

Nene
Nene are found on the islands of Hawaii, Maui, Molokai, and Kauai predominately, with a small population on Oahu. They are observed in a variety of habitats, but prefer open areas, such as

pastures, golf courses, wetlands, natural grasslands and shrublands, and lava flows. Threats to the species include introduced mammalian and avian predators, wind facilities, and vehicle strikes.

To avoid and minimize potential project impacts to Nene we recommend incorporating the following applicable measures into your project description:

- Do not approach, feed, or disturb Nene.
- If Nene are observed loafing or foraging within the project area during the Nene breeding season (September through April), have a biologist familiar with the nesting behavior of Nene survey for nests in and around the project area prior to the resumption of any work. Repeat surveys after any subsequent delay of work of three or more days (during which the birds may attempt to nest).
    - Cease all work immediately and contact the Service for further guidance if a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where Nene are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Hawaiian petrel, Band-rumped storm-petrel, and Newell's shearwater
Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Hawaiian stilt and Hawaiian coot
Listed Hawaiian waterbirds are found in fresh and brackish-water marshes and natural or man-made ponds. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation.

Based on the project details provided, our information suggests that your project may result in standing water or the creation of open water, thus attracting Hawaiian waterbirds to the site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g. any ponding water),

if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

To avoid and minimize potential project impacts to Hawaiian waterbirds we recommend you incorporate the following applicable measures into your project description:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design.
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
    - Contact the Service within 48 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.

Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Invasive Species

To avoid and minimize the risk of the road construction introducing harmful invasive pests including coqui, ants, and weeds into the project sites, we recommend the following measures be implemented by project contractors:

- Vehicles, machinery, and equipment must be thoroughly pressure washed and visibly free of mud, dirt, plant debris, frogs and frog eggs, insects and other debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds.
- The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats will be sanitized with a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.
- All work vehicles, machinery, and equipment may be subject to inspection.
- Any vehicles, machinery, and equipment that do not pass inspection will be turned away.
- Staging areas must be kept free of invasive pests.

Minimize Spread of Rapid Ohia Death

Rapid Ohia Death (ROD), a newly identified disease, has killed large numbers of mature ohia trees (*Metrosideros polymorpha*) in forests and residential areas of Hawaii Island. The disease is

caused by a vascular wilt fungus (*Ceratocystis fimbriata*). Crowns of an affected tree turn yellowish or brown within days to weeks and dead leaves typically remain on branches for some time. All ages of ohia trees can be affected and can have symptoms of browning of branches or leaves. As of early 2017 the disease has been confirmed in all districts except North and South Kohala. Additional information on ROD can be found at:

http://www2.ctahr.hawaii.edu/forestry/downloads/ROD-trifold-03.2016.pdf and
http://www2.ctahr.hawaii.edu/forestry/disease/ohia_wilt.html.

The following avoidance and minimization measures should be followed for projects working in ohia forests or at sites with ohia trees on Hawaii Island:

1) A survey of the proposed project site should be conducted within two weeks prior to any tree cutting to determine if there are any infected ohia trees. If infected ohia are suspected at the site, the following agencies should be contacted for further guidance.
    a. Service – please contact the name at the bottom of this letter.
    b. Dr. J.B. Friday, University of Hawaii Cooperative Extension Service, 808-969-8254 or jbfriday@hawaii.edu
    c. Dr. Flint Hughes, USDA Forest Service, 808-854-2617, fhughes@fs.fed.us
    d. Dr. Lisa Keith, USDA Agriculture Research Service, 808-959-4357, Lisa.Keith@ars.usda.gov

2) Both prior to cutting ohia and after the project is complete:
    a. Tools used for cutting infected ohia trees should be cleaned with a 70 percent rubbing alcohol solution. A freshly prepared 10 percent solution of chlorine bleach and water can be used as long as tools are oiled afterwards, as chlorine bleach will corrode metal tools. Chainsaw blades should be brushed clean, sprayed with cleaning solution, and run briefly to lubricate the chain.
    b. Vehicles used off-road in infected forest areas should be thoroughly cleaned. The tires and undercarriage of the vehicle should be cleaned with detergent if they have travelled from an area with ROD or travelled off-road. Use a pressure washer with soap to clean all soil off of the tires and vehicle undercarriage.
    c. Shoes and clothing used in infected forests should also be cleaned. Shoes should be decontaminated by dipping the soles in 70 percent rubbing alcohol to kill the ROD fungus. Other gear can be sprayed with the same cleaning solutions. Clothing can be washed in hot water and detergent.
    d. Wood of affected ohia trees should not be transported to other areas of Hawaii Island or interisland. All cut wood should be left on-site to avoid spreading the disease. The pathogen may remain viable for over a year in dead wood. The Hawaii Department of Agriculture has passed a quarantine rule that prohibits interisland movement, except by permit, of all ohia plant or plant parts.

If this project should receive federal funding, federal permit, or any federal authorization, it will require a Section 7 consultation with the Service. The Service only conducts Section 7 consultations with the federal action agency or their designated representative.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns regarding this consultation, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-284-0037, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference number: ***01EPIF00-2018-TA-0275***.

Sincerely,

Jodi Charrier
Acting Island Team Leader
Maui Nui and Hawaii Island

Non-Federal Representative Designation Letter to FWS, June 7, 2018

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

JUN 0 7 2018

Jodi Charrier
Acting Island Team Leader
Maui Nui and Hawaii Island
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

SUBJECT: Designation of Non-Federal Representative under Section 7 of the Endangered Species Act (Reference: 01EPIF00-2018-TA-0275)

Dear Ms. Charrier:

The U.S. Environmental Protection Agency Region 9 (EPA) awarded a Special Appropriation Act Project (SAAP) grant to the County of Hawaii for the Pahala Community Large Capacity Cesspool (LCC) Replacement Project. This project triggers the application of the National Environmental Policy Act (NEPA) and numerous Federal cross-cutting authorities including the Endangered Species Act (ESA).

Pursuant to 50 C.F.R. §402.08, a Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving notice to the Director of such designation. In accordance with 50 C.F.R. §402.08, EPA hereby designates Eastern Research Group, Inc. (ERG) to act on EPA's behalf when initiating the ESA consultation process and prepare a biological assessment if needed in connection with the Pahala Community LCC Replacement Project. Effective immediately, ERG may consult with the Fish and Wildlife Service (FWS) to initiate the informal consultation process under Section 7 of the ESA, with responsibilities described herein.

EPA requires, through grant provisions for federally-assisted SAAP projects, that grant recipients implement such measures as are ultimately determined necessary or appropriate during the ESA Section 7 consultation process to avoid adverse effects to listed species or adverse modification of designated or proposed critical habitat. However, EPA will continue to be ultimately responsible for compliance with the Section 7 requirements of the ESA and will remain responsible for participating in the consultation process if:

- there is disagreement between relevant parties regarding the scope of the area of potential effects, identification of endangered species or habitats, or evaluation of effects; or,

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- there is an objection from consulting parties or the public regarding findings or determinations or the implementation of agreed provisions.

If you have any questions, please contact Kate Rao, Drinking Water Protection Section, at (415) 972-3533 or via email at rao.kate@epa.gov.

Sincerely,

Mike Montgomery
Assistant Director, Water Division

cc:

William Kurcharski, County of Hawaii
Dora Beck, County of Hawaii

Biological Survey Report, August 16, 2018

AECOS No. 1545

Biological survey for the Pāhala Community Large Capacity Cesspool Closure Project on lot TMK: 9-6-002:018, Kaʻū District, Hawaiʻi Island

Prepared by:

AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104
Kāneʻohe, Hawaiʻi 96744-3221

August 16, 2018

Biological survey for the Pāhala Community Large Capacity Cesspool Closure Project on lot TMK: 9-6-002:018, Kaʻū District, Hawaiʻi Island

August 16, 2018 | ***Draft*** | *AECOS* No. 1545

Eric Guinther and Reginald David
AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104
Kāne'ohe , Hawai'i 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

The Hawaiʻi County Department of Environmental Management, Wastewater Division is proposing to construct a wastewater treatment and disposal system ("Project") to treat sewage collected in Pāhala, Kaʻū District. The treatment and disposal system will be located on a property identified as TMK: 9-6-002:018, north of the intersection of Hawaii Belt Road (Māmalahoa Highway) and Maile Street. This report describes methods used and results of a biological survey conducted in the Project area in August 2018. The primary purpose of the survey was to determine whether any species currently proposed or listed as threatened or endangered under either federal or state endangered species statutes occur on, or could utilize resources within, the Project area.

Project and Site Descriptions

The WWTP site encompasses the lower, approximately 15 ac (6 ha) of the subject parcel (TMK: 9-6-002:018). Presently the entire parcel is a macadamia nut (*Macadamia integrifolia*) orchard, but with the margins and two narrow windbreak tree lines dominated by other species of trees and herbaceous plants dividing the orchard into northwest-southeast trending units. In addition to the WWTP site, a proposed transmission pipe would be constructed to the northwest through the orchard up to Maile Street. From Maile Street a collection system is planned for many of the streets within Pāhala town (see Figure 1).

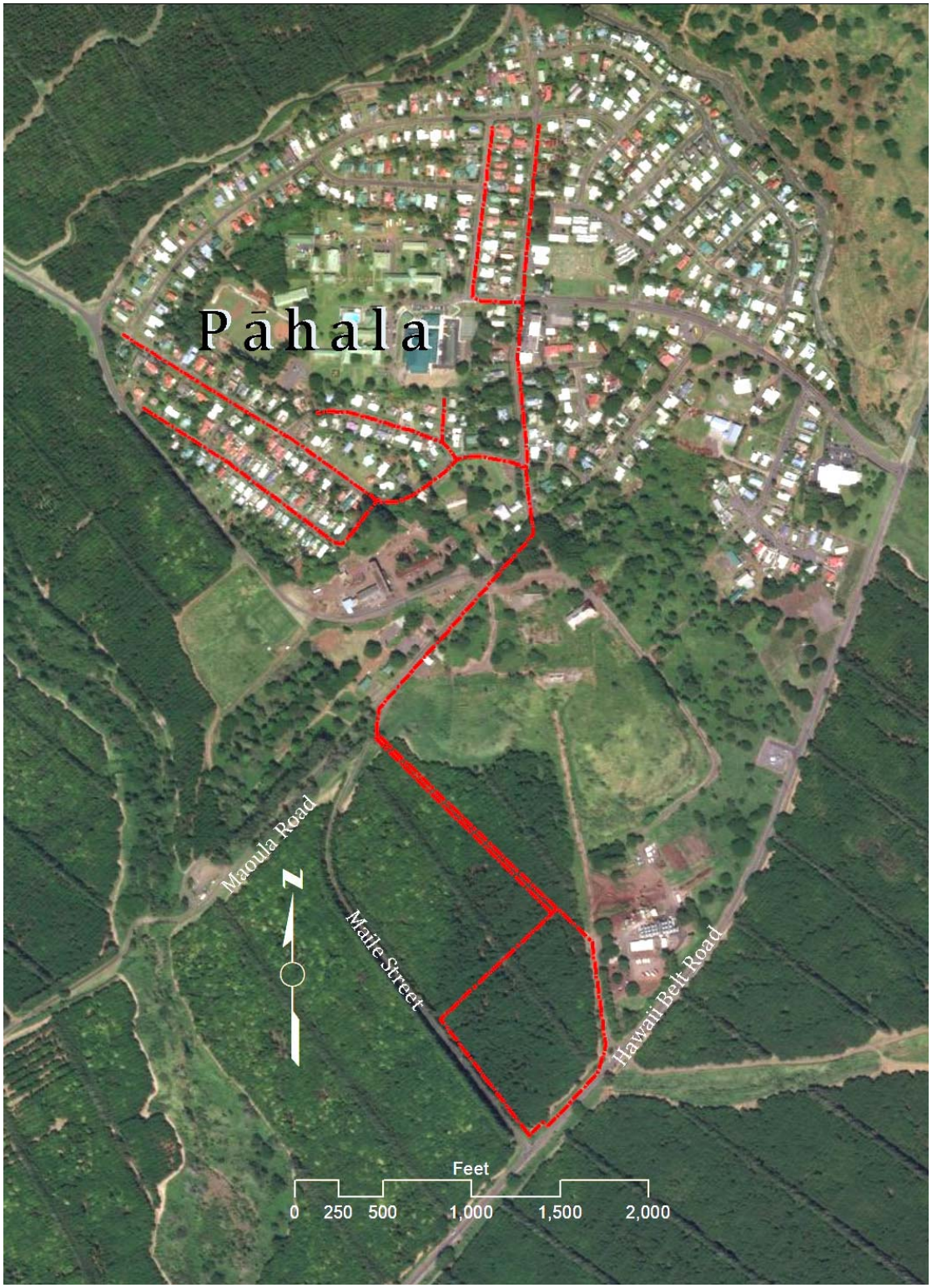

Figure 1. Project and survey areas marked in red, Pāhala.

Macadamia nut trees form a closed crown of dense leaf growth (see cover photo), creating deep shade within most parts of the grove. The dominant understory in these deeply shaded areas is germinating mac nut trees.

Methods

Botanical Survey

The botanical survey was undertaken on August 13, 2018 and entailed a wandering pedestrian transect that traversed the subject property, including the area extending north to Maile Road proposed for installation of a collector main. A "windshield" survey was conducted along all the streets proposed for the collection system beyond the surveyed parcel. Plant species were identified as they were encountered and notations made in a field notebook, which was used to develop qualitative abundance values for each species as the survey progressed. On a strictly area basis, only macadamia nut trees, Guinea grass (*Megathyrsus maximus*), and perhaps a couple of other species would have a ranking above uncommon. So, abundance values in this report are relative to areas that support species other than the macadamia nut trees, such as the road verges and other areas surrounding the orchard, unmaintained areas within the orchard, including narrow windbreak lanes that divide the orchard plots into units. The survey period encompassed the early dry season, but most of the vegetation was in a relatively healthy state (the orchard is irrigated as needed). However, early in the dry season found most trees and shrubs absent fruit or flower. This slight limitation did not compromise the discovery of native species of plants.

Plant names used herein follow *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawai'i's Ferns and Fern Allies* (Palmer, 2003) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental and crop plants. More recent name changes for naturalized plant species follow Imada (2012).

Avian Survey

Six avian count stations were sited roughly equidistant from each other, four within the WWTP area and two along the collection pipe route upslope to Maile Street. Stations were sited approximately 150 m (490 ft) apart from each other. A single eight-minute avian point count was made at each of the count stations. Field observations were made with the aid of Leica 8 X 42 binoculars and by

listening for vocalizations. The avian counts were conducted in the early morning hours. Time not spent counting at point-count stations was used to search the site for species and habitats not observed during the point counts. Weather conditions were excellent with winds of between 1 and 5 kph and no precipitation.

The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North American Birds* (American Ornithologists' Union, 1998), and the 42nd through the 59th supplements to the Check-List (American Ornithologists' Union, 1998, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008; Chesser et al., 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018).

Mammalian Survey

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) or *ʻōpeʻapeʻa*, all terrestrial mammals currently found on the Island of Hawai'i are alien species, and most are ubiquitous. The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all terrestrial mammalian species detected within the project area.

Results

Vegetation

Vegetation within the areas surveyed comprises a macadamia nut orchard of mature trees, unmaintained areas dominated outside the orchard by Guinea grass, lanes of windbreak trees oriented between orchard units, and (mostly) mowed road verge areas. Within the orchard are scattered small plots of ruderal herbaceous plants, in most cases dominated by nodeweed (*Synedrella nodiflora*), but if generally only lightly shaded, a number of other herbaceous species. The windbreak lanes consist of two rows of trees: silk oak (*Grevelia robusta*) and paperbark (*Melaleuca quinquenervia*) and are used in orchard maintenance to stack cut branches and logs. These lanes support many of the herbaceous plants recorded from the orchard. The proposed sewerage collection system will be installed along already paved roadways within Pāhala. The survey in these areas revealed the vegetation to be entirely maintained yards of ornamental plants.

Flora

A listing of the plant species recorded during the August 2018 survey is provided as Table 1. In all, the listing has 52 species of vascular plants: 2 ferns, one gymnosperm, and 49 species of angiosperms (flowering plants). Only two species (4%) are regarded as native to the Hawaiian Islands and both are indigenous (native, but also distributed elsewhere in the Pacific). Found in low numbers are the ubiquitous, ruderal *ʻuhaloa* (*Waltheria indica*) and the common blue- or purple-flowered morning glory vine: *koali ʻawa* (*Ipomoea indica*). Being widely distributed indigenous species, neither is listed as threatened or endangered or of any special concern.

Table 1. Plant species identified during the August 13, 2018 survey of TMK: 9-6-002:018, Pāhala, Kaʻū District, Hawaiʻi.

Species listed by family	Common name	Status	Abundance	Notes
FERNS				
NEPHROLEPIDACEAE				
Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton	sword fern	Nat	R	
PTERIDACEAE				
Pityrogramma calomelanos (L.) Link	silver fern	Nat	R	<1>
GYMNOSPERMS				
ARAUCARIACEAE				
Araucaria columnaris (G. Forst.) J.D. Hook.	Cook pine	Nat	O	<1>
FLOWERING PLANTS DICOTYLEDONS				
AMERANTHACEAE				
Amaranthus spinosus L.	spiny amaranth	Nat	R	
APOCYNACEAE				
Carissa macrocarpa (Ecklon) A. de Cand.	natal plum	Orn	R	
Nerium oleander L.	olreander	Orn	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	umbrella tree	Nat	U	
ASTERACEAE (COMPOSITAE)				
Ageratum conyzoides L.	*maile hohono*	Nat	R	<1>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
ASTERACEAE (cont.)				
Bidens pilosa L.	*ki*; beggartick	Nat	U	<2>
Calyptocarpus vialis Less.	---	Nat	O	<1>
Conyza bonariensis (L.) Cronq.	hairy horseweed	Nat	C	<2>
Crassocephalum crepidioides (Benth.) S. Moore	---	Nat	R	
Cyanthillium cinereum L.	little ironweed	Nat	U	<1>
Lactuca serriola L.	prickly lettuce	Nat	U	<1>
Indet.	ruderal weed	Nat	R	<3>
Synedrella nodiflora (L.) Gaertn.	nodeweed	Nat	AA	<2>
BASELLACEAE				
Anredera cordifolia (Ten.) Steenis	Madeira vine	Nat	R	<3>
BRASSICACEAE				
Lepidium virginicum L.	---	Nat	R	<2>
CAPPARACEAE				
Cleome gynandra L.	wild spider flower	Nat	O	<1>
CONVOLVULACEAE				
Ipomoea indica (J. Burm.) Merr.	*koali ʻawa*	**Ind**	R	
Ipomoea obscura (L.) Ker-Gawl.	---	Nat	O	
Merremia tuberosa (L.) J. Rendle	wood rose	Nat	R	
CUCURBITACEAE				
Momordica charantia L.	wild bitter melon	Nat	O	
EUPHORBIACEAE				
Euphorbia heterophylla L.	*kaliko*	Nat	U	<1>
Euphorbia hirta L.	garden spurge	Nat	O	<2>
Ricinus communis L.	castor bean	Nat	C	<2>
FABACEAE				
Acacia confusa Merr.	Formosan *koa*	Nat	R	
Leucaena leucocephala (Lam.) deWit	*koa haole*	Nat	R	<2>
Macroptilium atropurpureum (DC.) Urb.	---	Nat	U	<1>
Neonotonia wightii (Wight & Arnott) Lackey	glycine vine	Nat	AA	<2>
LAMIACEAE				
Leonotis nepetifolia (L.) R. Br.	lion's ear	Nat	O	<2>
MALVACEAE				
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	Nat	R	
Malvastrum coromandelianum (L.) Garcke	false mallow	Nat	O	<2>
Sida rhombifolia L.	Cuba jute	Nat	C	<2>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
MALVACEAE (cont.)				
Sida spinosa L.	prickly sida	Nat	R	
Waltheria indica L.	*ʻuhaloa*	**Ind**	U	
MORACEAE				
Ficus microcarpa L. f.	Chinese banyan	Nat	R	<2>
MYRTACEAE				
Melaleuca quinquenervia (Cav.) S.T. Blake	paperbark	Nat	C	
Syzygium cumini (L.) Skeels	Java plum	Nat	U	<2>
PHYTOLACCACEAE				
Rivina humilis L.	coral berry	Nat	U	
PROTEACEAE				
Grevillea robusta A. Cunn. ex R. Br.	silk oak	Nat	C	<2>
Macadamia integrifolia Maiden & Berche	macadamia nut	Nat	AA	
RUBIACEAE				
Spermacoce assurgens Ruiz & Pav.	buttonweed	Nat	C	<1>
	MONOCOTYLEDONS			
COMMELINACEAE				
Commelina benghalensis L.	hairy *honohono*	Nat	R	<1>
CYPERACEAE				
Cyperus gracilis R. Br.	McCoy grass	Nat	U	
POACEAE				
Axonopus compressus (Swartz) P. Beauv.	brd.-lvd. carpet grass	Nat	C	<1>
Cenchrus purpureus (Schumach.) Morrone	elephant grass	Nat	U	
Chloris barbata (L.) Sw.	swollen fingergrass	Nat	R	
Digiteria sp.	---	Nat	R	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	A	<2>
Megathyrsus maximus Jacq.	Guinea grass	Nat	AA	<2>
Setaria verticillata (L.) P. Beauv.	bristly foxtail	Nat	R	

Legend to Table 1:

Status = distributional status

Ind = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.

Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778 and well-established outside of cultivation.

Orn = ornamental; crop or landscape plant not established outside of cultivation.

Abundance = occurrence ratings for plants on property in July 2013.

R – Rare - only one or two plants seen.

Table 1 – Legend (continued).

U - Uncommon - several to a dozen plants observed.
O - Occasional - found regularly, but not abundant anywhere.
C - Common - considered an important part of the vegetation and observed numerous times.
A - Abundant - found in large numbers; may be locally dominant.
AA - Abundant - very abundant and dominant; defining vegetation type.

Notes:
<1> Characteristic or found only in the road verge immediately adjacent to the site.
<2> Species also reported from close by in David & Guinther (2013).
<3> Plant lacking flowers or fruit at time of survey; identification uncertain.

Avian Survey

A total of 175 individual birds of 13 species, representing nine separate families, was recorded during station counts (Table 2). Avian diversity and densities were very low, in keeping with the current usage of the site as a mature macadamia nut orchard, with minimal ground cover and few weedy or shrubby species. A closed canopy keeps areas beneath the trees in perpetual twilight. Four species, Northern Cardinal (*Cardinalis cardinalis*), Japanese White-eye (*Zosterops japonicus*), Yellow-fronted Canary (*Ceithagra mozambica*), and Red-billed Leiothrix (*Leiothrix lutea*), accounted for 52% of all birds recorded during station counts. The most frequently recorded species was Northern Cardinal, which accounted for 16% of the total number of individual birds recorded during station point counts. All of the species recorded during the course of this survey are established alien species.

Table 2. Avian species detected during point-counts for the Pāhala Community WWTP Project

Common Name	Scientific Name	**ST**	***RA***
	PHASIANIDAE - Pheasants & Partridges		
	Meleagridinae -Turkeys		
Wild Turkey	*Meleagris gallopavo*	A	2.00
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Spotted Dove	*Streptopelia chinensis*	A	3.17
Zebra Dove	*Geopelia striata*	A	2.00

Table 2 (continued).

Common Name	Scientific Name	ST	*RA*
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	3.67
	TIMALIIDAE - Babblers		
Chinese Hwamei	*Garrulax canorus*	A	2.00
Red-billed Leiothrix	*Leiothrix lutea*	A	3.33
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	0.17
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
	Carduelinae - Carduline Finches and Hawaiian Honeycreepers		
House Finch	*Haemorhous mexicanus*	A	1.33
Yellow-fronted Canary	*Ceithagra mozambica*	A	1.50
	CARDINALIDAE - Cardinals & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	4.67
	THRAUPIDAE - Tanagers		
	Thraupinae - Core Tanagers		
Yellow-billed Cardinal	*Paroaria capitata*	A	1.50
Saffron Finch	*Sicalis flaveola*	A	1.67
	ESTRILDIDAE - Estrildid Finches		
Scaly-breasted Munia	*Lonchura punctulata*	A	0.17

Key to Table 2

ST Status.

A Alien – Introduced to the Hawaiian Islands by humans.

RA Relative Abundance – Number of birds detected divided by the number of count stations (6).

Mammalian Survey

Rather remarkably, we recorded no mammalian species within the survey area. Indeed, there was no indication that pigs (*Sus scrofa*) utilize the Project area.

Discussion

Botanical Resources

Although some unmaintained or infrequently maintained areas exist on the subject parcel, the entire Project is proposed for land that is highly modified and the flora present subject to alterations, including mowing. Thus, there is no expectation for the site to support remnants of a native forest flora and minimal

opportunity for native plants to become established, the *ʻuhaloa* and *koali ʻawa* being exceptions due to their ability to grow in highly disturbed environments. A previous biological survey (David and Guinther, 2013) conducted on 5 ac (2 ha) of land close by to the east yielded only 25 species of plants, the most abundant being white shrimp plant (*Justicia betonica*), glycine vine, and Guinea grass. Because that area had been highly disturbed, then not disturbed for a long time, species such as the shrimp plant and particularly Guinea grass had become well-established to the exclusion of other species. Sixteen species (24% of the combined species list) were common to both surveys.

Obviously, the macadamia nut orchard is a valuable botanical resource, but a commercial one and not an environmentally sensitive one. The same can be said for the Cook pines (*Araucaria columnaris*) that line Maile Street along the southwestern side of the parcel. These old trees are an important community landscape element to be retained in place by the Project.

Avian Resources

The findings of the avian survey are consistent with the location of the site, and the monoculture of macadamia nut trees present on it. No native avian species were recorded during the course of this survey.

Although not detected during this survey, endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and Newell's Shearwater (*Puffinus newelli*) have been recorded over-flying the general Project area between April and the end of November each year. The petrel is listed as endangered, and the shearwater as threatened under both federal and State of Hawaiʻi endangered species statutes. The primary cause of mortality in both Hawaiian Petrel and Newell's Shearwater is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered to be second-most significant cause of mortality of these seabirds in Hawaiʻi. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. When disoriented, seabirds can collide with man-made structures and, if not killed outright, dazed or injured birds become prey to feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1998; Podolsky et al., 1998; Ainley et al., 2001; Hue et al., 2001; Day et al., 2003). Neither nesting colonies nor appropriate nesting habitat for either of these listed seabird species occur within or close to the current Project site.

Mammalian Resources

No Hawaiian hoary bats were detected during the course of this survey. It is possible that bats use resources within orchard part of the Project. Although, no rodents were recorded during the course of this survey, it is likely that one or more of the four alien Murida*e* established on Hawai'i Island—European house mouse (*Mus musculus domesticus*), roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and black rat (*Rattus exulans hawaiiensis*)—use various resources found within the general Project area on a seasonal basis, especially in the macadamia nut orchard. These human commensal species are drawn to areas of human habitation and activity and all are deleterious to native ecosystems and their dependent native fauna.

Jurisdictional Waters

The subject parcel slopes down to the southwest corner. A street culvert at that location carries runoff in the area under Māmalahoa Highway (Hawaii Belt Road). The National Wetlands Inventory (NWI) Wetlands Mapper (USFW, nd (a)) shows no features occurring on the parcel and no streams are shown on USGS topographic maps (USGS, 1923). Streams in the Pāhala area of the Island do not flow all the way to the sea, but terminate on Keone'ele'ele Flat to the southwest.

Critical Habitat

Federally delineated Critical Habitat is not present in Pāhala area (USFWS, 2012). Thus, the Project will not impinge on federally designated Critical Habitat. No equivalent designation exists under state law

Potential Impacts to Protected Species

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes (DLNR 1998, 2015; USFWS, nd (b)) were recorded by this survey. Three faunal species not observed, may occur in the general vicinity and are discussed here.

Seabirds

The principal potential impact that the construction of the project poses to protected seabirds is the increased threat that birds will be downed after becoming disoriented by lights associated with the proposed action during the

nesting season. The two activities that could pose a threat to these nocturnally flying seabirds are: a) if during construction, it is deemed expedient or necessary to conduct night-time construction activities during the seabird fledging season (which runs from September 15 through December 15); or b) exterior lighting is installed as part of the WWTP facilities. Impacts can be minimized if all external lighting is made dark sky compliant (HDLNR-DOFAW, 2016).

Hawaiian hoary bat

The potential impact that Project construction poses to the endangered Hawaiian hoary bat would be from clearing and grubbing of the macadamia nut orchard. Trimming or removal of trees within the construction areas may temporarily displace bats using this vegetation for roosting. Hawaiian bats use multiple roosts within their home territories, so the disturbance resulting from removal of trees is likely to be minimal. However, during pupping season, female bats carrying pups may be less able to rapidly vacate a roost site when the tree is felled. Additionally, adult female bats sometimes leave their pups in the roost tree while they themselves forage, and very small pups may be unable to flee a tree that is being felled. Adverse effects from such disturbance can be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft), between June 1 and September 15, the bat pupping season.

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Summary of Biological Survey Report, August 20, 2018

WILSON OKAMOTO
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10349-01
August 20, 2018

Ms. Jodi Charrier, Acting Team Leader
Maui Nui and Hawaii Island
Fish and Wildlife Service
U.S. Department of the Interior
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, HI 96850

Attention: Eldridge Naboa, Fish and Wildlife Biologist

Subject: Draft Environmental Assessment, Pre-Assessment Consultation;
Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'ū Ka'u, Hawai'i
Response to Comment (01EPIF00-2018-TA-0275)

Dear Ms. Charrier:

Thank you for your April 23, 2018 comment letter (01EPIF00-2018-TA-0275) and the April 10, 2018 e-mail message from Eldridge Naboa regarding the County of Hawai'i Department of Environmental Management Pāhala Community Large Capacity Cesspool Replacement project. As stated in the Project Summary, the Pāhala Community Large Capacity Cesspool Replacement project would be funded by an Environmental Protection Agency (EPA) Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (CSRF) loan program. As such, we understand consultation will need to be conducted by a federal agency or by a designated non-federal representative.

On June 7, 2018, EPA Region 9 Water Division, designated Eastern Research Group, Inc. (ERG) as the non-federal representative for undertaking the consultation for this project.

As part of the Draft EA, in August 2018, botanical and biological field studies were undertaken along the streets and adjacent areas of wastewater collection system and at the 14.9-acre wastewater treatment and disposal facility project site. The results of the field surveys showed the collection system will be installed along already paved roadways within Pāhala. They also revealed that vegetation is located entirely within yards and consist of ornamental plants.

The field survey showed 52 species of vascular plants: 2 ferns, one gymnosperm, and 49 species of angiosperms (flowering plants). Only two species (4%) are regarded as native to the Hawaiian Islands and both are indigenous (native, but also distributed elsewhere in the Pacific). Being widely distributed indigenous species, neither is listed as threatened or endangered or of any special concern.

The avian survey recorded a total of 175 individual birds of 13 species, representing nine separate families during station counts. Avian diversity and densities were very low, in keeping with the current usage of the site as a mature macadamia nut orchard, with minimal ground cover and few weedy or shrubby species. All of the species recorded during the course of the survey are established alien species. No native avian species were recorded during the course of this survey.

The field survey report indicated that, although not detected during the survey, the endemic Hawaiian Petrel (*Pterodroma sandwichensis*) and Newell's Shearwater (*Puffinus newelli*) have been recorded over-flying the general area between April and the end of November each year. The petrel is listed as endangered, and the shearwater as threatened under both federal and State of Hawai'i endangered species statutes.

No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawai'i endangered species statutes were recorded by the survey.

The Draft EA, will include a discussion of the avoidance and minimization measures as set forth in your April 23, 2108 letter.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director – Planning

cc: D. Beck, DEM
K. Rao, EPA
B. Rosen, ERG
C. Lekven, PE, BC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2018-TA-0275
01EPIF00-2019-I-0153

February 15, 2019

Mr. Patrick Goodwin
Environmental Scientist
14555 Avion Parkway, Suite 200
Chantilly, Virginia 20151-1102

Subject: Informal Consultation for the Pahala Large Capacity Cesspool Replacement Project; Pahala, Kau District, Island and County of Hawaii

Dear Mr. Patrick Goodwin:

The U.S. Fish and Wildlife Service (Service) received your correspondence on December 28, 2018, requesting our concurrence with your determination that the proposed Pahala Large Capacity Cesspool Replacement Project, may affect but is not likely to adversely affect the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian Hawk (*Buteo solitarius*), Hawaiian goose (*Branta (=Nesochen) sandvicensis*), Hawaiian Petrel (*Pterodroma sandwichensis*), Band-rumped Storm-Petrel (*Oceanodroma castro*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), and Hawaiian Coot (*Fulica alai*), and the threatened Newell's Shearwater (*Puffinus newelli*). This response is in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C 1531 *et seq.).*

Project Description

The proposed project is located in Pahala, Kau District, Hawaii. Funding for this project is provided by a Special Appropriation Grant from Environmental Protection Agency (EPA) and a loan from the State of Hawaii Clean Water State Revolving Fund. The project involves replacing two large-capacity cesspools (LCCs) with a new County-owned wastewater collection system to be constructed primarily within the existing public right-of-way; a treatment and disposal system that will occupy a 14.9-acre site that is currently a privately-owned macadamia nut plantation; and closure of the two LCCs.

The proposed project is located in the community of Pahala, a former sugar farming and processing operation, in the Kau District, Island of Hawaii. In 1999, pursuant to the Safe Drinking Water Act, EPA promulgated regulations (40 CFR 144.14) requiring the elimination or closure of all LCCs by April 2005. In 2010, the C. Brewer Company transferred the ownership and operation of the LCCs to the County, which is bringing these wastewater systems into compliance with the Safe Drinking Water Act.

Once the new system is in place, the County will close and abandon the existing LCCs. This system includes some lines located in the backyards of residential lots and some within public streets; therefore, abandoning the lines in place will minimize impacts related to their excavation and removal. The cut ends of the abandoned laterals to the collection system will be plugged with concrete to prevent unauthorized use of the old system and to avoid the need to maintain an unused underground hydraulic conduit. The two LCCs will also be abandoned and closed; the specific closure methods have not yet been determined but will be consistent with the requirements set forth in Hawaii Administrative Rules §11-23-19.

Avoidance and Minimization Measures

Hawaiian hoary bat
The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet (ft) or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 ft above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the Hawaiian hoary bat, the project:

- Will not disturb, remove, or trim woody plants greater than 15 ft tall during the bat birthing and pup rearing season (June 1 through September 15).
- Will not use barbed wire for fencing.

Hawaiian hawk
The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

To avoid and minimize impacts to Hawaiian hawks, the project:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, a biologist familiar with the species will conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
    - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, another survey will be conducted.
- Will not clear vegetation or conduct construction activities within 1,600 ft of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest will occur, as nests may be re-used during consecutive breeding seasons.

Hawaiian goose
Hawaiian goose are found on the islands of Hawaii, Maui, Molokai, and Kauai predominately, with a small population on Oahu. They are observed in a variety of habitats, but prefer open areas, such as pastures, golf courses, wetlands, natural grasslands and shrublands, and lava flows. Threats to the species include introduced mammalian and avian predators, wind facilities, and vehicle strikes.

To avoid and minimize impacts to the Hawaiian goose, the project:

- Will not approach, feed, or disturb Hawaiian goose.
- If Hawaiian goose are observed loafing or foraging within the project area during the breeding season (September through April), a biologist familiar with the nesting behavior will survey for nests in and around the project area prior to the resumption of any work. Surveys will be repeated after any subsequent delay of work of three or more days (during which the birds may attempt to nest).
    - All work will cease immediately and the Service will be contacted for further guidance if a nest is discovered within a radius of 150 ft of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where Hawaiian goose are known to be present, the project will post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Hawaiian petrel, Band-rumped storm-petrel, and Newell's shearwater
Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds, the project:

- Will fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Will install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Will avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Hawaiian stilt and Hawaiian coot
Listed Hawaiian waterbirds are found in fresh and brackish-water marshes and natural or man-made ponds. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation.

Based on the project details provided, our information suggests that your project may result in standing water or the creation of open water, thus attracting Hawaiian waterbirds to the site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g. any ponding water), if water is present. Hawaiian waterbirds attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

To avoid and minimize potential impacts to waterbirds, the project:

- To discourage waterbird use of the facility, the subsurface-flow-constructed wetland will not have areas of open water; asphalt rather than gravel will be used to provide access around the lagoons; the lagoons will be lined with a high density polyethylyne liner, rather than with substrate that would support vegetation growth; shade balls will be used in the largest lagoon to discourage algal growth; and the lagoons will be bordered by groves rather than bare land.
- The security fence around the perimeter of the treatment and disposal facility will exclude larger non-native mammalian predators.
- In areas where waterbirds are known to be present, the project will post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, the project will incorporate applicable best management practices regarding work in aquatic environments into the project design.
- A biological monitor that is familiar with the species' biology will conduct waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Surveys will be repeated again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
    - The Service will be contacted within 48 hours for further guidance.
    - Will establish and maintain a 100-ft buffer around all active nests and/or broods until the chicks/ducklings have fledged. Will not conduct potentially disruptive activities or habitat alteration within this buffer.
- A biological monitor that is familiar with the species' biology will be present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that waterbirds and nests are not adversely impacted.

Minimize Spread of Rapid Ohia Death

Rapid Ohia Death (ROD), a newly identified disease, has killed large numbers of mature ohia trees (*Metrosideros polymorpha*) in forests and residential areas of Hawaii Island. The disease is caused by a vascular wilt fungus (*Ceratocystis fimbriata*). Crowns of an affected tree turn yellowish or brown within days to weeks and dead leaves typically remain on branches for some time. All ages of ohia trees can be affected and can have symptoms of browning of branches or leaves. As of early 2017 the disease has been confirmed in all districts except North and South Kohala. Additional information on ROD can be found at:

http://www2.ctahr.hawaii.edu/forestry/downloads/ROD-trifold-03.2016.pdf and http://www2.ctahr.hawaii.edu/forestry/disease/ohia_wilt.html.

The following avoidance and minimization measures should be followed for projects working in ohia forests or at sites with ohia trees on Hawaii Island:

1) A survey of the proposed project site should be conducted within two weeks prior to any tree cutting to determine if there are any infected ohia trees. If infected ohia are suspected at the site, the following agencies should be contacted for further guidance.
    a. Service – please contact the name at the bottom of this letter.
    b. Dr. J.B. Friday, University of Hawaii Cooperative Extension Service, 808-969-8254 or jbfriday@hawaii.edu
    c. Dr. Flint Hughes, USDA Forest Service, 808-854-2617, fhughes@fs.fed.us
    d. Dr. Lisa Keith, USDA Agriculture Research Service, 808-959-4357, Lisa.Keith@ars.usda.gov

2) Both prior to cutting ohia and after the project is complete:
    a. Tools used for cutting infected ohia trees should be cleaned with a 70 percent rubbing alcohol solution. A freshly prepared 10 percent solution of chlorine bleach and water can be used as long as tools are oiled afterwards, as chlorine bleach will corrode metal tools. Chainsaw blades should be brushed clean, sprayed with cleaning solution, and run briefly to lubricate the chain.
    b. Vehicles used off-road in infected forest areas should be thoroughly cleaned. The tires and undercarriage of the vehicle should be cleaned with detergent if they have travelled from an area with ROD or travelled off-road. Use a pressure washer with soap to clean all soil off of the tires and vehicle undercarriage.
    c. Shoes and clothing used in infected forests should also be cleaned. Shoes should be decontaminated by dipping the soles in 70 percent rubbing alcohol to kill the ROD fungus. Other gear can be sprayed with the same cleaning solutions. Clothing can be washed in hot water and detergent.
    d. Wood of affected ohia trees should not be transported to other areas of Hawaii Island or interisland. All cut wood should be left on-site to avoid spreading the disease. The pathogen may remain viable for over a year in dead wood. The Hawaii Department of Agriculture has passed a quarantine rule that prohibits interisland movement, except by permit, of all ohia plant or plant parts.

The Service has analyzed potential impacts to listed species due to the implementation of your project. Based on the includsion of the avoidance and minimization measures listed above, the Service anticipates that any potential impacts will be discountable or insignificant and therefore we concur that the Pahala Large Capacity Cesspool Replacement Project may affect, but is not likely to adversely affect the endangered Hawaiian hoary bat, Hawaiian Hawk, Hawaiian goose, Hawaiian Petrel, Band-rumped Storm-Petrel, Hawaiian Stilt, and Hawaiian Coot, and the threatened Newell's Shearwater.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns regarding this consultation, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-284-0037, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference number: ***01EPIF00-2019-I-0153***.

Sincerely,

JODI CHARRIER

Digitally signed by JODI CHARRIER
Date: 2019.02.15 15:06:51 -10'00'

Jodi Charrier
Acting Island Team Leader
Maui Nui and Hawaii Island

BIOSECURTY PROTOCOLS – HAWAII ISLAND (JULY 2018)

The following biosecurity protocol (based on National Park Service, State of Hawaii, U.S. Fish and Wildlife, U.S. Geological Survey, and the DOI Office of Native Hawaiian Relations guidance) should be followed when operating on Hawaii Island to prevent the introduction of harmful invasive species including frogs, ants, weeds, and fungi into local natural areas (e.g., Hawaii Volcanoes National Park, Hakalau Forest National Wildlife Refuge, State of Hawaii "Natural Areas") and areas with native habitat (habitat that is primarily composed of native vegetation), other islands in Hawaiian archipelago, or the U.S. mainland. The protocol also includes suggestions for keeping field staff safe from certain invasive species.

1. All work vehicles, machinery, and equipment should be cleaned, inspected by its user, and found free of mud, dirt, debris and invasive species prior to entry into the natural areas or native habitat.
a. Vehicles, machinery, and equipment must be thoroughly pressure washed in a designated cleaning area and visibly free of mud, dirt, plant debris, insects, frogs (including frog eggs) and other vertebrate species such as rats, mice and non-vegetative debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds (truck beds with accumulated material (intentionally placed or fallen from trees) are prime sites for hitchhikers).

b. The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats shall be sanitized with a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat. Treatment is the responsibility of the equipment or vehicle owner and operator.

2. Little Fire Ants – All work vehicles, machinery, and equipment should be inspected for invasive ants prior to entering the natural areas or native habitat.
a. A visual inspection for little fire ants should be conducted prior to entry into natural areas or native habitat.

b. Hygiene is paramount but even the cleanest vehicle can pick up a little fire ant. Place MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) into refillable tamper resistant bait stations. An example of a commercially available refillable tamper resistant bait station is the Ant Café Pro (https://www.antcafe.com/). Place a bait station (or stations) in vehicle. Note larger vehicles, such as trucks, may require multiple stations. Monitor bait stations frequently (every week at a minimum) and replace bait as needed. If the station does not have a sticker to identify the contents, apply a sticker listing contents to the station.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat until it is sanitized and re-tested following a resting period. Infested vehicles must be sanitized following recommendations by the Hawaii Ant Lab (http://www.littlefireants.com/) or other ant control expert and in accordance

with all State and Federal laws. Treatment is the responsibility of the equipment or vehicle owner.

d. Gravel, building materials, or other equipment such as portable buildings should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) or AmdroPro (0.73% Hydramethylnon; http://littlefireants.com/Amdro%20Pro.pdf) following label guidance.

e. Storage areas that hold field tools, especially tents, tarps, and clothing should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; http://littlefireants.com/Maxforce%20Complete.pdf) or AmdroPro (0.73% Hydramethylnon; http://littlefireants.com/Amdro%20Pro.pdf) following label guidance.

3. Base yards and staging areas inside and outside areas must be kept free of invasive species.
a. Base yards and staging areas should be inspected at least weekly for invasive species and any found invasive removed immediately. Pay particular attention to where vehicles are parked overnight, keeping areas within 10-meters of vehicles free of debris. Parking on pavement and not under trees, while not always practical is best.

b. Project vehicles or equipment stored outside of a base yard or staging area, such as a private residence, should be kept in a pest free area.

4. All cutting tools must be sanitized to prevent the Rapid Ohia Death (ROD) fungus.
a. Avoid wounding ohia trees and roots with mowers, chainsaws, weed eaters, and other tools. Cut only the minimum amount of trees and branches as approved for the project.

b. All cutting tools, including machetes, chainsaws, and loppers must be sanitized to remove visible dirt and other contaminants prior to entry into natural areas or areas with native habitat, and when moving to a new project area within the native habitat area. Tools may be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution. One minute after sanitizing, you may apply an oil based lubricant to chainsaw chains or other metallic parts to prevent corrosion.

c. Only dedicated tools and chainsaws should be used to sample known or suspected ROD infected trees.

d. Vehicles, machinery, and equipment must be cleaned as described in (1) above.

5. Imported firewood, logs, and ohia parts:
a. Ohia firewood, ohia logs, and ohia parts should not be transported.

6. For individuals working in the field:
a. **Before going into the field**, visually inspect and clean your clothes, boots, pack, radio harness, tools and other personal gear and equipment, for seeds, soil, plant parts, insects, and other debris. A small brush is handy for cleaning boots, equipment and gear. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

b. **Immediately before leaving the field,** visually inspect and clean your clothes, boots, pack, radio harness, tools, and other personnel gear and equipment, for seeds, soil, plant parts, insects, and other debris. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. **Little fire ants nest in trees.** If you are under a tree and that tree is bumped or somehow stressed, the threat response of the ants is to fall from the leaves and sting the person under the tree. If you are subject to an ant attack, do not panic. The ants are extremely small but their stings are painful so make sure you remove all ants from your body and clothing. The stings cause inch long welts that are itchy and painful, and can last for weeks. Treat stings as you would other insect stings. In some persons stings can produce life threatening reactions. Stocking antihistamine in the first aid kit is a reasonable precaution.

d. **Rat Lungworm disease** is caused by a parasite that can infect humans who consume raw or undercooked infected snails or slugs or consume raw produce that contains a small infected snail or slug. Infection is rare but can be serious. Symptoms can include severe headache, neck stiffness, low grade fever, nausea, and vomiting anywhere from 1-6 weeks after exposure. The disease is not spread person to person. Anyone who handles snails or slugs should wear gloves and/or wash hands. Eating unwashed produce is discouraged.

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Appendix D
Draft Archeological Inventory Survey (AIS) Report

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Harry Kim
Mayor

Wilfred M. Okabe
Managing Director

William A. Kucharski
Director

Diane A. Noda
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
Email: cohdem@hawaiicounty.gov

March 11, 2019

Dr. Alan S. Downer, SHPD Administrator
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamōkila Boulevard, Suite 555
Kapolei, Hawai'i 96707

Re: Draft Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island
TMKs: (3) 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai'i Right-of-Ways (Bautista et al. 2019)
Submitted for HRS 6E-8 Review

Dear Dr. Downer:

The County of Hawai'i Department of Environmental Management is submitting the attached Draft Archaeological Inventory Survey (AIS) for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island, TMKs: (3) 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai'i Right-of-Ways (Bautista et al. 2019) for SHPD review, along with a 6E submittal filing fee form and check. These materials are additional submittals associated with existing Log No. 2018.000722.

The County of Hawai'i contracted Brown and Caldwell and its sub-consultants, Wilson Okamoto Corporation and Cultural Surveys of Hawai'i Inc., to prepare the attached AIS and has authorized them to coordinate directly with SHPD for processing and review and to address associated SHPD comments for this submittal.

The project's point of contact at the County of Hawai'i Department of Environmental Management is:

William A. Kucharski, Director
345 Kekuanaoa Street, Suite 41
Hilo, Hawai'i 96720
Phone: (808) 961-8083
Email: william.kucharski@hawaiicounty.gov

The project's point of contact at the County of Hawai'i Department of Environmental Management's Wastewater Division is:

Dora Beck, Wastewater Division Chief
108 Railroad Avenue
Hilo, Hawai'i 96720
Phone: (808) 961-8513
Email: dora.beck@hawaiicounty.gov

If you have any questions or comments, please contact Craig Lekven with Brown and Caldwell at (808) 442-3301. You may also reach him by email at CLekven@brwncald.com.

Sincerely,

William A. Kucharski
Director

WK:mef

Encs: Submittal Form
Draft AIS
Check for Filing Fee

cc: Diane Noda, DEM Deputy Director
Dora Beck, DEM-WWD Chief
Craig Lekven, P.E., Brown and Caldwell
John Sakaguchi, Wilson Okamoto Corporation

WILSON OKAMOTO
CORPORATION
INNOVATORS · PLANNERS · ENGINEERS

10349-01
March 11, 2019

Dr. Alan S. Downer, SHPD Administrator
DLNR-State Historic Preservation Division
Kākuhihewa Building, Suite 555
601 Kamōkila Boulevard
Kapolei, Hawai'i 96707

Attention: Dr. Susan Lebo, Archaeology Branch Chief

Subject: Draft *Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island, TMKs: [3] 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai'i Right-of-Ways* (Bautista et al. 2019) submitted for HRS 6E-8 review

Dear Dr. Downer:

We are submitting the following:

1) One (1) cardstock copy of the Draft *Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project,* prepared by Cultural Surveys Hawaii, March 2019;
2) Filing fee check of $450.00 payable to: Hawaii Historic Preservation Special Fund; and
3) Two (2) copies of the 6E filing fee form.

An electronic document link and related information has been sent to DLNR.Intake.SHPD@hawaii.gov. If you have any questions, please call me at 808-946-2277.

Sincerely,

Earl Matsukawa, AICP
Vice President, Director of Planning

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Roa, EPA
C. Levken; BC; W. Folk; CSH

Enclosures

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

HRS 6E Submittal Filing Fees

All submittals must have the appropriate filing fee in accordance with HAR §13-275-4 or HAR §13-284-4.
All contact fields below must be complete and accurate.

Landowner: n/a
(if privately-owned historic property on Hawaii Register, HRS §6E-10)

Agency: Department of Environmental Management, County of Hawai'i
Contact Name: William A. Kucharski, Director
Mailing Address: 345 Kekuanaoa Street Suite 41, Hilo Hawaii 96720
Phone: (808) 961-8083 Email: william.kucharski@hawaiicounty.gov

Title of Report/Plan: Draft Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pāʻauʻau 1 and 2 Ahupuaʻa, Kaʻū District,
Ahupuaʻa: Hionamoa, Pālima, and ... District: Kaʻū Island: Hawaiʻi
TMK(s): [3] 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawaiʻi Right-o

Contract Firm: Cultural Surveys Hawaiʻi
(firm who completed the work on behalf of the agency)
Contact Name: William Folk
Phone: (808) 262-9972 Email: wfolk @culturalsurveys.com

☐ Check if Report/Plan is a re-submittal (no fee)
☐ Check if Field Inspection Report requested by SHPD (no fee)
☐ Check if **Final Report** (no fee)

☐ $0 Archaeological Monitoring Report, no resources reported
☐ $25 Archaeological Monitoring Plan
☐ $25 Burial Disinterment Report
☐ $25 Request from Agency for Determination Letter per HAR §13-275
☐ $50 Archaeological Assessment (AIS with negative findings)
☐ $50 Osteological Analysis Report
☐ $100 Archaeological Monitoring Report, resources reported
☐ $150 Archaeological Inventory Survey Plan, Archaeological Data Recovery Plan, or Preservation Plan
☐ $250 Burial Treatment Plan (BTP)
☑ $450 Archaeological, Architectural, or Ethnographic Survey Report
☐ $450 Archaeological Data Recovery Report
☐ Fee Total: Make check payable to "Hawaii Historic Preservation Special Fund"

For Office Use Only:

Date Received:	Payment Method: Cash Amount $
Log No.:	Check No. Amount $
Receipt Issued:	Money Order Amount $

rev. 11/9/2017

☐ Draft ☐ Revision ☐ Final

Draft

Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā‘au‘au 1 and 2 Ahupua‘a, Ka‘ū District, Hawai‘i Island TMKs: [3] 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai‘i Right-of-Ways

Prepared for
Wilson Okomoto Corporation
and the
County of Hawai‘i Department of Environmental Management,
Wastewater Division

Prepared by
Olivier M. Bautista, B.A.,
Sarah Wilkinson, B.A.,
and
Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawai‘i, Inc.
Kailua, Hawai‘i
(Job Code: HIONAMOA 2)

March 2019

O‘ahu Office
P.O. Box 1114
Kailua, Hawai‘i 96734
Ph.: (808) 262-9972
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www.culturalsurveys.com

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399 Hualani St. #124
Hilo, Hawai‘i 96720
Ph.: (808) 965-6478
Fax: (808) 965-6582

Management Summary

Reference	Archaeological Inventory Survey for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā‘au‘au 1 and 2 Ahupua‘a, Ka‘ū District, Hawai‘i Island, TMKs: [3] 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai‘i Right-of-Ways (Bautista et al. 2019)
Date	March 2019
Project Number(s)	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: HIONAMOA 2
Investigation Permit Number	CSH completed the archaeological inventory survey (AIS) fieldwork under archaeological fieldwork permit numbers 18-15 and 19-07, issued by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) §13-282.
Agencies	United States Environmental Protection Agency (EPA); Hawai‘i State Department of Health (DOH); SHPD; County of Hawai‘i Department of Environmental Management (DEM), Wastewater Division
Land Jurisdiction	County; private (Kamehameha Schools, Olson Trust)
Project Proponent	County of Hawai‘i DEM
Project Funding	EPA (EPA Grant XP-96942401-6); State Revolving Fund
Project Location	The project is located in the town of Pāhala, approximately 5 km (3.1 miles) back from the coast in the Ka‘ū District, Hawai‘i Island. The project area crosses portions of Hionamoa, Pālima, and Pā‘au‘au 1 and 2 Ahupua‘a. The proposed treatment plant is located adjacent to the Maile Street and Hawai‘i Belt Road (Route 11) intersection. The project and is depicted on a portion of the 1995 Pahala U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle.
Project Description	The project includes closure of two Large Capacity Cesspools (LCCs) and development of a new collection system and treatment and disposal facility to service the Pāhala community. The collection system is located on county streets. The treatment disposal facility will occupy 14.9 acres and is located on a portion a 42.5-acre property (TMK: [3] 9-6-002:018) near the southern edge of Pāhala Town presently owned by Kamehameha Schools and under lease to Royal Hawaiian Orchards. Almost the entire parcel is planted in a commercial macadamia nut orchard, with a macadamia nut processing plant parking lot in the southeastern corner outside the limits of the current project area.
Area of Potential Effect (APE) and AIS Project Area Acreage	The project APE comprises 57.7 acres (23.4 hectares) in Pāhala Town, while the AIS project area is a 29.3-acre (11.8 hectares) area within the APE. The TMK parcels listed under “Reference” above are those associated with the project area; a full list of TMK parcels for the overall APE is given in Appendix A.

	The APE includes the following: 1. The 14.9-acre wastewater treatment plant (WWTP) site, within which all project-related staging, including for the collection system and the treatment and disposal facility, will be located; 2. An approximately 1,500-foot (ft) long by 25-ft wide utility easement (about 0.94 acres) located entirely within TMK: [3] 9-6-002:018 to connect the collection system line and other utilities to the WWTP; 3. The path of the new sewer collection lines, to be located within the 22- to 24-ft wide travel surface of select county streets; 4. Sewer line easements of similar width (22-24 ft) through TMKs: [3] 9-6-005:036 and 044 connecting the collection lines to the proposed Pāhala WWTP site; 5. The existing LCC 1 and 2 locales (located in TMKs: [3] 9-6-002:016 and 9-6-016:041, respectively), and an approximately 100-m (328-ft) long by 15-m (49-ft) wide corridor along the existing sewer line easement in TMK: [3] 9-6-002:016 between Maile Street and LCC 1; and 6. Numerous single-family residential/other properties with existing sewer laterals, some of which may need to be replaced/repaired/rehabilitated by the County. The AIS project area comprises Items 1–5 within the project APE, except for the LCC 2 location behind a private residence in TMK: [3] 9-6-016:041. It also does not include the numerous private properties located along the county streets selected for new sewer collection lines (Item 6).
Historic Preservation Regulatory Context	This AIS investigation was designed to comply with both federal and Hawai‘i State environmental and historic preservation review legislation. Due to federal (EPA) funding, this project is a federal undertaking, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). As a county project within both private and county lands, the project is also subject to Hawai‘i State environmental and historic preservation review legislation (Hawai‘i Revised Statutes [HRS] §343 and HRS §6E-8/HAR §13-275, respectively). In consultation with the SHPD, this archaeological inventory survey (AIS) investigation fulfills the requirements of HAR §13-276 and the *Secretary of the Interior’s Standards for Archaeology and Historic Preservation*. It was conducted to identify, document, and make National Register of Historic Places (National Register) and Hawai‘i Register of Historic Places (Hawai‘i Register) eligibility recommendations for any historic properties. This report is also intended to support any project-related historic preservation consultation with stakeholders such as state and county agencies and

	interested Native Hawaiian Organizations (NHOs) and community groups, if applicable. Pacific Legacy in 2016 conducted an archaeological field inspection of the entire 42.5-acre TMK: [3] 9-6-002:018 (Cleghorn 2016). The 11 November 2016 letter report was addressed to Dora Beck, P.E., Wastewater Division Chief for the County DEM Wastewater Division. The report noted extensive ground disturbance throughout the parcel conducted "prior to the planting of the present macadamia nut orchard. The area at the southeastern corner of the parcel that is not planted in macadamia nut trees has also been extensively disturbed and a portion of it serves as a graveled parking lot for the adjacent macadamia nut processing plant." A sealed lava tube entrance is present in this corner of the parcel outside the current project area. No surface archaeological features were documented by Cleghorn (2016). A handful of surface artifacts, including a single discoidal hammerstone and fragmental bottle glass and ceramics, were documented within the northern portion of the parcel outside the current project area. Cleghorn (2016) recommended consultation with SHPD about project historic preservation requirements, noting that SHPD would likely require an AIS. Cleghorn (2016) also recommended limiting the project area footprint to avoid the lava tube located in the southeastern corner of TMK: [3] 9-6-002:018. On 17 October 2017 the project proponent provided a written request to the SHPD for a letter of determination in accordance with HAR §13-275-3 (Appendix B). The Cleghorn (2016) letter report was attached as supportive information. CSH on 22 February 2018 met with SHPD Archaeology Branch Chief Dr. Susan Lebo to follow up on a 17 October 2017 request for project determination. During this meeting Dr. Lebo indicated the following: • An AIS should be undertaken addressing the entire area of proposed ground disturbance, with subsurface testing; • The AIS should include a "good faith effort" to address possible lava tubes within the area of proposed ground disturbance; • Backhoe assisted excavations should be conducted within select proposed features at the plant site; • All areas of the project not included in TMK: [3] 9-6-002:018 should be addressed, in particular the lateral installations along the county roadways; these areas probably would not require subsurface testing but should be evaluated for any relation to a possible historic plantation village or historic property designation.

	The items outlined above, and a more detailed summary of the subsurface testing schema, were supplied in a 22 March 2018 county DEM letter addressed to SHPD, which requested formal written concurrence with the AIS approach; additional materials were subsequently supplied to SHPD on request (see Appendix B). SHPD replied to this letter concurring with the AIS approach in a §6E-8 and NHPA Section 106 Review letter dated 20 August 2018 (Log No.: 2018.00722; Doc. No.: 1808JA02) (Appendix C). CSH on 6 December 2018 met with Dr. Susan Lebo and Dr. Jane Allen of SHPD to discuss the project APE and documentation requirements (Appendix D).
Fieldwork Effort	CSH archaeologists Olivier Bautista, B.A., and Sarah Wilkinson, B.A., conducted fieldwork on 18 September 2018, 1–4 October 2018, and 10 January 2019 under the general supervision of Principal Investigator Hallett H. Hammatt, Ph.D. This work required approximately 8 person-days to complete.
Consultation	Consultation is being undertaken for the project to comply with Section 106 of the NHPA. Presently, Section 106 consultation with community, agency, and Native Hawaiian Organizations has been initiated and is ongoing by the project proponents. The results of the current investigation will be utilized in these ongoing efforts. To date, no historic properties have been assessed as having traditional cultural significance to an ethnic group (Criterion e) within the project area.
Historic Properties Identified	Two newly documented historic properties were identified through background research: State Inventory of Historic Places (SIHP) #s 50-10-69-31088 is the historic Wood Valley Road/Coastal Road corridor, and SIHP # 50-10-69-31089 is the historic Volcano Road corridor. They are both assessed as significant under Criterion d for yielding important information for research on former rights of way in Pahala history. Constructed elements of the portions of these road alignments within the project area have been thoroughly impacted by the development of modern roadways, becoming Maile Street and Pikake Street in Pahala town within the original corridors. Due to the impacts and changes to these roads in Pāhala over time these historic properties only maintain integrity of location of the old corridor. SIHP # s -31088 and -31089 are assessed as significant under Criterion d per HAR §13-275-6 for the information they have yielded about primary transportation routes in the Pāhala vicinity during the late nineteenth and early twentieth centuries.
Effect Recommendation	Following consultation among EPA, DOH, DEM, and SHPD regarding the project effect for the segments of the Wood Valley/Coastal Road (SIHP # 50-10-69-31088) and Volcano Road (SIHP # 50-10-69-31089)

	within the project area under HRS §6E-8, per HAR § 13-275-7(a)(1) the County of Hawai‘i DEM’s project effect determination is “no historic properties affected.” In accordance with federal regulations (36 CFR 800.5), the AIS results support a determination of “no historic properties affected.”
Mitigation Recommendations	No mitigation commitments are recommended for the portions of SIHP #s 50-10-69-31088 and -31089 within the project area. The portions of these historic properties within the project area only maintain integrity of location as all of the constructed elements of the original Wood Valley/Coastal road and Volcano road are no longer evident today. While this project will have no effect on historic properties, archaeological monitoring during construction for identification and/or cautionary measures is proposed. This is based on the location of the project being within the “Pahala Historic District” (SIHP # 50-10-69-07362), as well as the presence near the project area of three historic properties as follows: • a lava tube system (SIHP # 50-10-69-27570) with some cultural modifications beneath Pahala town; • Ka‘ū High and Pāhala Elementary School (SIHP # 50-10-69-07522), a National Register-eligible historic property; and • the Hawai‘i Belt Road, (SIHP # 50-10-47-30187), a National Register-eligible historic property south of the project area.

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Section 1 Introduction

1.1 Project Background

At the request of Wilson Okomoto Corporation and on behalf of the County of Hawai‘i Department of Environmental Management, Wastewater Division, Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this archaeological inventory survey report (AISR) for the Pāhala Wastewater Treatment Plant and Sewer System project, Hionamoa, Pālima, and Pā‘au‘au 1 and 2 Ahupua‘a, Ka‘ū District, Hawai‘i Island, TMKs: [3] 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai‘i Right-of-Ways. The project area is located within a larger Area of Potential Effect (APE) in the town of Pāhala. The project area is depicted on a portion of the 1995 Pahala U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), tax map plats (Figure 2 and Figure 3), and a 2013 aerial photograph (Figure 4).

The project includes closure of two Large Capacity Cesspools (LCCs) and development of a new collection system and treatment and disposal facility to service the Pāhala community. The collection system is located on county streets. The treatment disposal facility will occupy 14.9 acres and is located on a portion a 42.5-acre property (TMK: [3] 9-6-002:018) near the southern edge of Pāhala Town adjacent to the Maile Street and Hawai‘i Belt Road (Route 11) intersection. This parcel is presently owned by Kamehameha Schools and under lease to Royal Hawaiian Orchards. Almost the entire parcel is planted in a commercial macadamia nut orchard, with a macadamia nut processing plant parking lot in the southeastern corner outside the limits of the current project APE.

The project APE comprises 57.7 acres (23.4 hectares) in Pāhala Town, while the AIS project area is a 29.3-acre (11.8 hectares) area within the APE (Figure 5). The TMK parcels listed above are those associated with the project area; a full list of TMK parcels for the overall APE is given in Appendix A. The APE includes the following:

1. The 14.9-acre wastewater treatment plant (WWTP) site, within which all project-related staging, including for the collection system and the treatment and disposal facility, will be located (Figure 6);
2. An approximately 1,500-foot (ft) long by 25-ft wide utility easement (about 0.94 acres) located entirely within TMK: [3] 9-6-002:018 to connect the collection system line and other utilities to the WWTP (see Figure 6);
3. The path of the new sewer collection lines, to be located within the 22- to 24-ft wide travel surface of select county streets;
4. Sewer line easements of similar width (22-24 ft) through TMKs: [3] 9-6-005:036 and 044 connecting the collection lines to the proposed Pāhala WWTP site;
5. The existing LCC 1 and 2 locales (located in TMKs: [3] 9-6-002:016 and 9-6-016:041, respectively), and an approximately 100-m (328-ft) long by 15-m (49-ft) wide corridor along the existing sewer line easement in TMK: [3] 9-6-002:016 between Maile Street and LCC 1; and
6. Numerous single-family residential/other properties with existing sewer laterals, some of which may need to be replaced/repaired/rehabilitated by the County.

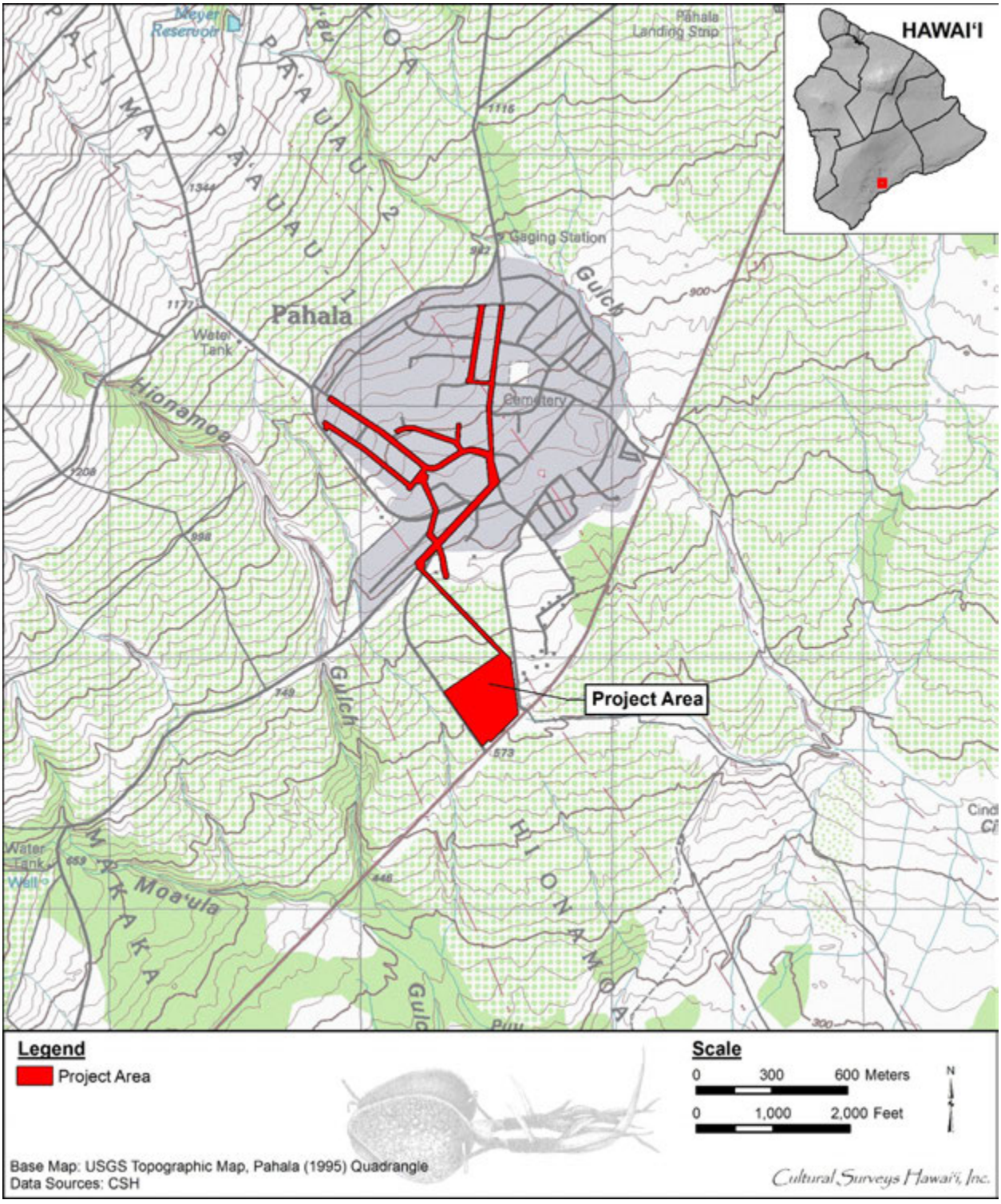


Figure 1. Portion of the 1995 Pahala USGS 7.5-minute topographic quadrangle showing the location of the project area

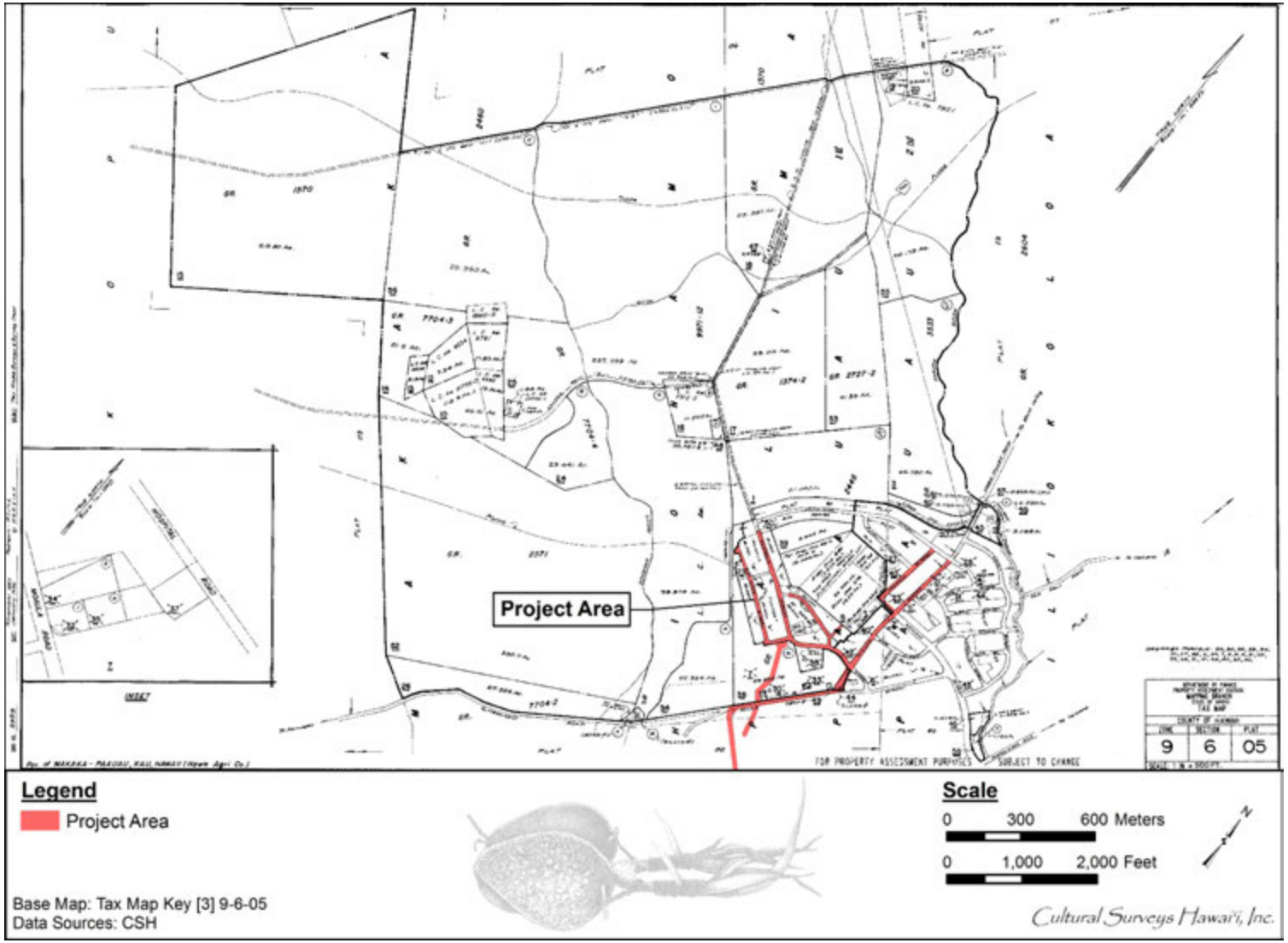


Figure 2. Tax Map Key (TMK) [3] 9-6-05 showing the northern portion of the project area (Hawai‘i TMK Service 2018)

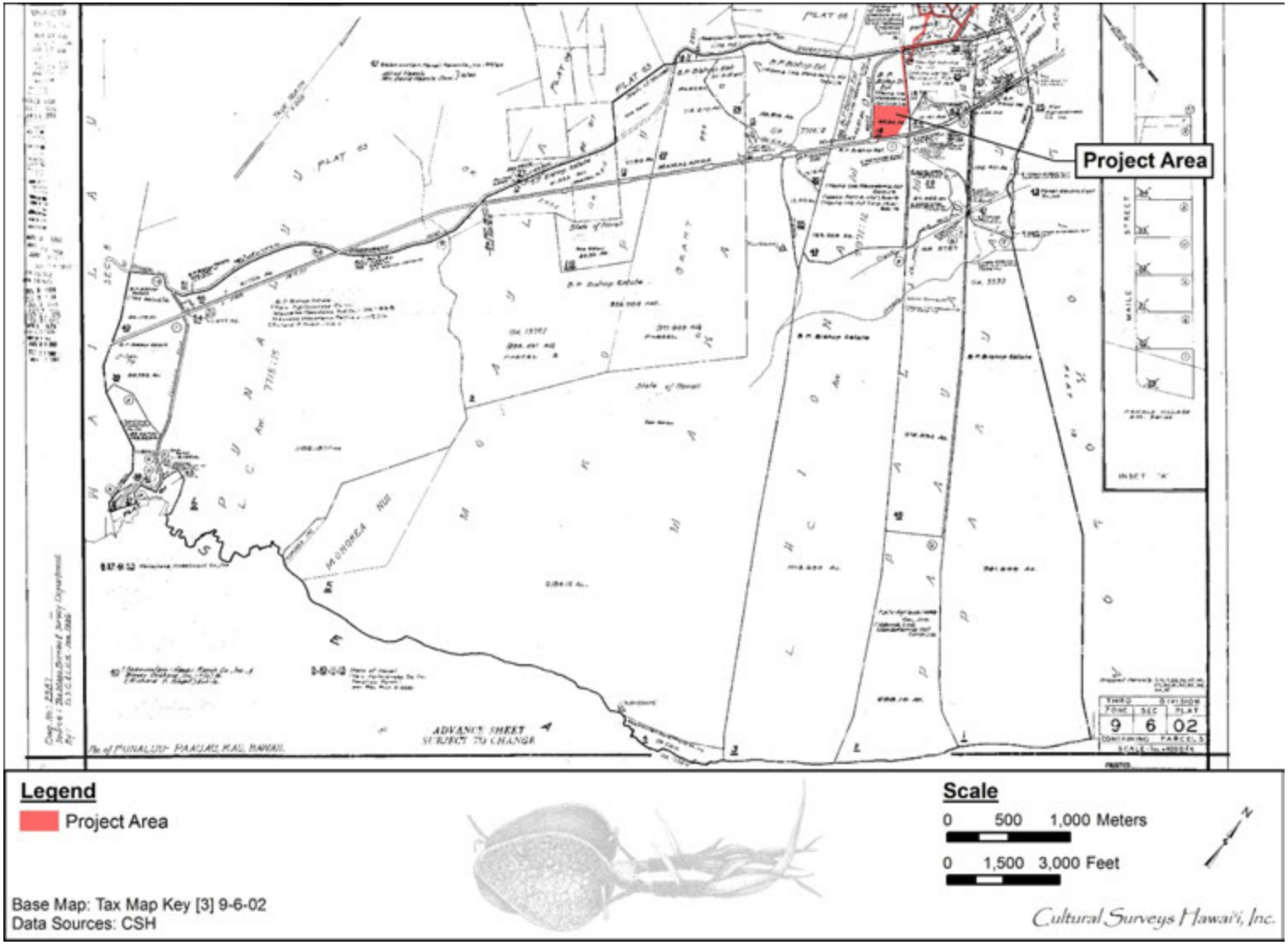


Figure 3. TMK: [3] 9-6-02 showing the southern portion of the project area (Hawai‘i TMK Service 2018)

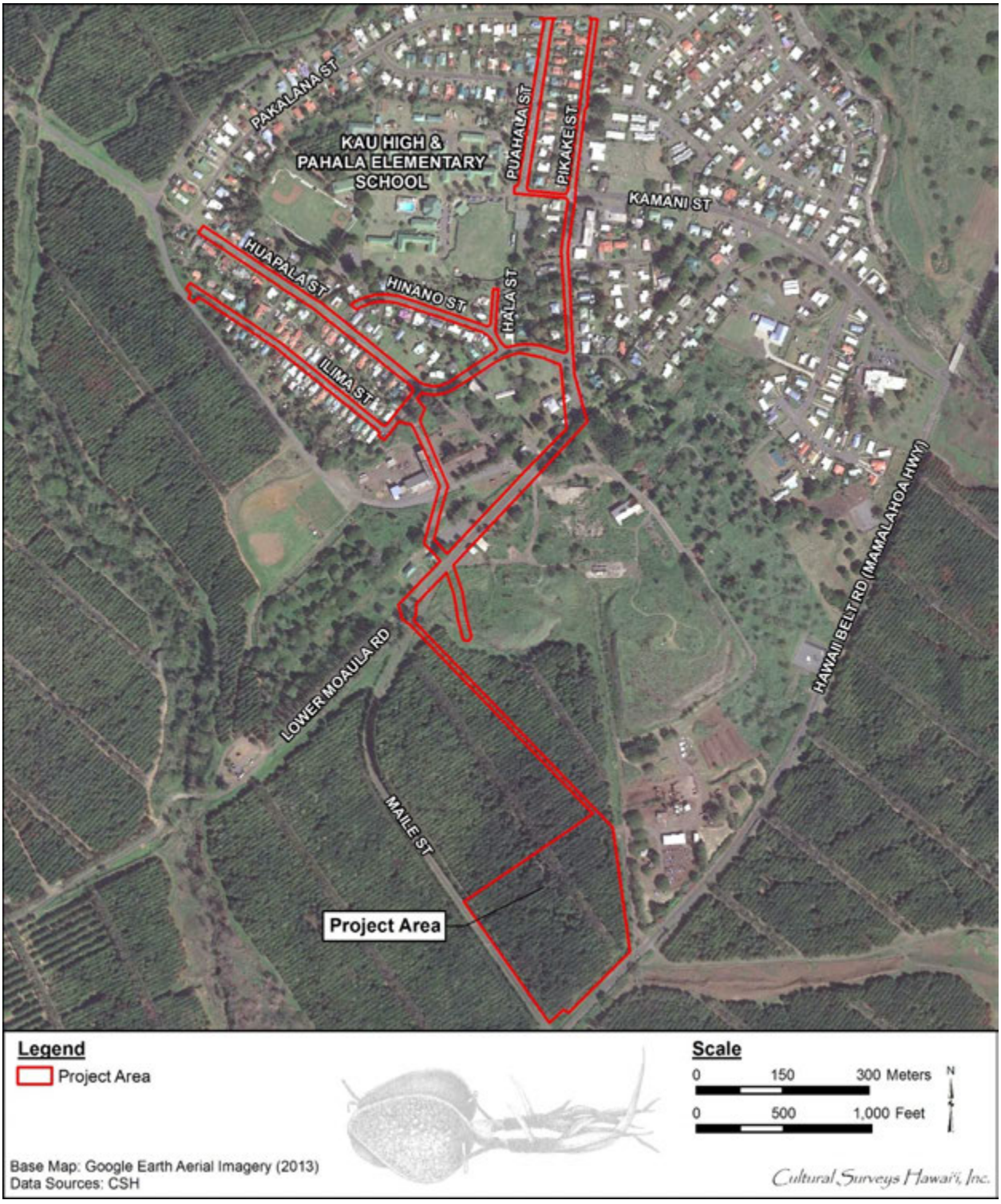


Figure 4. Aerial photograph of the project area (Google Earth 2013)

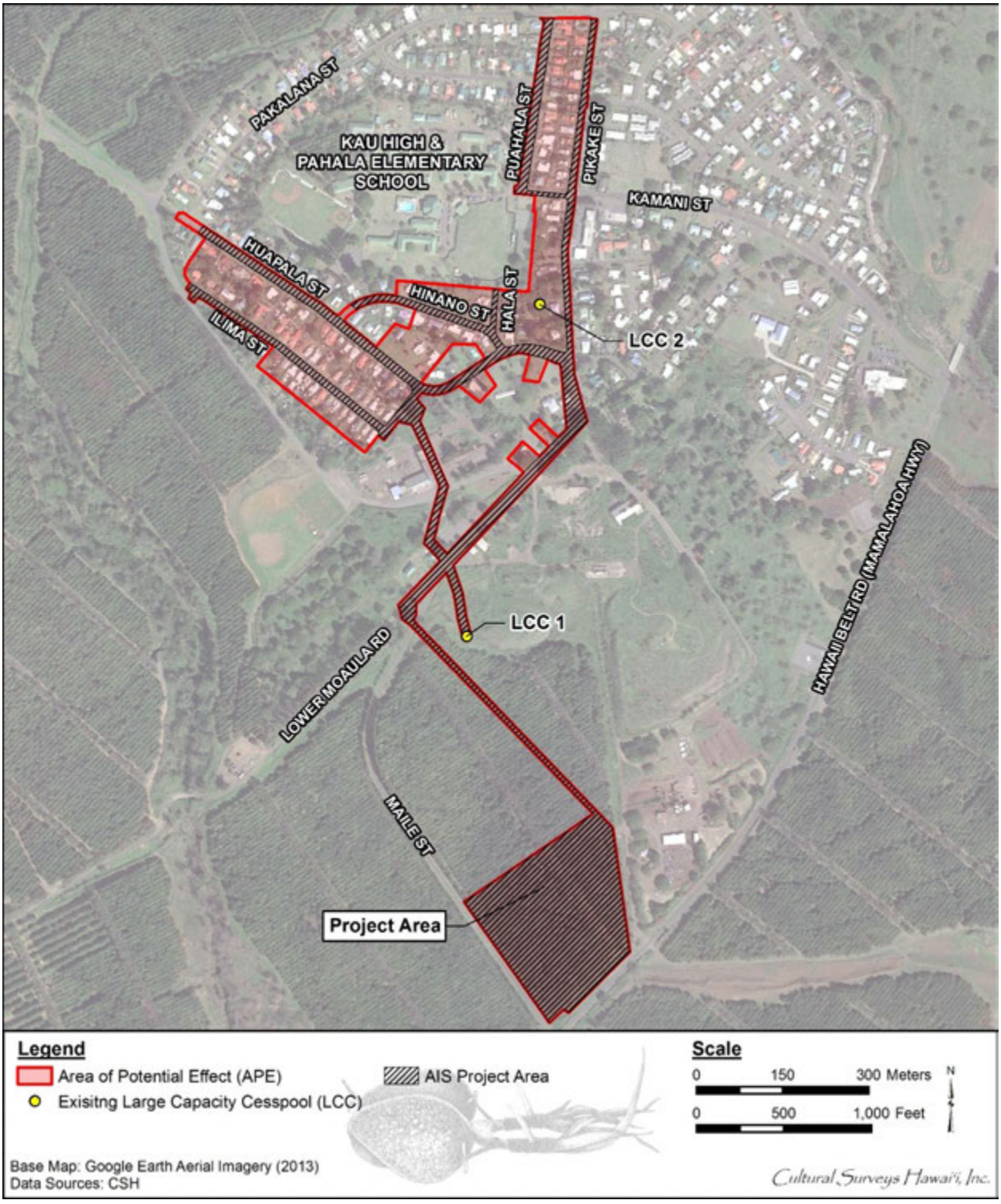


Figure 5. Aerial photograph of the project area, showing its configuration within the greater project APE and the locations of LCCs 1 and 2 (Google Earth 2013)

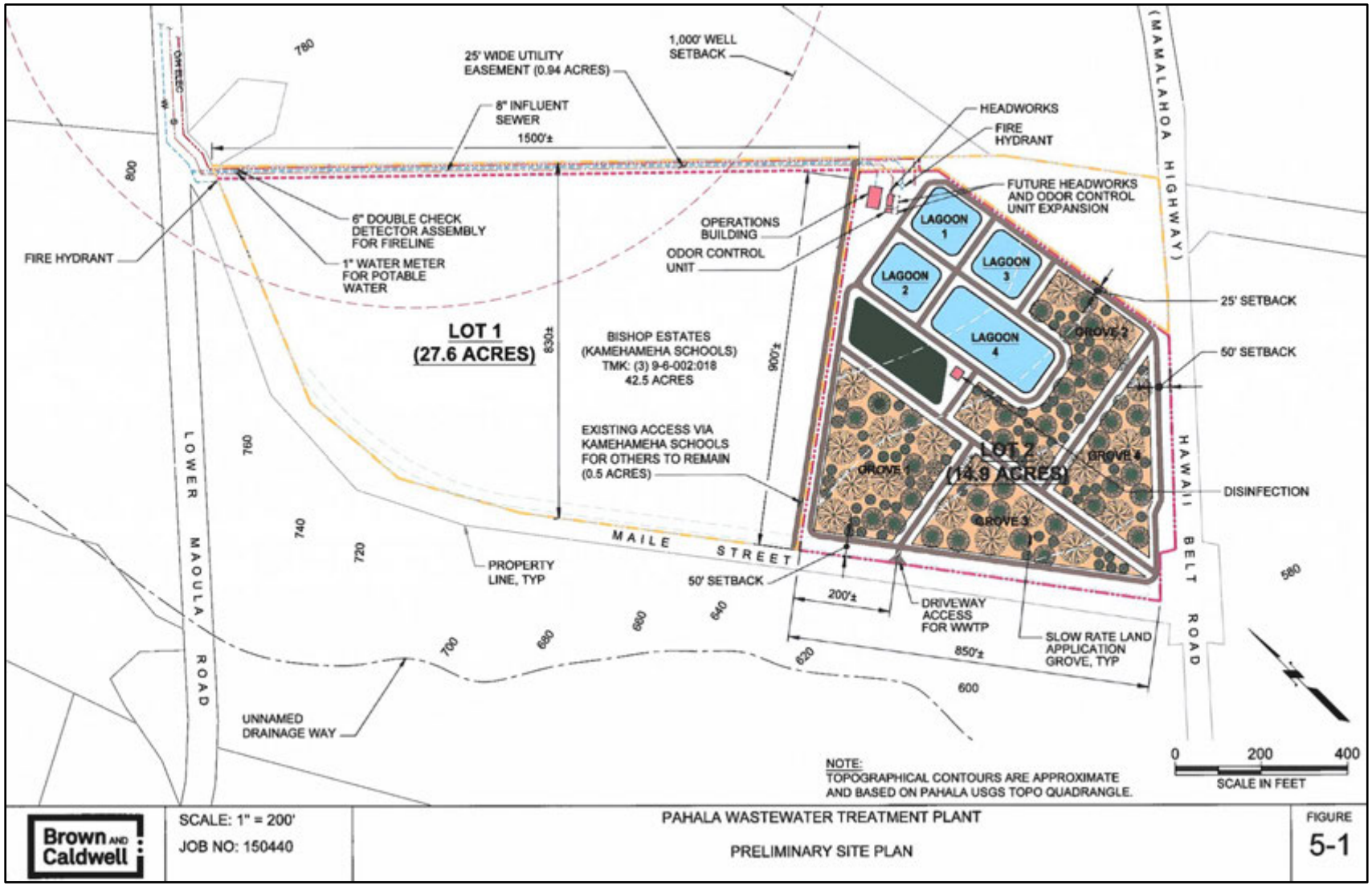


Figure 6. Preliminary site plan showing the 14.9-acre Pāhala WWTP and utility easement through TMK: [3] 9-6-002:018 (courtesy of client)

The AIS Project Area comprises Items 1–5 within the project APE, except for the LCC 2 location behind a private residence in TMK: [3] 9-6-016:041. It also does not include the numerous private properties located along the county streets selected for new sewer collection lines (Item 6).

The gravity sewer collection system lines will be mostly 8-inch diameter lines with the others from 12 to 16 inches, depending on their location, and will be placed in trenches located within the county streets. The trenches will be 3 to 4 ft wide and will be approximately 6 ft deep, or deeper depending on the location. For the former C. Brewer properties, the sewer laterals connecting the parcels to the collection system in the street have already been installed, although some of them may need to be replaced/repaired/rehabilitated by the County. For other properties that may eventually connect, the owners will be responsible for the improvements on their private property to connect to the collection system at the property line.

1.2 Historic Preservation Regulatory Context and Document Purpose

This AIS investigation was designed to comply with both federal and Hawai‘i State environmental and historic preservation review legislation. Due to federal (Environmental Protection Agency [EPA]) funding, this project is a federal undertaking, requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). As a county project within both private and county lands, the project is also subject to Hawai‘i State environmental and historic preservation review legislation (Hawai‘i Revised Statutes [HRS] §343 and HRS §6E-8/Hawai‘i Administrative Rules [HAR] §13-275, respectively).

In consultation with the State Historic Preservation Division (SHPD), this AIS investigation fulfills the requirements of HAR §13-276 and the *Secretary of the Interior's Standards for Archaeology and Historic Preservation*. It was conducted to identify, document, and make National Register of Historic Places (National Register) and Hawai‘i Register of Historic Places (Hawai‘i Register) eligibility recommendations for any cultural resources/historic properties. This report is also intended to support any project-related historic preservation consultation with stakeholders such as State and County agencies and interested Native Hawaiian Organizations (NHOs) and community groups, if applicable.

Pacific Legacy in 2016 conducted an archaeological field inspection of the entire 42.5-acre TMK: [3] 9-6-002:018 (Cleghorn 2016). The 11 November 2016 letter report was addressed to Dora Beck, P.E., Wastewater Division Chief for the County Department of Environmental Management (DEM) Wastewater Division. The report noted extensive ground disturbance throughout the parcel conducted "prior to the planting of the present macadamia nut orchard. The area at the southeastern corner of the parcel that is not planted in macadamia nut trees has also been extensively disturbed and a portion of it serves as a graveled parking lot for the adjacent macadamia nut processing plant." A sealed lava tube entrance is present in this corner of the parcel outside the current project area. No surface archaeological features were documented by Cleghorn (2016). A handful of surface artifacts, including a single discoidal hammerstone and fragmental bottle glass and ceramics, were documented within the northern portion of the parcel outside the current project area. Cleghorn (2016) recommended consultation with SHPD about project historic preservation requirements, noting that SHPD would likely require an AIS. Cleghorn (2016) also recommended limiting the project area footprint to avoid the lava tube located in the southeastern corner of TMK: [3] 9-6-002:018.

On 17 October 2017 the project proponent provided a written request to the SHPD for a letter of determination in accordance with HAR §13-275-3 (Appendix A). The Cleghorn (2016) letter report was attached as supportive information.

CSH on 22 February 2018 met with SHPD Archaeology Branch Chief Dr. Susan Lebo to follow up on 17 October 2017 request for project determination. During this meeting Dr. Lebo indicated the following:

- An AIS should be undertaken addressing the entire area of proposed ground disturbance, with subsurface testing;
- The AIS should include a "good faith effort" to address possible lava tubes within the area of proposed ground disturbance;
- Backhoe assisted excavations should be conducted within select proposed features at the plant site;
- All areas of the project not included in TMK: [3] 9-6-002:018 should be addressed, in particular the lateral installations along the county roadways; these areas probably would not require subsurface testing but should be evaluated for any relation to a possible historic plantation village or historic property designation.

The items outlined above, and a more detailed summary of the subsurface testing schema, were supplied in a 22 March 2018 county DEM letter addressed to SHPD, which requested formal written concurrence with the AIS approach; additional materials were subsequently supplied to SHPD on request (see Appendix A). SHPD replied to this letter concurring with the AIS approach in a §6E-8 and NHPA Section 106 Review letter dated 20 August 2018 (Log No.: 2018.00722; Doc. No.: 1808JA02) (Appendix B).

CSH on 6 December 2018 met with Dr. Susan Lebo and Dr. Jane Allen of SHPD to discuss the project APE and documentation requirements (Appendix D).

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is situated approximately 5 km (3.1 miles) back from the coast on the southeastern slope of Mauna Loa volcano, at an elevation of 170–305 m (590–1,000 ft) above mean sea level (amsl). The Pāhala Town vicinity receives an annual average rainfall of 52 inches (Giambelluca et al. 2013), which today supports commercial agricultural crops like coffee and macadamia nuts and historically supported sugarcane. The Ka‘ū Forest Reserve is located approximately 2.5 miles upslope. Gulches carrying flood waters from the forest reserve *makai* (seaward; downslope) bracket the town; no natural waterways are present within the project area. Vegetation within the proposed treatment plant consists of a macadamia (*Macadamia integrifolia*) orchard with Norfolk Island pines (*Araucaria heterophylla*) used for windbreaks. The terrain in this area is gently sloped to the southwest. The sewer line easement extends through the orchard and areas of grasses and weeds. Landscaped residential yards line the sides of the County roadways in Pāhala Town. The terrain along the roadways ranges from level to sloped.

The unique geology of its upper slopes, lined with a string of large *pu‘u* (hills, cinder cones) has protected broad portions of windward Mauna Loa from relatively recent lava flows. The region is known for its arable soils formed in volcanic ash, commonly referred to as "Pāhala Ash."

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Sato et al. (1973), the project area's soils consist of soils from the Waiaha and Naalehu series (Figure 7). The northern half of the project area is Waiaha silt loam, 0 to 10% slopes (WAC), and the southeastern corner is Waiaha silt loam, 10 to 20% slopes (WKD). The remaining portions of the project area are Naalehu silty clay loam 0%-10% slopes (NaC) and Naalehu silty clay loam 10%-20% slopes (NaD) (see Figure 7).

Waiaha soils are described as

> shallow, well-drained silt loams that formed in volcanic ash. These soils are nearly level to moderately steep and most areas are extremely stony . . . The natural vegetation consists of kiawe, koa haole, natal redtop, lantana, guineagrass, and bermudagrass. . .
>
> Waiaha soils are used for pasture. [Sato et al. 1973:52]

The WAC type has a non-stony surface layer and "receives more rain during the winter than the extremely stony soil;" it is also used for orchards (Sato et al. 1973:53).

Naalehu soils are described as

> well-drained silty clay loams that formed in volcanic ash. These soils are nearly level to steep. . . The natural vegetation consists of Christmas berry, bermudagrass, guava, and kaimi cover. . . Naalehu soils are used mostly for sugarcane. Small areas are used for pasture. [Sato et al. 1973:40]

1.3.2 Built Environment

The entire project area has been altered by agricultural, commercial, and residential development. The location of the proposed treatment plant is currently an active macadamia nut orchard operated by Royal Hawaiian Orchards. This portion of the project area is on the southern outskirts of Pāhala Town, bound to the west by Maile Street, to the south by the Hawai‘i Belt Road or Māmalahoa Highway (State Inventory of Historic Places [SIHP] # 50-10-47-30187), to the north by additional macadamia orchard, and to the east by an unimproved jeep road separating the orchard from the Royal Hawaiian processing facilities. This road is bound to the east by a concrete flume extending *mauka-makai* (from mountains to sea), located outside the project area. An unnamed paved roadway forms the approximate northern boundary of the proposed plant area; this road provides access to and from the Royal Hawaiian Orchards processing facility via Maile Street. Just inside the western boundary of the parcel parallel to Maile Street is another unimproved road, used to access the orchard. An earthen ditch is situated between this road and Maile Street, designed to channel run-off downslope. The orchard itself is bisected by a large, linear dozer push pile containing a row of trees forming additional wind-breaks; unimproved access roads run along both sides of this push pile.

The proposed sewer collection line extends for the most part along existing, paved County roadways including Maile Street, Pikake Street, Ilima Street, Huapala Street, Hinano Street, Kamani Street, and Puahala Street (see Figure 4). These roadways extend through predominately residential areas of Pāhala Town. The portion of Maile Street in which the sewer line will be placed is located between the Pikake Street/Old Camp Mill Road intersection and the Lower Moa‘ula

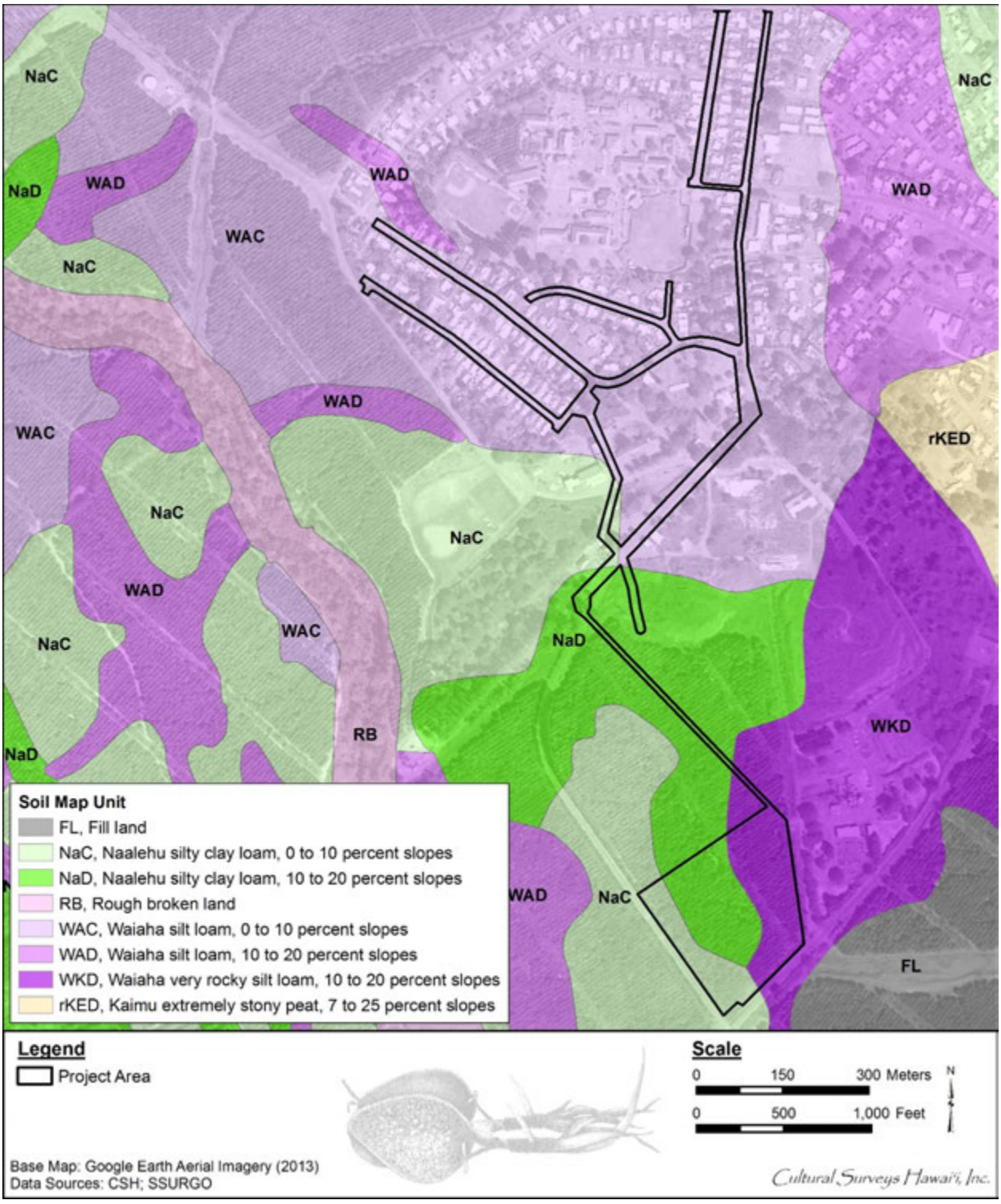


Figure 7. Overlay of *Soil Survey of the State of Hawaii* (Sato et al. 1972), indicating soil types within and surrounding the project area (USDA SSURGO 2001)

Road fork. Remnants of the sugar mill and associated plantation structures are present on either side of Maile Street outside of the project area.

Three sewer line easements are proposed for portions of the sewer line not within county roadways. One of these easements would extend along the southernmost segment of Pikake Street, which crosses privately owned TMK: [3] 9-6-005:044. This sewer line easement would also be within the existing paved roadway. Another easement extends from the eastern section of ‘Ilima Street through the old Pāhala Sugar Mill maintenance yard at TMK: [3] 9-6-005:036. The maintenance yard property has been completely altered with the development of the sugar plantation and town. The property has been graded and contains structures, driveways, parking areas, and a portion of a roadway used to access Ka‘ala‘iki Road/Pāhala Cane Haul Road. Though this overall parcel is within the project APE, no new sewer connections are proposed under the current project for any of its structures. The easement extends between and around the existing historic structures on this parcel and exits the property at Maile Street, where the line then extends southeast into TMK: [3] 9-6-002:018. The sewer line runs through the macadamia nut orchard, connecting to the northern corner of the proposed plant site.

The project involves the closure of the two existing LCCs (LCC 1 and LCC 2). LCC 1 is located in TMK [3] 9-6-002:016 south of Maile Street, at the terminus of a sewer easement maintained by the County. The portion of the parcel containing LCC 1 and its associated easement are fallow cane land. LCC 2 and its tie-ins to existing sewer lines are located behind a private residence at TMK [3] 9-6-016:041. This residential property comprises a main dwelling, outbuildings, driveway, and landscaped yard.

The sewer collection and transmission lines overlap with the known boundaries of the “Pāhala Historic District.” In the 1970s the majority of Pāhala Town was designated SIHP # 50-10-69-07362, a historic district associated with the historic sugar plantation and village. This historic property is not listed on the National Register or Hawai’i Register, and to the best of our knowledge has never been evaluated for eligibility for listing on these registers. CSH was unable to locate any records on file at the SHPD offices in Hilo or Kapolei pertaining to SIHP # -07362.

Section 2 Methods

2.1 Field Methods

CSH completed the fieldwork component of this archaeological inventory survey under archaeological fieldwork permit number 18-15, issued by the SHPD pursuant to HAR §13-282. Fieldwork was conducted on 18 September 2018 and 10 January 2019 by CSH Field Supervisor Olivier Bautista, B.A., and Project Director Sarah Wilkinson, B.A.; and on 1-4 October 2018 by Olivier Bautista B.A., under the general supervision of CSH Principal Investigator Hallett H. Hammatt, Ph.D. This work required approximately 8 person-days to complete. In general, fieldwork included 100% pedestrian inspection of the project area, GPS data collection, and subsurface testing.

2.1.1 Pedestrian Survey

A 100%-coverage pedestrian inspection of the project area was undertaken for the purpose of historic property identification and documentation. The pedestrian survey was accomplished through systematic sweeps spaced 2-5 m apart depending on ground visibility.

Where a new historic property was encountered, the determination of its boundary was based on factors including apparent age, architectural style, and the spatial and functional interrelationships of both natural and man-made features.

2.1.2 Subsurface Testing

A program of subsurface testing was undertaken for the AIS to assess the potential for subsurface archaeological features, including but not limited to buried cultural deposits and/or culturally modified lava tubes. The number and locations of the test excavations were chosen based on consultation with SHPD (see Appendices A and B). The subsurface testing program consisted of backhoe assisted excavation of seven trenches within the proposed plant site: one each within proposed Lagoons 1 and 4, Groves 1–4, and the Wetland area. The test excavations were placed to avoid trees, roots, and irrigation lines. In general, the seven linear trenches measured approximately 5 m (20 ft) long and 1.0 m (3.2 ft), and all trenches were excavated to bedrock.

A stratigraphic profile of each test excavation was drawn and photographed. The observed sediments were described using standard USDA soil description observations/terminology. Sediment descriptions included Munsell color; texture; consistence; structure; plasticity; cementation; origin of sediments; descriptions of any inclusions, such as cultural material and/or roots; lower boundary distinctiveness and topography; and other general observations. Were stratigraphic anomalies or potential cultural deposits exposed, these were to be carefully represented on test excavation profile maps.

2.2 Laboratory Methods

No samples or cultural materials were collected during the AIS fieldwork; therefore, laboratory studies were unnecessary.

2.3 **Research Methods**

Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai‘i, the Hawai‘i State Archives, the Mission Houses Museum Library, the Hawai‘i Public Library, and the Bishop Museum Archives; study of historic photographs at the Hawai‘i State Archives and the Bishop Museum Archives; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona ‘Aina database (Waihona ‘Aina 2000).

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected types and locations of cultural resources in the project area.

2.4 **Consultation Methods**

Consultation is being undertaken for the project to comply with Section 106 of the National Historic Preservation Act (NHPA). Presently, Section 106 consultation with community, agency, and Native Hawaiian Organizations has been initiated and is ongoing by the project proponents. The results of the current investigation will be utilized in these ongoing efforts. No historic properties have been assessed as having traditional cultural significance to an ethnic group (Criterion e) within the project area.

Section 3 Background Research

3.1 Traditional and Historical Background

3.1.1 Traditional Accounts

The district of Ka‘ū is the southernmost and largest district of Hawai‘i Island, encompassing over 600,000 acres and nearly 30 *ahupua‘a* (land divisions usually extending from uplands to the sea). The current project area crosses the boundaries of four *ahupua‘a,* including (from west to east) Hionamoa, Pālima and Pā‘au‘au 1 and 2. According to Pukui et al. (1976:173, 177), Pā‘au‘au translates as “bath enclosure,” and Pālima literally means “five-fold.” The meaning of “Hionamoa” was not found.

Traditional accounts concerning the area known as Pāhala are limited, likely due to scarcity of pre-Contact settlement in the vicinity. Pāhala is a historic-era settlement that formed around a sugar plantation in the late 1800s; the name “Pāhala” refers to a practice in the cane fields of “cultivation by burning mulch” (Pukui et al. 1976:174) made from the *hala* tree (*Pandanus tectorius*). That sugar became one of the first industries of Ka‘ū is indicative of the suitability of this inland regions for agriculture: Handy and Handy (1972:558) note that the *kula* (plains) lands of Ka‘ū are “perhaps the finest arable country in the Hawaiian Islands.”

Given its geological and climatic complexity, it is not surprising that Ka‘ū came to be known as a land of fierce and independent people, a “fatal land to chiefs.” These characteristics are expressed in David Malo’s (1951) delineation of the responsibilities of the *ali‘i* (chiefly class), and of the treatment meted out to those *ali‘i* who abused their power:

> It was the king’s duty to seek the welfare of the common people, because they constituted the body politic. Many kings have been put to death by the people because of their oppression of the *maka‘āinana* [populace].
>
> The following kings lost their lives on account of their cruel exactions on the commoners: Koihala was put to death in Kau, for which reason the district of Kau was called The Weir (Makaha) [*Mākaha*, “fierce Ka‘ū”]. [Malo 1951:195]

Samuel Kamakau, in *Ruling Chiefs of Hawai‘i*, mentions Ka‘ū as he recounts the political unification of the island of Hawai‘i under ‘Umi-a-Līloa during the sixteenth century.

> I-mai-ka-lani was the chief of Ka-u. He was blind, but noted for his strength and skill in battle. Many chiefs who had fought against him were destroyed. . . . ‘Umi-a-Liloa feared I-mai-ka-lani. . . After I-mai-ka-lani became blind the fight between him and ‘Umi continued . . . After I-mai-ka-lani’s death Ka-u became ‘Umi-a-Liloa’s. [Kamakau 1961:18–19]

Kamakau also details the shifts of power within Ka‘ū and other districts through generations on the island of Hawai‘i. Power, apparently, did not necessarily transfer from a ruler to his descendants (Kamakau 1961:61–65).

At times, the contiguous districts Kohala, Kona, and Ka‘ū formed a triumvirate under a single ruler. However, such unions were subject to change as, according to Kamakau, in later times rule over Ka‘ū was consolidated with that of Puna:

> Ka-lani-‘opu‘u and Keoua were the hereditary heirs to the land of Hawaii, for it had belonged to their father, Ka-lani-nui-‘i-a-mamao, and [his brother] Ka-lani-ke‘e-au-moku; but Alapa‘i had seized it through force of arms and had slain the inheritors.
>
> . . . a great battle was fought [between Ka-lani-‘opu‘u and Alapa‘i] at Kualoa and Mokaulele all the way to Mahinaakaka, at which Ka-lani-‘opu‘u almost lost his life . . . Ka-lani-‘opu‘u’s men were victorious that day, and the chief realized how powerful his following was in chiefs and fighting men and how strong he himself was to break men’s bones with his hands.
>
> After this battle Mahinaakaka, Ka-lani-‘opu‘u ruled over Ka-‘u and Puna, for he was a native of Ka-‘u. There were the birth sands of his ancestors. [Kamakau 1961:76–77]

Kamakau’s account suggests the precariousness of the inter-district power combinations by the ruling *ali‘i* during traditional Hawaiian times in Ka‘ū and other districts.

The chief Ka-lani-‘opu‘u ruled Ka‘ū during the eighteenth century just before the first European visitors began to record their early impressions of the land and its people.

3.1.2 Early Historic Period

Lt. James King, sailing off the island of Hawai‘i during the 1779 voyage of Captain James Cook, described the Ka‘ū first seen by Europeans:

> The coast of Kaoo [Ka‘ū] presents a prospect of the most horrid and dreary kind: the whole country appearing to have undergone a total change from the effects of some dreadful convulsion. The ground is every where covered with cinders and intersected in many places with black streaks, which seem to mark the course of a lava that has flowed, not many ages back, from the mountain Roa [Mauna Loa] to the shore. The southern promontory looks like the mere dregs of a volcano. The projecting headland is composed of broken and craggy rocks, piled irregularly on one another, and terminating in sharp points. [King 1784:104]

The only onshore exploration at Ka‘ū involved a search for freshwater:

> When [Mr. Bligh] landed, he found no stream or spring, but only rain-water, deposited in holes upon the rocks; and even that was brackish, from the spray of the sea; and that the surface of the country was entirely composed of flags and ashes, with a few plants here and there interspersed. [King 1784:545]

Archibald Menzies, a surgeon and naturalist on the 1794 voyage of Captain George Vancouver, describing an excursion from Kona across Ka‘ū to the top of Mauna Loa, found a different scene in areas that received more rainfall. Menzies writes of

> a fine fertile valley [where he] put up for the night at a village called Kioloku, on a rich plantation belonging to Keawe-a-heulu.
>
> . . . This was by far the most populous village we had yet met with since we left Kealakekua. Towards the dusk of the evening, there fell some showers of rain which gave a gay and refreshing look to the most enchanting scenes of rural

> industry with which we were surrounded. The economy with which these people laid out and managed their ground and the neatness with which they cultivated their little fields made the whole valley appear more like a rich garden than a plantation. A stream of water which fell from the mountain through the middle of it was ingeniously branched off on each side to flood and fertilize the most distant fields at pleasure. [Menzies 1920:184–185]

This abundance was not isolated; continuing on his way east through the *ahupua‘a* of Honu‘apo (approximately 9 miles southwest of Pālima), Menzies found

> . . . the people everywhere busily employed in their little fields, many of which were here cropped with plantains and bananas that had a ragged appearance from having little or no shelter, yet they bore fruit tolerably well. [Menzies 1920:185]

In 1823, Rev. William Ellis, journeying like Menzies from Kona through Ka‘ū, recorded his impressions of the land, demonstrating like Menzies a willingnessto look and let the land speak for itself. He describes the valley of Wai‘ōhinu (located approximately 12 miles southwest of the project area) as open toward the sea, and on both sides adorned with gardens and interspersed with cottages, even to the summits of the hills.

> A fine stream of fresh water, the first we had seen on the island, ran along the centre of the valley, while several smaller ones issued from the rocks on the opposite side, and watered the plantations below.
>
> Our road, for a considerable distance, lay through the cultivated parts of this beautiful valley: the mountain taro, bordered by sugar-cane and bananas, was planted in fields six or eight acres in extent, on the sides of the hills, and seemed to thrive luxuriantly. [Ellis 1963:133–134]

Ellis’ account confirms the upland luxuriance that had made the *ahupua‘a* of Wai‘ōhinu a center for the *ali‘i* of Ka‘ū. As Ellis continued his journey he moved closer to the coast and his journal illumines areas where western eyes had previously perceived only a “prospect of the most horrid and dreary kind.” Travelling northeast toward Punalu‘u (located approximately 4.5 miles southwest of the project area), Ellis found the countryside “more thickly inhabited [as his walk continued] . . . The villages along the sea shore, were near together, and some of them extensive” (Ellis 1963:136). Ellis also notes the intervening broad stretches of rough *‘a‘ā* between the habitation areas. These flows had been made traversable by waterworn boulder paths. Ellis thus reveals the desolate coastline described 44 years earlier by James King was in fact the site of a well-populated, active culture and economy where habitation centers, though isolated, were accessible to each other and to the resources of land and sea.

William Ellis in 1823 may have been the first missionary to visit Ka‘ū. During the 1830s Protestant missionaries based in Kona and Hilo made occasional tours into Ka‘ū, but a permanent missionary presence was not installed until the early 1840s when Catholic and Protestant missions were established in the district. In 1841, a Catholic priest, Father Marechal, arrived in Ka‘ū and within a few months boasted of 900 converts. The following year, 1842, the Protestant minister John Paris reached Ka‘alu‘alu (located at Ka Lae, approximately 19 miles southwest of the project area) by schooner where he found,

> The shore was lined with hundreds of natives as our little boat neared the shore.. . . Then came greetings from the multitude, some kissing my hands and some taking hold of my feet. A joyful ‘Aloha ino!’ with a low wail, rose from the aged ones. [Paris 1926:89]

Paris’ account illustrates the abundant resources available in the district:

> . . . two strong men, tattooed from head to foot, came in bearing a huge whole hog, baked entire minus hair and entrails. These bearers were followed by others, dressed in the same style bringing calabashes of various sizes filled with fish, poi, potatoes, then came melons, bananas, and sugar cane, and little gourds filled with goat’s milk. All was spread out in royal Hawaiian style, a dozen kukuis [nuts from the Candlenut tree, *Aleutris moluccana*] burning and kahilis [feather standards] waving to and fro. [Paris 1926:90]

Paris settled in Wai‘ōhinu where he founded a church and school. Later, in 1843, a stone church was also built at Punalu‘u to the northeast. Cordy (1986:21) postulates that around this time a settlement shift was occurring from coastal to inland regions, the result of depopulation and of efforts to gain access to the government road and to populate the economic center of Wai‘ōhinu.

Mission station reports, censuses, and accounts by visitors to Ka‘ū during the mid-nineteenth century document changes to the district brought about by natural forces and the pressures of an increasing western presence. A visitor to Wai‘ōhinu and its environs in 1849 anonymously published an account describing the devastating effects of a drought and fire that had occurred three years earlier:

> [W]e noticed many a tall, stately trunk, branchless and lifeless standing monument-like, all over the country. On enquiry we ascertained that they were the remains of a noble forest, which, with the whole surrounding country, were burnt in 1846. In that year a severe drought visited the Island, the streams dried up, the grass withered, and fire swept over the whole district. [Sailor in Kelly 1980:89]

The author also describes an area above the settlement at Wai‘ōhinu that, apparently undamaged by the 1846 fire, probably represents the idyllic setting that had drawn the Ka‘ū *ali‘i* to the *ahupua‘a*:

> [W]e ascended the hills back of the mission, and when we had reached an elevation of about 5,000 feet were repaid with one of the richest scenes it was our privilege to look upon. Below us lay, fashioned by the hand of nature, within a range of ten miles, six lovely terraces, on which one thousand dwellings might be placed, each of which should have a prospect of the sea, the rocky shore, the lava and the verdant upland. . . . On this land we saw some noble upland kalo, and a number of very large banana trees. Several crystal springs take their rise on the summit, and might send, if rightly directed, a portion of their treasures through every man’s fields. Behind this noble series of hills, timber abounds. So that there is to be found every thing desirable to make a rich farming country, and in a circuit of some fifteen miles, might be abundantly grown the best products of the temperate, with the rich and varied fruits of the tropic zones. But alas the farmers are wanting, the land lies in all the wild luxuriance of nature desolate, there are no passable roads, except foot

> paths, to it, and no harbor at which vessels could lie in safety, is found within many miles. [Sailor in Kelly 1980:89]

Noticeably missing from this account is mention of any Hawaiians occupying and utilizing this verdant land "now lying utterly waste." An 1831-1832 census of Ka‘ū, the first taken within the district, records a total population of 5,800. In 1835 the total population is counted as 4,766. The first official government census, taken in 1847, records the population as having dropped to 3,010. Reverend John Paris would write in an 1848 mission station report (Paris 1848:3), "Since the year 1845 the work of depopulation of Kau has gone on with fearful rapidity." He notes, during the years 1845 and 1846 (Paris 1848:3), a "distressing famine and fire which overran the country," the same disasters the anonymous visitor of 1849 mentioned. By the time of the 1853 government census only 2,210 people are recorded in Ka‘ū.

3.1.3 The Māhele and the Kuleana Act

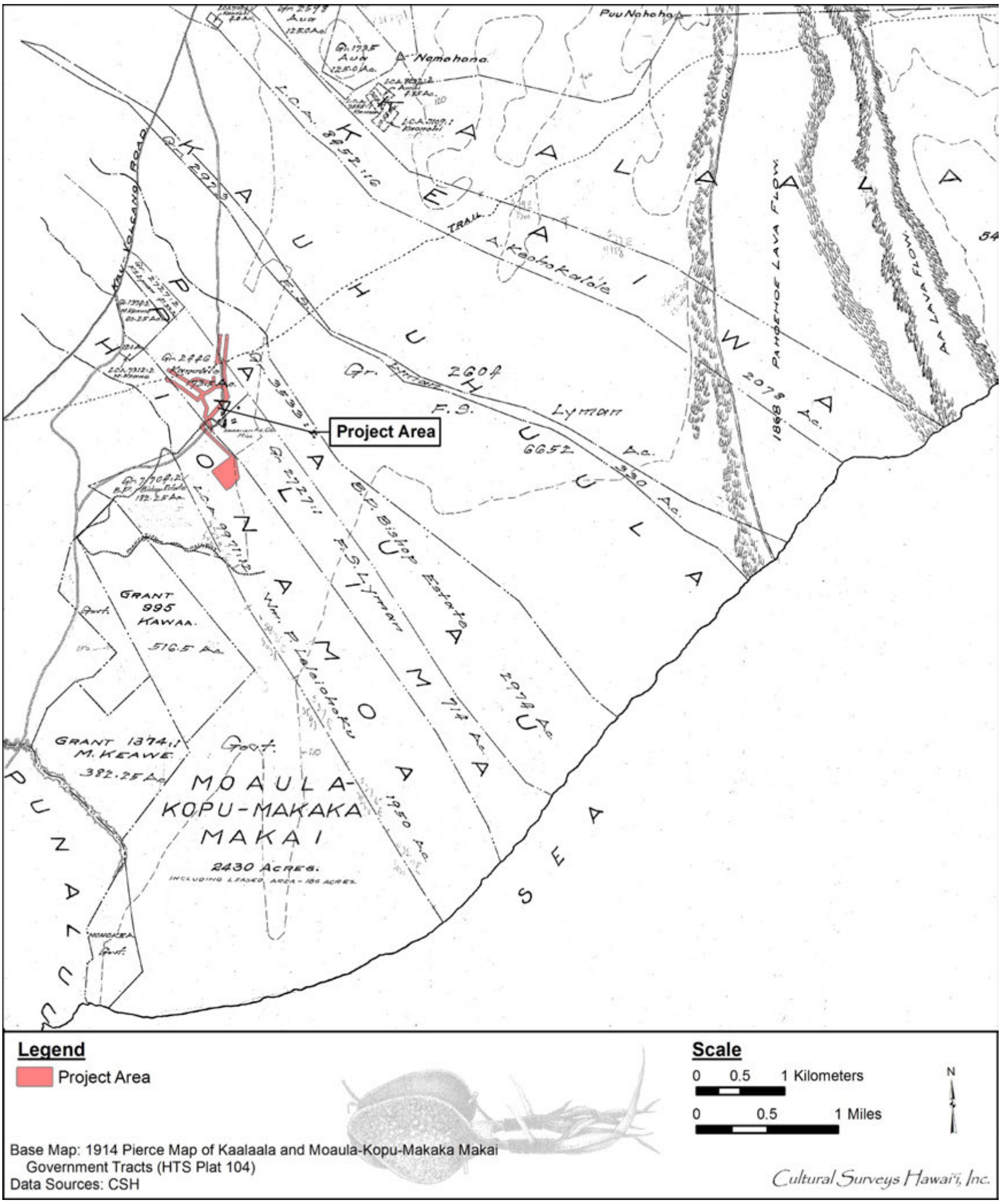
In the mid-nineteenth century, during the time of Kamehameha III, a series of legal and legislative changes were brought about in the name of land reform (see the works of Jon Chinen 1958, 1971 for a thorough and well-written explanation). Previous to the Māhele, all land belonged to the *akua* (gods), held in trust for them by the paramount chief, and managed by subordinate chiefs.

Following the enactment of a series of new laws from the mid-1840s to mid-1850s, Kamehameha III divided the land into four categories: Crown Lands reserved for himself and the royal house; Government Lands for the government; Konohiki Lands claimed by *ali‘i* and their *konohiki* (supervisors); and *kuleana*, small plots claimed by the *maka‘āinana* (commoners) (Chinen 1958:8–15). These claims are described in Land Commission Award (LCA) testimony from the claimant and witnesses. A Royal Patent (RP), which quit-claimed the government's interest in the land, was issued on most Land Commission Awards (LCA) (Chinen 1958:14). In some cases, more than one RP number was issued for an LCA, especially in cases where there were several widely separated *‘āpana* (lots), such as an award with agricultural land in one *ahupua‘a* and a house lot in another.

Ali‘i were required to pay a commutation fee to the government for their confirmed Konohiki Land titles; this payment could be in cash or in the return of land to the government or crown. Many *ali‘i* elected to return substantial portions of their awarded lands to avoid the one-third commutation cash fee. The Kuleana Act of 1850 allowed *maka‘āinana*, in principle, to own land parcels where they were currently and actively cultivating and/or residing. In 1851, certain Government Lands became available for purchase in lots of 1 to 50 acres in fee simple; this new category of land ownership became known as Royal Patent Grants or Land Grants. Unfortunately, Land Grant records tend to offer far less insight into specific land use than LCA records.

According to Soehren (2010), Hionamoa, Pālima, and Pā‘au‘au were not named in the Māhele Book. However, a 1914 map (Figure 8) shows 1,950 acres in Hionamoa awarded to the *ali‘i* William Pitt Leleiohoku as LCA 9971:12.

Waihona ‘Aina (2000) indicates Moses Keawe claimed five *‘apana* in the vicinity of the project area as part of LCA 7312. Two of the five lots were awarded. LCA 7312:1 comprised 1.5 acres located in Pā‘au‘au 2, approximately 750 m north of the project area along the "Kau-Volcano Road" (present Ka‘ala‘iki Road). LCA 7312:2 comprised 11.7 acres in Hionamoa, located



Legend

Project Area

Scale

0 0.5 1 Kilometers

0 0.5 1 Miles

N

Base Map: 1914 Pierce Map of Kaalaala and Moaula-Kopu-Makaka Makai Government Tracts (HTS Plat 104)
Data Sources: CSH

Cultural Surveys Hawai‘i, Inc.

Figure 8. Portion of R.F. Pierce’s 1914 map of Kalaala and Moaula-Kopu-Makaka Makai Government Tracts, showing the project area in relation to roads, trails, and the plantation railroad

approximately 350 m northwest of the project area along the "Kau-Volcano Road"/Ka‘ala‘iki Road. Both of the awarded *‘apana* were house lots. The three *‘apana* not awarded comprised taro fields.

LCA 10248 to Mahi was also awarded in Pā‘au‘au 2. This award comprised 13 acres straddling the "Kau-Volcano Road"/Ka‘ala‘iki Road adjacent to LCA 7312:1, approximately 750 m north of the project area. Unfortunately, the testimony for this award does not provide information about land use. No *kuleana* are indicated within Pā‘au‘au 1 or Pālima.

Waihona ‘Aina (2000) lists four land grants in Pālima-Pā‘au‘au: Land Grant 01370 to Nahala, 02446 to Kamalo (overlapped by the project area), 02655 to Nahala, and 02727 to F.S. Lyman. In addition to these, Pā‘au‘au also contained Land Grant 03533 made to the trustees of the Bernice Pauahi Bishop Estate; this grant is also overlapped by the project area. Soehren (2010) notes that Grant 03533, which also included lands at Kaunakakai on Moloka‘i and Honolulu and Ka‘akaukukaui on O‘ahu, was made "in exchange for quitclaim deed to certain lands in Hilo." Grants 01370 and 02655 are located *mauka* (inland) of the "Kau-Volcano Road"/Ka‘ala‘iki Road. Grants 02446, 02727, and 03533 are depicted on the 1914 map (see Figure 8) in relation to the project area. Figure 8 also indicates a fifth grant in upland Pālima: Land Grant 01374 to Keawe. This grant, comprising two separate *‘apana*, is listed on Waihona ‘Aina (2000) as being located in Kopu-Moaula a short distance east of Pālima. Figure 8 indicates the portion of Land Grant 01374 north of the project area is ‘Apana 2. No Land Grants are indicated within Hionamoa.

3.1.4 Mid- to Late 1800s

By the middle of the nineteenth century, imported livestock roaming freely throughout pasturelands of Ka‘ū were creating new aggravations. Ka‘alu‘alu had become a focus of activity as the export of agriculture and livestock began to dominate the Ka‘ū economy; at the same time, about 1852, an improved, 7-mile-long cart road was constructed between the bay and Wai‘ōhinu. In the 1850s, Rev. Henry Kinney (cited in Kelly 1980) commented on the "hundreds of goats salted and dried" as well as "upland taro, potatoes and onions" which previously had to be hauled "on the backs of men" overland to Hilo and which could now be taken to the harbor and shipped.

Ranching activity in Ka‘ū commenced sometime after the middle of the century when Princess Ruth Ke‘elikolani started Ka‘alu‘alu Ranch with cattle brought from Waimea. Cattle continued to be shipped out of Ka‘alu‘alu at least until the 1920s. Organized cattle ranching was focused at Ka‘alu‘alu, Kahuku, and Kapāpala (located northeast of present Pāhala Town).

While cattle and other livestock were significant elements of the new western economic focus imposed upon Ka‘ū during the nineteenth century, it was agriculture that had the most extensive impact on the land and people. Among new agricultural pursuits attempted in Ka‘ū was wheat growing:

> But it proved difficult to co-ordinate the size of the wheat crop with the requirements of the flour mills; difficult also to coordinate the output of the mills with the demands of the market, domestic and foreign. The business did not become a permanent one. [Kuykendall 1966:150]

Contributing to the failure of wheat production was the harvesting of *pulu*, a soft, flossy, yellow wool on the base of tree-fern leaf stalks (*Cibotium* spp.) used for stuffing mattresses and pillows. During the 1860s *pulu* constituted the major export crop from Ka‘ū. A mission station report

written in 1860 by W.C. Shipman relates the ruinous effect upon the native population of participation in the *pulu* trade:

> The effect—on them is not good; not that the pulu is not a source from which they might secure comfort to themselves and families, but the actual result is the reverse. They are offered goods to almost any amount, to be paid for in pulu; this to a native is a strong temptation to go into debt. Consequently many of them are deeply in debt and almost all to some extent. The policy of the traders is to get them in debt and to keep them there so long as possible . . . [T]hey are almost entirely under the control of their creditors, and are compelled to live in the pulu regions, at the peril of losing their houses and lots, and whatever other property they may possess. Thus their homes are almost in reality deserted, ground uncultivated. [Shipman 1860:4]

Life in Ka‘ū during the 1860s was further disrupted and devastated by the forces of nature. A sequence of major earthquakes and eruptions of Mauna Loa beginning in March 1868 resulted in many deaths and losses of property and livestock. Then an earthquake in early April precipitated a tidal wave that destroyed coastal villages, dislodged a cliff side at Kapāpala blanketing the land below and burying a village, and opened the Great Crack at Kīlauea (located approximately 2.5 miles east of Pāhala), emptying the crater’s lava lake into Punalu‘u and Keauhou. A subsequent lava flow, this time in western Ka‘ū, buried all of Wai‘ahukini Valley west of the great *pali*.

Apparently great natural disasters could not hinder the pace of foreign business interests in Ka‘ū. In 1868, the same year as the great earthquake, Alexander Hutchinson established the Naalehu Sugar Company and built a mill at Nā‘ālehu just east of Wai‘ōhinu. More enduring commercially than either wheat or *pulu*, sugar cultivation beaome the major industry within Ka‘ū, appropriating the focus of life in the district.

During the mid-1870s Waiohinu Plantation was established by John Nott and Company. This operation was bought out in 1877 by Alexander Hutchinson who at the same time founded Hilea Plantation. By the end of the 1870s, sugar mills were operating at Nā‘ālehu, Hīlea, and Honu‘apo. Though Hutchinson died in 1879, his name survived in the Hutchinson Sugar Company which during the remainder of the nineteenth century continued to expand and consolidate existing plantation operations in Ka‘ū.

Another plantation operation, the Hawaiian Agricultural Company, was established in Pāhala in 1876 by a consortium of Honolulu businessmen. An 1877 map of the Hawaiian Agricultural Company sugarcane lands (Figure 9) shows the Pāhala Mill located just east of the project area, overlapping lands indicated as already planted in cane, as well as unplanted areas labeled as “Good, Stony land.” No roads or trails are indicated. An 1886 map (Figure 10) also depicts the location of the mill at the “Pahala Plantation,” as well as the Hutchinson Sugar Company mills at Hīlea, Honu‘apo, and Nā‘āleahu to the southwest and the associated wharves at Honu‘apo and Punalu‘u. Dorrance and Morgan (2000:110) note that Pāhala’s “steam driven mill was the most modern and largest in the islands.” Figure 10 curiously depicts the project area overlapping land divisions called “Nakumu” and “Makaka;” no information about these places names was found. Figure 10 also illustrates three travel routes extending though the Pāhala vicinity: two routes extend from Nā‘ālehu northeast, one along the coast and one *mauka*, joining and continuing northeast above Pāhala Mill. Another route is shown extending northeast from Nīnole/Punalu‘u through Pāhala, parallel and *makai* of the Nā‘ālehu route.

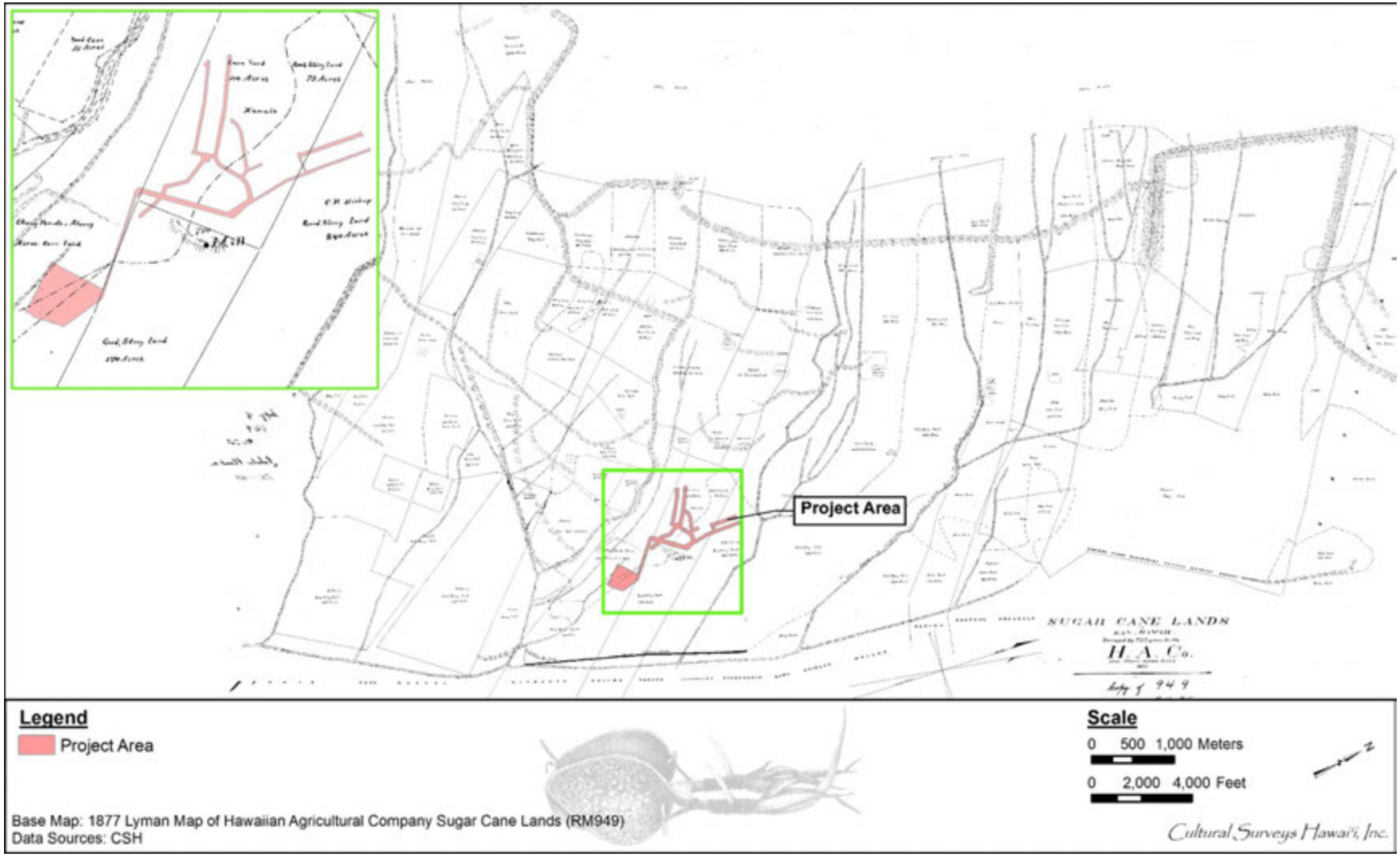


Figure 9. F.S. Lyman 1877 map of Hawaiian Agricultural Company sugarcane lands, showing the project area in relation to the Pāhala Mill and developed cane lots

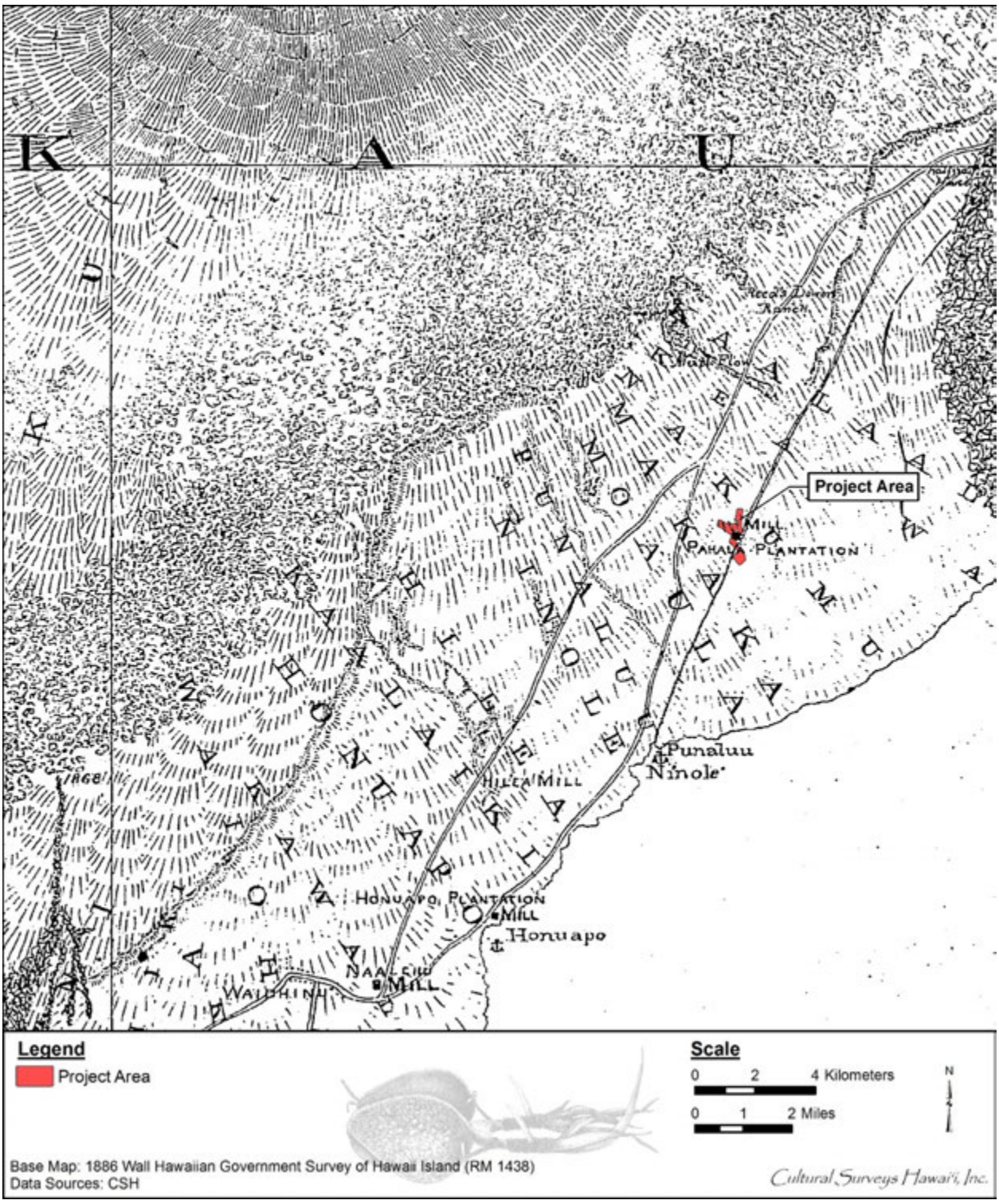


Figure 10. Portion of W.A. Wall’s 1886 map of Hawai‘i Island, showing the project area in relation to sugar mills and harbors in windward Ka‘ū

By the end of the nineteenth century the Hawaiian Agricultural Company controlled almost 10,000 acres of cane land and constituted the largest plantation in the Hawaiian Islands. The extensive agricultural endeavors taking place in Ka‘ū at this time were also altering the social landscape. During the 1870s, Chinese laborers were brought in by Alexander Hutchinson. By the time of the 1884 government census there were 568 Chinese in the district. Japanese laborers were imported beginning in the latter 1880s and Filipinos began arriving during the first decade of the twentieth century. Ethnic workers' camps surrounded the mill at Pāhala. As the town around the mill developed, a school was established at Pāhala in 1881 to serve the children of the plantation workers.

3.1.5 1900s

Life in the early twentieth century continued to center around the activities of the two sugar operations, Hutchinson Sugar Plantation and the Hawaiian Agricultural Company. Pāhala continued to develop as a town. A 1906 map (Figure 11) depicts the location of a school approximately 0.5 miles north of the current Ka‘ū High and Pāhala Elementary School (KHPES) campus location, and a post office in the vicinity of the project area. Figure 11 also illustrates the approximated boundaries of sugar plantation lands (in red) in relation to the forest lands *mauka* (in blue) and grazing lands east associated with Kapapala Ranch. The continued development of roadways in the vicinity of Pāhala Town is also depicted, with the addition of *mauka-makai* andlateral routes between the mills at Honu‘apo and Pāhala (see Figure 11). The portions of these roadways in closest proximity to Pāhala are shown in more detail on the 1914 map (see Figure 8); the uppermost road shown is labeled "Kau-Volcano Road." The lower roadway extending through Pāhala plantation is not named.

The 1914 map (see Figure 8) includes some additional details about the Pāhala vicinity. A trail is depicted with a dashed line, crossing the northern portion of the current project area and continuing off the map to the east and west. It is unlikely that any portion of this trail remains within the town vicinity, which has been completely altered by agricultural and residential development. Furthermore, a meandering "Plantation Railroad" is shown, extending southwest roughly parallel to the unnamed roadway and then curving back to the east where it stops abruptly. Presumably this limited railroad was used to carry cut cane to the mill from some of the nearby fields. More remarkable upon the physical landscape at this time must have been the systems of flumes for transporting cane from fields to mills; this was the main method of transporting cane at the time.

Railway development continued, with the establishment of lines running from Nā‘ālehu and Hīlea to Honu‘apo and from Punalu‘u to Pāhala. A 1929 map of Hawaiian Agricultural Co. cane fields (Figure 12) depicts the route of the rail line extending from the mill across through the narrow central portion of the project area and to the west; also shown are the major roadways of the time merging along the present Maile Street corridor. The 1930 USGS topographic map (Figure 13) shows the Pāhala area in better detail, including the narrow-gauge rail line running to Pāhala parallel the coastal road from Punalu‘u. The expansion of the town is evident on this map, which includes additional rows of structures along roadways and around the mill, as well as the locations of the school (still north of the present campus), a church, a pipeline, and a large stone wall to the southeast of the town. The route of the major roadway crossing through Pāhala Town, labeled

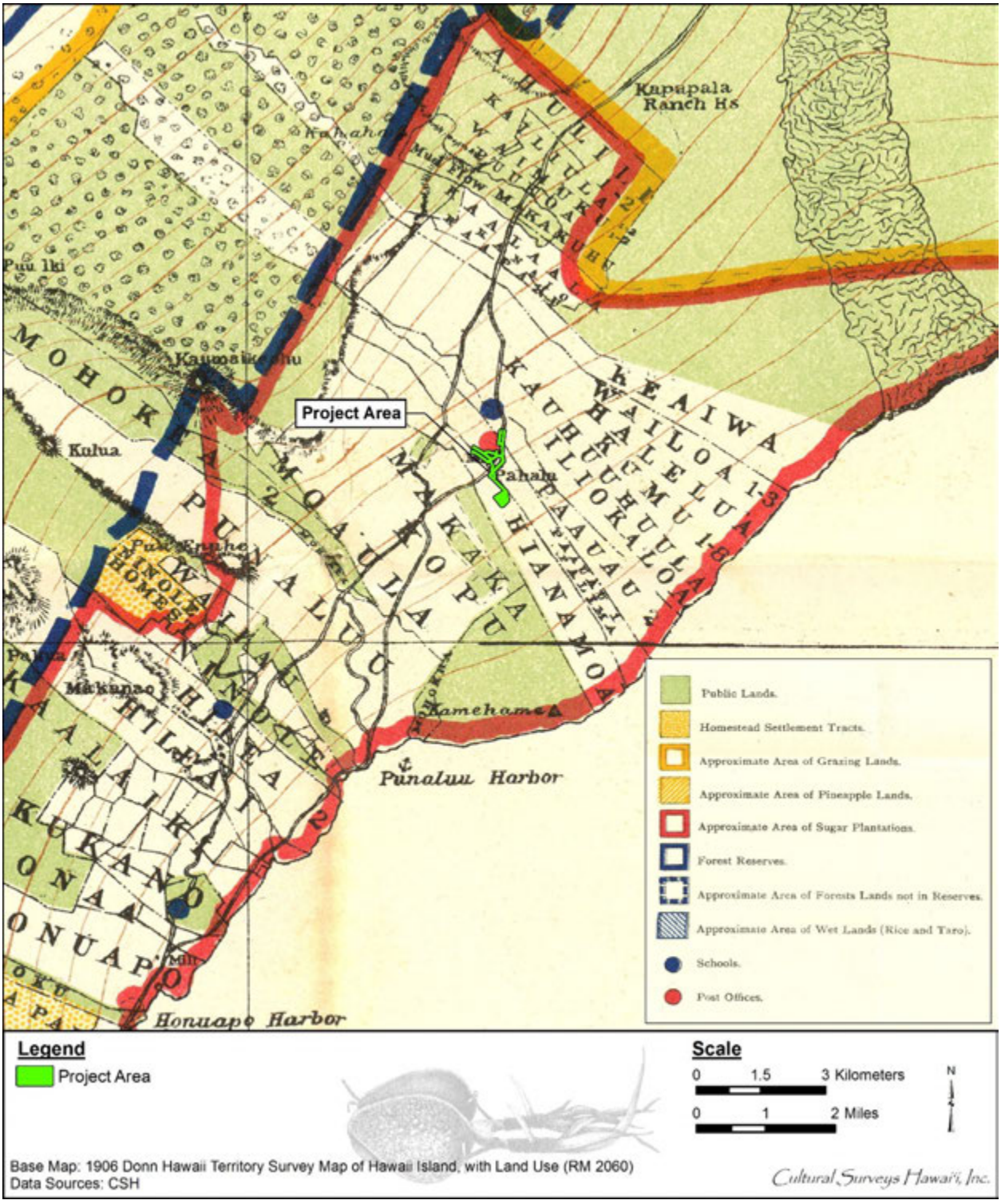


Figure 11. Portion of J.M. Donn’s 1906 map of Hawai‘i Island, showing the project area in relation to Pāhala Mill, school, post office, and areas of different land use

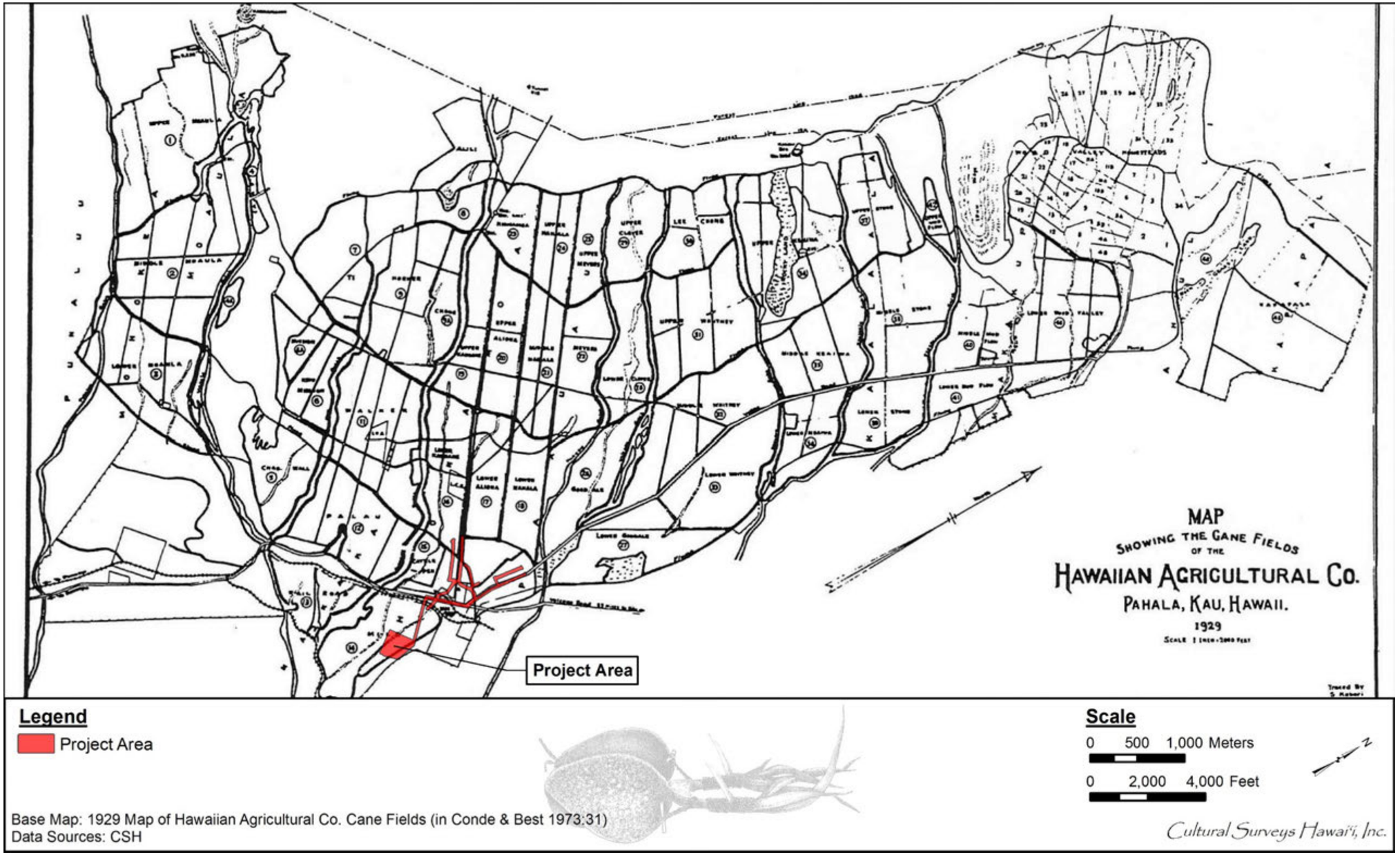


Figure 12. 1929 map of Hawaiian Agricultural Co. cane fields, showing the location of the project area

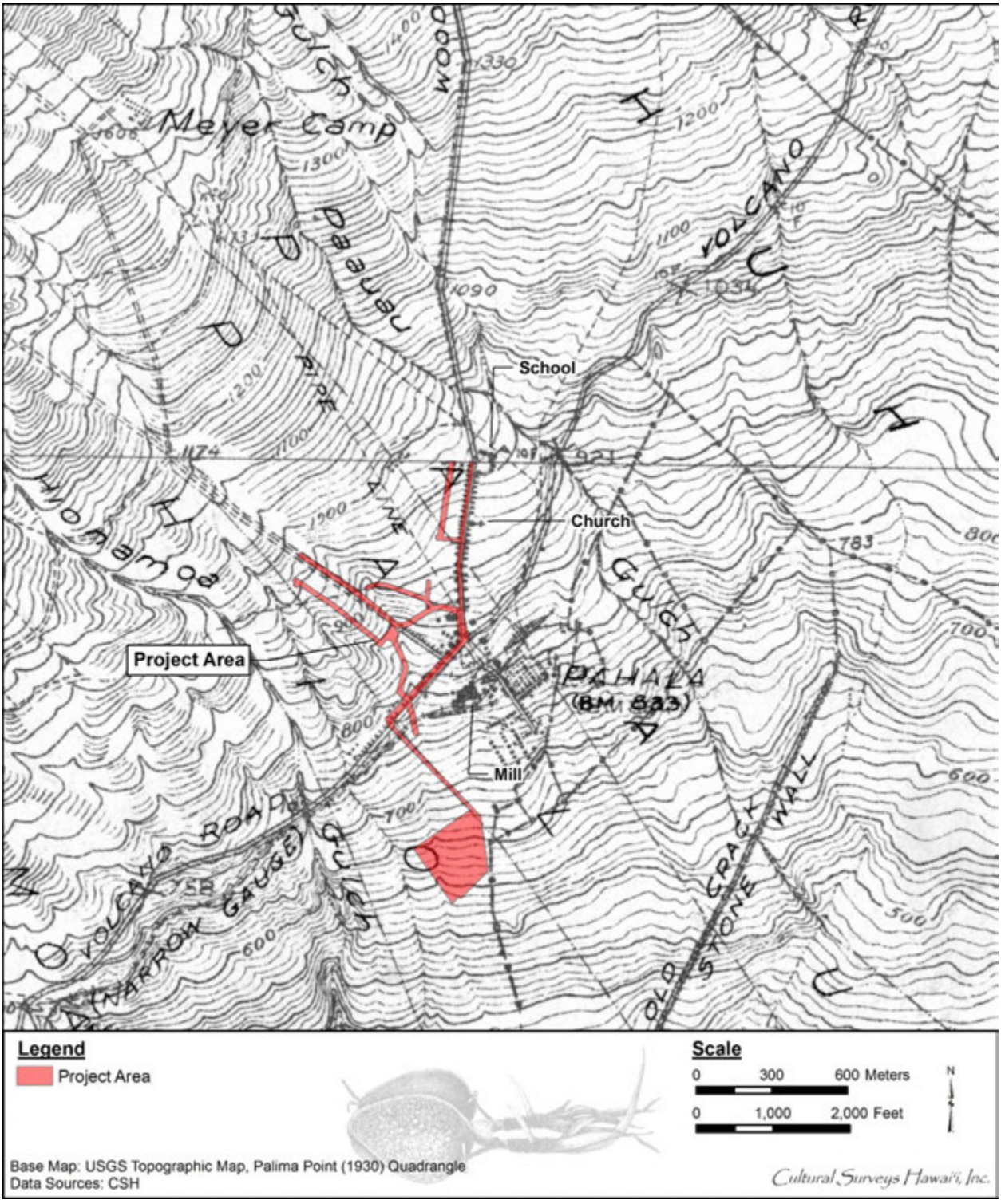


Figure 13. Portion of the 1930 Palima Point USGS 7.5-minute topographic quadrangle showing the project area in relation to the mill, school, church, roads, and railroad in the Pāhala vicinity

“Volcano Road,” utilizes a new eastward extension, with the portion of the older alignment that extended north from the town is now labeled “Wood Valley Road.”

The flumes and railroads in Ka‘ū were abandoned by the 1940s with the advent of trucking. In the 1940s the Belt Road or Māmalahoa Highway (Route 11) was constructed through Ka‘ū, running just *makai* of Pāhala Town. A 1967 USGS map (Figure 14) shows this new route and the continued development of the town. By this time the school had moved southwest into the heart of the town, and a landing strip had been constructed to the northeast. All of the older road alignments are still depicted, but not as major roadways, with the exception of a Route 15 looping off the Belt Road along present Maile Street and Kamani Street. During this latter half of the twentieth century the residential side-streets within Pāhala were also improved with paving and installation of the culvert at the Huapala and Ilima Streets intersection.

The 1940s Belt Road alignment appears on an undated Olson Trust map (Figure 15) reprinted in Cleghorn (2016:13). Hand drawn annotations indicate some land uses in the area dating to the 1960s and 1970s. This map indicates the WWTP site and adjacent areas were under pasture; the easement extending to Maile Street also crosses through a rectangular area labeled “Cane Area Planted Aug. 1966” and a fence line “Plotted Oct. 1961.” Also significant are the locations of a “Cesspool” (LCC 1), and a concrete flume and lava tube located east of the proposed WWTP site. This map appears to depict a portion of the former narrow-gauge railroad following a “1.8 %” grade west of the easement extending south from Maile Street; this illustration may indicate disturbance to or dismantling of the former railroad route by the mid-twentieth century in the area crossed by the easement. The Olson Trust drawing also depicts numerous structures along Maile Street, many of which are no longer present.

A 1977 aerial photo (Figure 16) indicates further expansion of the town to the east amidst large agricultural plots. Note that the proposed WWTP plant site portion of the project area is not cultivated in sugarcane at this time; instead, these former cane fields were being readied for planting of the macadamia orchard that is now fully matured.

The Hawaii Agricultural Company operated until 1972 when it merged with the Hutchinson Sugar Company to form the Kau Sugar Company, which was renamed as the Kau Agribusiness Company in 1986 (Dorrance and Morgan 2000:112). Following the demise of the sugar industry in other parts of the island, Kau Agribusiness Company ceased its sugar operations in 1996 (Dorrance and Morgan 2000:112).

3.1.6 Contemporary Land Use

Pāhala continues to serve a small rural population supported by predominately agricultural and livestock economies. The town is also used as a stop-over for tourists visiting Punalu‘u Beach located 5 miles southwest and/or travelling between Hilo and Kailua-Kona.

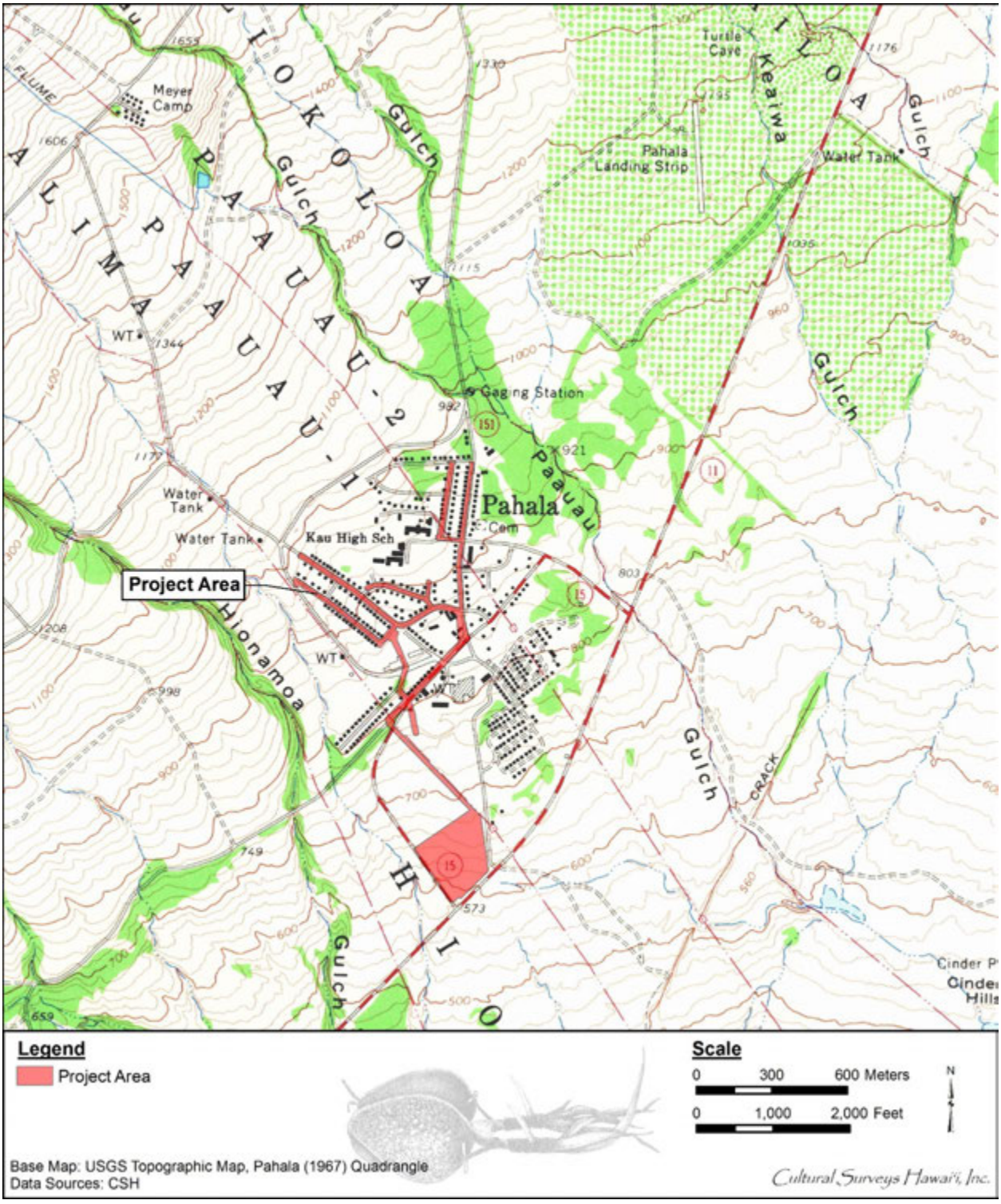


Figure 14. Portion of the 1967 Pahala USGS 7.5-minute topographic quadrangle showing the project area and development within Pāhala Town

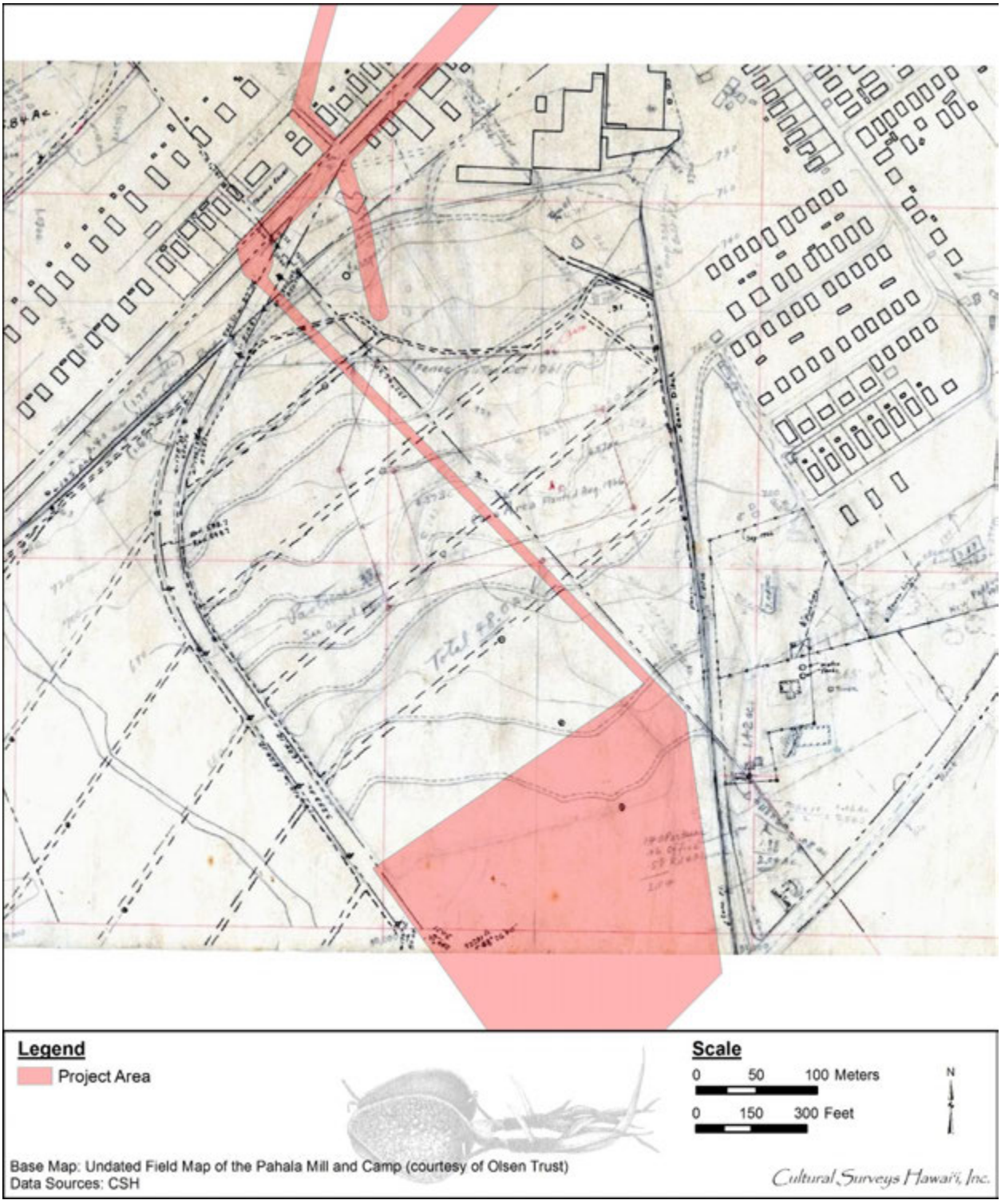


Figure 15. Portion of an undated field map of the Pahala Mill and Camp reprinted in Cleghorn (2016:13) showing the project area in relation to plantation features

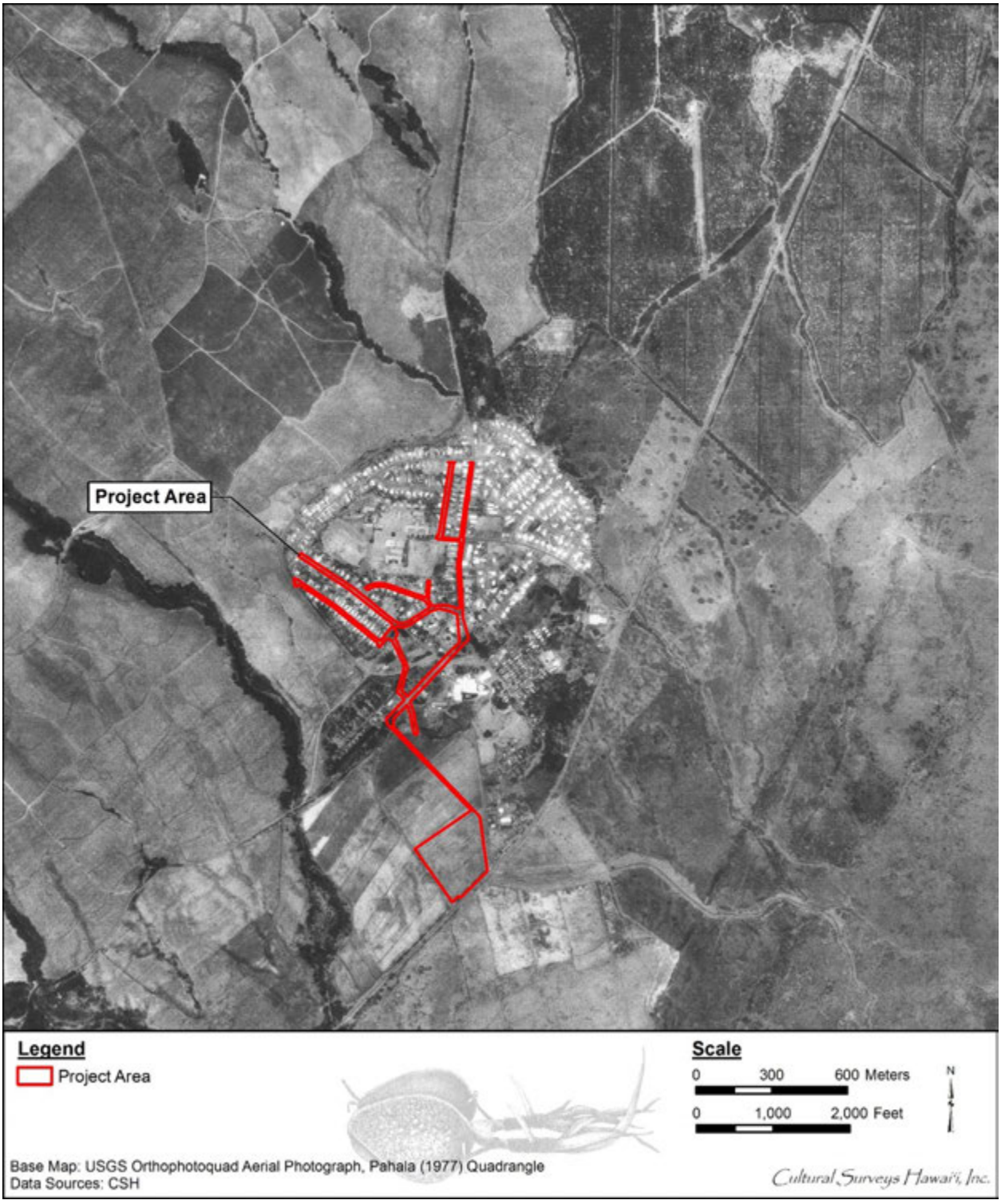


Figure 16. Portion of the 1977 USGS orthophotoquad aerial photo, Pahala Quadrangle, showing the project area and continued development of Pāhala Town

3.2 **Previous Archaeological Research**

3.2.1 Previous Archaeological Studies

Eight previous archaeological studies have been conducted in the vicinity of the current project area in Pāhala. These previous archaeological studies are presented in Table 1 and shown in Figure 17.

In 1981, Hamilton Ahlo undertook an archaeological reconnaissance for the U.S. Army Corps of Engineers Pā‘au‘au Stream Flood Control project, located east of the current project area along the Pā‘au‘au 2 and ‘Iliokoloa Ahupua‘a boundary (Ahlo 1981; see Figure 17). The study examined an approximately 4,000-ft (1.2-km) section of Pā‘au‘au Stream just *mauka* of the Hawai‘i Belt Road (Route 11) and the adjacent embankments. Extensive prior disturbance was noted along both sides of the stream; no archaeological features were documented, and no further work was recommended.

In 2001, Haun and Associates conducted an archaeological assessment (no finds AIS) for an emergency replacement of the Pā‘au‘au Bridge, situated east of the current project area along the Hawai‘i Belt Road in Pā‘au‘au 2 and ‘Iliokoloa (Haun 2001; see Figure 17). The 5.256-acre project area included the bridge over Pā‘au‘au Gulch, the approaches on either side of the bridge along the highway, and adjacent areas to the east. Significant prior disturbance from agricultural and road development and a major flooding event were noted. No archaeological features were documented, and no further work was recommended.

In 2004, Haun and Associates conducted an AIS on 255.7 acres in Palima and Pā‘au‘au Ahupua‘a, northwest of the current project area (Haun and Henry 2004; see Figure 17). The study confirmed extensive prior disturbance from modern and historic agricultural activity dating back to the latter half of the nineteenth century. One newly recorded historic property was documented: SIHP # -24119, a 105-m-long section of a historic irrigation flume associated with the former sugar plantation (Figure 18). No traditional sites were identified, and no further work was recommended.

In 2006, T. S. Dye & Colleagues, Archaeologists, Inc. conducted an archaeological assessment of a proposed cellular site within a 1,600-sq-ft portion of TMK: [3] 9-6-005:018, northwest of the current project area in Pālima and Pā‘au‘au 1 Ahupua‘a (Jourdane and Dye 2006; see Figure 17). Prior disturbance associated with commercial agriculture were noted. No archaeological features were observed.

As part of a state-wide Department of Education (DOE) wastewater systems improvement project, CSH undertook a literature review and field inspection (LRFI) for two Ka‘ū District schools, including KHPES located between the northern portions of the project area (Hammatt and Shideler 2006; see Figure 17). The LFRI included background research for the Pāhala area including LCA data and previous archaeological studies in the vicinity and noted that the school is listed on the HRHP under the thematic group “Public Schools on the Island of Hawai‘i” (SIHP # -07522; see Figure 18). Hammatt and Shideler (2006:27) recommended on-site archaeological monitoring for the project.

In 2009 CSH monitored the DOE wastewater systems improvements project at KHPES (Wilkinson et al. 2010; see Figure 17). The project involved the installation of a new leach field, eight septic tanks, and associated sewer lines. While no subsurface cultural deposits were located

Table 1. Previous archaeological studies in the vicinity of the project area

Reference	Type of Study	Location	Results (SIHP # 50-10-69****)
Ahlo 1981	Archaeological reconnaissance	Pā‘au‘au Stream between Māmalahoa Hwy (Route 11) and Wood Valley Rd, Pā‘au‘au 2 and ‘Iliokoloa Ahupua‘a; TMK not listed	No historic properties or cultural materials identified
Haun 2001	Archaeological inventory survey (recorded as an archaeological assessment)	Pā‘au‘au Bridge, Pā‘au‘au 2 and ‘Iliokoloa Ahupua‘a, portions TMKs: [3] 9-6-002:047, 9-6-012:012, 9-6-013:005, 9-6-023:043	No historic properties or cultural materials identified
Haun and Henry 2004	Archaeological inventory survey	Pālima and Pā‘au‘au 1 Ahupua‘a, TMKs: [3] 9-6-005:017, 018 and 9-6-006:004	One historic property documented: SIHP # -24119, historic irrigation flume associated with sugarcane cultivation
Dye and Jourdane 2006	Archaeological inventory survey (recorded as an archaeological assessment)	Pālima and Pā‘au‘au 1 Ahupua‘a, TMK: [3] 9–6–005:018 por.	No historic properties or cultural materials identified
Hammatt and Shideler 2006	Literature review and field inspection	Two DOE schools in Ka‘ū District, TMKs: [3] 9-6-005:008, 039; 9-5-009:006, 015	Noted listing of KHPES on the HRHP; on-site archaeological monitoring recommended
Wilkinson et al. 2010	Archaeological monitoring	Ka‘ū High and Pāhala Elementary School, Pā‘au‘au Ahupua‘a, TMKs: [3] 9-6-005:008, 039	Noted listing of KHPES on the HRHP; one other historic property documented: SIHP # -27570, lava tube
Escott 2013	Archaeological inventory survey	Ka‘ū High and Pāhala Elementary School, TMK: [3] 9-6-005:008 por.	Explored and mapped previously recorded SIHP # -27570 (lava tube system), documenting three new features; documented one new historic property, a historic-era burial (SIHP # -29501) within the SIHP # -27570 lava tube
Cleghorn 2016	Archaeological field inspection	Pa‘au‘au 1 Ahupua‘a, TMK: [3] 9-6-002:018	Documented scattered surface artifacts and a lava tube within former plantation land; AIS recommended

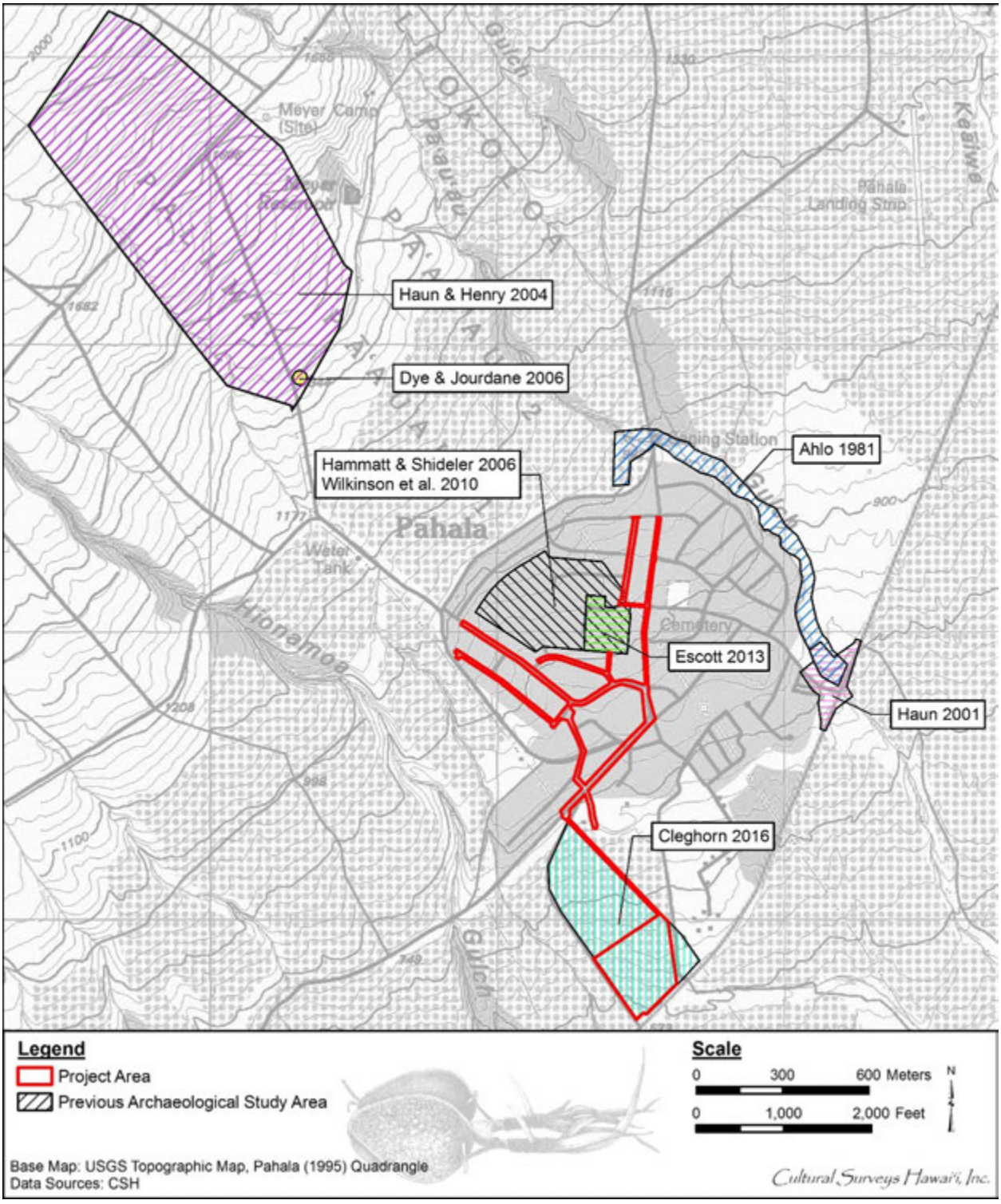


Figure 17. Portion of the 1995 Pahala USGS 7.5-minute topographic quadrangles showing previous archaeological studies in the vicinity of the project area

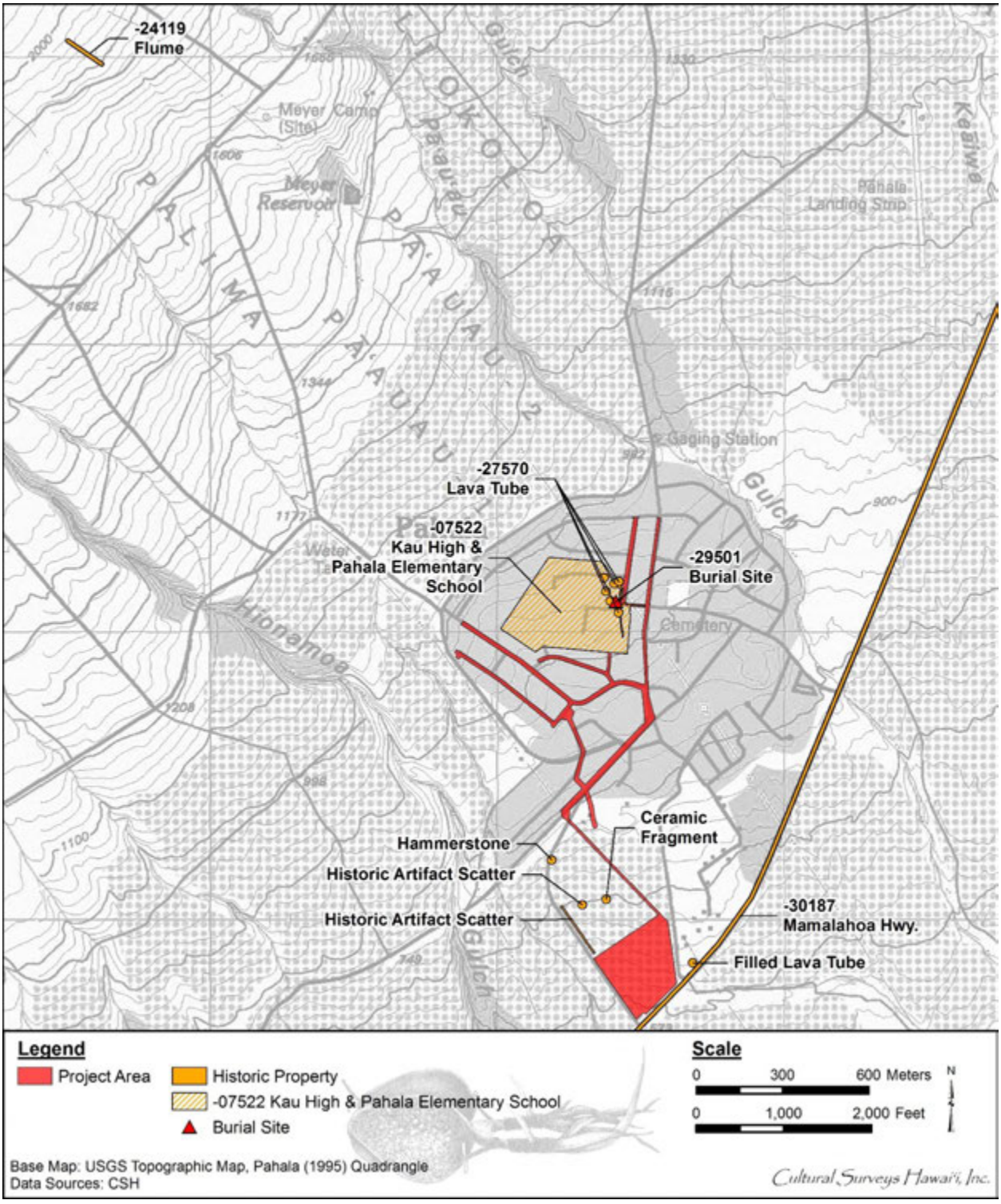


Figure 18. Portion of the 1995 Pahala USGS 7.5-minute topographic quadrangles showing locations of sites documented in previous archaeological studies in the vicinity of the project area

during excavation, a lava tube system was breached and assigned a site number (SIHP # 50-10-69-27570) despite an absence of cultural modifications to the breached portion of the tube system. The location of SIHP # -27570 is shown on Figure 18.

In 2012, Scientific Consultant Services, Inc., conducted an AIS for a proposed gymnasium and disaster relief shelter within a 4.5-acre portion of the KHPES campus, adjacent to but outside the northeastern portion of the current project area (Escott 2013; see Figure 17). The SIHP # -27570 lava tube system was also explored and mapped. A burial site was found within the tube and designated SIHP # 50-10-69-29501 (see Figure 18). This burial is located away from the limits of the current project area. Escott (2013) describes the lava tube system as follows:

> The lava tube system containing Site 27570 and Site 29501 has three main branches converging near the tube system opening under a modern storm drain grate [Figure 19]. The southern branch does not contain archaeological sites. Sites 27570 and 29501 are located in the northern and western branches of the tube system, respectively.
>
> The western branch includes two tubes that are situated parallel to each other and are connected at two points. The western branch of the tube system is closed off by collapse at its western terminus. Site 29501 is located in the northern tube of the western branch, roughly 35.0 meters in from the storm grate opening [Figure 20].
>
> The northern branch of the tube system is accessed through an opening in the floor of the western tube system. The floor of the northern branch is approximately 3.0 meters below the floor of the western branch tube . . . [Escott 2013:17]

No other archaeological features were located within the 4.5-acre project area. Escott (2013:36) noted SIHP # -29501 would “be preserved in accordance with a Hawai‘i Island Burial Council-approved Burial Treatment Plan,” and recommended archaeological monitoring of any future ground disturbing work “near the northern and western branches of the tube system.”

In 2016 Pacific Legacy, conducted archaeological field inspection of TMK: [3] 9-6-002:018, addressing an earlier and larger version of the WWTP project (Cleghorn 2016; see Figure 17). Extensive disturbance associated with development of the macadamia nut orchard was noted. Surface artifacts were encountered within a portion of the macadamia nut orchard that is no longer within the project area limits (see Figure 18). These artifacts included a single traditional hammerstone and fragmental historic glass and ceramics. The report also discussed a lava tube known to exist between the vicinity of the present Royal Hawaiian Orchards processing plant and KHPES; an opening to the tube on the processing plant property was filled in sometime in the past to prevent access. Pacific Legacy recommended discussion with SHPD regarding project historic preservation requirements, noting that an AIS would likely be required. It was also recommended that the vicinity of the lava tube entrance known to exist near the processing plant be excluded from the project area (Cleghorn 2016:7).

Figure 19. Aerial photo showing the Escott (2013) project area and site locations (Escott 2013:18)

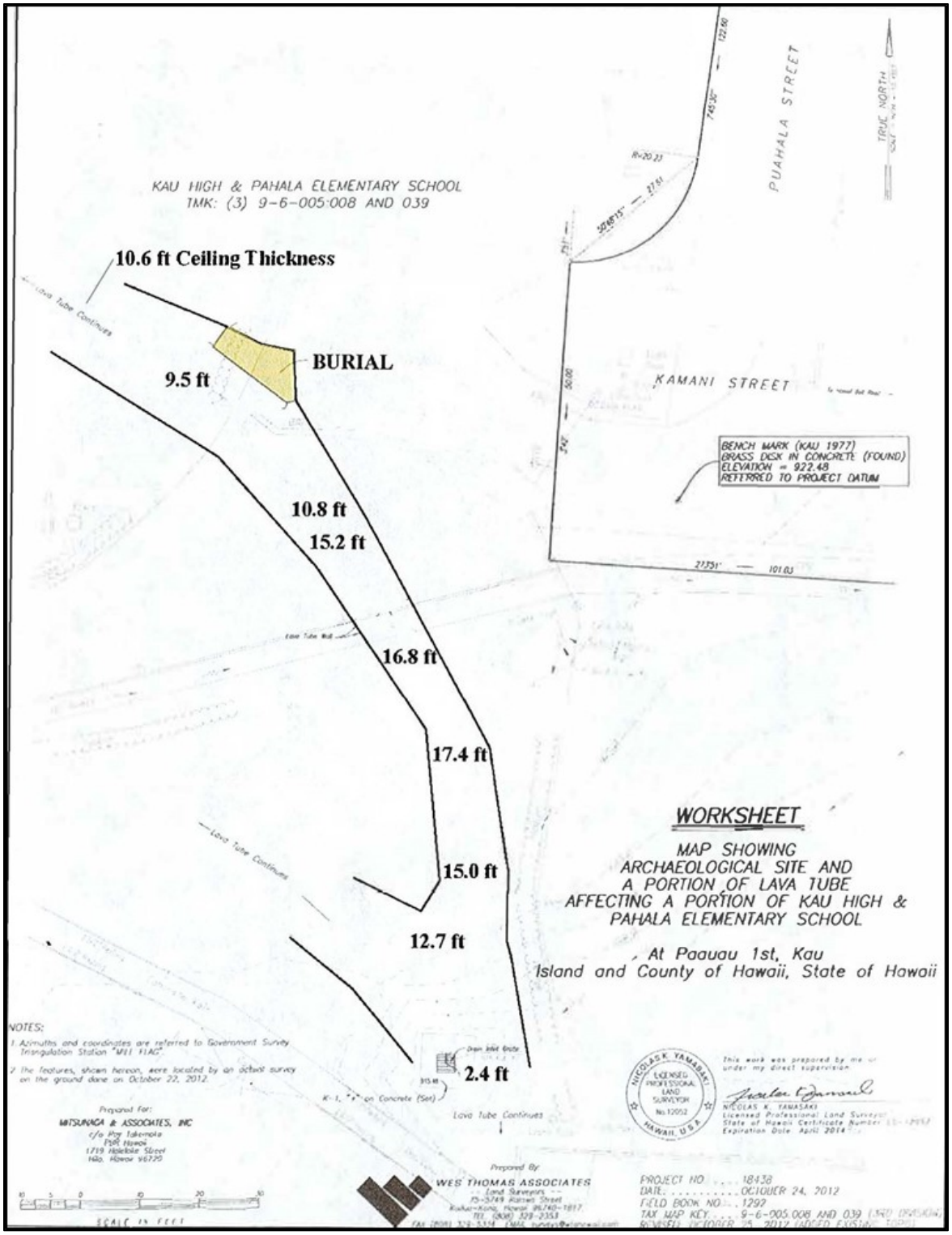


Figure 20. Survey map of SIHP # -29501 burial and SIHP # -27570 lava tube ceiling thicknesses (Escott 2013:19); note the tube is set back from Kamani Street and Puahala Street where a portion of the current project area is located

3.3 National Register-Eligible Historic Properties in the Vicinity

Two historic properties near the project APE have been evaluated as eligible for listing on the National Register: Ka‘ū High and Pāhala Elementary School and the Māmalahoa Highway. Neither of these sites are within the project APE.

3.3.1 Ka‘ū High and Pāhala Elementary School

Ka‘ū High and Pāhala Elementary School, located north of and between portions of the project APE (see Figure 18), is part of the thematic grouping “Public Schools on the Island of Hawai‘i” (SIHP # 50-10-69-07522). SIHP # -07522 is listed on the Hawai‘i Register. The school was nominated to the National Register in May 2002 under the name “Ka‘u High and Pahala Elementary School.” The nomination form lists the period of significance as 1935-1950 and areas of significance as Criteria A (education/social history value) and C (architecture value). This historic property has not been listed on the National Register.

3.3.2 Māmalahoa Highway

SIHP # 50-10-47-30187 comprises the former and present alignments of the Māmalahoa Highway (Highway 11/Hawai‘i Belt Road); an actively used and contemporary portion of this roadway is located adjacent to the southern boundary of the proposed WWTP site (see Figure 18). Under a prior study (Clark et al. 2014:81) this historic property was evaluated as eligible for inclusion on the National Register under Criteria A and D for its importance in and information about “late nineteenth and early twentieth events in establishing a regional transportation network that has its roots in antiquity.” The portion of the roadway adjacent to the project area was constructed in the 1940s. This historic property has not been nominated for listing on the Hawai‘i Register or National Register.

3.4 Background Summary and Predictive Model

Ka‘ū is a large district known for its dynamic natural environment and fierce people. Despite the impressions of early visitors that the district was a barren wasteland, its abundant and varied resources supported a substantial population. However, in pre-Contract times Pāhala was not a habitation center. Villages were located at the coast or in places like Wai‘ōhinu to the southwest where water and other resources were more abundant.

In the first 50 years after Contact, the population of Ka‘ū declined dramatically due to introduced disease, natural disasters, and outmigration to developing economic centers. Missions were established in Wai‘ōhinu and Punalu‘u. In the Māhele, a handful of *kuleana* claims in the Pāhala vicinity indicate land use associated with residence and small-scale farming. The vast majority of Hionamoa Ahupua‘a was awarded as LCA 9971:12 to the *ali‘i* William Pitt Leleiohoku; this award overlaps the proposed WWTP site. A number of Land Grants were also made in the Pāhala vicinity, including Land Grant 02446 to Kamalo overlapping the northern portion of the project area.

The historic era in Ka‘ū was dominated by the development of the livestock and commercial agriculture industries. Several large ranching outfits were established in Ka‘ū in the mid-1800s, including Kapāpala Ranch located a relatively short distance east of present Pāhala Town. However, it was sugar plantations that produced the most widespread and lasting impact on the physical and social landscape of Ka‘ū. The Hawaiian Agricultural Company was established in

the Pāhala vicinity in 1876 and quickly grew. A mill was established and the village of Pāhala began to develop with the influx of plantation workers and their families. The majority of the project area was under cane at some point in time.

Previous archaeological research in the vicinity has documented very little evidence of pre-Contact land use, partially due to widespread land alteration for the sugar plantation. Historic plantation remnants such as cane flumes have been documented in the area. Lava tubes are also known to be present in and around Pāhala. A lava tube system (SIHP # -27570) has been documented to the north and east of the project area; the lava tube contains a historic to modern refuse dump and a historic burial site (SIHP # -29501) located on the KHPES campus. The school itself is on the HRHP as part of a thematic group of historic Hawai‘i Island schools (SIHP # -07522). The Māmalahoa Highway (SIHP # 50-10-47-30187) located just south of the project area has been evaluated as eligible for inclusion on the NRHP but has not been nominated. The current project area does not encroach on any previously documented portions of the lava tube system, the school campus, or the Māmalahoa Highway.

Given the known traditional land use in this area and the impacts of continued agricultural and residential development, surface pre-Contact sites are not expected within the project area. The modern development of the macadamia nut orchard has likely also obliterated any plantation-era sites once present in that portion of the project area; surface features associated with the former plantation village and/or historic transportation routes may be present in other portions of the project area. Subsurface historic features related to sugar cultivation could be present throughout the project area. Furthermore, additional lava tubes may be present and have the potential to contain pre- and/or post-Contact archaeological features, including human burials.

Section 4 Results of Fieldwork

CSH completed the fieldwork component of this archaeological inventory survey under archaeological fieldwork permit number 17-08, issued by the SHPD pursuant to HAR §13-282. Fieldwork was conducted on 18 September 2018, 1–4 October 2018, and 10 January 2019. This work required approximately 8 person-days to complete.

The fieldwork comprised a 100% pedestrian inspection of the project area and a program of subsurface testing. The results of the pedestrian inspection are provided in Section 4.1 and the subsurface testing results are provided in Section 4.2.

Two historic properties characterized as historic-era transportation routes (SIHP #s 50-10-69-31088 and -31089) were documented within the project area (Figure 21; see Section 5 for full site descriptions). No pre-Contact features or lava tubes were encountered within the project area.

4.1 Pedestrian Inspection Results

A 100% pedestrian inspection was undertaken with the field crew spaced 3-5 m apart depending upon the density of the vegetation. Ground visibility was very good throughout most of the inspection area.

The pedestrian inspection began along the easement located within TMK: [3] 9-6-005:036. This area has been completely disturbed by prior development. From Maile Street, the easement extends northwest along an existing paved driveway to an open, asphalted area located along the southern side of the private roadway used to access Ka‘ala‘iki Road (Figure 22). This asphalt area is surrounded by previously graded land presently overgrown with California grass. The easement crosses the roadway, entering the former sugar plantation maintenance yard. The easement extends along a dirt driveway between two large, old maintenance buildings that are still in use (Figure 23). These buildings are located outside the easement and project area. North of these structures is a graded, grassy parking area; the easement crosses this parking area and through a previously disturbed, heavily vegetated area containing scrap metal and miscellaneous trash located along the *makai* side of Ilima Street (Figure 24). An earthen storm water drainage channel extends along the *makai* side of Ilima Street southwest from a culvert at Huapala Street and contains scattered modern household trash (Figure 25).

Upon exiting the proposed easement within TMK: [3] 9-6-005:036, the survey continued along various residential streets within the project area, including Pikake Street, Kamani Street, Puahala Street, Huapala Street, Hala Street, Hinano Street, and Ilima Street (Figure 26 through Figure 29). These streets consist of one-to-two-lane asphalt travel ways with no curbing or sidewalks. These streets employ variable use of standard signage and center and outer lane striping. A four-way crosswalk is located at the Pikake Street and Kamani Street intersection near the KHPES campus (Figure 30). Kamani Street dead ends at the school and the project area does not cross onto the campus. The homes lining these residential streets outside the project area are of variable age but are commonly of post-and-pier “plantation style” design with corrugated metal roofing. Slight linear depressions are typically present along one side of each street within the asphalt or grassy shoulder, providing drainage for runoff; these drainages are also outside the asphalt travel ways comprising the project area. A single culvert constructed in the 1960s was observed running under the modern Huapala Street surface adjacent to the Ilima Street intersection (Figure 31); this culvert

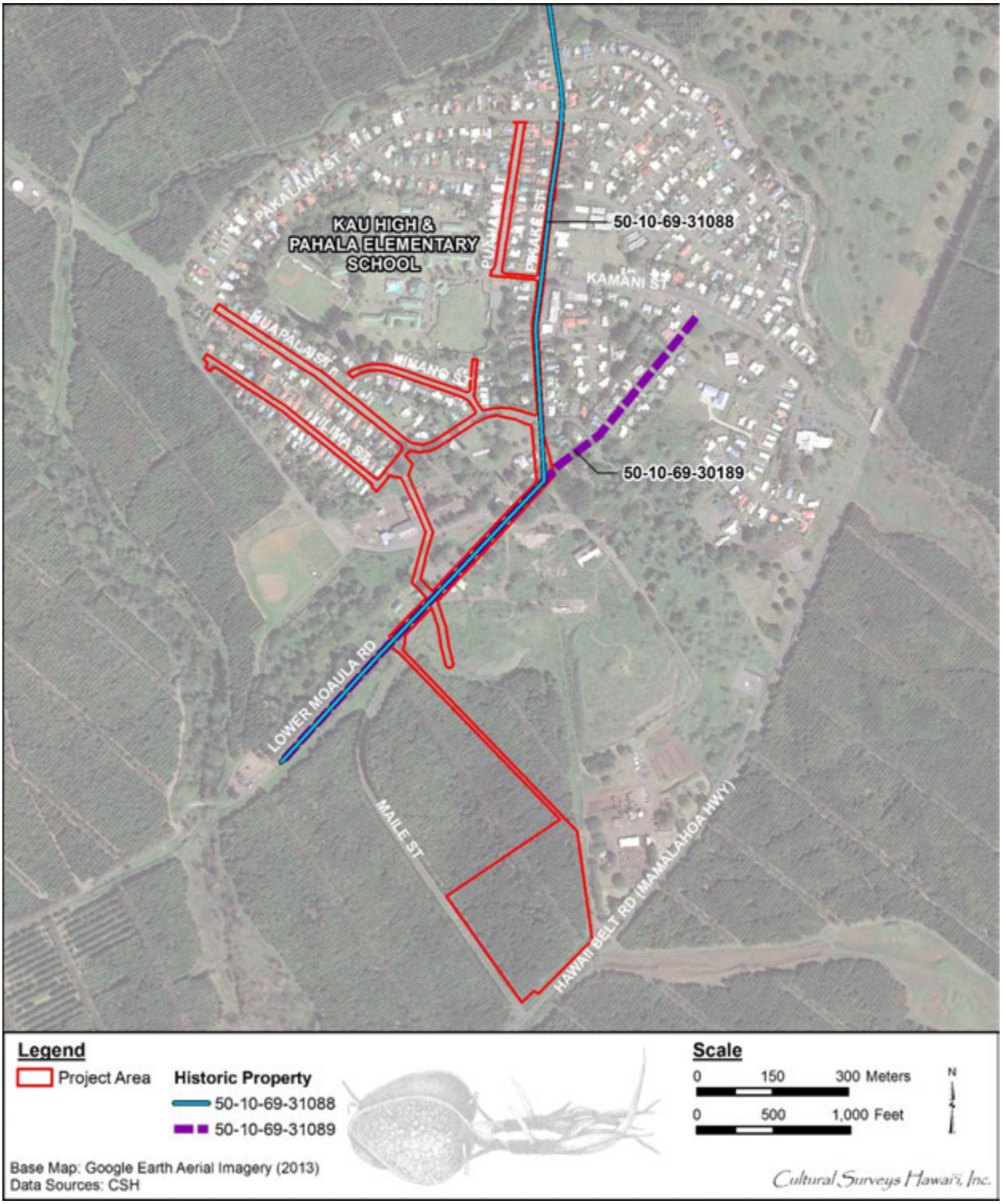


Figure 21. Aerial photo of the project area (Google Earth 2013) showing the locations of newly documented historic properties

Figure 22. Photo showing the portion of the easement in TMK: [3] 9-6-005:036 that extends from Maile Street along an existing asphalt driveway; view northwest

Figure 23. Photo showing the portion of the easement in TMK: [3] 9-6-005:036 that passes through the old plantation maintenance yard; the structures present to either side are outside the project area; view to northwest

Figure 24. Photo showing the forested area between the maintenance yard and Ilima Street at the northern end of the easement in TMK: [3] 9-6-005:036; view to northwest

Figure 25. Photo showing the location where the easement in TMK: [3] 9-6-005:036 exits at Ilima Street (frame right); the earthen drainage channel extending from the Huapala Street culvert is beneath the grass to the left of the road; view to southwest

Figure 26. Photo looking down Huapala Street; note linear drainage in grassy lawn on left side of photo; view to southeast

Figure 27. Photo looking up Ilima Street; note drainage in grassy shoulder on right side of photo; view to northwest

Figure 28. Photo looking up Hinano Street from the eastern Huapala Street intersection; view to northwest

Figure 29. Photo looking up Hala Street from the Hinano Street intersection; view to north

Figure 30. Photo of the intersection of Pikake and Puahala streets; view to northwest

Figure 31. Photo of the culvert located at the Huapala Street and Ilima Street intersection; view to northeast

diverts runoff into the channel located along the *makai* side of Ilima Street (see Figure 25).

Pikake Street is an arterial route in Pāhala lined with commercial establishments in addition to residences. Research has indicated this present roadway is a portion of a historic road alignment (SIHP # -31088, Wood Valley Road/Coastal Road; see Figure 21 and Section 5.1). A commercial center at the Pikake Street and Kamani Street intersection includes a bank, drugstore, post office, and the Mizuno Superette (Figure 32). The southern portion of Pikake Street approaching its terminus at Maile Street is technically a private roadway located within TMK: [3] 9-6-005:044. Pikake Street at the Maile Street intersection includes turn lanes (Figure 33). A broad asphalt parking area is located along the northeastern side of the intersection, fronting the offices of Olson Trust. On the western side of this intersection are the offices of Kau Agribusiness Company, comprising two plantation-era buildings (see Figure 33). Within the grassy yard fronting these buildings is an old Corliss steam engine once used by the sugar mill. These structures and the engine are located outside the project area.

The inspection proceeded southwest down Maile Street from the Pikake Street intersection. The project area includes an approximately 0.25-mile portion of Maile Street located between the old mill camp road and the Lower Moaula Road intersection (Figure 34 and Figure 35). Research has indicated this present roadway is a portion of a historic road alignment (SIHP # -31089, Volcano Road; see Figure 21 and Section 5.2). Along the *makai* side of Maile Street in this area are an old plantation house (which has been subsequently used as a store) and visible remnants of the mill and theater; all these features are located outside the project area. Along the *mauka* side of Maile Street in this area are a Hawaiian Telcom building (see Figure 34), a few old plantation homes serving as residences, and the asphalt parking area noted previously, as well as a section of concrete sidewalk. Both sides of Maile Street exhibit extensive prior disturbance. No remnants of the old plantation railroad were observed.

From the vicinity of the Maile Street/Lower Moaula Road intersection, the inspection continued southeast along the proposed utility easement within TMK: [3] 9-6-002:018. Closest to Maile Street the easement briefly crosses a previously graded area overgrown in California grass and other weeds, before entering the macadamia orchard. This easement extends through the orchard to the proposed WWTP plant site. The orchard contains linear rows of mature trees watered via surface irrigation lines (Figure 36). Fallen macadamia nuts, leaf litter, and relatively few small stones are present on the ground surface. Signs of surface water runoff were observed throughout the orchard. An asphalt road accessing the processing plant from Maile Street forms the *mauka* border of the proposed plant site (Figure 37). Bulldozer push piles were observed along the Belt Road edge and down the center of the orchard (Figure 38 and Figure 39), and bulldozer blade scars are frequently visible on small exposures of lava bedrock throughout the orchard. During the survey fieldwork CSH crew observed operation of a machine in an adjacent orchard used to harvest macadamia nuts off the ground; this machine was observed to scatter small rocks and other natural materials around.

A few scattered pieces of highly fragmental glass and ceramics were observed in the vicinity of the proposed Test Excavation (TE) 2 location in the northern-central portion of the proposed site; testing at this location did not uncover any subsurface cultural materials (see Section 4.2.2). The nature and density of the fragmental cultural materials observed on the surface within the macadamia orchard were not sufficient to comprise a significant cultural deposit. These materials

Figure 32. Photo looking up Pikake toward the Kamani Street intersection; commercial center is visible to the right; view to north

Figure 33. Photo showing the Pikake Street terminus at Maile Street; Hawaiian Telcom building is on opposite corner; view to southwest

Figure 34. Photo of a portion of Maile Street within the project area, showing the Pikake Street intersection in the background and the HELCO building (left frame); view to northeast

Figure 35. Photo of a portion of Maile Street in the project area, showing the Lower Moaula Road fork in the far background; view to southwest

Figure 36. Representative photo of the macadamia orchard; note the surface irrigation lines between the trees; view to southwest

Figure 37. Photo of the paved road that passes through the macadamia orchard between Maile Street and the macadamia nut husking plant; this road forms the *mauka* boundary of the proposed WWTP site portion of the project area; view to northeast

Figure 38. Photo showing the margin of the macadamia orchard at the southeastern corner of the proposed WWTP site portion of the project area; a dozer push pile is present beneath the grass along the left side of the photo; view to southwest

Figure 39. Photo showing a portion of the linear push pile/berm located along the wind break bisecting the macadamia orchard; view to southwest

were similar in nature to those scattered historic artifacts encountered by Cleghorn (2016) in the portion of the orchard north of the current project area. No traditional artifacts like the hammerstone recorded by Cleghorn (2016) were encountered within the current project area.

The last portion of the project area to be inspected was the location of existing LCC 1 and associated sewer easement in TMK: [3] 9-6-002:016. The sewer line easement was recently cleared from an area just below Maile Street; the areas surrounding the cleared easement are fallow with overhead California grass. Ground visibility was excellent along the maintained easement, allowing for relocation of a sewer manhole (Figure 40) and cleanout along the existing sewer line. The LCC 1 location at the *makai* end of the maintained easement is not marked on the ground surface; a low dirt mound is believed to indicate its location (Figure 41). No remnants of the old plantation railroad were observed.

4.2 **Subsurface Testing Results**

Subsurface testing was conducted within the proposed WWTP site portion of the project area, to determine the nature of the sediments and the potential for subsurface archaeological features including but not limited to buried cultural deposits and/or culturally modified lava tubes. This area is a mature macadamia nut orchard. The subsurface testing program involved mechanical excavation of seven test trenches measuring approximately 5 m (16.5 ft) long and 1 m (3.2 ft) wide, with an average depth of 1.6 m (5.2 ft). All seven test excavations terminated at bedrock. The locations of the excavation trenches are depicted on Figure 42 and Figure 43. An archaeologist was present to monitor the excavations and document the exposed stratigraphy, which was recorded upon completion of each trench. No subsurface features or deposits were exposed during excavation, which is consistent with known prior disturbance from sugarcane cultivation and the present macadamia orchard. The stratigraphic information, profile drawings, and photographs taken at each trench follow.

The subsurface testing program generally revealed two distinct natural sedimentary layers located atop decomposing bedrock: a dark, rich silty loam A horizon overlying a dusky red silty clay loam B horizon. These findings are consistent with the USGS Soil Survey (Sato et al. 1973) sediment types depicted in Figure 7 and with past and present agricultural land use. The exception was in TE 1, which contained three stratigraphic layers. Here, the two natural sediment layers are interposed by a layer of ash deposit. The ash was deposited and subsequently covered up at some point in time. Of all the test excavations, TE 1 is in closest proximity to the macadamia but processing plant (see Figure 42) and may be the result of some activity at the former plantation. No charcoal or cultural materials were present within the ash layer.

4.2.1 Test Excavation 1 (TE 1)

Test Excavation 1 (TE 1) was located in the northern corner of the proposed WWTP site portion of the project area, where a lagoon is planned for development (see Figure 42 and Figure 43). Figure 44 shows TE 1 marked out with orange flagging tape prior to excavation. TE 1 measured approximately 5 m long and 1 m wide. TE 1 was excavated to a depth of up to 230 cm below surface (cmbs) through two layers of natural Waiaha series sediment (Strata I and III) interposed by a layer of deposited ash (Stratum II), and terminated at basalt bedrock (Figure 44 through Figure 46 and Table 2). No charcoal or cultural materials were observed within TE 1.

Figure 40. Photo of the sewer manhole located along the existing, maintained sewer easement within TMK: [3] 9-6-002:016; view to southwest

Figure 41. Photo showing the LCC 1 location at the *makai* terminus of the existing, maintained sewer easement within TMK: [3] 9-6-002:016; view to south

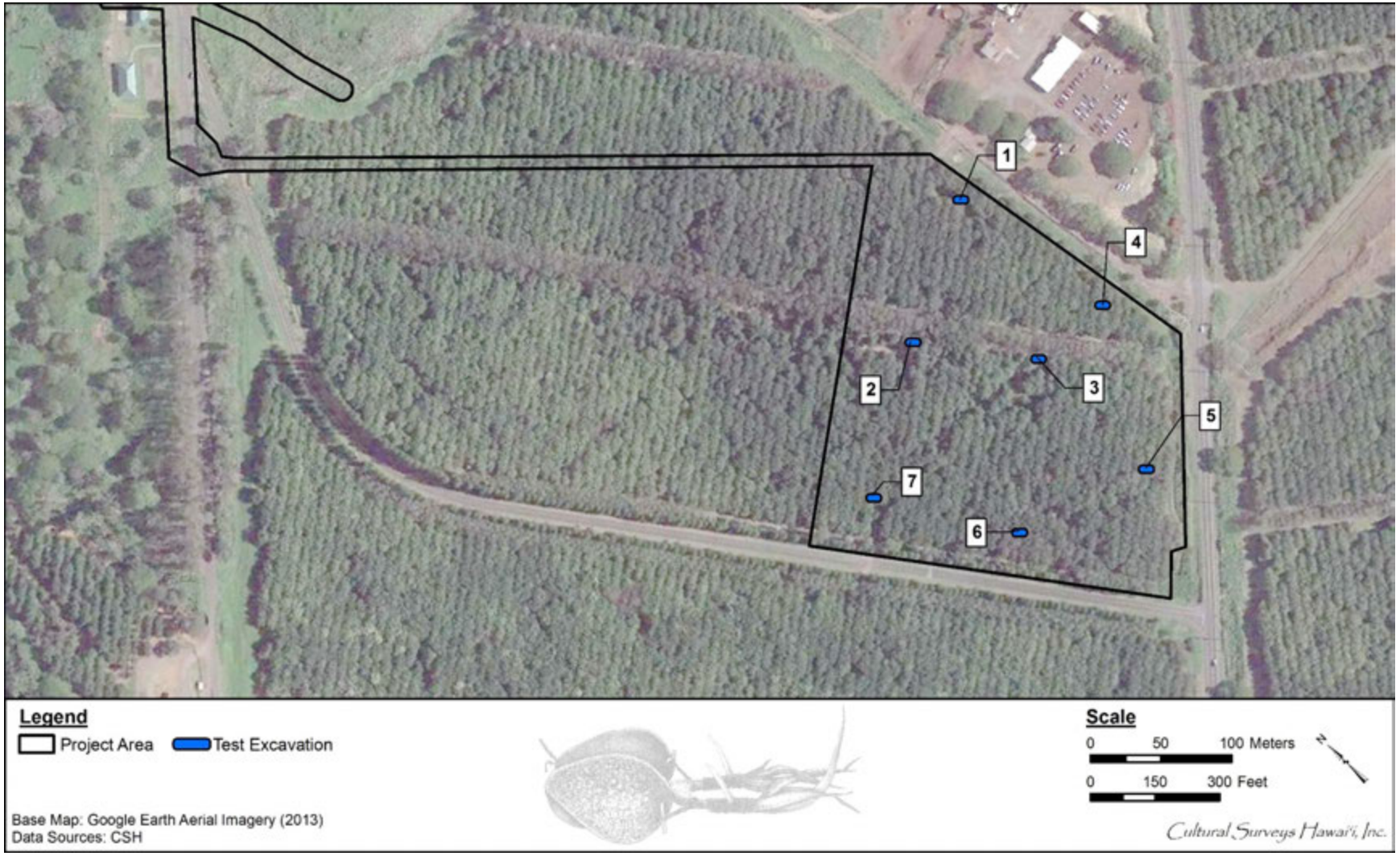


Figure 42. Aerial photograph showing the locations of the seven test excavation trenches within the proposed WWTP site portion of the project area (TE 1 through TE 7) (Google Earth 2013)

Figure 43. Preliminary WWTP site plan, overlain with locations of the seven test excavation trenches within the proposed WWTP site portion of the project area (TE 1 through TE 7) (site plan courtesy of client, with Google Earth 2013 overlay added)

Figure 44. Photo of TE 1 marked out with flagging tape prior to excavation; view to southwest

Figure 45. Photo of TE 1 northwest sidewall profile; view to northwest

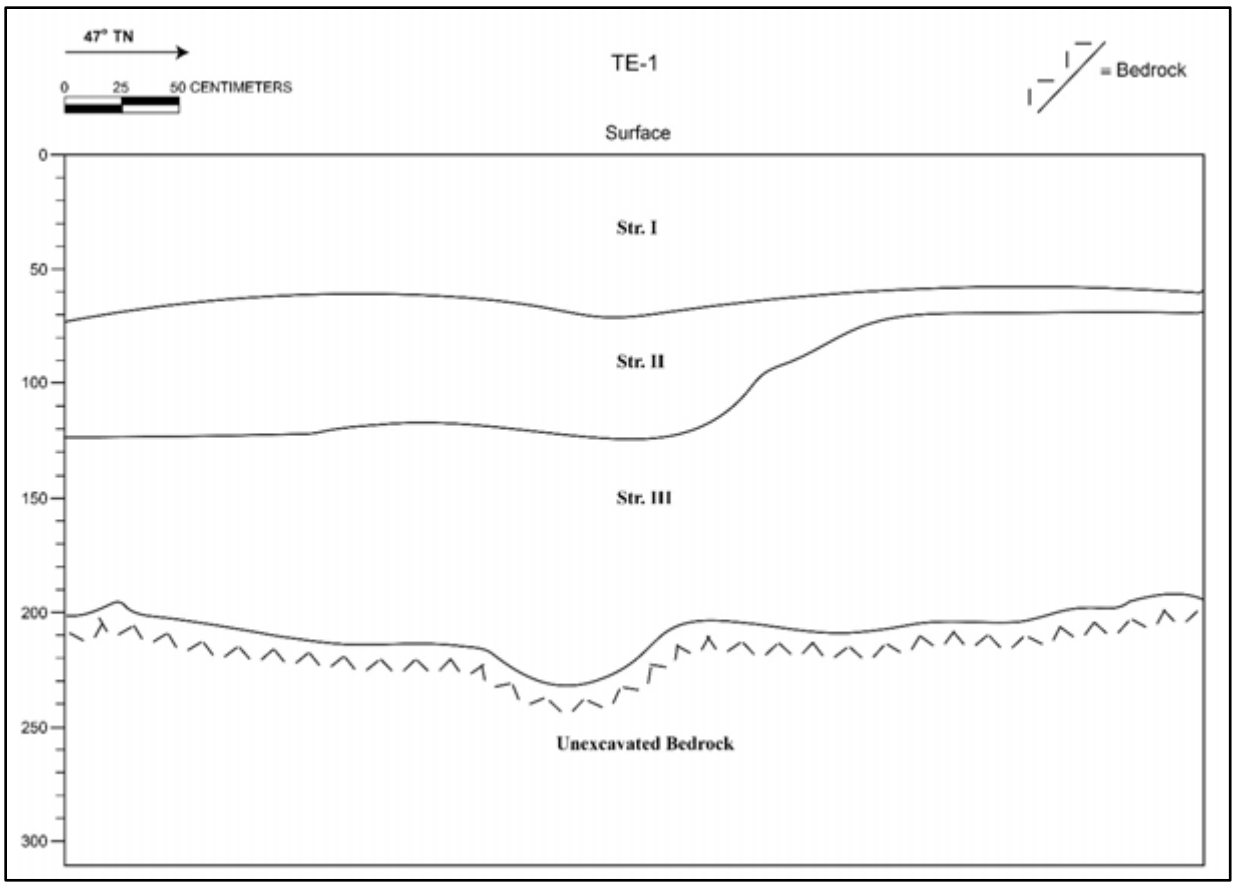


Figure 46. Profile of TE 1 northwest sidewall

Table 2. TE 1 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–72	A horizon; 7.5YR 2.5/3, very dark brown; silty loam; weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; clear, smooth lower boundary; roots common; no cultural material present; natural Waiaha series sediment
II	72–123	Ash; 5Y 7/1, light gray; ash; structureless (single-grain); dry, loose, no cementation consistence; non-plastic; unknown origin; diffuse, wavy lower boundary; few roots; no charcoal or cultural material present; ash deposit possibly associated with former plantation
III	123–230	B horizon; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, wavy lower boundary, terminated at bedrock; few roots; no cultural material present; natural Waiaha series sediment

4.2.2 Test Excavation 2 (TE 2)

Test Excavation 2 (TE 2) was located within the northern-central section of the proposed WWTP site portion of the project area, where a wetland is planned for development (see Figure 42 and Figure 43). Figure 47 shows TE 2 marked out with orange flagging tape prior to excavation. TE 2 measured approximately 5 m long and 1 m wide. TE 2 was excavated to a depth of up to 120 cmbs through two layers of natural Waiaha series sediment (Strata I and II) and terminated at basalt bedrock (Figure 48, Figure 49, and Table 3). Despite the presence of a few small pieces of highly fragmental historic materials on the ground surface in the TE 2 locale (see Section 4.1), no cultural materials were observed within TE 2.

4.2.3 Test Excavation 3 (TE 3)

Test Excavation 3 (TE 3) was located near the center of the proposed WWTP site portion of the project area, where a lagoon is planned for development (see Figure 42 and Figure 43). Figure 50 shows TE 3 marked with orange flagging tape prior to excavation. TE 3 measured approximately 5 m long and 1 m wide. TE 3 was excavated to a depth of up to 180 cmbs through two layers of natural Waiaha series sediment (Strata I and II) and terminated at basalt bedrock (Figure 51, Figure 52, and Table 4). No cultural materials were observed within TE 3.

4.2.4 Test Excavation 4 (TE 4)

Test Excavation 4 (TE 4) was located along the eastern boundary of the proposed WWTP site portion of the project area, where a grove is planned for development (see Figure 42 and Figure 43). Figure 53 shows TE 4 marked with orange flagging tape prior to excavation. TE 4 measured approximately 5 m long and 1 m wide. TE 4 was excavated to a depth of up to 155 cmbs through two layers of natural Waiaha series sediment (Strata I and II) and terminated at basalt bedrock (Figure 54, Figure 55, and Table 5). No cultural materials were observed within the TE 4.

4.2.5 Test Excavation 5 (TE 5)

Test Excavation 5 (TE 5) was located in the southeastern section of the proposed WWTP site portion of the project area, where a grove is planned for development (see Figure 42 and Figure 43). Figure 56 shows TE 5 marked with orange flagging tape prior to excavation. TE 5 measured approximately 5 m long and 1 m wide. TE 5 was excavated to a depth of up to 162 cmbs through two layers of natural Waiaha series sediment (Strata I and II) and terminated at basalt bedrock (Figure 57, Figure 58, and Table 6). No cultural materials were observed within TE 5.

4.2.6 Test Excavation 6 (TE 6)

Test Excavation 6 (TE 6) was located along the western boundary of the proposed WWTP site portion of the project area, where a grove is planned for development (see Figure 42 and Figure 43). Figure 59 shows TE 6 marked with orange flagging tape prior to excavation. TE 6 measured approximately 5 m long and 1 m wide. TE 6 was excavated to a depth of up to 160 cmbs through two layers of natural Naalehu series sediment (Strata I and II) and terminated at basalt bedrock (Figure 60, Figure 61, and Table 7). No cultural materials were observed within TE 6.

Figure 47. Photo of TE 2 marked out with flagging tape prior to excavation; view to southeast

Figure 48. Photo of TE 2 southwest sidewall; view to northeast

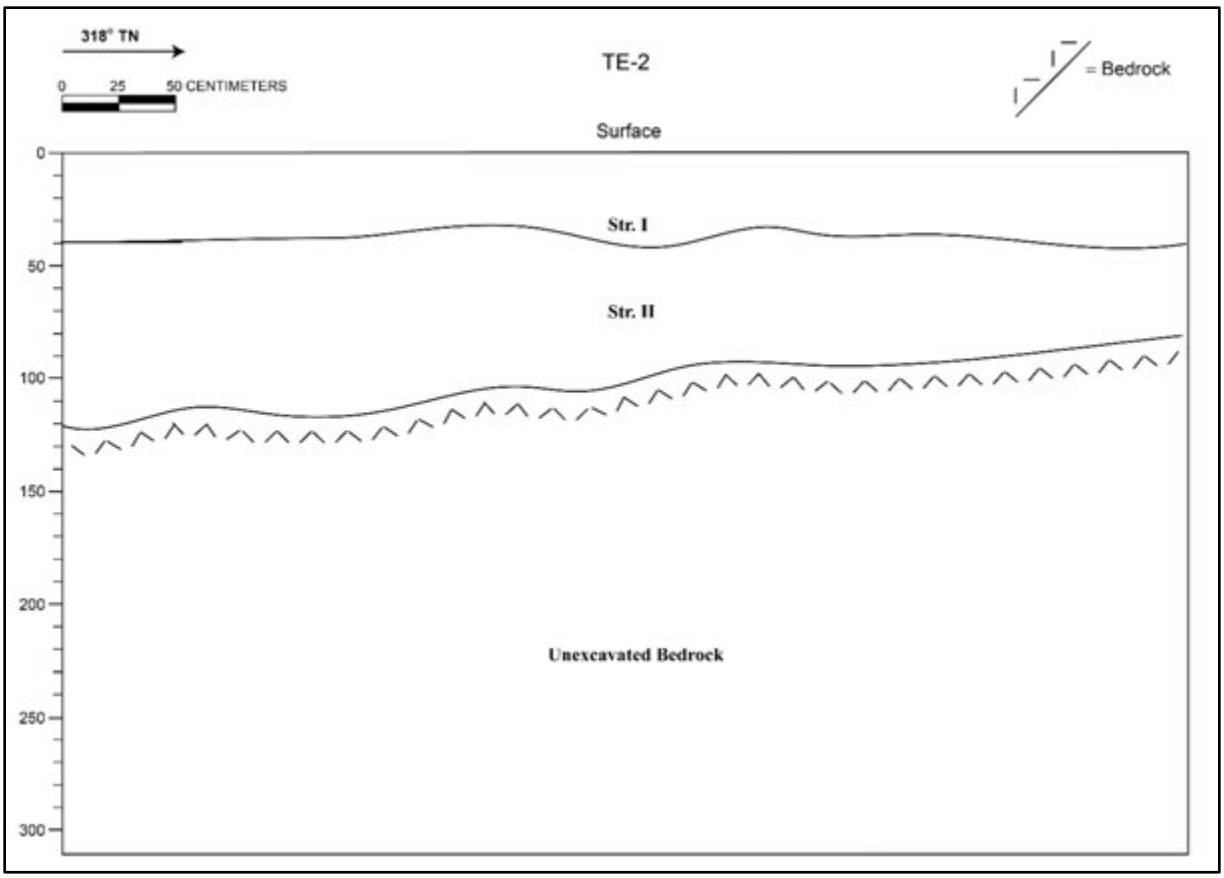


Figure 49. Stratigraphic profile of TE 2 southwest sidewall

Table 3. TE 2 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–45	A horizon; 7.5YR 2.5/3, very dark brown; silty loam, weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; diffuse, smooth lower boundary; roots common; no cultural material present; natural Waiaha series sediment
II	45–120	B horizon; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, smooth lower boundary, terminated at bedrock; few roots; no cultural material present; natural Waiaha series sediment

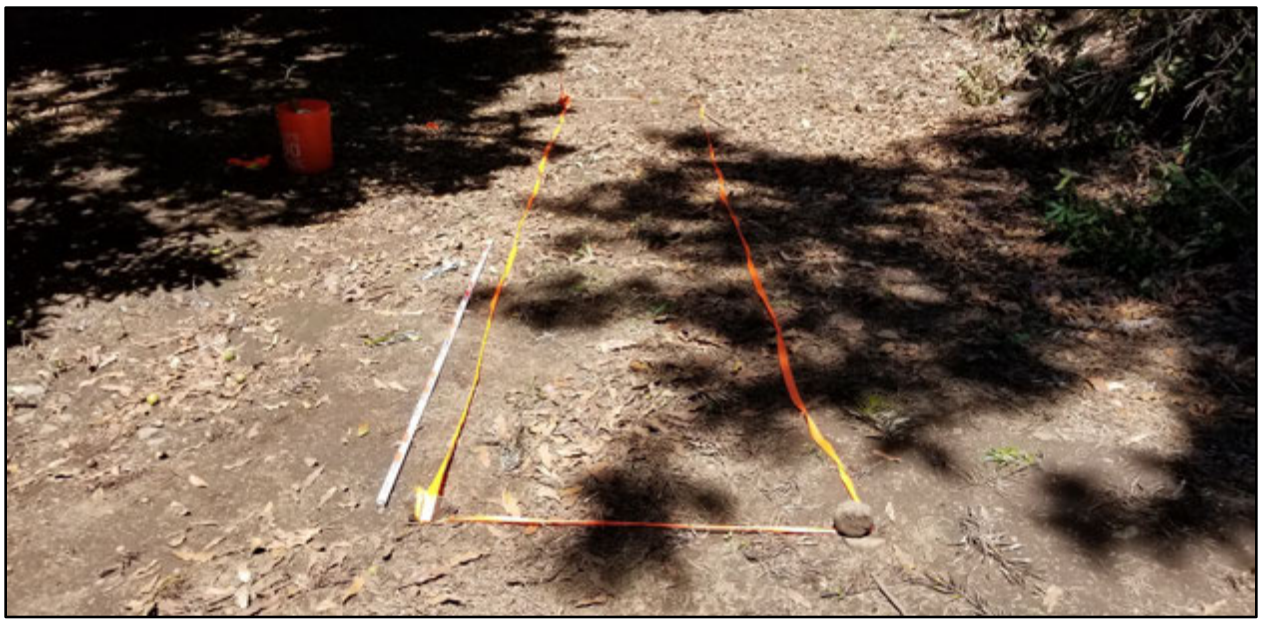


Figure 50. Photo of TE 3 marked out with flagging tape prior to excavation; view to southeast

Figure 51. Photo of TE 3 west sidewall; view to northeast

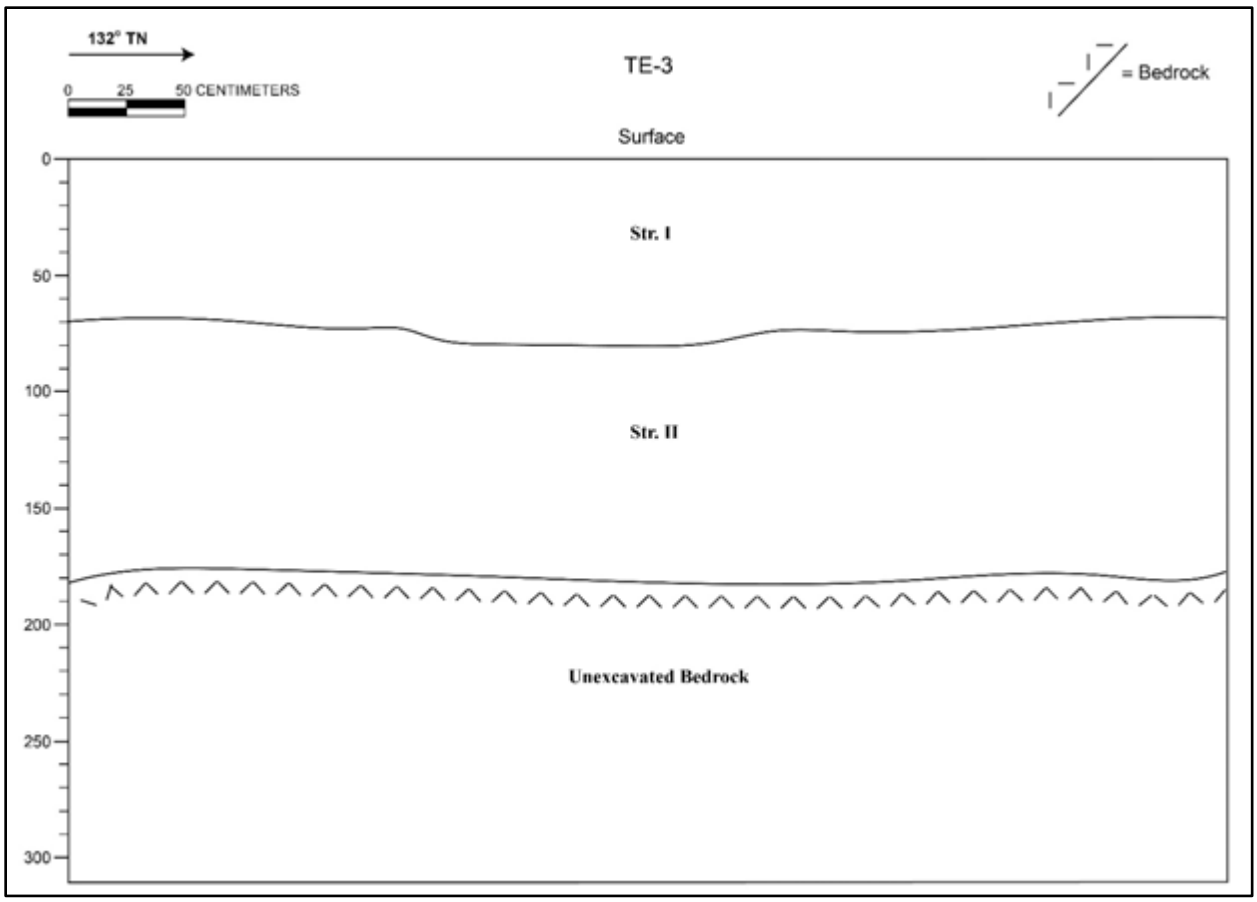


Figure 52. Stratigraphic profile of TE 3 northeast sidewall

Table 4. TE 3 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–82	A horizon; 7.5YR 2.5/3, very dark brown; silty loam; weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; diffuse, smooth lower boundary; roots common; no cultural material present; natural Waiaha series sediment
II	82–180	B horizon, Natural; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, smooth lower boundary, terminated at bedrock; few roots; no cultural material present; natural Waiaha series sediment

Figure 53. Photo of TE 4 marked out with flagging tape prior to excavation; view to south

Figure 54. Photo of TE 4 northwest sidewall; view to northwest

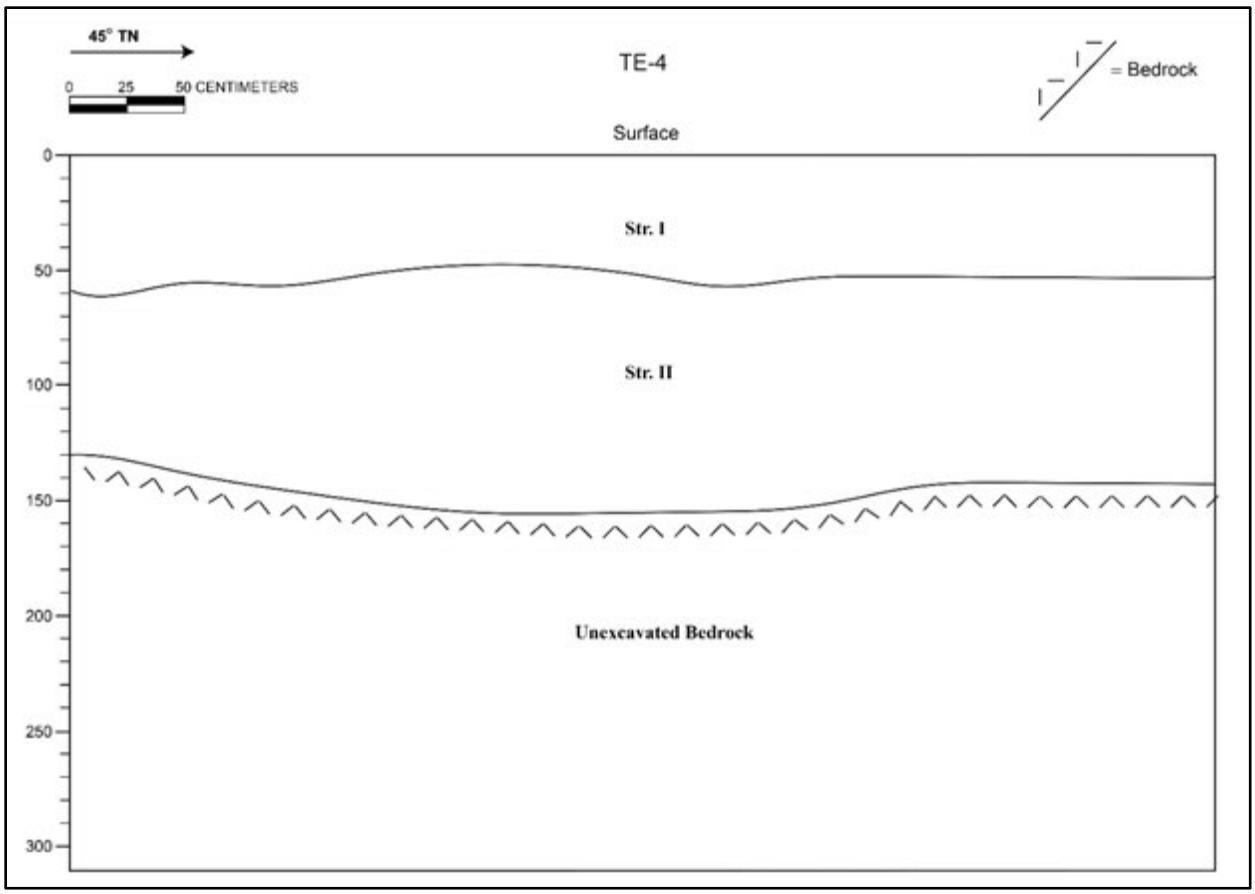


Figure 55. Stratigraphic profile of TE 4 northwest sidewall

Table 5. TE 4 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–60	A horizon; 7.5YR 2.5/3, very dark brown; weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; clear, smooth lower boundary; roots common; no cultural material present; natural Waiaha series sediment
II	60–155	B horizon; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, wavy lower boundary, terminated at bedrock; few roots; no cultural material present; natural Waiaha series sediment

Figure 56. Photo of TE 5 marked out with flagging tape prior to excavation; view to southwest

Figure 57. Photo of TE 5 southwest sidewall; view to south

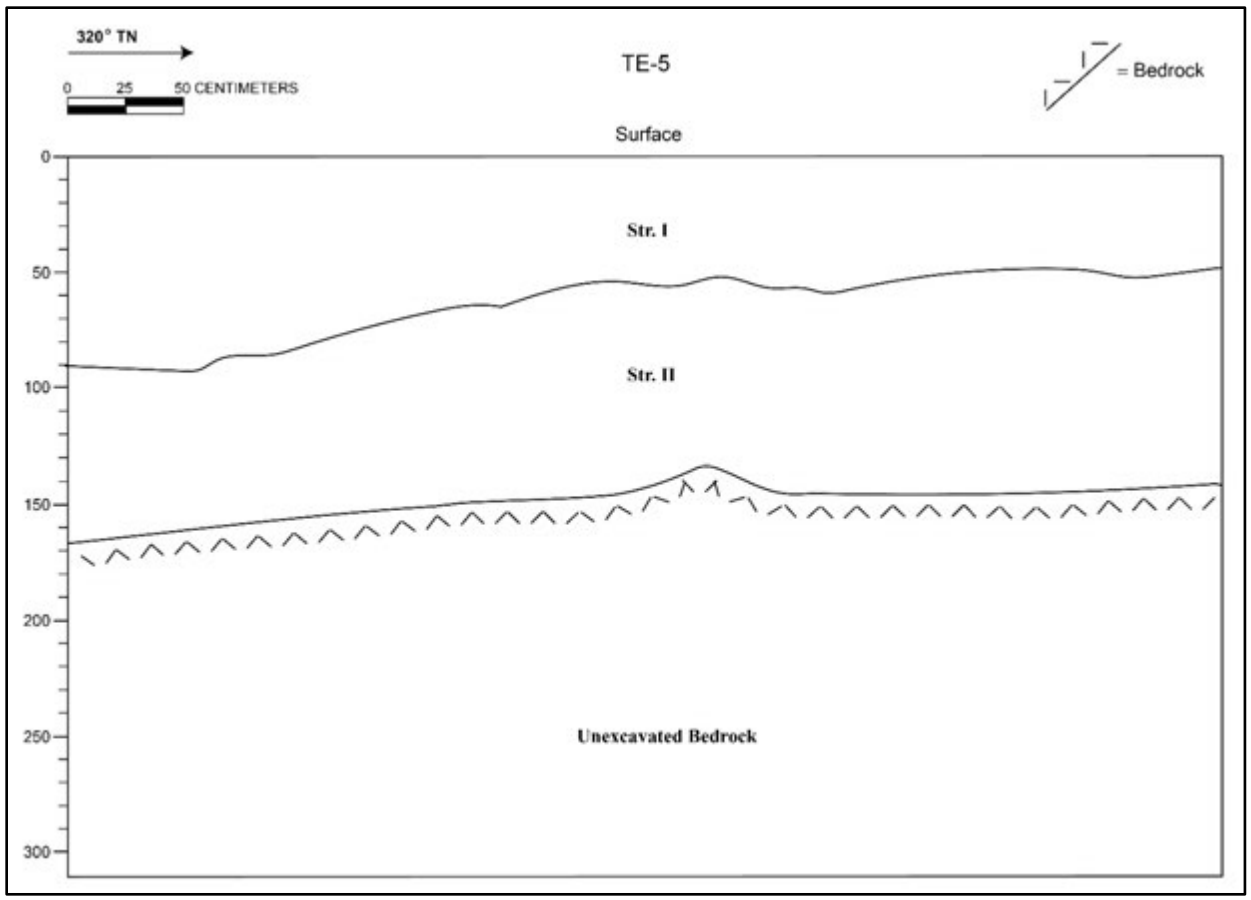


Figure 58. Stratigraphic profile of TE 5 southwest sidewall

Table 6. TE 5 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–95	A horizon; 7.5YR 2.5/3, very dark brown; silty loam, weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; clear, smooth lower boundary; roots common; no cultural material present; natural Waiaha series sediment
II	95–162	B horizon, Natural; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, smooth lower boundary, terminated at bedrock; few roots; no cultural material present; natural Waiaha series sediment

Figure 59. Photo of TE 6 marked out with flagging tape prior to excavation; view to southwest

Figure 60. Photo of TE 6 southeast sidewall; view to southeast

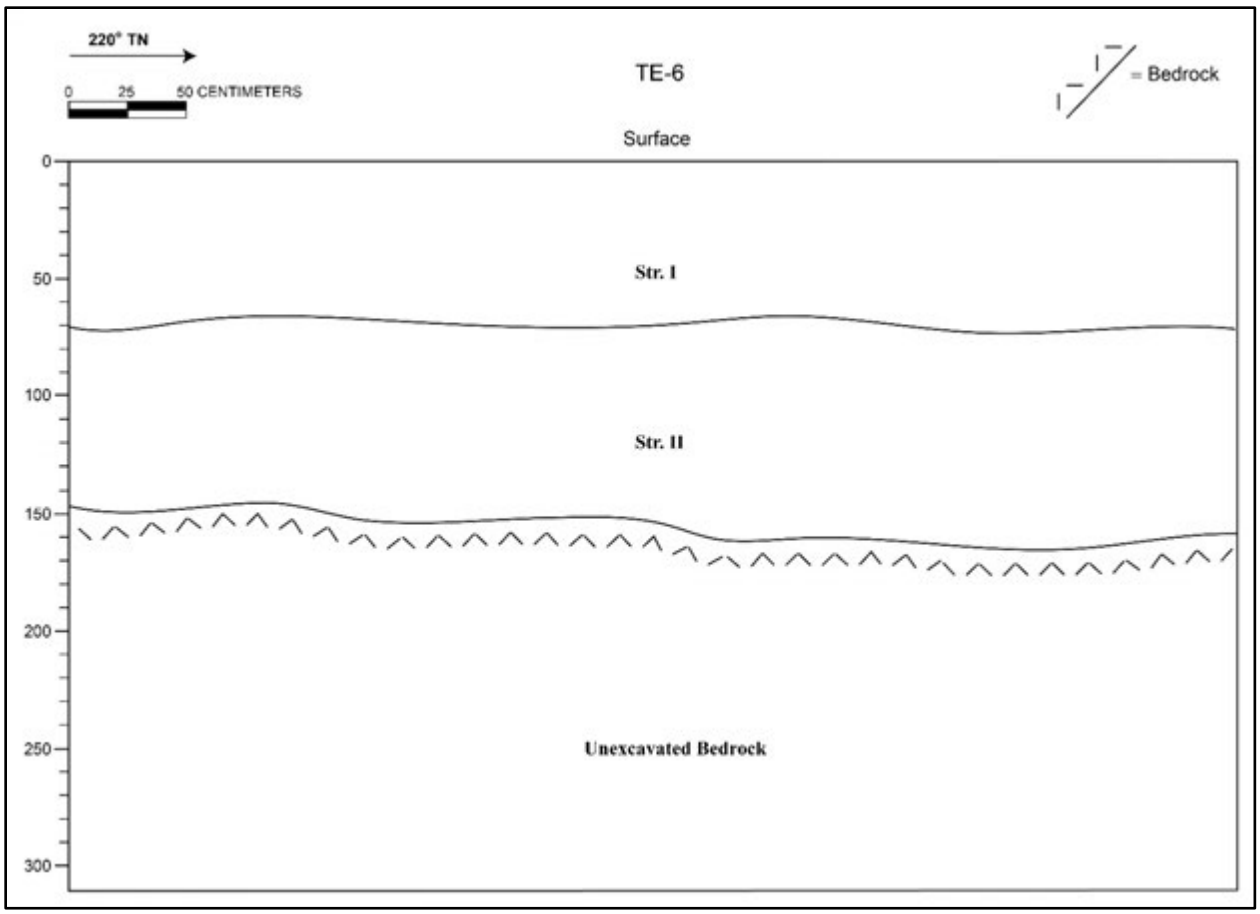


Figure 61. Stratigraphic profile of TE 6 southeast sidewall

Table 7. TE 6 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–70	A horizon; 7.5YR 2.5/3, very dark brown; weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; clear, smooth lower boundary; roots common; no cultural material present; natural Naalehu series sediment
II	70–160	B horizon, Natural; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, smooth lower boundary, terminated at bedrock; few roots; no cultural material present; natural Naalehu series sediment

4.2.7 Test Excavation 7 (TE 7)

Test Excavation 7 (TE 7) was located in the western corner of the proposed WWTP site portion of the project area, where a grove is planned for development (see Figure 42 and Figure 43). Figure 62 shows TE 7 marked with orange flagging tape prior to excavation. TE 7 measured approximately 5 m long and 1 m wide. TE 7 was excavated to a depth of up to 175 cmbs through two layers of natural Naalehu series sediment (Strata I and II) and terminated at basalt bedrock (Figure 63, Figure 64, and Table 8). No cultural materials were observed within TE 7.

Figure 62. Photo of TE 7 marked out with flagging tape prior to excavation; view to southwest

Figure 63. Photo of TE 7 south sidewall; view to southeast

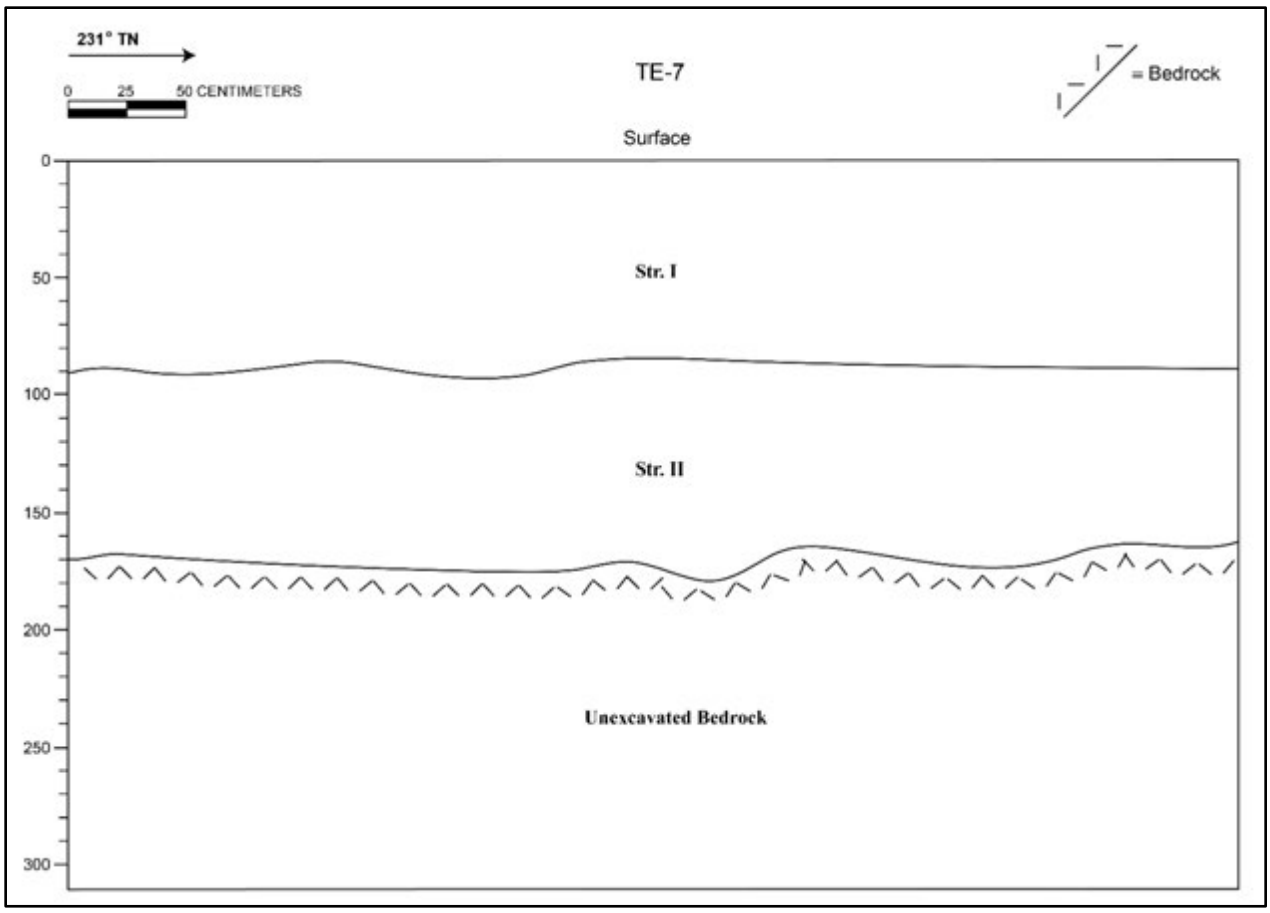


Figure 64. Stratigraphic profile of TE 7 southeast sidewall

Table 8. TE 7 stratigraphic description

Stratum	Depth (cmbs)	Description
I	0–90	A horizon; 7.5YR 2.5/3, very dark brown; weak, fine, granular structure; dry, loose, weak cementation consistence; slightly plastic; terrigenous sediment origin; clear, smooth lower boundary; roots common; no cultural material present; natural Naalehu series sediment
II	90–175	B horizon; 2.5YR 3/4, dusky red; silty clay loam; moderate, medium, subangular blocky structure; dry, weakly coherent, weak cementation consistence; slightly plastic; terrigenous sediment origin; abrupt, wavy lower boundary, terminated at bedrock; few roots; no cultural material present; natural Naalehu series sediment

Section 5 Historic Property Descriptions

Two historic properties (historic-era road alignments) were identified within the project area during this AIS. They are summarized in Table 9 and their distributions are depicted on Figure 21.

Table 9. Sites identified within the current project area

SIHP # (50-10-69)	Formal Type	Function
-31088	Road alignment (Volcano Road)	Transportation
-31089	Road alignment (Wood Valley Road/Coastal Road)	Transportation

5.1 SIHP # 50-10-69-31088

FORMAL TYPE:	Road (Wood Valley Road/Coastal Road)
FUNCTION:	Transportation
NUMBER OF FEATURES:	1
AGE:	Late 1800s-1920s
TAX MAP KEY:	[3] 9-6-005:999 (county right-of-way)
LAND JURISDICTION:	County of Hawai‘i
PREVIOUS DOCUMENTATION:	None

SIHP # 50-10-69-31088 consists of a 1.16-km (0.72-mile) section of the historic Wood Valley Road/Coastal Road alignment located within the current project area (see Figure 21). The section of this alignment within the project area follows the present Maile Street and Pikake Street alignments located between the Lower Moaula Road fork and Pakalana Street on the west and northern edges of Pāhala Town, respectively (see Figure 4). Construction of the modern Maile Street and Pikake Street roadways, which are approximately 5-10 m (16.5-33 ft) wide, has impacted all the constructed elements of the corresponding portions of the former Wood Valley Road/Coastal Road roadway (see Figure 32 through Figure 35).

Background research, particularly examination of historic maps from the Pāhala and greater Ka‘ū areas, indicate a coastal route extending from Nā‘ālehu to the Punalu‘u vicinity and then east and north through Pāhala Town, where it merged with the original (late 1800s) “Volcano Road” alignment further upslope (see Figure 8, Figure 10, Figure 11, Figure 65, and Figure 66). With the construction of the new Volcano Road (SIHP # -31089) in the 1920s the Wood Valley Road/Coastal Road alignment became obsolete as a primary route (see Section 5.2), and the central portion of the stretch between Pāhala and Nā‘ālehu was abandoned after the development of SIHP # -31089 (see Figure 65). Above Pāhala Town the route is still called Wood Valley Road, but it is used by residents of Wood Valley located approximately 5 miles to the northeast and not as a primary route to Kīlauea.

SIHP -31088 (Wood Valley Road/Coastal Road) is a primary transportation route that linked Kīlauea with Nā‘ālehu from the late 1800s–1920s. Pursuant to HAR §13-275-6, SIHP # -31088 is assessed as significant under Criterion d for the information it has yielded about primary transportation routes in the Pāhala vicinity during the late nineteenth and early twentieth centuries.

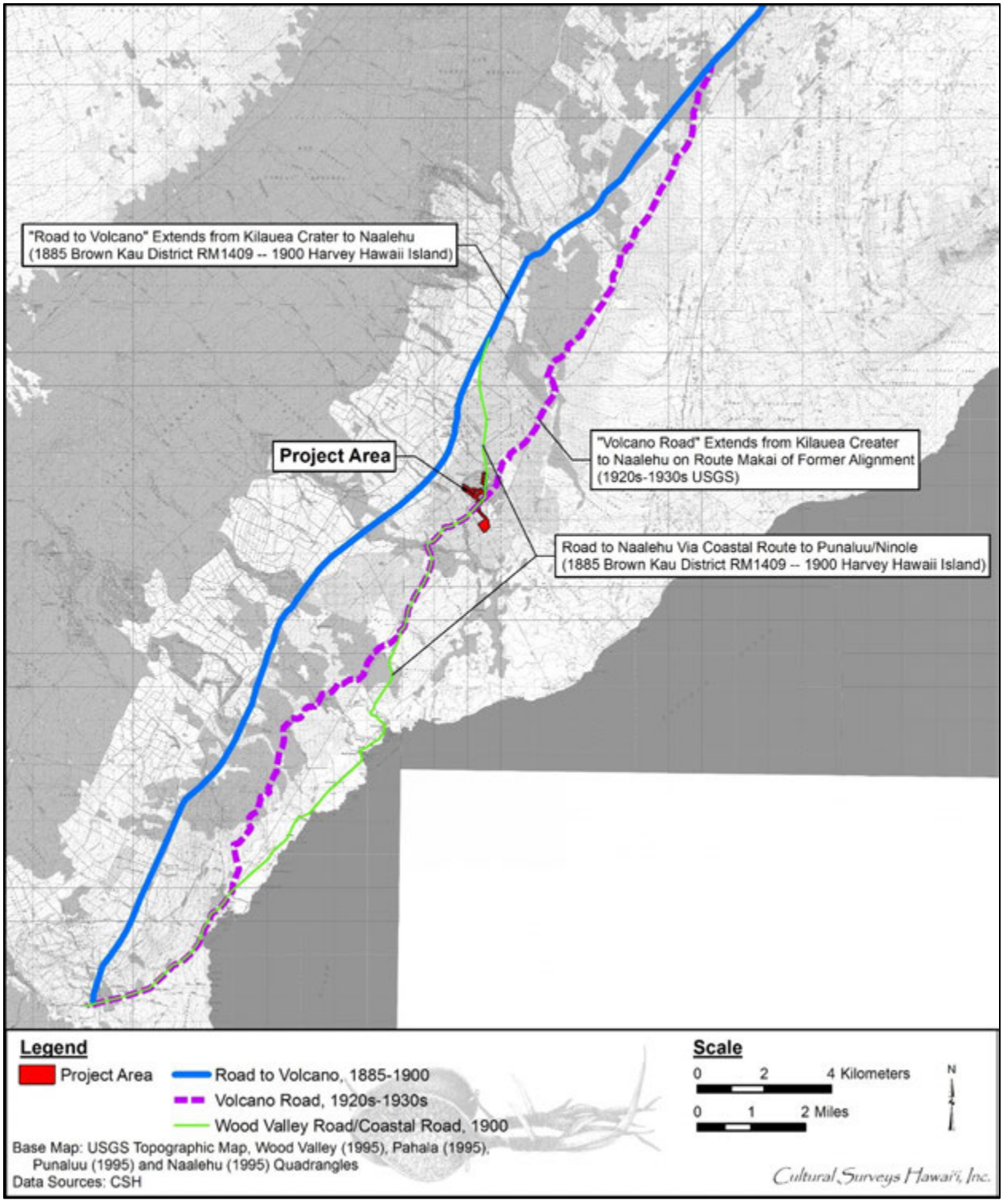


Figure 65. Portions of the 1995 Wood Valley, Pahala, Punaluu, and Naalehu USGS 7.5-minute topographic quadrangles showing the location of the project area in relation to historic roadways

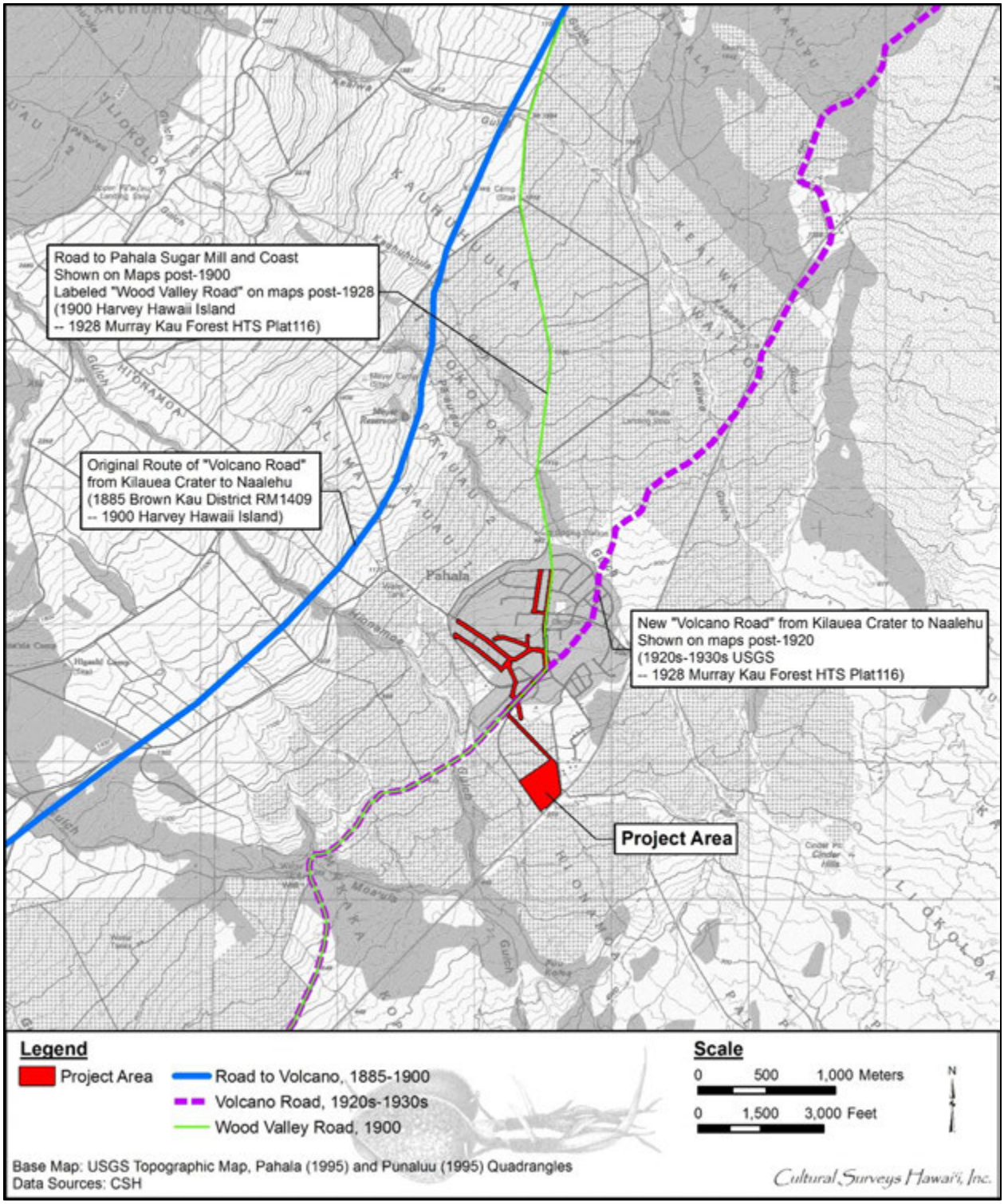


Figure 66. Portions of the 1995 Pahala and Punaluu USGS 7.5-minute topographic quadrangles showing the location of the project area in relation to historic roadways

5.2 **SIHP # 50-10-69-31089**

FORMAL TYPE:	Road alignment (Volcano Road)
FUNCTION:	Transportation
NUMBER OF FEATURES:	1
AGE:	1920s-1930s
TAX MAP KEY:	[3] 9-6-005:999 (county right-of-way)
LAND JURISDICTION:	County of Hawai‘i
PREVIOUS DOCUMENTATION:	None

SIHP # 50-10-69-31089 consists of a 0.47-km (0.29-mile) section of the historic Volcano Road alignment located with the current project area (see Figure 21). The section of this alignment within the project area follows the present Maile Street alignment located between the Lower Moaula Road fork and Pikake Street, overlapping along Maile Street with the SIHP # -31088 alignment. Additional portions of these two historic routes also overlapped further west toward Nā‘ālehu (see Figure 65). Construction of the modern Maile Street roadway, which is approximately 10 m (33 ft) wide, has impacted all the constructed elements of the corresponding portions of the former Volcano Road roadway (see Figure 33 through Figure 35).

Background research, particularly examination of historic maps from the Pāhala and greater Ka‘ū areas, indicate a route extending from Kīlauea Crater to Nā‘ālehu called “Volcano Road,” replacing the similarly named route located more *mauka* on maps from the late 1800s and early 1900s (see Figure 12, Figure 13, Figure 65, and Figure 66). With the construction of the Māmalahoa Highway (SIHP # 50-10-47-30187) in the 1940s the Volcano Road alignment became obsolete as a primary route; the 1967 USGS map (see Figure 14) shows the portion of the Volcano Road alignment along present Maile Street as part of a “Route 15” looping through Pāhala from the Belt Road, while the current USGS map (see Figure 1) does not label the route at all.

SIHP -31089 (Volcano Road) is a primary 1920s-1930s transportation route that linked Kīlauea with Nā‘ālehu.

Pursuant to HAR §13-275-6, SIHP # -31089 is assessed as significant under Criterion d for the information it has yielded about primary transportation routes in the Pāhala vicinity during the late nineteenth and early twentieth centuries.

Section 6 Significance Assessments and Register Eligibility

This AIS identified two newly documented historic properties: SIHP #s 50-10-69-31088 and -31089, overlapping historic-era roadways crossing through the project area and APE. Section 6.1 provides significance assessments for these historic properties under HRS §6E, while Section 6.2 provides National Register and Hawai‘i Register eligibility determinations.

6.1 Significance Assessments under HRS §6E

Under HRS §6E, for a historic property to be significant under HAR §13-275-6 (applicable to government projects), the historic property should possess integrity of location, design, setting, materials, workmanship, feeling, and/or association, and meet one or more of the following significance criteria:

a Be associated with events that have made an important contribution to the broad patterns of our history;

b Be associated with the lives of persons important in our past;

c Embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or possess high artistic value;

d Have yielded, or is likely to yield, information important for research on prehistory or history; or

e Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

The segments of SIHP #s -31088 and -31089 within the current project area only maintain integrity of location as all the constructed elements of the original roadways are no longer present today. While the corridors remain active roadways, they no longer function as the primary routes they once were; furthermore, the plantation setting has been altered to one based more on residential and commercial use, and the route names themselves have also changed. Pursuant to HAR §13-275-6, SIHP # s -31088 and -31089 are assessed as significant under Criterion d for the information they have yielded about primary transportation routes in the Pāhala vicinity during the late nineteenth and early twentieth centuries.

6.2 National Register and Hawai‘i Register Eligibility Determination

Under Section 106, historic property significance is evaluated as eligibility for listing on the National Register pursuant to 36 CFR 60.4. An evaluation of eligibility for listing on the Hawai‘i Register pursuant to HAR §13-198-8 is also included in this section. To be considered eligible for listing on the National Register and/or Hawai‘i Register, a historic property should possess integrity as described in Section 6.1 above, and meet one or more of the following broad significance criteria:

A That are associated with events that have made a significant contribution to the broad patterns of our history;

B That are associated with the lives of persons significant in our past;

C That embody the distinctive characteristics of a type, period, or method of construction, or that represent that work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

D That have yielded, or may be likely to yield, information important in prehistory or history.

As discussed in Section 6.1, none of the constructed elements of the subject portions of the original SIHP #s -31088 and -31089 roadways are evident today, and these portions of the historic properties lack integrity apart from their location (determined in consultation with SHPD; see Appendix D). These segments of these historic properties have limited relevance and importance in illustrating the historic context of vehicular transportation systems on Hawai‘i island. Therefore, SIHP #s -31088 and -31089 are evaluated as not eligible for inclusion on the National Register or Hawai‘i Register.

Section 7 Summary and Interpretation

The entire project area was covered in close pedestrian sweeps. Except for a couple small areas of dense vegetation, access and visibility were good during the survey. The project area has been completely altered by past agricultural and residential/town development. Historic remnants of the sugar plantation are present throughout Pāhala Town and surrounding the project area, but these remnants are all located outside the limits of the project area.

No significant artifacts or cultural deposits were observed on the ground surface within the proposed WWTP site portion of the project area; this area experiences ongoing disturbance by storm water runoff and macadamia harvesting operations. No lava tube openings were encountered within the project area.

A program of subsurface testing was conducted within the proposed WWTP site and consisted of mechanical excavation of seven test trenches. The subsurface testing generally revealed two distinct natural stratigraphic layers atop decomposing bedrock; these sediments are consistent with known sediment types in the area and with past and present agricultural land use. In one trench (TE 1) the two natural sediment layers are interposed by a layer of culturally sterile ash deposit, likely associated with activity at former sugar plantation. No cultural deposits or lava tubes were encountered during the testing.

Two historic properties were newly documented within the project area based on a review of historic maps. These include SIHP #s -31088 and -31089, overlapping historic-era road corridors which functioned as primary transportation routes throughout the greater Pāhala/eastern Ka‘ū area. None of the constructed elements of the subject portions of the original SIHP #s -31088 or -31089 roadways are evident today, and these portions of the historic properties lack integrity apart from their location. While the project would involve ground disturbance within the existing corresponding road corridors (Maile Street and Pikake Street), it would not create new impacts to the historic corridors nor change their present characteristics.

Section 8 Project Effect and Mitigation Recommendations

8.1 Project Effect

Following consultation among EPA, DOH, DEM, and SHPD regarding the project effect for the segments of the Wood Valley/Coastal Road (SIHP # 50-10-69-31088) and Volcano Road (SIHP # 50-10-69-31089) within the project area under HRS §6E-8, per HAR § 13-275-7(a)(1) the County of Hawai‘i DEM's project effect determination is "no historic properties affected." In accordance with federal regulations (36 CFR 800.5), the AIS results support a determination of "no historic properties affected."

8.2 Mitigation Recommendations

No mitigation commitments are recommended for the portions of SIHP #s 50-10-69-31088 or -31089 within the project area. The portions of these historic properties within the project area only maintain integrity of location as all the constructed elements of the original Wood Valley/Coastal road and Volcano road are no longer evident today.

While this project will have no effect on historic properties, archaeological monitoring during construction for identification and/or cautionary measures is proposed. This is based on the location of the project being within the "Pahala Historic District" (SIHP # 50-10-69-07362), as well as the presence near the project area of three historic properties as follows:

- a lava tube system (SIHP # 50-10-69-27570) with some cultural modifications beneath Pahala town;
- Ka‘ū High and Pāhala Elementary School (SIHP # 50-10-69-07522), a National Register-eligible historic property; and
- the Hawai‘i Belt Road, (SIHP # 50-10-47-30187), a National Register-eligible historic property south of the project area.

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Appendix A APE Land Jurisdiction

1

TMK	Owner	TaxAcres
396002016	PMK CAPITAL PARTNERS LLC	66.719
396002018	KAMEHAMEHA SCHOOLS	42.5
396002024	COUNTY OF HAWAII	0.41
396005036	EDMUND C. OLSON #2 TRUST	25.35
396005044	EDMUND C. OLSON #2 TRUST	0.4937
396014001	MCBEATH,BARBARA ANN	0.1714
396014002	BECKER,PHILIP ALEXANDER TRST /etal	0.1731
396014003	FUKUNAGA,FAMILY TR	0.1781
396014004	POLIDO,SANDRA A	0.1798
396014005	BRANCH,YOUNG ELENA	0.1764
396014006	BRANCH,YOUNG ELENA	0.1774
396014007	PANGLAO,MALIA L /etal	0.1741
396014008	NURIAL-DACALIO,DEISHA-LYN KAWEHILANI /etal	0.1798
396014009	LEDERGERBER,ALBERT /etal	0.1791
396014010	KAILIAWA,PATRICK K-DEC'D	0.1798
396014011	ANDRADE,CLEMENT /etal	0.1791
396014012	WROBLEWSKI,STEVEN W /etal	0.1814
396014013	STONE,ELIZABETH /etal	0.2503
396014014	LORENZO,FRANK J SR /etal	0.2154
396014017	ORCINO,LILYBETH AURELIO /etal	0.3083
396014018	JARA,JUDY S /etal	0.1609
396014019	LONGAKIT,FAMILY TRST	0.1561
396014020	LORENZO,STANLEY R JR /etal	0.1591
396014021	RAPP,MARK STEVEN /etal	0.165
396014022	OLIVEIRA,LILLIAN K ESTATE /etal	0.1654
396014023	SILVA,GEORGE A JR /etal	0.1652
396014024	ASUNCION,SIXTO P /etal	0.1626
396014025	FUKUNAGA,SABURO /etal	0.1673
396014026	GALIZA,ALFRED L SR/ADELA TR	0.1646
396014027	VILLA,JERRY R /etal	0.1644
396014028	MITSUNAGA,GREG HIDEKI SEBASTIAN /etal	0.1673
396014029	ITO,NEWTON SHIGERU/CECILIA MAE TTEES	0.1684
396014030	HAUGEN,IRIS N P /etal	0.1641
396014031	OKAMURA,TOSHIO /etal	0.1626
396014032	CLH,TRST	0.1615
396014033	BECKER,PHILIP A /etal	0.1576
396014034	YOKOTA,KENNETH K /etal	0.1581
396014035	EUSTATHIADES,ZOE ALEXANDRA	0.1627
396014036	KUNIHIRO,TAKESHI /etal	0.1674
396014037	GALIMBA,KELLY KEOKI TR	0.1674
396014038	ANDRES,DENNIS M	0.1658
396014039	ASISTIN,ALFREDO /etal	0.1658
396014040	KANESHIRO,HAROLD K TR /etal	0.1666
396014041	JUDALENA,KAZUTO R	0.1681
396014042	JOHNSON,MARIA BERNARDETT FG	0.1674
396014043	PONCE,RAMONA	0.1674
396014044	GALAPIR,WESLEY	0.168
396014045	SANDERS,KANDRA	0.2479
396014046	KATCHMAR,JOHN M TR	0.2435
396014047	RAMOS,DOMINGO C JR /etal	0.293
396014048	ASUNCION,EMITERIO /etal	0.2861
396014049	TAKAKI,RODNEY H	0.3014
396014050	KEKOA,JEFFREY /etal	0.3315
396014051	KAWACHI,MICHAEL H	0.3315
396014052	SUMIDA,TSURUO TR	0.3073
396014053	MUNNERLYN,MICHAEL /etal	0.3315
396014054	NAGASAKO,LEROY KENJI /etal	0.3315
396014055	MITSUNAGA,EDWIN H /etal	0.3315
396014056	ANDRADE,FAMILY TR	0.3014
396014057	RAMOS,FERDINAND CAPIRAL /etal	0.2861
396015001	KAWAAUHAU,STEPHANIE M /etal	0.2438

HIONAMOA 2 APE_TMK_Parcels

2

396015006	UEDA,HAJIME TRST /etal	0.3464
396015007	MIZUNO,STANLEY KAZUO TR	0.1662
396015008	YAMAGUCHI,SALLY C TRUST	0.5667
396015009	CAMBA,GLORIA /etal	0.6415
396015016	MANANTAN,RUBY N	0.2271
396015017	HIGASHI,CHUCK /etal	0.2939
396015018	HAWAII METHODIST UNION	0.262
396015019	DACALIO,MILTON /etal	0.2006
396015020	TAMONDONG,GARY /etal	0.3253
396015021	TAMONDONG,SHANDON L /etal	0.3544
396015022	YOSHIMURA,HISAKO I /etal	0.2879
396015023	KALEOHANO,ARTHUR H /etal	0.3247
396015024	NISHIMURA,NED NOBUO/GAIL TOYOKO TTEES	0.2443
396015025	GALIMBA,KELLY KEOKI /etal	0.3829
396015026	YOKOMIZO,FAMILY TRST /etal	0.3485
396015027	DACALIO,MORGAN	0.2939
396015028	NABOA,ROY/LUCINDA R TR	0.282
396015033	HAWAII METHODIST UNION	1.332
396016036	OLDMEN,MICHAEL J /etal	0.4
396016039	BARAN,EVELYN BARBARA	0.3017
396016040	NEAL,JULIA A /etal	0.6606
396016041	DAVIS-NATIVIDAD,BRYAN RUDY /etal	0.6259
396016042	PROVOST,AKIKO	0.6402
396016043	DACALIO,DON FRANCISCO /etal	0.4293
396016044	AH SAN,JOHN L	0.4253
396016045	NEAL,JULIA A /etal	0.3598
396016046	CAMBA,GLORIA	0.2523
396020001	OLSON,EDMUND C TRUST NO 2	0.1907
396020002	ORTEGA,MICHELLE M	0.184
396020003	RYDER,FRANK III /etal	0.1856
396020004	GANDALIRA,PEDRO /etal	0.1801
396020005	ROSALES,DAWN L C /etal	0.1787
396020006	EVANGELISTA,RODRIGO R /etal	0.1789
396020007	SOUZA,DAVID JR TR /etal	0.1768
396020008	CABATINGAN,ABDON /etal	0.1719
396020009	FUERTE,FLORENDO /etal	0.1733
396020010	REQUELMAN,EDWARD/C TR	0.1699
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396020014	GABINI,SONNY A /etal	0.203
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396020016	AGLIA,JOSEPH P /etal	0.2478
396020017	NAVARRO-VIERRA,CRISTEN DOLLY	0.2208
396020018	BECKER,PHILIP A /etal	0.2215
396020019	KAMAKURA,CLARITA /etal	0.1549
396020020	VILLA,TEOFILO	0.1495
396020021	LORENZO-OLEYTE,LENORA M /etal	0.1609
396020022	SANTIAGO,DENNIS E	0.1499
396020023	CABUDOL,APOLINARIO /etal	0.166
396020024	ANDRADE,EDWARD /etal	0.1563
396020025	DELOS SANTOS,MARIANO V /etal	0.1592
396020026	PENERA,FREDDIE L /etal	0.2018
396020027	LOUIS,ALBERT G /etal	0.2044
396020028	YAMAKI,JAMES M	0.2079

HIONAMOA 2 APE_TMK_Parcels

Appendix B County of Hawai‘i Correspondence to SHPD

WASTEWATER DIVISION
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
108 RAILROAD AVENUE - HILO, HAWAII 96720
(808) 961-8338 - FAX (808) 961-8644

October 17, 2017

Susan Lebo, Ph.D.
DLNR—State Historic Preservation Division
Kākuhihewa Bldg., Suite 555
601 Kamōkila Boulevard
Kapolei, Hawai'i 96707
Phone: (808) 692-8019
Fax: (808) 692-8020

Subject: Request for a State Historic Preservation Division determination letter (as per HAR §13-275-3) for a Wastewater Treatment and Disposal System Project in Pāhala, Pā'au'au 1, Ka'ū District, Hawaii Island (TMK: (3) 9-6-002:018)

Dear Dr. Lebo:

The County of Hawaii Wastewater Division is requesting a State Historic Preservation Division (SHPD) determination letter (as per HAR §13-275-3) for a Wastewater Treatment and Disposal System Project in Pāhala, Pā'au'au 1, Ka'ū District, Hawaii Island (TMK: (3) 9-6-002:018).

The project is to service the Pāhala community and is located on a 42.5 acre property near the southern edge of Pāhala Town presently owned by Kamehameha Schools and under lease to Royal Hawaiian Orchards. Almost the entire parcel is planted in a commercial macadamia nut orchard with a macadamia nut processing plant parking lot in the southeastern corner.

The project will include a Wastewater Treatment Plant (WWTP) on the 42.5 acre property that will connect to a line currently discharging wastewater into two (2) Large Capacity Cesspools (LCC's) which are lava tubes. The project may also include a network of sewerline improvements in Pāhala Town on the southwest and southeast sides of Ka'ū High & Pāhala Elementary School. This project will use the State Revolving Funds in addition to an EPA Grant (EPA Grant XP-96942401-6) which includes federal and state monies, so Section 106 consultation will also be required.

To supply background information to facilitate SHPD project review, we are providing an *Archaeological Field Inspection of a 42.5 Acre Property in the Ahupua'a of Pa'au'au 1, Ka'ū District, Hawai'i Island [TMK: (3) 9-6-002:018]* (Cleghorn 2016).

The project's point of contact at County of Hawaii Wastewater Division is:

Ms. Dora Beck, P.E.
Wastewater Division Chief
County of Hawaii Wastewater Division
108 Railroad Avenue
Hilo, Hawaii 96720

Hawaii County is an Equal Opportunity Provider and Employer

Request for a State Historic Preservation Division determination letter Wastewater Treatment and Disposal System Project in Pāhala, Pā'au'au 1, Ka'ū District, Hawaii Island (TMK: (3) 9-6-002:018)

Should you have any questions or comments about this project, please feel free to call me at (808) 961-8513 (dora.beck@hawaiicounty.gov) or you may also contact Lyle Hirota, Wastewater Deputy Division Chief at 808-961-8333 (lyle.hirota@hawaiicounty.gov).

We look forward to an SHPD determination letter (as per HAR §13-275-3) to guide this project moving forward.

Sincerely,

Dora Beck

Dora Beck, P.E.
Wastewater Division Chief

ATTACHMENT

Cc: William A. Kucharski, DEM Director
Diane Noda, DEM Deputy Director
Craig Lekven, P.E., Brown and Caldwell
Earl Matsukawa, Wilson Okamoto Associates

2

Harry Kim
Mayor

Wilfred M. Okabe
Managing Director

William A. Kucharski
Director

Diane A. Noda
Deputy Director

County of Hawai‘i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūanāo‘a Street, Suite 41 · Hilo, Hawai‘i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
cohdem@co.hawaii.hi.us
http://www.hawaiicounty.gov/environmental-management/

March 22, 2018

Via email: alan.s.downer@hawaii.gov and U.S. Mail

Alan S. Downer, Ph.D., Administrator
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawai‘i 96707

Subject: Request for Concurrence of Proposed Pāhala Wastewater Treatment Plant and Sewer System Project and the Archaeological Inventory Survey Approach for the Project Hionamoa Ahupua‘a, Ka‘ū District, Hawai‘i Island Tax Map Key: Multiple

Dear Dr. Downer:

On October 17, 2017, the County of Hawai‘i Department of Environmental Management, Wastewater Division, the project proponent, provided a written request to the State Historic Preservation Division (SHPD) for a letter of determination in accordance with Hawai‘i Administrative Rules (HAR) 13-275-3 for a proposed Pāhala Wastewater Treatment Plant (WWTP) and Sewer System Project.

Attached with the determination request to SHPD, the County supplied a November 11, 2016, letter report from Pacific Legacy, an archaeological firm, addressed to Dora Beck, P.E., Wastewater Division Chief for the Department of Environmental Management's Wastewater Division, the subject of which is an *Archaeological Field Inspection of a 42.5 Acre Property in the Ahupua‘a of Pa‘au‘au 1, Ka‘ū District, Hawai‘i Island [TMK: (3) 9-6-002:018]*. The letter reports on the finds of an archaeological field inspection conducted by Pacific Legacy of the proposed Pāhala WWTP and Sewer System Project area.

County of Hawai'i is an Equal Opportunity Provider and Employer

Alan S. Downer, Ph.D., Administrator
State Historic Preservation Division
March 22, 2018
Page 2

On February 22, 2018, David Shideler of Cultural Surveys Hawai‘i, Inc. (CSH) met with SHPD Archaeology Branch Chief Dr. Susan Lebo to follow up on the County of Hawai‘i’s determination request. They discussed the proposed Pāhala Wastewater Treatment Plant and Sewer System Project in the Hionamoa Ahupua‘a, Ka‘ū District, Hawai‘i Island, which has multiple tax map keys. Attached is the original correspondence from CSH, the contents of which are also described below. The site map showing the proposed layout and location of the proposed test excavation areas is attached to CSH’s correspondence.

The reported outcome of the February 22, 2018, discussion between CSH and Dr. Lebo is summarized as follows:

1. Dr. Lebo indicated a desire for an archaeological inventory survey addressing the entire area of proposed ground disturbance, with subsurface testing.

2. Dr. Lebo indicated particular concern for a good faith effort to address possible lava tubes within the area of proposed ground disturbance. Related investigations would include an effort to develop available information on the location of any such lava tubes, further pedestrian work, and subsurface testing.

3. Dr. Lebo indicated a schema of a total of six backhoe assisted excavations (one in Lagoon 1, one in Lagoon 4, and one in each of Basins 1, 2, 3, and 4) which would only need to go as deep as the proposed maximum excavation for the lagoons/ basins. This would probably be all of the indicated subsurface testing required.

4. Dr. Lebo indicated a desire that all areas of project-related ground disturbance that were not addressed in the Pacific Legacy 2016 report be addressed in the AIS. In particular, this would include consideration of the lateral installation areas, predominately located along existing residential subdivision roadways. AIS efforts in these later installation areas probably would not require subsurface testing, but would include documentation and an evaluation of how these streets might relate to a possible historic plantation village or historic property designation.

Backhoe excavations would likely measure 20’ long by 2’ wide. The depth of excavation at each trench would be determined by whichever of the following is reached first: bedrock; maximum depth of project-related ground disturbance indicated for that location; or a depth of 6 feet, which is the approximate maximum depth of the naturally occurring sediments throughout the project area. Typically, this subsurface testing schema would be:

- Refined in the course of consultation with the SHPD as applicable during the surface survey work;

Alan S. Downer, Ph.D., Administrator
State Historic Preservation Division
March 22, 2018
Page 3

- Refined to address new locations encountered in the surface survey that indicate a probability of subsurface cultural deposits; and
- Refined to avoid trees, tree roots, and other conflicting constraints.

We kindly request concurrence of this AIS strategy. Please feel free to contact me with any questions or concerns.

Sincerely,

William A. Kucharski
Director

WK:mef

Attachment: CSH 3/15/18 letter

cc: Dr. Susan Lebo, SHPD (with attachment)
Sean Naleimaile, SHPD (with attachment)
Dora Beck, P.E., Wastewater Division (with attachment)
Craig Lekven, Brown and Caldwell (w/o attachment)

State Historic Preservation Division
HRS 6E Submittal Form

Per §6E, Hawai'i Revised Statutes, if the Project requires review by the State Historic Preservation Division (SHPD), please review and fill out this form and submit all requested information to SHPD. Please submit this form and project documentation **electronically** to:

dlnr.intake.shpd@hawaii.gov

If you are unable to submit electronically, please contact SHPD at (808) 692-8015. Mahalo.

The submission date of this form is: April 25, 2018

1. APPLICANT (select one)

☐ Property Owner ☑ Government Agency

2. AGENCY (select one)

☐ Planning Department ☐ Department of Public Works ☑ Other (specify): County of Hawai'i,

Type of Permit Applied For: Concurrence with AIS approach

3. APPLICANT CONTACT

3.1) Name: William A. Kucharski 3.2) Title: Director

3.3) Street Address: 345 Kekuanao'a Street, Suite 41

3.4) County: Hawai'i 3.5) State: HI 3.6) Zip Code: 96720

3.7) Phone: (808) 961-8083 3.8) Email: cohdem@co.hawaii.hi.us

4. PROJECT DATA

4.1) Permit Number (if applicable): Not applicable

4.2) TMK [e.g. (3) 1-2-003:004]: (3) 9-6-002:018

4.3) Street Address: Adjacent to Maile Street, Pahala

4.4) County: Hawai'i 4.5) State: HI 4.6) Zip Code: 96777

4.7) Total Property Acreage: 42.5 acres

4.8) Project Area (acreage, square feet): 14 acres

4.9) List any previous SHPD correspondence (LOG Number & DOC Number, if applicable):

LOG NO. 2018.00722 DOC NO.

5. PROJECT INFORMATION

5.1) Does the Project involve a Historic Property? A Historic Property is any building, structure, object,

district, area, or site, including heiau and underwater site, **which is over 50 years old** (*HRS §6E-2*).

☐ Yes ☑ No

5.2) The date(s) of construction for the historic property (building, structure, object, district, area, or site, including heiau and underwater site) is not applicable

5.3) Is the Property listed on the Hawai‘i and or National Register of Historic Places? To check: http://dlnr.hawaii.gov/shpd/

☐ Yes ☑ No

5.4) Detailed Project Description and Scope of Work:

Wastewater Treatment and Disposal System Project in Pahala, Pa'au'au 1, Ka'u District, Hawaii Island (TMK: (3) 9-6-002:018). The project is to service the Pahala community and is located on a 42.5 acre property near the southern edge of Pahala Town presently owned by Kamehameha Schools and under

5.5) Description of **previous** ground disturbance (e.g. previous grading and grubbing):

Majority of project area is presently macadamia nut orchard and residential neighborhood

5.6) Description of **proposed** ground disturbance (e.g. # of trenches, Length x Width x Depth):

Project will involve construction/installation of wastewater treatment lagoons, land application tree groves, a polishing constructed wetland, and associated pipelines and structures.

5.7) The Agency shall ensure whether historic properties are present in the project area, and, if so, it shall ensure that these properties are properly identified and inventoried. Identify all known historic properties:

No archaeological inventory survey has been completed for the updated Pahala WWTP project

5.8) Once a historic property is identified, then an assessment of significance shall occur.

Integrity (check all that apply):

☐ Location ☐ Design ☐ Setting ☐ Materials ☐ Workmanship ☐ Feeling ☐ Association

Criteria (check all that apply):

☐ a – associated with events that have made an important contribution to the broad patterns of our history
☐ b – associated with the lives of persons important in our past
☐ c – embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value
☐ d – have yielded, or is likely to yield, information important for research on prehistory or history
☐ e – have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts - - these associations being important to the group's history and cultural identity

5.9) The effects or impacts of a project on significant historic properties shall be determined by the agency.

Effect Determination (select one):

☐ No Historic Properties Affected
☐ Effect, with Agreed Upon Mitigation Commitments (§6E-42, HRS)
☐ Effect, with Proposed Mitigation Commitments (§6E-8, HRS)

5.10) This project is (check all that apply, if applicable):

☑ an activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency;

☑ carried out with Federal financial assistance; and or

☑ requiring a Federal permit, license or approval.

If any of these boxes are checked, then the Project may also be subject to compliance with Section 106 of the National Historic Preservation Act (NHPA).

6. PROJECT SUBMITTALS

6.1) Please submit a copy of the Tax Map Key (TMK) map

6.2) Please submit a copy of the property map showing the project area and indicate if the project area is smaller than the property area.

6.3) Please submit a permit set of drawings. A permit set is a set of drawings prepared and signed by a licensed architect or engineer and is at least 65% complete.

6.4) Are you submitting a survey?

☐ Yes ☑ No

Specify Survey:

6.5) Did SHPD request the survey?

☐ Yes ☐ No

If 'Yes', then please provide the date, SHPD LOG NO, and DOC NO:

Date: LOG NO. DOC NO.

6.6) **SURVEY REVIEW FEES**. Fee for Review of Reports and Plans (§§13-275-4 and 284-4). A filing fee will be charged for all reports and plans submitted to our office for review. Please go to:

http://dlnr.hawaii.gov/shpd/about/branches/archaeology/filing-fee-schedule/

A check payable to the Hawaii Historic Preservation Special Fund should accompany all reports or plans submitted.

6.7) Please submit color photos/images of the Historic Property (any building, structure, object, district, area, or site, including heiau and underwater site) that will be affected by the Project.

The following are the minimum number and type of color photographs required:

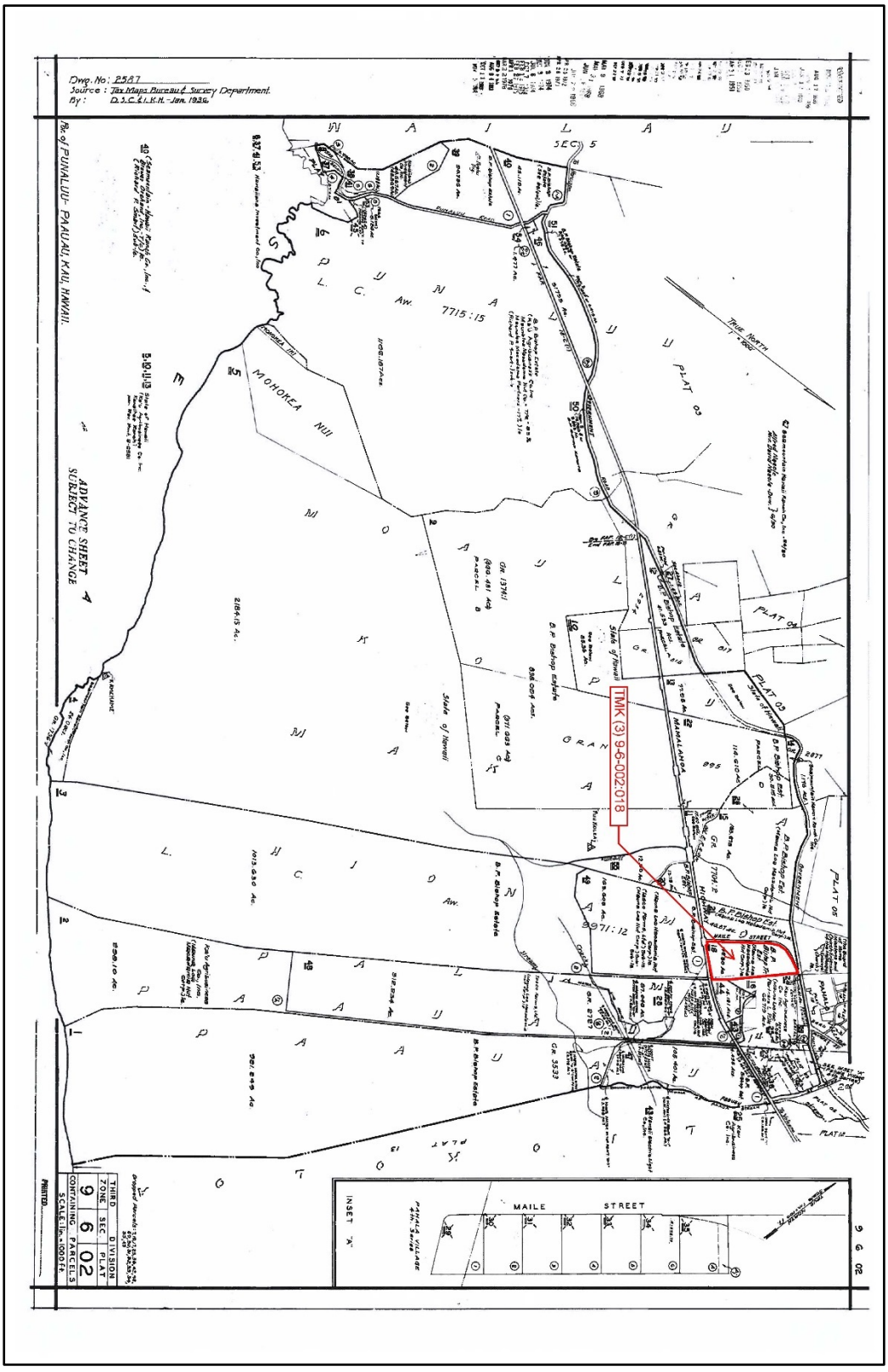
Quantity	Description
1-2	Street view(s) of the resource and surrounding area
1-2	Over view of exterior work area
1	exterior photo of the North elevation (if applicable)
1	exterior photo of the South elevation (if applicable)
1	exterior photo of the East elevation (if applicable)
1	exterior photo of the West elevation (if applicable)
1-2	interior photos(s) of areas affected (if applicable)

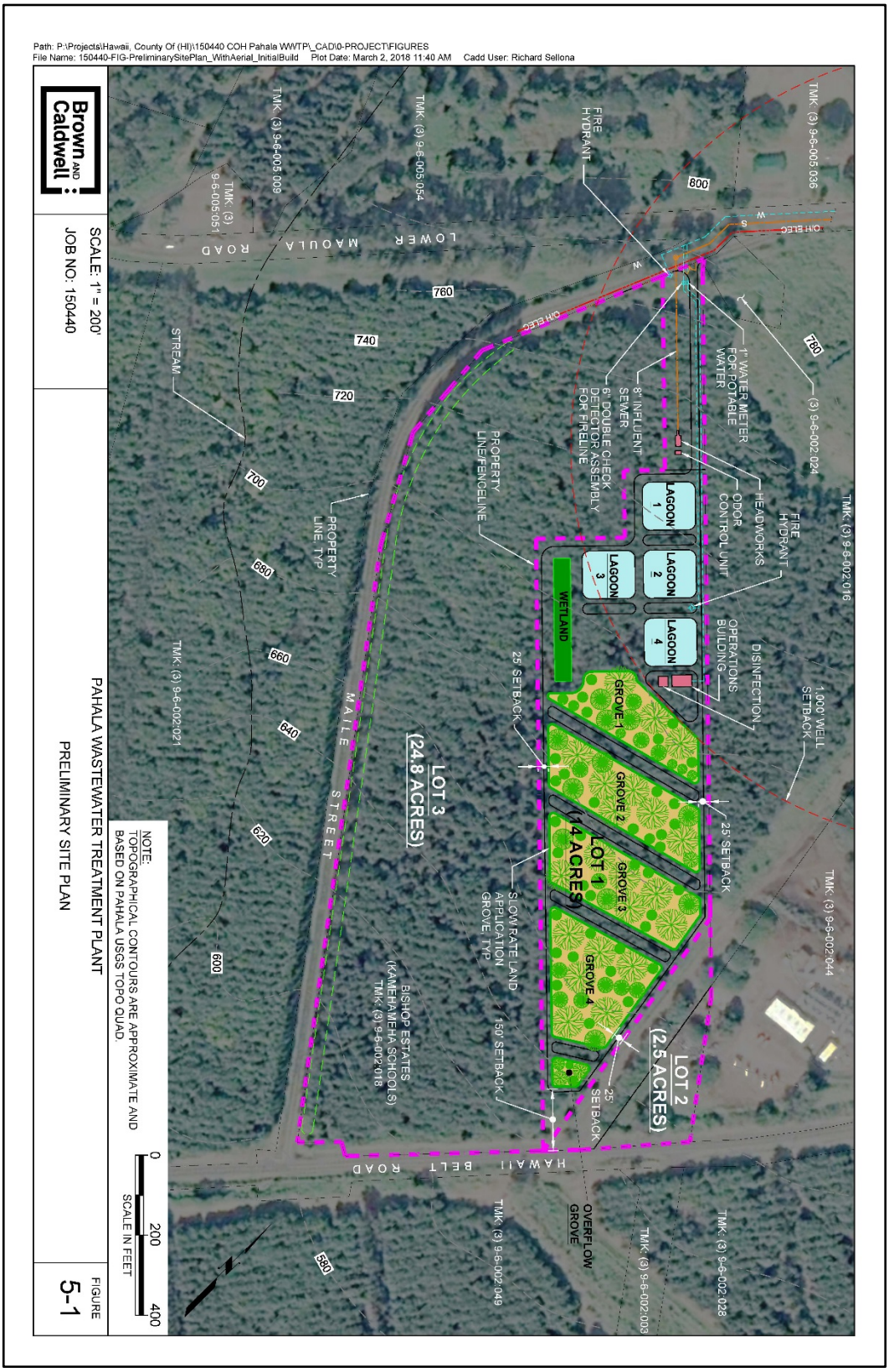
CHECKLIST

☑ **SHPD FORM 6E** (this form)

☑ **PROJECT SUBMITTALS** (any requested documentation for items 6.1 - 6.7 of this form)

☑ **FILING FEE FORM** (if applicable)


TMK (3) 9-6-002:018
Dwg. No: 2587
Source: Tax Maps Bureau & Survey Department.
By: D.L.C.E.I.K.H. - Jan. 1926.
Plat of PUNALUU- PAAUAU, KAU, HAWAII.
ADVANCE SHEET SUBJECT TO CHANGE
MOHOKEA NUI
PUNALUU
MAILE STREET
INSET "A"
THIRD ZONE 9 SEC 6 DIVISION PLAT 02
CONTAINING PARCELS
SCALE: 1in. = 1000 ft.
PRINTED


Path: P:\Projects\Hawaii, County Of (HI)\150440 COH Pahala WWTP_CAD\0-PROJECT\FIGURES
File Name: 150440-FIG-PreliminarySitePlan_WithAerial_InitialBuild Plot Date: March 2, 2018 11:40 AM Cadd User: Richard Sellona
Brown AND Caldwell
SCALE: 1" = 200'
JOB NO: 150440
PAHALA WASTEWATER TREATMENT PLANT
PRELIMINARY SITE PLAN
FIGURE 5-1
NOTE: TOPOGRAPHICAL CONTOURS ARE APPROXIMATE AND BASED ON PAHALA USGS TOPO QUAD.
SCALE IN FEET 0 200 400
LOT 3 (24.8 ACRES)
LOT 1 (14 ACRES)
LOT 2 (2.5 ACRES)
LAGOON 1
LAGOON 2
LAGOON 3
LAGOON 4
WETLAND
GROVE 1
GROVE 2
GROVE 3
GROVE 4
OVERFLOW GROVE
DISINFECTION
OPERATIONS BUILDING
HEADWORKS
ODOR CONTROL UNIT
1" WATER METER FOR POTABLE WATER
8" INFLUENT SEWER
6" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRELINE
FIRE HYDRANT
PROPERTY LINE/FENCELINE
PROPERTY LINE, TYP
SLOW RATE LAND APPLICATION GROVE, TYP
25' SETBACK
150' SETBACK
1,000' WELL SETBACK
STREAM
MALE STREET
LOWER MAOULA ROAD
HAWAII BELT ROAD
BISHOP ESTATES (KAMEHAMEHA SCHOOLS) TMK: (3) 9-6-002:018
TMK: (3) 9-6-005:036
TMK: (3) 9-6-005:054
TMK: (3) 9-6-005:009
TMK: (3) 9-6-005:051
TMK: (3) 9-6-002:024
TMK: (3) 9-6-002:016
TMK: (3) 9-6-002:044
TMK: (3) 9-6-002:028
TMK: (3) 9-6-002:003
TMK: (3) 9-6-002:049
TMK: (3) 9-6-002:021
OH ELEC
800
780
760
740
720
700
680
660
640
620
600
580

SHPD 6E Form; Item 5.4) Detailed Project description and Scope of Work

Background

The Pāhala Large Capacity Cesspool Closure is in Pahala, Pa'au'au 1, Ka'u District, Hawaii Island. The project includes a new collection system and treatment and disposal facility to service the Pahala community. The collection system is located on County streets. The treatment disposal facility will occupy 14.9 acres and is located on a portion a 42.5 acre property near the southern edge of Pahala Town presently owned by Kamehameha Schools and under lease to Royal Hawaiian Orchards. Almost the entire parcel is planted in a commercial macadamia nut orchard with a macadamia nut processing plant parking lot in the southeastern corner.

The project will also close two (2) Large Capacity Cesspools (LCC's).

This project will use the State Revolving Funds in addition to an EPA Grant (EPA Grant XP-96942401-6) which includes federal and state monies, so Section 106 consultation will also be required.

There are 2 areas of disturbance related to the project :

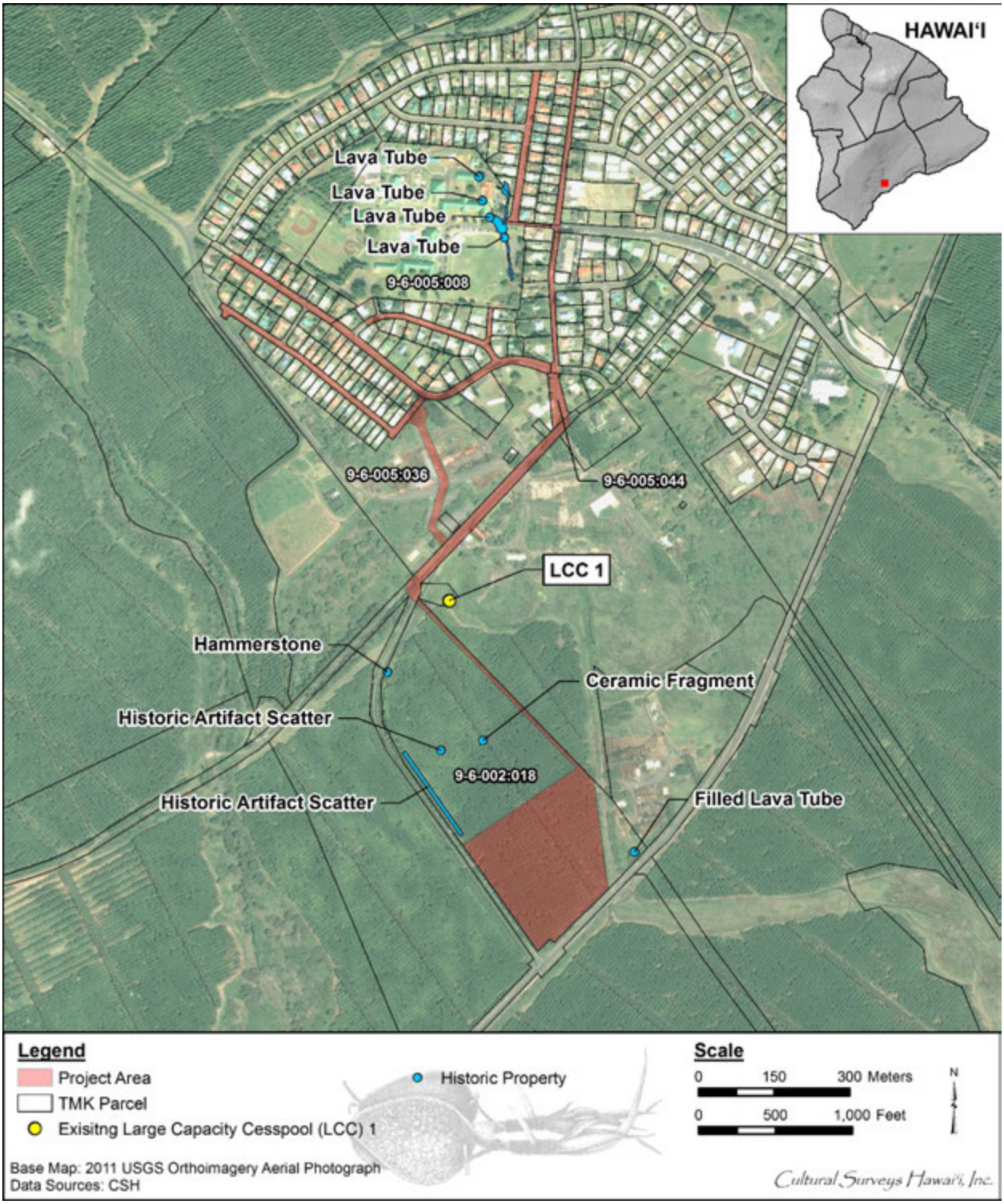
1) The new wastewater collection system will be located within public right-of-way (ROWs) in the Pāhala community. The streets within the community have been improved with asphaltic concrete (AC) surfaces with shoulders consisting improved or grass swales. Most of the streets do not have curbs or gutters. The streets have two travel lanes, one lane in each direction, although not all the streets have been stripped. The travel surface appears to be about 22 to 24 feet wide. The streets are under the jurisdiction the County and do not have TMKs. See Figure ----

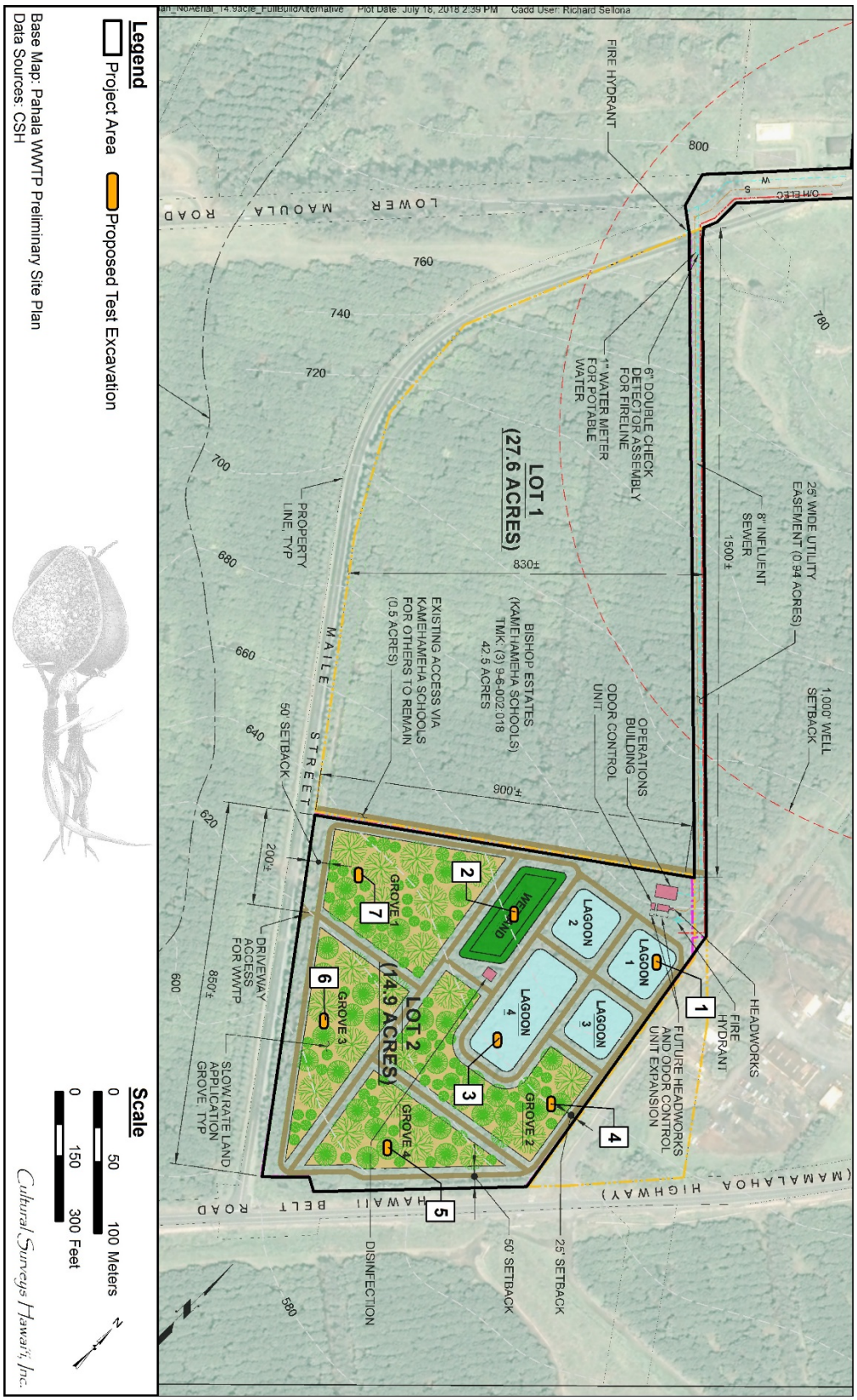
   The collection system line will use polyvinyl chloride (PVC) pipe which is corrosion resistant. The County's sewer standards show the trenches for sewer lines would require at least 4 feet of cover from the top of the pipe to grade and 12 inches of cushion material on both sides of the line and 6 inches below the line. This means the typical sewer trenches will be about 3 feet wide and at least 6 feet deep.

2) The treatment and disposal facility project site will occupy approximately 14.9 acres east (makai) of an existing access road to the adjacent parcel in the northwest corner of the Maile Street and Mamalahoa Highway intersection outside of the State of Hawai'i Department of Transportation right-of-way . The project site will occupy a portion within TMK: 9-6-002:018. An approximately 25-foot by 1,500-foot utility easement will be disturbed to construct a trench according to County standards for the influent line to the 14.9-acre site which will also be disturbed to construct treatment and disposal facility.

   The 14.9-acre treatment and disposal facility will consist of: an area for headworks and operations building: 4 lagoons to treat the effluent; a wetland area for further treatment and disinfection; 4 planted groves for disposal of the treated effluent. Each of the lagoons will require excavation about 10 feet; the planted groves about 6 feet and the wetland about 4 feet. See Figure ------

   The collection system and the treatment and disposal facility will be owned and operated by the County Department of Environmental Management and as such will be a public facility.


HAWAI'I
Lava Tube
Lava Tube
Lava Tube
Lava Tube
9-6-005:008
9-6-005:036
9-6-005:044
LCC 1
Hammerstone
Ceramic Fragment
Historic Artifact Scatter
9-6-002:018
Historic Artifact Scatter
Filled Lava Tube
Legend
Project Area
TMK Parcel
Exisitng Large Capacity Cesspool (LCC) 1
Historic Property
Scale
0 150 300 Meters
0 500 1,000 Feet
N
Base Map: 2011 USGS Orthoimagery Aerial Photograph
Data Sources: CSH
Cultural Surveys Hawai'i, Inc.


Legend
Project Area
Proposed Test Excavation
Base Map: Pahala WWTP Preliminary Site Plan
Data Sources: CSH
Scale
0 50 100 Meters
0 150 300 Feet
N
Cultural Surveys Hawai'i, Inc.
LOT 1 (27.6 ACRES)
LOT 2 (14.9 ACRES)
LOWER MAOULA ROAD
MAILE STREET
HAWAII BELT ROAD
(MAMALAHOA HIGHWAY)
FIRE HYDRANT
6" DOUBLE CHECK DETECTOR ASSEMBLY FOR FIRELINE
1" WATER METER FOR POTABLE WATER
PROPERTY LINE TYP
25' WIDE UTILITY EASEMENT (0.94 ACRES)
8" INFLUENT SEWER
1,500 ±
1,000' WELL SETBACK
OPERATIONS BUILDING
ODOR CONTROL UNIT
BISHOP ESTATES (KAMEHAMEHA SCHOOLS) TMK: (3) 9-6-002:018 42.5 ACRES
EXISTING ACCESS VIA KAMEHAMEHA SCHOOLS FOR OTHERS TO REMAIN (0.5 ACRES)
50' SETBACK
±1,005
830±
200±
850±
DRIVEWAY ACCESS FOR WWTP
SLOW RATE LAND APPLICATION GROVE TYP
GROVE 1
GROVE 2
GROVE 3
GROVE 4
LAGOON 1
LAGOON 2
LAGOON 3
LAGOON 4
WETLAND
HEADWORKS
FUTURE HEADWORKS AND ODOR CONTROL UNIT EXPANSION
DISINFECTION
25' SETBACK
50' SETBACK
1
2
3
4
5
6
7

Appendix C SHPD Correspondence

DAVID Y. IGE
GOVERNOR OF
HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

August 20, 2018

William A. Kucharski, Director
County of Hawai‘i Department of Environmental Management
345 Kekūanāo‘a Street Suite 41
Hilo Hawai‘i 96720
William.Kucharski@hawaiicounty.gov

IN REPLY REFER TO:
Log No. 2018.00722
Doc. No. 1808JA02
Archaeology

Dear Mr. Kucharski:

SUBJECT: **Chapter 6E-8 and National Historic Preservation Act (NHPA) Section 106 Review – Request for Acceptance of the Archaeological Inventory Survey Approach for Proposed Pāhala Wastewater Treatment Plant and Sewer System Project Hionamoa Ahupua‘a, Ka‘ū District, Hawai‘i Island TMK: (3) 9-6-002:018**

This letter provides the State Historic Preservation Division's (SHPD's) response to the County of Hawai‘i Department of Environmental Management (DEM) office's March 22, 2018, letter concerning the subject titled *Request for Concurrence of Proposed Pāhala Wastewater Treatment Plant and Sewer System Project and the Archaeological Inventory Survey Approach for the Project Hionamoa Ahupua‘a, Ka‘ū District, Hawai‘i Island Tax Map Key: (3) 9-6-002:018* (William A. Kucharski, March 2018). The SHPD received this request on March 23, 2018 (Log No. 2018.00722) and a follow up letter on April 27, 2018 (Log No. 2018.01021).

This letter also reviews three additional documents, received electronically by SHPD on August 2, 2018. These documents, which include two aerial photomaps and a text summary, finalize the boundaries for the proposed Pāhala Wastewater Treatment Plant and Sewer System project area, and the locations and plans for seven test trenches to be excavated during the project archaeological inventory survey (AIS). The AIS will be conducted by Cultural Surveys Hawai‘i, Inc., (CSH), at the request of the County of Hawai‘i.

The submittal reviewed here follows a February 22, 2018, meeting between David Shideler of CSH and Dr. Susan A. Lebo of SHPD; the meeting was held to define an acceptable strategy for the project AIS and to obtain SHPS's concurrence with the plan. Additional correspondence in SHPD's files includes CSH's March 15, 2018, letter to Brown and Caldwell, with a copy to SHPD, also following up the February 22, 2018, SHPD-CSH consultation regarding the testing approach.

The proposed project will replace the current Pāhala Large Capacity Cesspool, in a portion of Pāhala in Pa‘au‘au 1 Ahupua‘a. This cesspool is one of two large-capacity cesspools that will close when the proposed project is completed.

The project will create a new collection system, and a treatment and disposal facility, both designed to serve the Pāhala community. The proposed collection portion of the project area will be located on County roads and streets, where trenches up to 6 feet deep will be excavated to accommodate the sewer system. The total area to be included in the collection system project area needs to be clarified. The County roads and streets, which cross through the central and southwest portions of Pāhala town, do not have TMK parcel numbers. Two wider roads assigned to TMK: (3) 9-6-005 Parcels 044 and 036 on the TMK photomap, connect the town road network with the treatment- and disposal-facility project area, farther south.

The treatment and disposal facility will occupy 14.9 acres in a portion of a 42.5-acre property south of Pāhala town that is currently owned by Kamehameha Schools and leased to Royal Hawaiian Orchards. Most of the parcel is located in a commercial macadamia nut orchard; a macadamia nut processing plant parking lot occupies the southeast corner. The 14-9-acre project area is bounded on the southeast by Hawai‘i Belt Road (Māmalahoa Highway), on the southwest by Maile Street, on the northwest side by orchard, and on the northeast side by a road that is not labeled in the available maps.

SHPD accepts the AIS approach. The seven units will include one in Lagoon 1, one in Lagoon 4, and one each in Basins 1, 2, 3, 4, and 5.

Please send two hard copies clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library.

Please contact Dr. Jane Allen at (808) 692-8027 or by email at Jane.Allen@hawaii.gov if you have any questions, or if we can be of assistance.

Aloha,
Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: Dora Beck, Dora.Beck@hawaiicounty.gov
Craig Lekven, CLekven@BrwnCald.com
William Folk, WFolk@culturalsurveys.com

Appendix D SHPD Meeting Notes

SHPD Meeting (Dec 6, 2018) Agenda Matters to Discuss with SHPD

Location: Kapolei

Time: Noon

Attendees: SHPD – Susan Lebo (SL) and Jane Allen (JA)

CSH – DS (12pm), WF (1pm)

- **HIONAMOA 2 Determining new/larger APE for Pahala Wastewater Project**
  SL: every lot will need to be part of the APE do not concern yourself with each lot.

  WF: anything with a lateral or to receive a lateral will be in the APE?

  SL/JA. LCC will be included in the APE,

  WF: The easement for a section of the new sewer line, and buildings related to the old mill operations that are to receive new laterals are all within one large parcel. Will we need to include the entire parcel in the APE?

  SL/JA: you will have a portion of the TMK parcel in the APE that includes the buildings; the building in your APE will be historic building. Those buildings will need to be reviewed by Architecture branch which may ask for an LRS for them, but the underground installation of WW line will not affect the building, you will still end up with no adverse effect/no historic properties effect – contact architecture they may request a "mini" LRS, We need to search to determine if the plantation may have a SHIP #.

  WF: The Pahala historic district map showing the SHIP # 7362 (Pahala Historic District) for the 1970's state wide inventory the SHPD/State Parks did in the 70's.

  SL: there is a SHIP # 7362. Did you contact Sean? Or here? in the district it depends if the archaeology is a component of the district. Email SW and Sean an email about historic district of Pahala. Statewide inventory of historical districts.

  WF: Yes. We will check again with Sean and email Dr. Lebo

  WF: So building would be contributing elements of a new SHIP or the 1970's historic district number if someone wished to nominate these for the registers.

  SL: 2-3 building associated with plantation; are they significant or on the State or Historic register? This should be addressed to architecture branch.

  WF: do we need to address the four roads since they are documented on historic maps.

  SL: You would indicate that there are historic roads, which are not in your project, and indicate which are within/through your APE. Obtain SIHP numbers for the roads. Will you

do anything to impact the roads? SHIP # integrity for the roads are only the location or the corridor. No change to the alignment; no impact.

Your project effect would be no effect for determination. With respect to that you are not creating any new impact and not changing characteristics.

Monitoring could be recommended for identification/cautionary measures not for Data Recovery.

Under 106 do you have any historical properties, single house lots not eligible for an historic property.

Notifications of homeowners that their house is within the APE will need to be done via public meetings and consultation letters

.

DS: passive consultation with homeowners?
WF: there will be public meetings,

SL: Give the home owners the project description at the public meeting. Who is the lead agency?

WF: EPA

SL: they will get input from you on APE. They need to do consultation/identification process to start the 60 days.

Identify historic properties within the APE.

Testing is not needed for the entire APE.

Staging areas need to be added within the APE. APE in letter and AIS need to be include text stating "staging areas will be within the existing road, the PA and APE" or something similar;

Funding of EPA and subject to 6E and 106. Ask for SHPD concurrence on APE. When you complete the 6E document (AIS), support county as no historic properties affected. Precautionary monitoring, to extensive excavation.

Under HRS 6E review – "No historic properties affected"; means the project will have no effect on significant historic properties. The CoH makes this determination and asks for SHPD concurrence. Supporting documents for this determination should be sent to SHPD Archaeology Branch and Architecture Branch.

For Federal projects (under Section 106) – "No adverse effect" means historic properties are present but there is no adverse impact to the properties. The EPA makes this determination and asks for SHPD concurrence.

EPA – 106 determination of "no historic properties affected".

LRS – identification purpose, no impact, no historic properties affected.

End time: 2:18

Harry Kim
Mayor

Wilfred M. Okabe
Managing Director

William A. Kucharski
Director

Diane A. Noda
Deputy Director

County of Hawai'i

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

345 Kekūanāo'a Street, Suite 41 • Hilo, Hawai'i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
Email: cohdem@hawaiicounty.gov

October 9, 2019

Via email (alan.s.downer@hawaii.gov) and U.S. Mail

Alan S. Downer, Ph.D., Administrator
Hawai'i State Historic Preservation Division
Department of Land and Natural Resources
601 Kamōkila Boulevard, Suite 555
Kapolei, Hawai'i 96707

RE: Pāhala Wastewater Treatment Plant and Sewer System Project
Hionamoa, Pālima, and Pā'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island
TMKs: (3) 9-6-002:016 por. and 018 por., 9-6-005:036 por. and 044, and County of Hawai'i Right-of Ways (Bautista et al. 2019)
Acceptance of Archaeological Inventory Survey Report (LOG No. 2018.000722)

Dear Dr. Downer:

The County of Hawai'i (COH) is proposing to undertake construction of the Pāhala Large Capacity Cesspool Replacement Project in Pāhala, Pa'au'au 1, Ka'ū District, Hawai'i Island. The project includes a new collection system and treatment and disposal facility to service the Pāhala community as well as closure of two Large Capacity Cesspools (LCCs). The collection system will be located primarily on County streets. The treatment and disposal facility will occupy 14.9 acres and is located on a portion of a 42.5-acre parcel, TMK (3) 9-6-002:018, near the southern edge of Pāhala Town. A Final Environmental Assessment is currently being prepared for this project. This project will use funds from a U.S. EPA Grant (EPA Grant XP-96942401-7) and from the State Revolving Funds (C150090-05, C150090-08) which includes federal and state monies.

On March 11, 2019, the County submitted to SHPD a Draft Archaeological Inventory Survey (AIS) for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Palima, and Pa'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island (Log No. 2018.000722). In May 2019, the EPA contacted Sean Naleimaile of your staff and confirmed that SHPD was reviewing the Draft AIS for both NHPA Section 106 consultation and HRS 6E-8 concurrence purposes.

On September 26, 2019, the EPA confirmed by letter that the EPA has determined that no historic properties will be affected by the undertaking. The basis for this determination was explained further in the Draft AIS submitted to SHPD in March 2019 by the County of Hawai'i, EPA's NHPA Section 106 designee. The two enclosed figures from the Draft AIS show the Area of Potential Effect (APE) and the treatment and disposal facility project site.

Based on the findings of the March 11, 2019, Draft AIS and the EPA's September 26, 2019, determination letter, we respectfully request that you review and accept the findings in the Draft AIS. Your acceptance of the Draft AIS is necessary so that needed final environmental assessment, design work, and eventually construction can proceed for the Pāhala Community Large Capacity Cesspool Replacement Project.

If you have any questions or desire additional information, please contact Dora Beck at (808) 961-8513 or dora.beck@hawaiicounty.gov

Sincerely,

William A. Kucharski
Director

Encs: Draft AIS APE
Draft AIS Treatment and Disposal Facility

cc: Craig Lekven, Brown & Caldwell
Kate Rao, EPA
Dora Beck, Wastewater Division Chief
S. Wilkinson, CSH

WK:mef

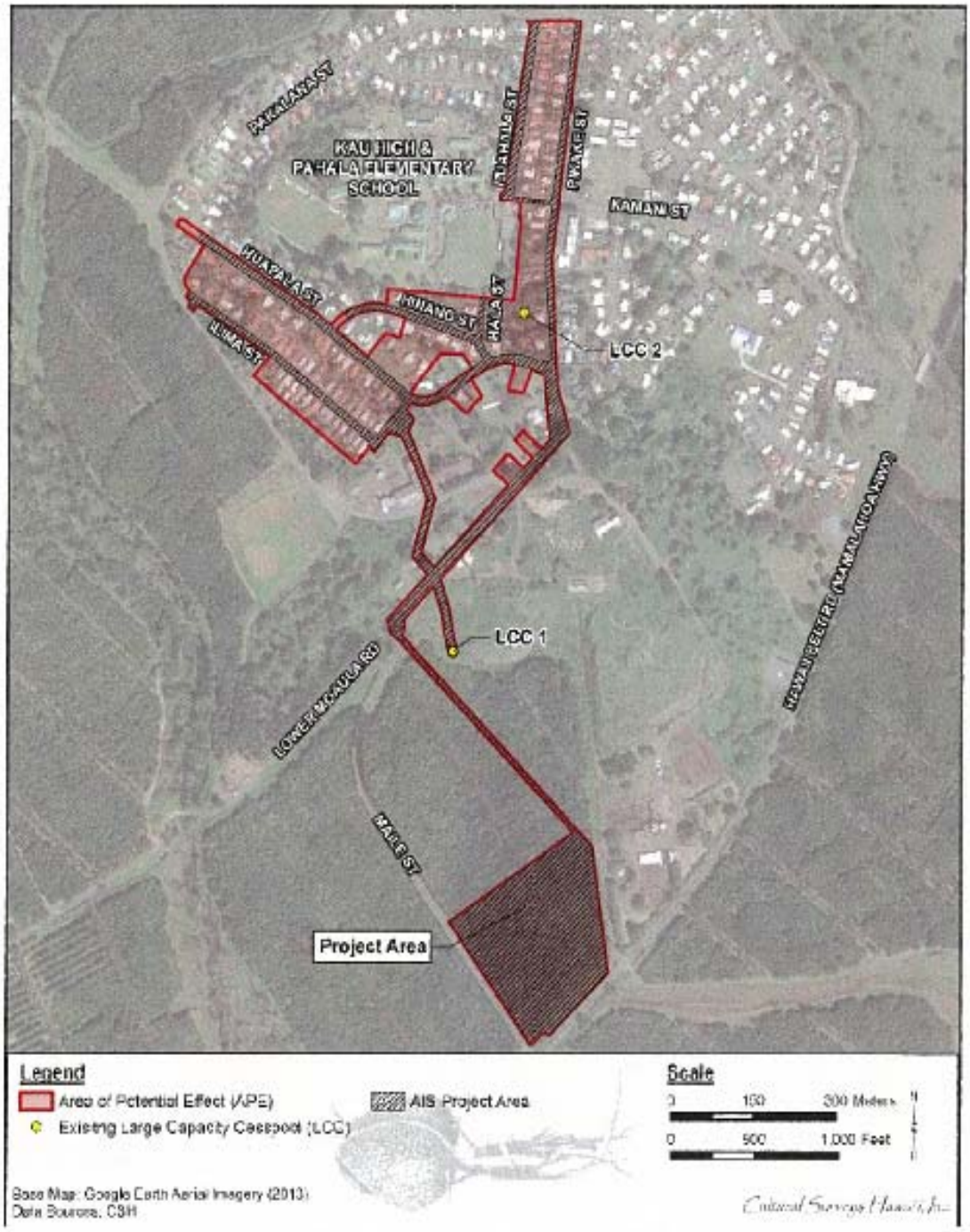


Figure 1. Area of Potential Affect and AIS Project Area for the Pāhala Community LCC Replacement Project

(Note: this is Figure 5 in the AIS)

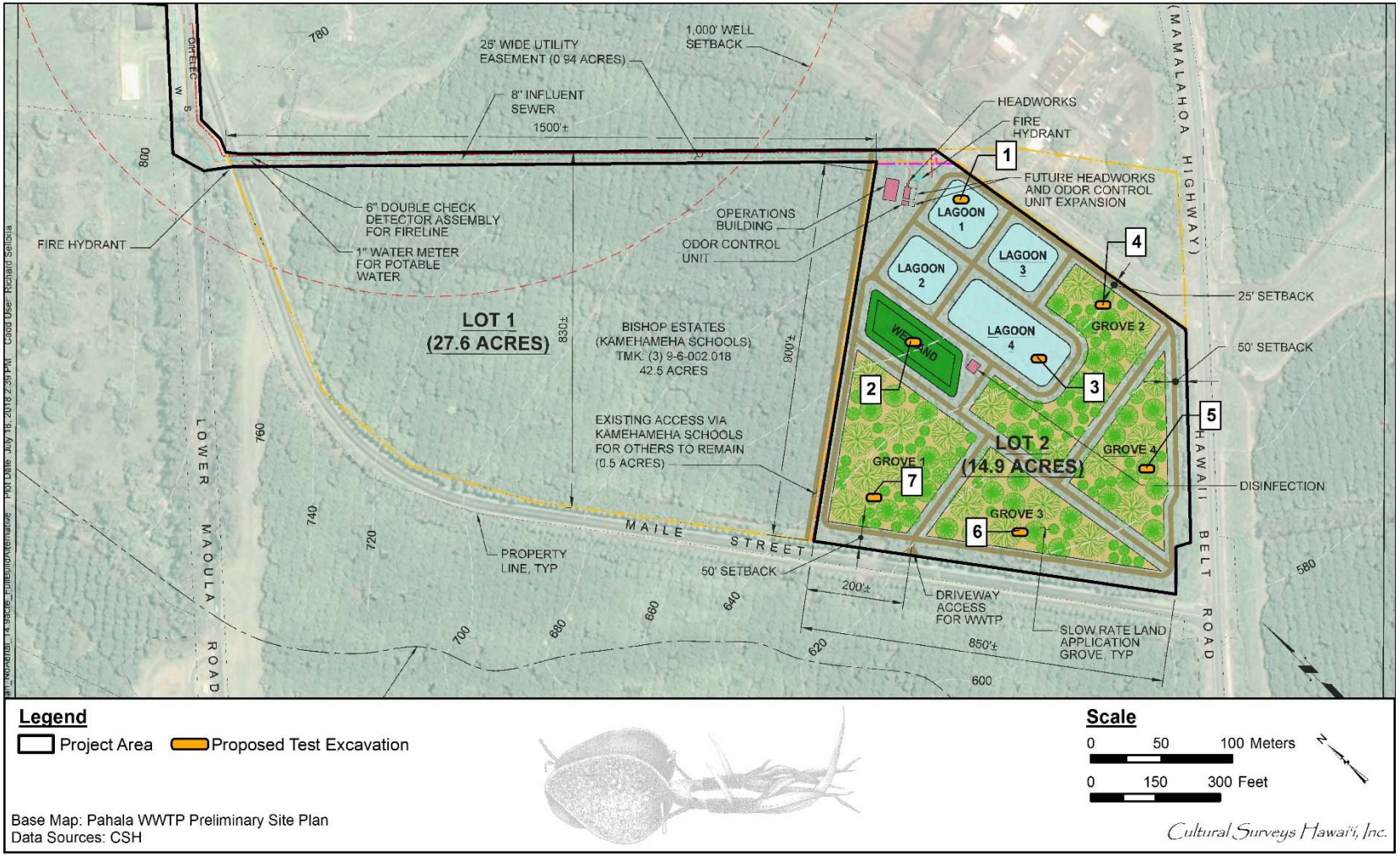


Figure 2. Pahala WWTP Preliminary Site Plan showing AIS test excavation locations

(Note: this is Figure 43 in the AIS)

Appendix D-1
National Historic Preservation Act Section 106 Consultation

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Certified Mail No.: 7008 1830 0002 6279 3093
Return Receipt Requested

September 26, 2019

Alan Downer, Ph. D., Administrator
Hawai'i State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Blvd., Suite 555
Kapolei, Hawai'i 96707

RE: National Historic Preservation Act (NHPA) Section 106 Consultation for the Pāhala Community Large Capacity Cesspool Replacement Project (EPA Grant XP-96942401)

Dear Dr. Downer:

The U.S. Environmental Protection Agency Region 9 (EPA) authorized our grantee, the County of Hawai'i (County), to initiate the NHPA Section 106 consultation process with the Hawai'i State Historic Preservation Division (SHPD) pursuant to 36 C.F.R. § 800.2(c)(4) for the above-referenced project in correspondence to you dated February 28, 2018.

On March 11, 2019, the County submitted to SHPD a Draft Archaeological Inventory Survey (AIS) for the Pāhala Wastewater Treatment Plant and Sewer System Project, Hionamoa, Pālima, and Pā'au'au 1 and 2 Ahupua'a, Ka'ū District, Hawai'i Island (Log No. 2018.000722). In May 2019, EPA contacted Sean Naleimaile of your staff and confirmed that SHPD was reviewing the Draft AIS for both NHPA Section 106 consultation and HRS 6E-8 concurrence purposes. However, Mr. Naleimaile recently contacted my staff seeking EPA's effect determination to complete the Section 106 process. While it was EPA's understanding that the County's March 2019 submission would be sufficient to convey EPA's effect determination, I am sending this letter to confirm that EPA has determined that no historic properties will be affected by the undertaking. The basis for this determination is summarized below and explained further in the Draft AIS submitted to SHPD in March 2019 by EPA's NHPA Section 106 designee.

Description of the Undertaking

The proposed undertaking involves construction of an improved wastewater system to replace two large capacity cesspools (LCCs) in the community of Pāhala, in the Ka'ū District, Island of Hawai'i. See Figure 1 for an overview of the existing LCCs, new collection system, and new treatment and disposal facility locations. Under the proposed undertaking, the County will perform the following actions:

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1) Acquire, or otherwise obtain the right to develop and use, a portion of a 42.5-acre parcel, identified as Site 7, that is currently owned by Kamehameha Schools, then construct a new secondary wastewater treatment and disposal facility within a portion of the parcel (see Figure 2);

2) Construct a wastewater collection system, primarily within the public right-of-way and two short segments within easements in the Pāhala community, to collect and convey sanitary waste from the residential lots to the new treatment and disposal facility;

3) Close and abandon two LCCs, according to Hawai'i Department of Health (DOH) closure procedures; and

4) Abandon the existing wastewater collection system in place.

The new secondary wastewater treatment and disposal facility will be located on a 14.9-acre portion of the 42.5-acre parcel identified as Site 7. This 42.5-acre parcel (Tax Map Key (TMK): 3-9-6-002:018), located adjacent to LCC 1 about 0.5 miles (2,600 feet) south of the developed area of the community, is owned by Kamehameha Schools and used as a macadamia nut orchard. See Figure 2 for a preliminary site plan showing the proposed location of the treatment and disposal facility within the southeast portion of Site 7.

The new wastewater treatment and disposal facility will consist of a headworks and an odor control unit, an operations building, four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen, an adjacent disinfection system to remove pathogens, and four slow-rate land treatment basins for disposal of the treated effluent. Construction will involve grading, excavating, and fill activities at Site 7. Excavation to depths of approximately 4 to 10 feet will be required to provide necessary capacity for the lagoons, constructed wetlands, and planted groves. An approximately 4-foot tall berm will be constructed on all four sides of the groves to contain rainfall from a 100-year, 24-hour storm event.

The proposed wastewater collection system will be located within 8 public streets: Maile Street; 'Ilima Street; Huapala Street; Hīnano Street; Hala Street (all located in the southern portion of the community) and Puahala Street; Kaimani Street and Pīkake Street (located on the eastern end of the community). These streets serve the residential areas and have two travel lanes with unpaved shoulders and no improved sidewalks. The new collection system will consist of a total of approximately 12,150 linear feet (2.3 miles) of corrosion-resistant polyvinyl chloride (PVC) piping, ranging in size from 8-inch diameter to 16-inch diameter. Construction of the new wastewater collection system will require trenching in locations throughout the Pāhala community, primarily within the right-of-way of public streets plus two short segments within easements. Trenches will typically be about 3 feet wide and at least 6 feet deep. Once the line is placed in the trench, the affected area will be backfilled to restore the existing topography.

The two LCCs in Pāhala are readily accessible for closure activities. LCC 1 is located in a parcel that has been previously cleared and is currently overgrown with tall grasses. It may be necessary to clear a path for construction vehicles and equipment to access LCC 1. Clearing an access road (or other similar work) will not be necessary to access LCC 2, which is located in the backyard

of a residential lot with access via the house driveway. The specific methods to be used for closure of the LCCs have not yet been determined but will be compliant with DOH requirements.

Abandonment and closure of the two LCCs and the existing wastewater collection system will likely require minor earthwork. The area of potential effects (APE) described below is designed to encompass all potential closure activities.

Area of Potential Effects

In accordance with 36 C.F.R. § 800.4(a)(1), EPA has defined the APE as the entire project area that will potentially experience ground disturbance due to excavation, trenching, grading, filling, vegetation removal, construction vehicle use, establishment and use of staging and laydown areas, and other similar activities. The APE encompasses the wastewater treatment plant development parcel, the entire length of the new wastewater collection system, utility and sewer line easements, the sites of the two existing LCCs, and properties with existing sewer laterals (see Figure 1).

Identification of Historic Properties

The County conducted a search for historic properties within the APE for this undertaking and two road segments were identified and documented as historic features in the Draft AIS. However, after further review and evaluation, the County determined that they were not eligible for inclusion on the National Register of Historic Places due to the lack of integrity apart from their location.

If potential artifacts or archeological resources are discovered during construction activities, the contractor will stop work immediately at that location and take all reasonable steps to secure the preservation of those features.

Native Hawaiian Organization Consultation

In accordance with the requirements of the National Historic Preservation Act, numerous stakeholders were consulted during the development of the Draft Environmental Assessment for the Pāhala Community Large Capacity Cesspool Replacement Project (Draft EA), including 14 Native Hawaiian Organizations that may attach religious or cultural significance to properties affected by the undertaking. On March 29, 2018, each of the following organizations was sent a copy of a project summary and a request for their written comments on the undertaking. Attachment A provides an example of the correspondence that was sent to all 14 organizations listed below. As of the date of this letter, no responses have been submitted to the County.

- Hawai'i Island Burial Council
- Association of Hawaiian Civic Clubs
- Charles Pelenui Mahi 'Ohana
- Friends of 'Iolani Palace
- Hawaiian Civic Club of Hilo
- Kamehameha Schools
- Kanu o ka'Āina Learning 'Ohana
- Ko'olau Foundation
- Maku'u Farmers Association
- Na Koa Ikaika Ka Lāhui Hawai'i
- Office of Hawaiian Affairs
- Pacific Agricultural Land Management Systems
- Partners in Development Foundation
- Pi'ihonua Hawaiian Homestead Community Association

Outreach

During the public comment period for the Draft EA (September 23, 2018 – December 10, 2018), EPA and the County received public comments expressing concern regarding impacts to "a burial cave with human skeletal remains and or shelving" that is "in the area where the County wants to put a Sewage wastewater treatment plant." Based on the available information, EPA and the County believe that these comments refer to the filled lava tube opening identified in the 2016 archaeological field inspection report that is described in Section 1.2 of the Draft AIS. To ensure that the undertaking does not affect this cultural resource, the County configured the site plan for the proposed wastewater treatment and disposal facility to ensure that the location of this lava tube opening would be outside the APE for this undertaking.

Finding of No Historic Properties Affected

In accordance with 36 C.F.R. § 800.4(d), EPA has reached a finding of no historic properties affected for this undertaking. Since there are no known historic or archeological sites within the APE, and since appropriate preservation measures will be taken should archeological resources be discovered during construction, this undertaking will have no effect on any historic or cultural resources or on any traditional and customary practices. In addition, the potential for encountering unexpected archeological resources within the site of the proposed treatment and disposal facility is low due to historical ground modifications and ongoing harvesting activities.

I am requesting your concurrence with the APE and the determination of no historic properties affected within 30 days of receipt of this letter. If I do not receive a response within 30 days of receipt, I will assume concurrence from your office and EPA will authorize the grant recipient to proceed with the project in accordance with 36 C.F.R. § 800.4(d)(1)(i).

If you require additional information or have questions regarding this request, please contact Kate Rao, Groundwater Protection Section, at (415) 972-3533 or via email at rao.kate@epa.gov.

Sincerely,

David Albright
Manager, Groundwater Protection Section
Water Division

cc:
William Kucharski, County of Hawai'i
Dora Beck, County of Hawai'i

Attachments:

Figure 1 -- *Area of Potential Affect and AIS Project Area for the Pāhala Community LCC Replacement Project*

Figure 2 -- *Preliminary site plan showing the 14.9-acre Pāhala WWTP within the southeast portion of Site 7.*

Attachment A – *Native Hawaiian Organizations Correspondence*

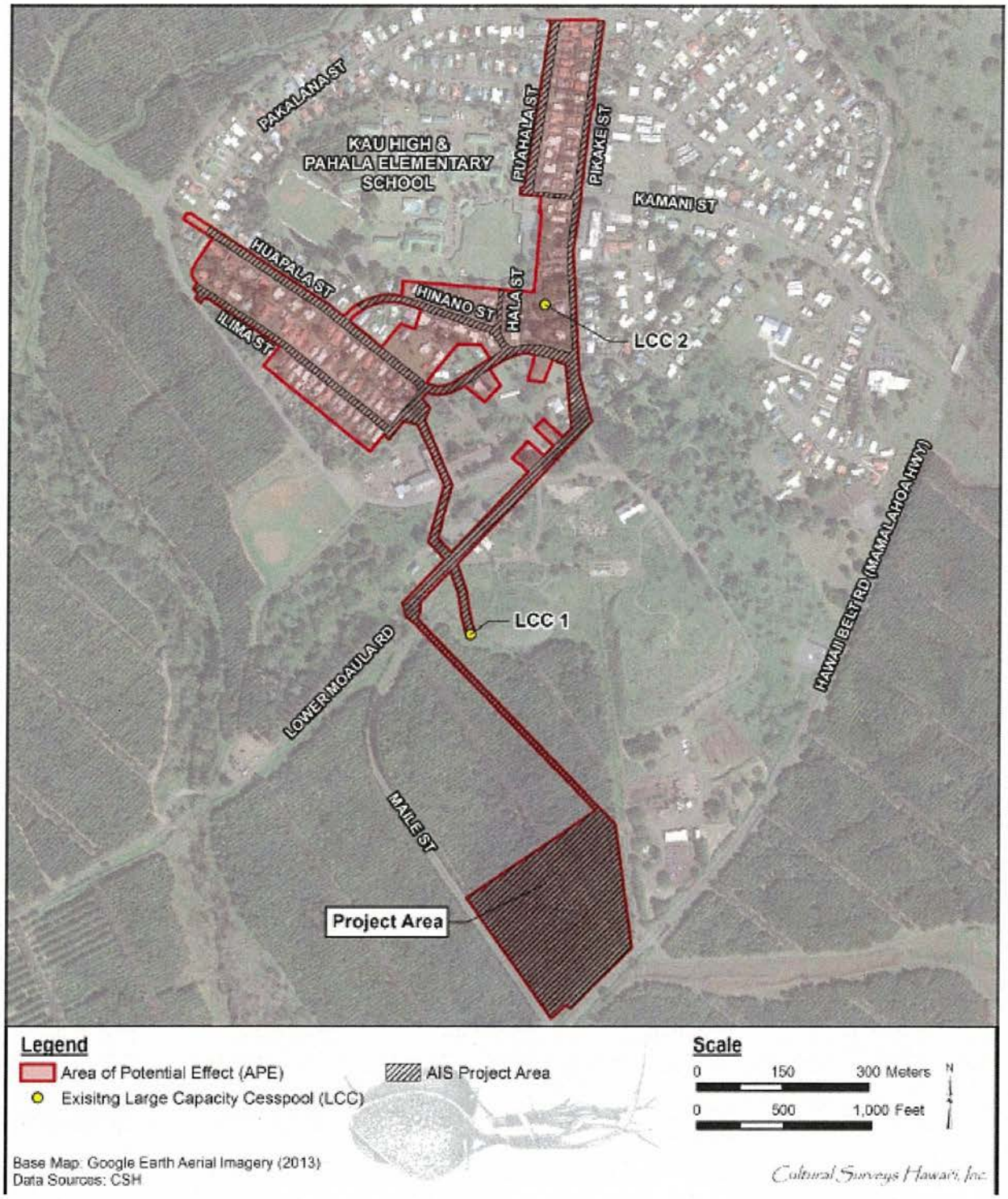

Figure 1. Area of Potential Affect and AIS Project Area for the Pāhala Community LCC Replacement Project

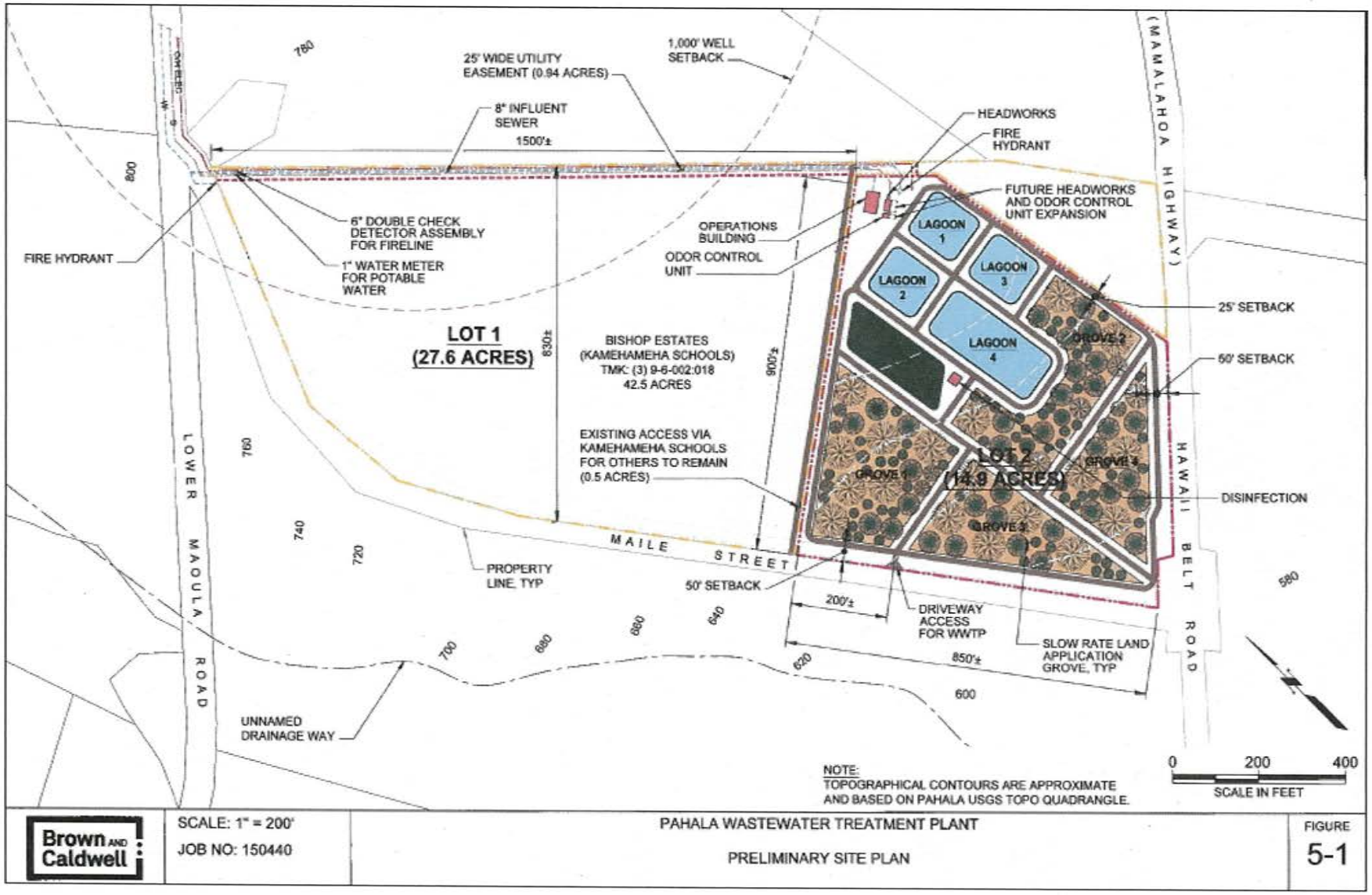

Figure 2. Preliminary site plan showing the 14.9-acre Pāhala WWTP within the southeast portion of Site 7. (Courtesy of Cultural Surveys Hawai'i)

Harry Kim
Mayor

Wilfred M. Okabe
Managing Director

William A. Kucharski
Director

Diane A. Noda
Deputy Director

County of Hawai'i
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
cohdem@co.hawaii.hi.us
http://www.hawaiicounty.gov/environmental-management/

March 29, 2018

Ms. Mililani B. Trask, Convenor
Na Koa Ikaika o Ka Lāhui Hawai'i
P.O. Box 6377
Hilo, HI 96720

Subject: Pāhala Community Large Capacity Cesspool Replacement
Pā'au'au, Ka'u, Hawai'i
Consultation Under U.S.C. §302706

Dear Ms. Trask:

The County of Hawai'i Department of Environmental Management (DEM) is undertaking the Pāhala Community Large Capacity Cesspool Replacement, Pā'au'au, Ka'ū, Hawai'i project. This project would be funded by a U.S. Environmental Protection Agency (EPA) Region 9 Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (SRF) loan program. The proposed project will utilize federal funds; as such it is considered a federal action and undertaking, as defined by the National Historic Preservation Act (NHPA) of 1966, as amended (2006), and as set forth in 54 U.S.C. §300320. Therefore, the EPA must consider the effects of the project on historic properties and must also consult with organizations that attach religious or cultural significance to properties affected by the project.

By letter dated March 8, 2018, the EPA Region 9 reached out to participants to be consulted on this project pursuant to U.S.C. §302706, also called Section 106 of the NHPA (see enclosure). The letter also stated that the EPA had authorized the DEM to initiate consultation. Therefore, on behalf of the EPA Region 9, the DEM invites you to participate in consultation for the proposed Pāhala Community Large Capacity Cesspool Replacement project, which is located about 52 miles south of Hilo and west (mauka) of Māmalahoa Highway (Route 11) within the community of Pāhala.

Overview of the Undertaking

The purpose of the project is to construct wastewater system improvements to replace the County's existing system servicing Pāhala. The wastewater system improvements will allow the

County to comply with EPA regulations requiring closure of large capacity cesspools (LCCs) and to construct a system meeting current State of Hawai'i Department of Health (DOH) and DEM design guidelines for the collection, treatment and disposal of the treated effluent. The Pāhala Community Large Capacity Cesspool Replacement Project improvements would be owned, operated and maintained by the County. A project summary sheet and location map are enclosed for your information.

The new wastewater collection system will be located within public rights-of-way, and the new treatment and disposal system will be located on a currently privately owned parcel (TMK: 9-6-002:018) which will be acquired by the County. The wastewater collection system would be located within 7 public streets; Maile Street, 'Ilima Street, Huapala Street, Hīnano Street, and Hala Street, all located in the southern portion of the community and Puahala Street; and Pīkake Street located on the eastern end. The collection system would consist of approximately 11,000 linear feet of gravity flow piping ranging from 8 to 12 inches in diameter. The collection system is not anticipated to include County pump stations, nor will the system collect stormwater runoff. The County's sewer standards show the trenches for sewer lines would require at least 4 feet of cover from the top of the pipe to grade and 12 inches of cushion material on both sides of the line and 6 inches below the line. Therefore, the typical sewer trenches will be about 3 feet wide and at least 6 feet deep.

The proposed treatment and disposal system would occupy about 14 acres and consist of a headworks with screens to remove debris and an odor control unit, four lined aerated lagoons of about 0.3 acres each, an operations building with adjacent disinfection system to remove pathogens, a subsurface flow constructed polishing wetland to remove nitrogen and four slow rate (SR) land treatment basins planted with native Hawaiian trees that will be surrounded by berms on all four sides. SR land treatment involves irrigation of land and vegetation with the treated effluent. Significant additional treatment is provided as the water percolates through the soil. The vegetation uptakes the nutrients in the effluent as fertilizer, and transpires a portion of the applied water. A security fence will be constructed along the perimeter of the site.

An archaeological inventory survey, including the excavation of trenches, will be conducted within the treatment and disposal project site to identify the presence of historic properties as defined in U.S.C §300308.

Consultations

We welcome any comments you have on this Project's proposed improvements. We are particularly interested in any information you may have on the historic and cultural sites that have been recorded in the area or any other historic or cultural sites about which you may have knowledge.

Section 106 consultation letters have also been sent to other organizations or individuals that might attach significance to this area and inviting them to participate in the process. The attached list shows the organizations that are also being consulted as part of this Section 106 consultation.

In addition, if you are acquainted with any persons or organization that are knowledgeable about the proposed project area, or any descendants with ancestral lineal or cultural ties to or cultural

knowledge or concerns for, and cultural or religious attachment to the proposed project area, we would appreciate receiving their names and contact information.

We would appreciate a written response within 30 days from date of receipt of this letter to Dora Beck, P.E., Project Manager, County of Hawai'i Department of Environmental Management, by U.S. Postal Service to County of Hawai'i Department of Environmental Management, 108 Railroad Avenue, Hilo, Hawai'i 96720.

Please feel free to contact Dora Beck by telephone at (808) 961-8513 if you have any questions. We look forward to working with you and the State Historic Preservation Division on these needed improvements.

Very truly yours,

William A. Kucharski
Director

WK/DB:mef
Attachment and enclosures

Pāhala Community Large Capacity Cesspool Replacement Project
Pā'au'au, Ka'u, Hawai'i
Native Hawaiian Organizations Consultation List

Hawai'i Island Burial Council
Association of Hawaiian Civic Clubs
Charles Pelenui Mahi 'Ohana
Friends of 'Iolani Palace
Hawaiian Civic Club of Hilo
Kamehameha Schools
Kanu o ka'Āina Learning 'Ohana
Ko'olau Foundation
Maku'u Farmers Association
Na Koa Ikaika Ka Lahui Hawai'i
Office of Hawaiian Affairs
Pacific Agricultural Land Management Systems
Partners in Development Foundation
Pi'ihouna Hawaiian Homestead Community Association

PROJECT SUMMARY
Pāhala Community Large Capacity Cesspool Closure
Pā'au'au, Ka'u, Island of Hawai'i
Tax Map Key: 9-6-002:018

1. Introduction

The community of Pāhala is located about 52 miles southeast of Hilo, in the Ka'u District, Island of Hawai'i. Pāhala is located west (mauka) of Māmalahoa Highway (State Route 11) about 3.8 miles from the shoreline with most of the community lying between 980 feet mean sea level (msl) on the western end and approximately 800 feet msl on the eastern end. See Figure 1. The Pāhala community had its start in 1876 with establishment of the Hawaiian Agricultural Company to develop the sugar industry in Hawai'i. For the next 120 years or so, Pāhala was a major sugar producing area. However, by the early 1990s there was a major downturn in the sugar market. Thus, beginning in 1994, the sugar mill in the town was shut down and dismantled. By 1996, the Ka'u Sugar Company, the successor to the Hawaiian Agricultural Company, closed and, subsequently, the sugar cane fields were cleared and the lands now grow macadamia nut and coffee trees. The population in Pāhala was approximately 1,405 persons in 2016, the most current estimate.

Founded in 1826, C. Brewer was both the oldest company in Hawai'i and a major developer of the sugar industry in Pāhala. For about the last 60 years, approximately 50 percent of the residential units in Pāhala have been serviced by a wastewater collection and disposal system constructed, operated and maintained by C. Brewer. The collection system consisted of sewer lines, some of which were located in the streets and others routed in the backyards of private parcels. The disposal system consisted of two large capacity cesspools (LCCs) within the community.

In 1998, the US Environmental Protection Agency (EPA) issued regulations (40 CFR 144.14) requiring the elimination or closure of all large capacity cesspools used for wastewater disposal by April 5, 2005. In 2003, C. Brewer requested assistance from the County to close their LCCs. Subsequently, the County held a community meeting to present sewer system replacement alternatives. Voting took place by mail to choose the preferred sewer improvement alternative, resulting in 87 percent of returned ballots in favor of installing a new sewer collection, treatment and disposal system to be operated and maintained by the County.

In 2006, in anticipation of its dissolution, C. Brewer requested the County construct and maintain a new community sewer system. The County subsequently agreed by way of a County Council Resolution, to enter into a formal agreement to assume ownership of the C. Brewer constructed collection system and the two LCCs by April 30, 2010 and to construct and maintain a new community sewer system. As part of the County's agreement, C. Brewer agreed to install laterals to certain of the residential properties.

In 2007, the County proposed a new collection system and a wastewater treatment system, consisting of large capacity septic tanks and converting the existing LCCs into seepage pits for disposal of the treated effluent. In 2008, the combination of the LCCs being in poor and failing condition and the poor results from soil percolation tests influenced the County to consider acquiring a larger land area to construct a secondary treatment system. Such a system could allow a higher level of wastewater treatment and disposal, as well as accommodate existing Pāhala properties not currently served by the LCC system in addition to expanding the system to accommodate possible community growth.

2. Project Description

The County of Hawai'i. Department of Environmental Management (DEM) is proposing to construct wastewater system improvements to replace the current system servicing Pāhala, now owned by the County. The wastewater system improvements would allow the County to comply with EPA

regulations requiring closure of the LCCs and to construct a system meeting current State of Hawai'i Department of Health (DOH) and DEM design guidelines for the collection, treatment and disposal of the treated effluent. The Pāhala Community Large Capacity Cesspool Closure project improvements would consist of a new wastewater collection system located within the public right-of-way and a treatment and disposal system located on a currently privately-owned parcel (TMK: 9-6-002: 018) which will be acquired by the County. The Pāhala Community Large Capacity Cesspool Closure project would be funded by an EPA Special Appropriation Grant and by the State of Hawai'i Clean Water State Revolving Fund (SRF) loan program.

The wastewater collection system would be located within 7 public streets; Maile Street; 'Ilima Street; Huapala Street; Hīnano Street; Hala Street; all located in the southern portion of the community and Puahala Street; and Pīkake Street located on the eastern end. These streets serve the residential areas and have two travel lanes with unpaved shoulders and no improved sidewalks. The collection system would consist of approximately 11,000 linear feet of gravity flow piping ranging from 8 to 12 inches in diameter. The collection system is not anticipated to include pump stations, nor will the system collect stormwater runoff. The number of manholes in the system will be determined during the detail design phase. The County's sewer standards show the trenches for sewer lines would require at least 4 feet of cover from the top of the pipe to grade and 12 inches of cushion material on both sides of the line and 6 inches below the line. Therefore, the typical sewer trenches will be 3 feet wide and at least 6 feet deep.

The treatment and disposal system would be a land-based system located southeast of the developed community and would be designed to treat flows of approximately 190,000 gallons per day. The EPA defines land treatment as "the application of appropriately pre-treated municipal and industrial wastewater to the land at a controlled rate in a designed and engineered setting. The purpose of the activity is to obtain beneficial use of these materials, to improve environmental quality, and to achieve treatment goals in a cost-effective and environmentally sound manner".

The proposed treatment and disposal system would occupy about 14 acres and consist of a headworks with screens to remove debris and an odor control unit, four lined aerated lagoons of about 0.3 acres each, an operations building with adjacent disinfection system to remove pathogens, a subsurface flow constructed polishing wetland to remove nitrogen and four slow rate (SR) land treatment basins which will be surrounded by berms on all four sides. SR land treatment involves irrigation of land and vegetation with the treated effluent. Significant additional treatment is provided as the water percolates through the soil. The vegetation uptakes the nutrients in the effluent as fertilizer, and transpires a portion of the applied water. A security fence will be constructed along the perimeter of the site.

3. Anticipated Impacts

Project impacts would be primarily related to construction of the trenches for placement of the collection system lines and construction of the land-based treatment and disposal system. These activities would create dust and noise while work occurs in the streets and in the area of the land treatment and disposal system, which will include removal of existing macadamia nut trees within the 14 acre project site. As the collection system is constructed, the streets will be restored for vehicle travel. Upon completion of the treatment and disposal facilities, the project will operate without the need for DEM employees to be on-site. Weekly monitoring visits will be sufficient to insure routine proper operation, and a telemetry system will alert DEM employees of abnormal conditions to allow timely response when they occur.

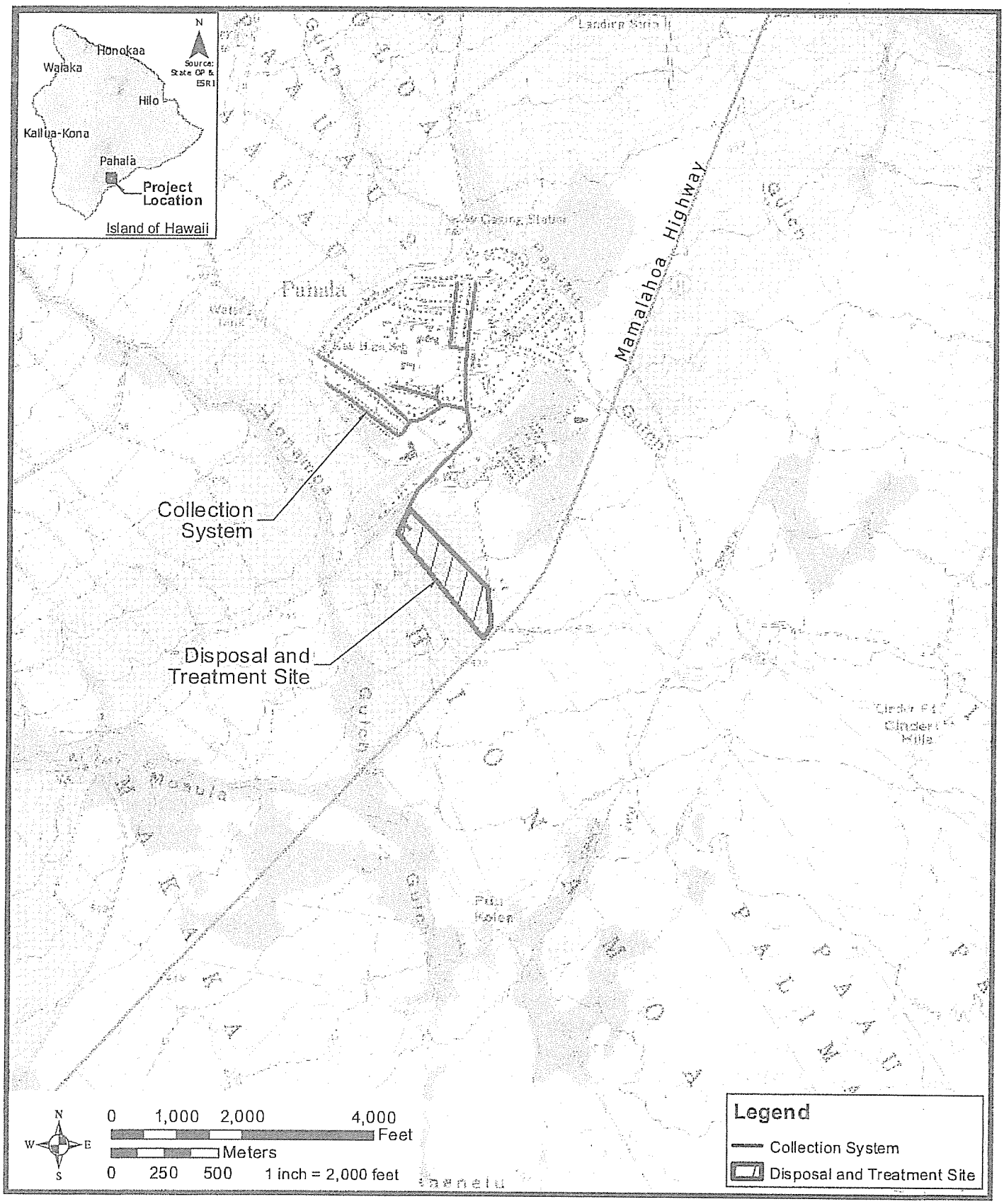

FIGURE 1

PROJECT LOCATION MAP

PAHALA COMMUNITY LARGE CAPACITY CESSPOOL CLOSURE PROJECT
COUNTY OF HAWAII DEPARTMENT OF ENVIRONMENTAL MANAGMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAR 0 8 2018

Mililani B. Trask, Convenor
Na Koa Ikaika Ka Lahui Hawaii
PO Box 6377
Hilo, HI 96720

RE: U.S. Environmental Protection Agency Region 9 authorization to allow the County of Hawaii to initiate consultation with the State Historic Preservation Officer and Native Hawaiian organizations for the Pahala Community Large Capacity Cesspool Replacement Project

Dear Ms. Trask:

The U.S. Environmental Protection Agency Region 9 (EPA) awarded a Special Appropriation Act project grant to the County of Hawaii for the Pahala Community Large Capacity Cesspool (LCC) Replacement Project. This project may have effects on properties included in, or eligible for inclusion in, the National Register of Historic Properties. The National Historic Preservation Act (NHPA), 54 U.S.C. §300101 *et seq.*, and its implementing regulations, 36 CFR Part 800, require federal agencies to consider the effects of their undertakings on historic properties.

Pursuant to 36 CFR §800.2(c)(4), a Federal agency may authorize an applicant for federal assistance to initiate consultation with the State Historic Preservation Officer (SHPO) or Native Hawaiian organizations provided that: (1) the Federal agency remains legally responsible for all findings and determinations charged to the agency official; and (2) the Federal agency notifies the SHPO or Native Hawaiian organizations when an applicant is so authorized.

In accordance with 36 CFR §800.2(c)(4), EPA hereby authorizes the County of Hawaii to act on EPA's behalf when initiating the NHPA consultation process in connection with the Pahala Community LCC Replacement Project. Effective immediately, the County of Hawaii may consult with the SHPO and Native Hawaiian organizations (see enclosed list) to initiate the review process under 36 CFR Part 800 including identifying and evaluating historic properties, assessing effects, and proposing mitigation measures where necessary. However, EPA Region 9 will remain responsible for participating in the consultation process if:

- the County of Hawaii determines that the "Criteria of Adverse Effect" under 36 CFR §800.5 applies to this project; or
- there is disagreement between the County of Hawaii and the SHPO or Native Hawaiian organizations regarding the scope of the area of potential effects, identification of historic properties, or evaluation of effects; or

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- there is an objection from consulting parties or the public regarding findings or determinations or the implementation of agreed provisions; or

- there is potential for a foreclosure situation or intentional adverse effects as described under 36 CFR §800.9(b) and (c).

In accordance with 36 CFR §800.2(c)(2), EPA shall ensure that all consultations with Native Hawaiian organizations are conducted in a sensitive manner concerning the needs of such organizations.

If you have any questions, please contact Kate Rao, Drinking Water Protection Section, at (415) 972-3533 or via email at rao.kate@epa.gov.

Sincerely,

Tomás Torres
Water Division Director

Encl.: Pahala Large Capacity Cesspool Replacement Project
Native Hawaiian Organizations Consultation List

cc: William Kurcharski, County of Hawaii
Dora Beck, County of Hawaii
Craig Levken, Brown and Caldwell
Earl Matsukawa, Wilson Okamoto Corporation
John Sakaguchi, Wilson Okamoto Corporation
David Shideler, Cultural Surveys Hawaii, Inc

Pahala Large Capacity Cesspool Replacement Project
Native Hawaiian Organizations Consultation List

Hawaii Island Burial Council

Association of Hawaiian Civic Clubs

Charles Pelenui Mahi Ohana

Friends of Iolani Palace

Hawaiian Civic Club of Hilo

Kamehameha Schools

Kanu o ka ʻĀina Learning ʻOhana

Koolau Foundation

Maku'u Farmers Association

Na Koa Ikaika Ka Lahui Hawaii

Office of Hawaiian Affairs

Pacific Agricultural Land Management Systems

Partners in Development Foundation

Piihonua Hawaiian Homestead Community Association

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Appendix E
EPA and County of Hawai'i Responses to Comments on the Draft EA

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Appendix E:
U.S. Environmental Protection Agency and County of Hawai‘i

Response to Comments on the Draft Environmental Assessment

for the
Pāhala Large Capacity Cesspool (LCC) Replacement Project
EPA Grant XP-96942401

Pāhala, District of Ka‘u, County of Hawai‘i, Hawai‘i
TMK: 9-6-002:018

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1 Index of Comments Received on the Pāhala Large Capacity Cesspool Replacement Project Draft EA

A Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool (LCC) Replacement Project[1] was released for public comment on September 23, 2018. Initially, a 30-day public comment period was planned; however, due to requests from the public for additional time, the U.S. Environmental Protection Agency (EPA) and the County of Hawaiʻi (County) agreed to republish the Draft EA on November 8, 2018 which extended the comment period. The comment period closed on December 10, 2018. Table 1 lists the comments received, including the names of the commenters and a comment number assigned to each comment. In total, 77 comment letters were received, some of which included multiple individual comments.

Table 1
Index of Comments Received on the Pāhala LCC Replacement Project Draft EA

Number	Commenter	Date
1	S. Demoruelle	9/24/2018
2	S. Demoruelle	9/24/2018
3	S. Demoruelle	9/24/2018
4	S. Demoruelle	9/24/2018
5	S. Demoruelle	9/25/2018
6	S. Demoruelle	9/25/2018
7	S. Demoruelle	9/25/2018
8	S. Demoruelle	9/25/2018
9	S. Demoruelle	9/28/2018
10	S. Demoruelle	9/28/2018
11	S. Demoruelle	9/28/2018
12	S. Demoruelle	9/28/2018
13	S. Demoruelle	9/29/2018
14	S. Demoruelle	10/1/2018
15	S. Demoruelle	10/1/2018
16	S. Demoruelle	10/3/2018
17	S. Demoruelle	10/6/2018
18	S. Demoruelle	10/10/2018
19	S. Demoruelle	10/12/2018
20	S. Demoruelle	10/13/2018
21	S. Demoruelle	10/21/2018
22	S. Demoruelle	10/24/2018
23a	S. & J. Demoruelle	10/22/2018
23	[Comment combined in 23a]	
24	[Comment combined in 23a]	
25	[Comment combined in 23a]	
26	T. Tuttle	10/10/2018
27	S. Demoruelle	10/10/2018
28	N. Hong	10/10/2018
29	N. Gilmour	10/17/2018
30	J. Warren	10/19/2018
31	N. Gilmour	10/20/2018

[1] Preconsultation letters and other materials related to this project may use a slightly different project title (e.g., Pāhala Community Large Capacity Cesspool Replacement Project).

Table 1
Index of Comments Received on the Pāhala LCC Replacement Project Draft EA

32	State of Hawaiʻi Office of Planning	10/17/2018
33	E. Andrade Jr.	10/19/2018
34	C. & T. Tuttle	10/22/2018
35	State of Hawaiʻi Department of Hawaiian Home Lands	9/27/2018
36	County of Hawaiʻi Police Department	10/2/2018
37	R. Javar	10/10/2018
38	L. Lopes	10/22/2018
39	S. Demoruelle	10/23/2018
40	Pāhala Residents per Pele Defense Fund	10/23/2018
41	S. Hanoa	10/23/2018
42	J. Moses	10/24/2018
43	A. & A. McDowell	10/22/2018
44	D. Loper	9/29/2018
45	S. Demoruelle	10/31/2018
46	S. Demoruelle	10/31/2018
47	S. Demoruelle	10/31/2018
48	S. Demoruelle	10/31/2018
49	S. Demoruelle	10/26/2018
50	S. Demoruelle	11/2/2018
51	S. Demoruelle	11/5/2018
52	S. Demoruelle	11/6/2018
53	S. Demoruelle	11/8/2018
54	S. Demoruelle	11/13/2018
55	A. & M. Ibarra	11/13/2018
56	W. & D. Wong Yuen	11/14/2018
57	S. Demoruelle	11/16/2018
58	S. Demoruelle	11/2/2018
59	L. Navarro	11/19/2018
60	L. Gollin	11/19/2018
61	T. Ibarra	12/1/2018
62	P. Fuerte	10/10/2018
63	G. Sorensen	11/2/2018
64	S. Demoruelle	12/10/2018
65	S. Demoruelle	12/10/2018
66	S. Demoruelle	12/10/2018
67	T. Napeahi, Pele Defense Fund	12/10/2018
68	D. Kalua	12/4/2018
69	T. Napeahi, Pele Defense Fund [Duplicate of Comment 67]	12/10/2018
70	T. Napeahi, Pele Defense Fund [Duplicate of Comment 67]	12/10/2018
71	State of Hawaiʻi Department of Land and Natural Resources	12/7/2018
72	State of Hawaiʻi Department of Education	12/7/2018
73	N. Gilmour	12/10/2018
74	K. Fox	12/10/2018
75	S. Demoruelle	12/10/2018
76	N. Hong	10/28/2018
77	State of Hawaiʻi Department of Land and Natural Resources	10/22/2018

2 EPA Response to Comments

EPA's responses to comments received are detailed below. Due to the number of comments received, comments and responses are grouped by subject matter. Each section contains a summary of comments received, followed by EPA's responses.

As explained in the Preface of the Final EA, EPA and the County elected to prepare a joint EA in order to promote consistency and avoid duplication of efforts. Due to the fact that it is a joint document, the Final EA contains information related not only to compliance with the National Environmental Policy Act (NEPA) and federal cross-cutting authorities, but also information related to compliance with state and local requirements, such as the Hawaiʻi Environmental Policy Act (HEPA), otherwise referred to as Hawaiʻi Revised Statutes (HRS) Chapter 343. EPA is only responsible for addressing compliance with NEPA and federal cross-cutting authorities, and thus, EPA's responses to comments are focused on these issues. The County is responsible for complying with additional state and local requirements and has prepared separate responses to individual comments that are included in Section 3 of this Appendix. The County responses use the same numbering system as Table 1 (see Section 1).

2.1 Resource Area Impacts

Responses to comments received regarding the impacts to the resource areas as described in the Draft EA associated with the proposed project have been arranged into the following categories:

- Flood Risk
- Public Services
- Visual Characteristics
- Socioeconomic
- Archeological and Cultural Resources
- Air Quality
- Other Impacts

2.1.1 *Flood Risk*

Comment

- I am concerned about the flooding potential of the WWTP, specifically relating to the culvert that carries water beneath the highway from the macadamia nut orchard. (Comments 22, 41)
- What will prevent the "lagoon style treatment plant" from overflowing in the event of heavy rains and flooding due to tropical storms and hurricanes, which may be more frequent with climate changes? (Comments 28, 33, 56)
- There has been historical flooding that is a major concern to the community, to the proposed area. (Comment 40)
- Flooding at the sewage treatment plant site will cause health and safety issues. (Comments 63, 76)

- Flooding at the site will create hazardous and dangerous scenarios. Flooding will impact emergency routes, may impact travel to hospitals or emergency facilities and could isolate emergency first responders, fire and EMS vehicles and equipment. (Comments 41, 67, 68)
- The location of the plant should be reconsidered because of the history of flooding in the area. Overflow of the reservoirs could transport toxins, bacteria, and chemicals over Highway 11, through conservation and preservation areas, and into the ocean. (Comments 55, 76)

Response

Due to the nature of the comments received, the responses to flooding-related comments were broken into two response categories:

a) Flood Risk: Response addressing concerns regarding the potential for the location of the wastewater treatment and disposal facility and collection system to flood; and

b) Overflow of Wastewater Treatment and Disposal Facility: Response addressing concerns regarding the design of the facility and concerns related to overflow inside the facility.

a) Flood Risk

As stated in the Draft EA Section 3.9.1 (Flood Risk – Existing Conditions), the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017, shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot. The County of Hawaiʻi Department of Public Works (in its April 16, 2018 response to the pre-assessment notification) confirmed that the proposed wastewater treatment and disposal facility site is outside the 500-year floodplain. As such, the site is not considered to be in a high flood risk area. The wastewater treatment and disposal facility would not result in construction of new facilities within the 500-year floodplain. Although a small portion of the proposed collection system is located within the 500-year floodplain, the associated trenching operations would be temporary and would not alter the 500-year floodplain. No impacts to the existing floodplain are expected.

The wastewater treatment and disposal facility would be designed to minimize the creation of new stormwater flow and to avoid disrupting existing stormwater flow patterns. Current drainage patterns are influenced by two existing culverts that allow stormwater to flow across the Māmalahoa Highway in the vicinity of the proposed wastewater treatment and disposal facility. The first is a box culvert located at the intersection with Maile Street that conveys stormwater under the highway. The second culvert is located approximately 600 feet east of the Maile Street intersection and was used to convey sugar mill flume water across the highway for disposal. Please see the Final EA Section 3.23.1 (Infrastructure – Drainage System) for a map showing the location of the two culverts.

The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins (see Draft EA Section 3.23.2).

The Pāhala LCC Replacement Project would have minimal impact on existing stormwater flows. The Site 7 parcel, including the proposed site of the wastewater treatment and disposal facility, slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows drain through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street - Māmalahoa Highway intersection to the areas below the highway. Stormwater drainage flows generated upstream of the wastewater treatment and disposal facility project site would be directed around the perimeter via diversion swales that would convey flow back to the existing drainage pattern to the culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. However, these ponding events are typical and expected at any culvert and would not be exacerbated as a result of the Proposed Action because there would be no net increase in runoff or drainage flows from the site up to and including design storm events. Due to the topography of Site 7, stormwater drainage flows from onsite are not anticipated to flow through the second culvert mentioned above due to its elevation and location to the east which means it is generally upgradient from the onsite drainage patterns.

As a result, the Pāhala LCC Replacement Project is not anticipated to contribute to any increased risk of flooding of Māmalahoa Highway, Maile Street, or downstream properties. The State of Hawaiʻi Department of Transportation (DOT) Hawaiʻi District office was contacted to discuss the historical roadway flooding concerns expressed by the community at the wastewater treatment and disposal facility project site and the culvert at the Maile Street - Māmalahoa Highway intersection. The District office indicated the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage at that location during precipitation events.

Furthermore, the Pāhala LCC Replacement Project would be constructed in accordance with all applicable design criteria related to minimizing flood risk. As stated in the Draft EA Section 3.23 (Infrastructure – Drainage System), the on-site stormwater management system would meet the requirements of Hawaiʻi County Code (HCC) § 27-20(e) (Standards for subdivisions and other developments), which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain runoff caused by the proposed development, within the site boundaries, up to the expected one-hour, ten year storm event as shown in the department of public works *'Storm Drainage Standards'* unless those standards specify a greater interval." To act as secondary containment in the event of a large storm event, landscape buffers with dirt berms may also be constructed around most of the perimeter of the facility; these berms would be subject to a geotechnical engineering assessment of berm stability during the design process.

In addition, to meet the requirements of HCC § 27-20(f), the wastewater treatment and disposal facility would be designed to not alter the general drainage pattern above or below the development. Thus, no increase in flow amount for HCC design storm events would be directed to either of the culverts at the highway as a result of the site development. HCC § 27-20 requires an on-site drainage plan to accommodate any runoff caused by a proposed development. Therefore, a drainage study would be prepared during the design process to evaluate the improvements that are needed to comply with the County Code requirements. These additional requirements and impact avoidance measures are stated in the Final EA Sections 2.3.1 and 3.23.

Finally, the Pāhala LCC Replacement Project is not anticipated to impact emergency routes. The Draft EA Section 2.3 (Proposed Action – Site 7 Alternative) Figure 2.2 showed that the Pāʻauʻau Gulch near the hospital is located about 0.735 miles north of the wastewater treatment and disposal facility site and lies at approximately 780 feet above mean sea level (about 140 to 200 feet above the site), which means surface flows at the site would not affect the gulch. Similarly, the Kaimani Street and Māmalahoa Highway intersection lies about 0.72 miles north of the

wastewater treatment and disposal facility site and at about 780 feet above mean sea level, which means surface flows at the site would also not affect that intersection. As stated above, the project would not increase the risk of flooding of Māmalahoa Highway or Maile Street as it would not increase the amount of runoff. Emergency access to Kaʻū Hospital would not be impacted as a result of the Proposed Action because flooding of the roads due to stormwater and surface flow is not expected to increase as a result of the Proposed Action. The entrance to the Kaʻū Hospital on Kamani Street is about 3/4 mile northeast of the proposed wastewater treatment and disposal facility site.

b) Overflow of Wastewater Treatment and Disposal Facility

The wastewater treatment and disposal facility and collection system would be designed to accommodate the peak flows during design wet weather flow events, including precipitation on the area occupied by the lagoon treatment system. In the Draft EA Appendix B (Preliminary Engineering Report), Section 2.2, the anticipated peak wastewater flows from the community provided are based on the applicable design standards. The Draft EA Section 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility) stated the lagoons would be lined with high density polyethylene liners to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B Section 5.3 showed the lagoons would have sufficient operational freeboard to contain and to equalize design flows during peak weather events. In addition, the slow-rate land application groves would be designed to completely contain both anticipated peak wet weather effluent flows and on-site captured precipitation from a 100-year, 24-hour storm event. This would be accomplished by constructing berms around the land application tree groves. The tree groves would be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents." Effluent would be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event. Thus, the collection system, the lagoons themselves, and the land application groves would be designed to include sufficient extra capacity to limit overflows during design storm events. Due to these flood mitigation measures, no overflows would occur for storms up to the 100-year, 24-hour storm event.

Additional information concerning the flood risk of the proposed treatment and disposal facility and collection system has been added to the Final EA Section 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility) and 3.23 (Infrastructure – Drainage System).

2.1.2 *Public Services*

Comment

- Maile Street is an emergency route in and out of Pāhala. If the county fences the property, will the road be closed if there is an emergency? Will Māmalahoa Highway be closed too? (Comment 41)

Response

The fencing of the wastewater treatment and disposal facility (Site 7) would not affect emergency routes. As discussed in the Draft EA Section 3.17 (Traffic), the Proposed Action is "outside the Māmalahoa Highway ROW and would not require any disturbance or other impacts within the Māmalahoa Highway ROW." Maile Street would be impacted only to the extent needed for typical traffic control operations and no permanent or temporary fencing would be constructed in a way that impacts Maile Street or Māmalahoa Highway. This is also depicted in the Draft EA Figure 2.3, which shows no project elements affecting Maile Street or Māmalahoa Highway. Prior to implementing the Proposed Action, traffic control plans would be developed and approved by the

County which would include measures to allow for emergency access during project construction. As stated in the Draft EA Section 3.17.2, the traffic control plans would provide directions to temporarily divert traffic or close travel lanes during the construction period. Normally, such plans call for these diversions or closures during non-peak travel times to minimize disruptions to traffic flow. No long-term road closures would be needed for the Proposed Action. This information has been repeated and clarified in the Final EA.

2.1.3 *Visual Characteristics*

Comment

- Why should people here in Pāhala have to see a sewage plant when entering our town? (Comment 41)
- The treatment plant will be visible during times of high winds, as the surrounding trees and foliage bend and sway. (Comment 56)
- The plant will be an eyesore at the entrance to our community. (Comments 63, 67)

Response

As discussed in the Draft EA Section 3.19 (Visual Considerations and Light Pollution), the Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. Above grade structures, such as the operations building and, headworks cover structure, would be screened by existing Cook pine trees along Maile Street, most of which would remain. The wastewater collection system would be installed below the streets and therefore would not impact views. Visual impacts would also be mitigated by the 8.0 acres of planted trees in the disposal groves, and by the rise in elevation between the highway and the facility. Exterior lighting at the proposed wastewater treatment and disposal facility would be designed in accordance with HCC § 14-50 and would be limited to manually switched lights under the roof overhang at the entrance to the operations/electrical building and at the headworks area. Lights would be installed with down-shielding to prevent excess light pollution. When an operator or maintenance staff are not present on-site, lights would not be on. The Final EA Section 3.19 has been revised to include that the maximum height of the wastewater treatment and disposal facility above-grade structures would not exceed 25 feet. For more information, please refer to the County responses provided to the above comments.

2.1.4 *Socioeconomic*

Cost of the Project

Comment

- The costs of the project are excessive and will cause economic harm of the county into the future. The cost will be over $250,000 per LCC household. (Comment 45)
- The Pāhala project cost is excessive ($40.5 million). The cost of the project should be kept under $10 million. (Comments 45, 46)
- The cost estimates for the Pāhala WWTP Project are inaccurate. The project will cost approximately $40 million. (Comment 51)
- The combined costs of both WWTP projects in the County are excessive. (Comment 51)
- These Wastewater Projects have become a total boondoggle. Please stop this waste of tax dollars and set a firm budget of under $10 million! (Comment 52)
- The costs of the project have skyrocketed. (Comment 61)

- The County and Kaʻū taxpayers cannot afford to spend $81 million the two projects. (Comment 66)
- The cost of the project is grossly underestimated. (Comment 23a)

Response

NEPA does not require a monetary cost-benefit analysis of a project, particularly where there are important qualitative considerations. *See* 40 CFR § 1502.23.[2] In this case, the "No-Action Alternative" would not satisfy the intended purpose and need for the Proposed Action as outlined in the Draft EA Section 2.2 (Purpose and Need for Action), which is to provide the infrastructure necessary to enable the County to comply with the Safe Drinking Water Act (SDWA) and fulfill the compliance provisions of the Administrative Order on Consent (AOC) between EPA and the County with respect to closure of the Pāhala LCCs by April 2023.[3]

Though not required under NEPA, planning-level cost comparisons for the Pāhala LCC Replacement Project were summarized in the Preliminary Engineering Report (see Appendix B of both the Draft EA and Final EA). The capital cost of an aerated lagoon/constructed wetland/land application treatment and disposal facility is estimated at $16 million (plus $2 million for concrete lagoon lining if required) and has an estimated annual operations and maintenance cost of $227,000. The capital cost of closure of two community LCCs and a new collection system is estimated at $14 million. These numbers represent a conceptual planning-level construction cost estimate and do not include planning, design, land acquisition, or past project costs. Of the treatment alternatives that were deemed feasible and compared in Appendix B, the proposed wastewater treatment and disposal facility design has the lowest estimated capital cost and estimated annual operations and maintenance cost. Thus, even if a cost-benefit analysis were performed (which is not required under NEPA), it would likely support the Proposed Action. Information on anticipated project costs has been added to the Final EA Section 2.1.2 (Project Funding).

County Financial Capacity

Comment

- I am concerned about the impact of the Pāhala project on the credit capacity of the county of Hawaiʻi given the diminishing tax base. Why wasn't the financial standing and debt burden of the county discussed in the DEA? (Comment 12)
- The Draft EA did not consider the economic impact of CWSRF loans on the County. (Comment 23a)
- The Draft EA has no cost analysis for borrowing funds to pay for the Pāhala project. (Comment 27)

Response

The federal action triggering NEPA review of this project is the award of a federal earmark grant (not a loan), which would not require repayment. The County has proposed to finance the remainder of the project using funds from the Hawaiʻi Clean Water State Revolving Fund (SRF), which provides low-interest loans for the construction of publicly owned wastewater treatment

[2] While the above-cited regulation applies specifically to the preparation of an EIS, the rationale behind it applies equally to the preparation of an EA.
[3] In September 2019, EPA accepted the County's request to extend the Pahala LCC closure date from June 2021 to April 2023.

works. The SRF loan process is managed by the State of Hawai'i Department of Health and is outside of the scope of this NEPA analysis.

Economic Impacts on the Community

Comment

- The Draft EA did not consider the economic impact of costs on Pāhala households. (Comment 23a)
- The costs of connecting newly accessible properties will fall on many elderly residents with fixed incomes. (Comment 41)
- Pāhala is an economically depressed community with a high percentage of people on welfare, social security, pension, or other fixed income. How are they going to afford any hook up fees, maintenance fees, or any other fees that will likely come with this wastewater treatment plant? (Comment 56)
- The county or state needs to find alternate sources of funding to cover hook-up costs for all lots within the planned project area. The expense of joining the new sewer system will place a burden on the sensitive populations of Pāhala. (Comment 73)
- The cost of connecting the "newly accessible lots" to the new system will have a devastating financial impact on the community and could result in the loss of community support for the project. (Comment 31)
- Why are some residents paying hookup fees and others are not? Should not discriminate. (Comment 67)
- What is the cost to be on the county sewer? Residents who are not on the LCC will be penalized with enormous fees, which is a large burden to older residents on fixed incomes. (Comment 55)
- I am really upset that lots that were not hooked up to the C. Brewer system will have to pay a lot of money to hook up to the new system. Many of these lots are owned by low income or elderly people who cannot afford to hook up to the new system on their own. (Comment 42)
- Including the whole community of Pāhala in the new system places an unnecessary financial burden on both the homeowners and the County. (Comment 61)
- I have no money to hook up to the sewage plant. (Comment 37)
- The community is being divided because the County is covering costs for certain houses to be hooked up to the new system and requiring other homeowners to pay to hook up. (Comment 42)
- The costs of the two Kaʻū projects far exceeds the taxable value of the lots to be disconnected from the LCCs. (Comment 65)
- Funding should be available for the entire project. Pāhala is a poor and poverty district, with 85% of residents retired or living on fixed incomes, limited employment opportunities. (Comment 40)

Response

The purpose of the Proposed Action is to bring the County into compliance with the SDWA by constructing an alternative means of wastewater disposal that would allow the County to close

the existing LCCs. NEPA does not require consideration of socioeconomic impacts that are unrelated to an impact on the physical environment. *See* 40 CFR § 1508.14.

The Proposed Action is expected to result in the connection of 111 existing connected lots to the new collection system and wastewater treatment and disposal facility. In addition, due to their proximity to the new collection system, 65 to 66 additional lots would become accessible to the sewer. Sewer laterals to the property line would be installed as a part of this project. Under the Proposed Action, the design of the new collection system would include sewer service stub-outs to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there would be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the HCC, the respective newly-accessible property owners would be responsible for the design, permitting, and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. It is not accurate that the whole community of Pāhala would be included in the new sewer system.

The Draft EA Section 3.16 (Socioeconomic Characteristics) provided information regarding the socioeconomic characteristics of the Pāhala community in comparison to the County of Hawaiʻi. The information for the 2012-2016 period shows the median age for Pāhala is 42.4 years, compared to 41.8 years for the County. By age group, Pāhala shows a total of 65.7 percent less than 60 years old, compared to 74.2 percent for the County. The median household income for Pāhala is $47,625, compared to $53,936 for the County. For Pāhala, 85.1 percent of households have an income less than $99,999, compared to 77.6 percent for the County. Overall, the Proposed Action is expected to benefit residents by providing a cleaner and longer-lasting wastewater treatment system. This information has been repeated and updated in the Final EA. The Final EA Sections 3.16 (Socioeconomic Characteristics) and 5.7 (Environmental Justice Executive Order 12898) have been updated to clarify that, despite the relatively high proportions of low-income, minority, and children residents in Pāhala compared to the County overall, the Proposed Action would not result in disproportionately high and adverse human health or environmental effects on these sensitive populations.

EPA acknowledges commenters' concerns over hook-up fees, maintenance fees, and other potential fees. However, it is the responsibility of the County to determine how to finance their portion of the Proposed Action. Additional research and outreach regarding financing options for residents was provided by the County in response to comments from the community. On March 21, 2019, the County held a meeting in Pāhala which included a presentation to provide information on financing options available to residents whose lots would become accessible to the new collection system. The purpose of the meeting was to fulfill a County commitment made in October 2018 to research financing options available to the newly accessible residents of the Pāhala community by March 2019. This information has been included in the Final EA Section 7 (Public Participation).

Sources of Funding

Comment

- Did C Brewer give the County funding? (Comment 67)
- No consideration has been given of other funding types for the project. (Comment 23a)
- Should the County of Hawaiʻi fund the whole project, including hook ups? (Comment 67)

Response

The Draft EA Section 2.1.2 (Project Funding) discussed the two funding sources that would be used to support the Pāhala LCC Replacement Project: an EPA Special Appropriations Act Project (SAAP) grant and Clean Water State Revolving Funds. An EPA SAAP grant was awarded to the County in 2005, and subsequently amended. The total amount of the award is $1.842 million.

The second source of funding for the project is the Hawai‘i Clean Water State Revolving Fund. The Hawai‘i Clean Water State Revolving Fund receives annual funding from the EPA, which the State of Hawai‘i Department of Health is then responsible for allocating among eligible projects. The Final EA Section 2.1.2 has been updated to include additional information about this source of funds.

As stated previously, the proposed project is expected to result in some costs to owners of lots that become accessible to the new wastewater collection system. A discussion of the County's efforts to identify additional financing options for homeowners to pursue can be found in the section above (*Economic Impacts on the Community)*. The Final EA Section 3.16 (Socioeconomic Characteristics) has been updated with this information.

Please refer to the Draft EA Section 2.1.4 (History of Wastewater Management in Pāhala) for a discussion of C. Brewer's involvement. Additional information has been added to the Final EA Section 2.1.4 for clarity.

2.1.5 *Archeological and Cultural Resources*

Comment

- The proposed plant may be located in proximity to an archeological or burial site. (Comment 33)
- There are burials and caves within the proximity of proposed site. Community members have witnessed seeing the caves and burials. It was deemed a site not to be used by the County back in 2008. (Comment 41)
- There are cultural and historic resources, including caves and bones, at the site. (Comment 42)
- There are many caves and unrecorded burial sites in Pāhala. There needs to be a thorough EIS, and in-depth testing, not just surface testing that was done, to document any archeological findings. (Comment 56)
- Lava tubes and burials were identified during previous development projects in Pāhala. No subsurface testing for these resources was completed on the site, and these areas could be affected during development or flooding of the site. (Comment 67)
- Possible burial sites are suspected to be present on or near the site. (Comment 68)
- Concerned about use of the current site due to the presence of historically sensitive areas. Elders should be consulted about these resources. (Comment 73)
- The location of the burial cave (believed to be in the southeastern corner of the site) should be ascertained and this area protected. Once the location of the cave has been identified, consultation with descendants, SHPD, and the Hawai‘i Island Burial Council can be completed to determine appropriate physical buffers for the facility. It is very important to ascertain that the burial cave is located at a higher elevation than the proposed facility to ensure that the cave is not subjected to contact with treated or untreated wastewater. (Comment 74)

Response

As discussed in the Draft EA Section 3.15.1(a) (Archeological and Cultural Resources – Existing Conditions), after consultation with the State Historic Preservation Division (SHPD), the County initiated an Archeological Inventory Survey (AIS) to “fully document, map, date and collect [any] surface artifacts” located at the proposed site. An AIS plan was approved by the SHPD on August 20, 2018.

Since the publication of the Draft EA, the Draft AIS for the Pāhala Wastewater Treatment Plant and Sewer System Project was completed and submitted to the SHPD on March 11, 2019, for review. The AIS was generated based on a literature review and research, pedestrian surveys, and subsurface testing. The AIS report did not identify any pre-Contact features or lava tubes within the project area. The AIS report referenced the findings of a November 2016 survey which did identify a known lava tube access within former plantation land to the east of and outside of the treatment and disposal facility project site, and just north of Māmalahoa Highway that has been blocked. No impacts to this lava tube are expected since it is located outside of the treatment and disposal facility project site. The Draft EA Section 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility) stated the aerated lagoons would be lined with high density polyethylene liners to prevent water seepage through the bottom and sides of the lagoons. Thus, untreated wastewater would not enter the ground beneath the wastewater treatment and disposal facility.

To determine the location of the lava tube that may be what is referenced by commenters, the County sent a follow-up letter to Commenter 40, the Pele Defense Fund, requesting information about the known lava tubes in the project area via email to the address from which the comment was submitted and via certified mail on November 14, 2018 but received no response.

Overall, the AIS results supported a determination of “no historic properties affected” by the proposed project. This information is updated in the Final EA Section 3.15 and the Draft AIS report has been included as an Appendix to the Final EA.

Consultation regarding historic properties has been completed according to applicable laws and regulations. The Draft AIS report was provided to SHPD in accordance with the requirements of the National Historic Preservation Act (NHPA) and was made available to the public by the EPA on June 5, 2019 through a publicly available web posting on the project page for the Pāhala project (see: https://www.epa.gov/uic/proposed-Pāhala-community-large-capacity-cesspool-replacement-project-draft-environmental). In the AIS, the area of potential effect was determined to be 57.7 acres and includes the following:

1. The 14.9-acre wastewater treatment plant (WWTP) site, within which all project-related staging, including for the collection system and the treatment and disposal facility, will be located;
2. An approximately 1,500-foot (ft) long by 25-ft wide utility easement (about 0.94 acres) located entirely within Tax Map Key (TMK) [3] 9- 6-002:018 to connect the collection system line and other utilities to the WWTP;
3. The path of the new sewer collection lines, to be located within the 22- to 24-ft wide travel surface of select county streets;
4. Sewer line easements of similar width (22-24 ft) through TMKs [3] 9-6-005:036 and 044 connecting the collection lines to the proposed Pāhala WWTP site;
5. The existing LCC 1 and 2 locales (located in TMKs [3] 9-6-002:016 and 9-6-016:041, respectively), and an approximately 100-m (328-ft) long by 15-m (49-ft) wide corridor along

the existing sewer line easement in TMK [3] 9-6-002:016 between Maile Street and LCC 1; and

6. Numerous single-family residential/other properties with existing sewer laterals, some of which may need to be replaced/repaired/rehabilitated by the County.

In accordance with the NHPA (36 CFR § 800.4(d)), EPA reached a finding of no historic properties affected for this undertaking and requested SHPD concurrence with this determination on September 26, 2019. No response from SHPD has been provided to date. In accordance with 36 CFR § 800.4(d)(1)(i) and as specified in the September 26 letter, because no response was received within 30 days of SHPD receipt of the adequately documented finding, EPA has fulfilled their Section 106 responsibilities for this undertaking. However, construction would not proceed until SHPD has approved the Draft AIS.

Though pedestrian surveys were conducted throughout the APE to identify potential lava tubes and none were visually observed at the site, the AIS was not able to conclusively establish that lava tubes are not present within the area surveyed as part of the AIS. Therefore, in addition to the field methodology presented in the AIS, and to limit ground disturbance, the County is in the process of performing Ground Penetrating Radar and soil resistivity surveys as part of the project design phase, and would adjust the final design of the Proposed Action as needed to mitigate impacts to any potential lava tubes identified as a result of these surveys. The discussion in the Final EA Section 3.3 (Geology) has been updated to reflect this.

The Hawaiʻi Island Burial Council was consulted as part of the Draft EA preparation process. As stated in the Draft EA Section 3.15 (Archeological and Cultural Resources), on March 29, 2018, the County also conducted outreach to Native Hawaiian Organizations as part of the Section 106 consultation for this project. Consultation letters were delivered to invite comments from organizations that may attach religious or cultural significance to properties affected by the Proposed Action. A total of 14 letters were mailed to various Native Hawaiian Organizations requesting comments (see the Draft EA Section 10); no responses have been submitted to the County. In addition, outreach for the Draft EA included talk story sessions that were open to all members of the public, including elders.

On September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers to advertise that on October 10, 2018, a public information meeting was to be conducted by the County in Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the Draft EA and that a second part of the meeting would also address Section 106 of NHPA. Although eight persons signed in to comment on Section 106, no comments or information were forthcoming regrading Section 106 during the October 10th meeting. This information is included in the Final EA Section 7 (Public Participation) and Section 3.15.

It is not true that the site of the Preferred Alternative (Site 7) was “deemed a site not to be used by the County back in 2008.” It appears that the commenter is referring to the 2007 Nāʻālehu and Pāhala LCC Conversion project Final EA (the “2007 Final EA”), which evaluated a proposed project to install septic tanks to replace the existing LCCs. The 2007 Final EA did not evaluate Site 7 as an alternative location for the septic tank project and did not identify it as a site “not to be used by the County.”

2.1.6 *Air Quality*

Comment

- Residents of Pāhala have a high rate of asthma and studies have shown that there are negative impacts on residents who live next to a sewage plant. Not only do we have the

chemicals left in the ground by C, Brewer, we have the dust and chemicals from the Macadamia Nut Co. and the vog from Tutu Pele. (Comment 41)

- The smell of the facility is a concern. (Comments 33, 56, 67, 68)
- The treatment plant could cause an increase in harmful airborne bacteria. (Comment 67)

Response

Odor and smell impacts were addressed in the Draft EA Section 3.14.2(a) (Air Quality – Impacts and Mitigation Measures) which stated "to mitigate potential nuisance odors, the headworks [of the wastewater treatment and disposal facility] would be equipped with an odor control system with a GAC scrubber to remove odor […] the treatment lagoons would be equipped with mechanical aerators capable of maintaining sufficiently aerobic (with oxygen) conditions within the water column, which would prevent nuisance odor conditions from occurring" under normal operating conditions. This information has been repeated in the Final EA.

For other air quality impacts, the design and operation characteristics of the new wastewater treatment and disposal facility would limit pathways for off-site migration of aerosols. As stated in the Draft EA Section 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility), the lagoons would be equipped with high-speed floating aerators. The plant design would not result in migration of aerosols outside of the site boundaries. The land application system would use a piping system with slots at ground level to distribute treated and disinfected wastewater; because this process distributes disinfected water and does not create an aerosol, risk of exposure to pathogens through inhalation is minimal.

Furthermore, the wastewater treatment and disposal facility would be located at least 0.5 miles away from the developed area of the community, which provides a buffer to mitigate potential concerns associated with nuisance odors or aerosol migration that could arise outside of normal operating conditions.

2.1.7 *Other Impacts*

Comment

- Is this project going to affect the whole community? (Comment 62)
- Will outside community waste be transported into Pāhala? (Comment 67)

Response

In the Pāhala community, between 176 and 177 lots would be affected directly by the new collection system of the Proposed Action (111 lots on the existing LCC system and 65 to 66 newly accessible lots). This information has been revised in the Final EA Section 2.3.2 (Construct New Wastewater Collection System). The collection system and the treatment and disposal facility are to serve only the Pāhala community.

Comment

- The sewer will attract pests. (Comment 67)

Response

The existing wastewater collection system is an aging system that has flaws and cracks that can provide access to pests such as rats and cockroaches. When the new collection system is installed, the existing system would be abandoned, and the subsequent lack of use would reduce available habitat and pest food sources. The new collection system would be more resistant to

developing cracks and openings, resulting in fewer opportunities for pests to access the sewer as compared to existing system.

Closure and abandonment of the existing LCCs would eliminate potential pest attractants. In addition, the wastewater treatment and disposal facility would be located farther from the Pāhala community than the existing LCCs, thus conveying sewage to a facility that would incorporate design elements and operation practices to reduce attractiveness to pests. These design elements and operation practices would include features such as appropriate removal and management of waste from screening mechanisms to reduce food sources; use of aerators in lagoons to agitate water sources that otherwise could attract mosquitoes; and intermittent dosing of effluent to avoid standing water in groves. The Proposed Action would not be expected to contribute to pest-related concerns in Pāhala. This information is included in the Final EA Section 3.13 (Fauna).

Comment

- The current site location causes concerns about impacts in the event of a natural disaster. Topics to be addressed include developing a hazard plan, response to fires and spills resulting from pump failure, and assuring sources of power and water at the site. (Comment 67)

Response

As stated in the Draft EA Section 3.4 (Seismic Hazard), the wastewater treatment and disposal facility would be designed and constructed to meet the requirements of the International Building Code, 2006 Edition (IBC) as specified in HCC Chapter 5 and would comply with seismic loadings established for the County of Hawai‘i. This would minimize the potential for an uncontrolled release of untreated or partially treated sanitary wastewater, emergency generator diesel fuel, or disinfection chemicals from the facility during a seismic event. Hazards related to hurricanes, such as wind, rain, and flood loads, would be taken into account during detailed design. In addition, the treatment processes would be appropriately designed to have capacity to accommodate upset conditions, including pump and other equipment failures by use of back-up generator for power as described below, alarm conditions for operators and a communication system.

Information pertaining to fire systems, water supply, and electrical systems is located in the Final EA Sections 3.21 (Public Services – Fire Protection), 3.22 (Infrastructure – Water System), and 3.24 (Infrastructure – Electrical and Communication Systems), respectively. As explained there, fire protection and related services would be provided to the treatment facility from a fire station located in Pāhala, and the treatment and disposal facility would include a fire protection line sized as required during design to be used in the event of a fire. Department of Water Supply and the Fire Department would have an opportunity to review construction plans for the Proposed Action during the project design phase. All alternatives would be designed according to NFPA 820 “Standard for Fire Protection in Wastewater Treatment and Collection Facilities.” In accordance with Hawai‘i Fire Department requirements, Fire Department access and water supply to the proposed Site 7 would be designed to comply with Chapter 18 of NFPA 2006 Uniform Fire Code as amended by the County of Hawai‘i. This information is included in the Final EA Sections 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility) and 3.22.

Water service does not currently exist at Site 7. Water for the proposed wastewater treatment and disposal facility would be provided by extending the existing water main operated by the County of Hawai‘i DWS (located approximately 2,000 feet northeast of the proposed wastewater treatment and disposal facility) and by installing a service line to connect the new facility to that extended water main. The proposed site (Site 7) was deemed preferable to two other sites

considered (Sites 8 and 9) because, among other reasons, potable water and fire protection lines would need to be extended further to reach the latter two sites. Operation of the sewer system would not require a water source external to the proposed treatment and disposal facility. As stated in the Draft EA Section 3.22.2, construction plans would show the estimated maximum daily water usage calculations prepared by a professional engineer licensed in the State of Hawaiʻi. After review of the calculations, DWS would determine if enough water is available and a water commitment could be issued.

It is anticipated that electrical power would be provided by Hawaiʻi Electric and Light Company (HELCO) overhead power lines and a pole-mounted transformer. Backup power would be provided by a diesel generator and aboveground fuel tank with capacity to support three consecutive days of operation. In addition, the electrical service panel would support a connection to a portable trailer-mounted generator in the event of a power outage lasting longer than three days. This information has been repeated in the Final EA Section 3.24.

2.2 NEPA Processes

Responses to comments regarding the federal NEPA process for the Proposed Action have been arranged into the following categories:

- Purpose and Need
- Scope of Proposed Action
- Cumulative Effects
- Federal and State Consultations
- NEPA Procedures

2.2.1 *Purpose and Need*

Comment

- Why does the small community of Pāhala need a wastewater treatment plant (WWTP) when other communities have larger populations and are growing in size? (Comment 56)
- Why was the Pāhala community chosen to have the cesspool conversion done by 2021 when the rest of the state has until 2050? (Comment 67)
- If this is truly a means for Hawaiʻi County to avoid fines from the federal government for the LCC violations, then that is what the focus of the proposal should be about. (Comment 61)

Response

As described in the Draft EA Section 2.1.3 (Large Capacity Cesspools), the two cesspools serving Pāhala community meet the criteria of being LCCs under federal law since they each serve multiple dwellings. These LCCs are in violation of the SDWA as long as they continue to operate. The SDWA Underground Injection Control (UIC) Program prohibited the construction of new LCCs as of April 2000 and required the closure of all existing LCCs by April 5, 2005 (*see* 40 CFR § 144.88). In order to close the LCCs serving the Pāhala community and comply with federal law, the County needs to develop an alternate means of wastewater treatment for those homes and buildings that are currently connected to the LCCs.

It is not true that the rest of the state has until 2050 to close LCCs—all LCCs across the nation, including those in the Pāhala community, were required under federal law to be closed by 2005. In referencing 2050, it appears that the commenter is referring to a Hawaiʻi state law that was

passed in 2017 that requires the closure of all cesspools (LCCs and small capacity cesspools) by 2050. Unlike LCCs, which serve multiple dwellings and/or have the capacity to serve 20 persons or more per day, small capacity cesspools typically serve individual homes and are not regulated under federal law. This information has been clarified in the Final EA Section 2.1.3.

EPA and the County entered into an AOC in June 2017 since the County continued to operate the Pāhala LCCs after the 2005 closure deadline and after assuming ownership of the system from C. Brewer in 2010. This Administrative Order included an enforceable schedule for the County to close the Pāhala LCCs in order to bring the County into compliance with federal law. Because the LCCs cannot be closed until an alternate means of wastewater disposal is constructed, the schedule for closure of the LCCs included in the Administrative Order was developed based on the County's estimate of the amount of time required to design and build a replacement means of wastewater disposal.

After careful review of different alternatives for wastewater treatment and disposal (see Section 2.5.4 (Treatment Alternatives) of this Appendix and the Final EA Section 2.8 (Alternatives Considered but Not Carried Forward)), the County identified the most appropriate solution given the community requirements as well as applicable Federal, State, and County regulations governing wastewater disposal systems. The wastewater treatment and disposal facility would be sized appropriately for the Pāhala community, based on the number of lots that would be connected to the new facility through the Proposed Action (anticipated to be approximately 176 to 177 lots), and wastewater flow projections for these lots, as determined by code. The size is also determined by the use and zoning of the lots and includes a standard allowance for industrial lots. For more information on the sizing of the proposed wastewater treatment and disposal facility, see Section 2.4.3 (Hawai‘i Department of Business, Economic Development and Tourism, Land Use Commission (LUC)) of this Appendix.

Comment

- There is no data to prove Pāhala community at status quo shows an impact in ground water contamination. (Comment 67)

Response

The purpose of, and need for, the project is to close the LCCs serving the Pāhala community in order to bring the County into compliance with federal law, and to prevent potential impacts to public health and the environment that may be caused by discharging untreated sewage into the ground in a residential neighborhood. Regulations promulgated under the SDWA required the closure of all LCCs nationwide by no later than April 2005. There is no requirement under these regulations to show actual impacts to groundwater. This is because the SDWA is designed to prevent endangerment of drinking water before it occurs—thus, to comply with the SDWA, the regulations require closure of all LCCs. The Draft EA Section 3.8.2 (Ground Water – Impacts and Mitigation Measures) stated that while use of the two LCCs has not resulted in documented impacts to groundwater or drinking water resources, abandonment of the LCCs would remove a potential source of such impacts and bring the facility into compliance with the SDWA. Abandonment of the existing wastewater collection system would not affect groundwater within the affected areas. This information is repeated in the Final EA Section 3.8.2.

2.2.2 *Scope of the Proposed Action*

Comment

- The failure to consider aggregated and cumulative effects of the Pāhala and Nā‘ālehu projects is legally unacceptable. These two projects should be analyzed in a single impact

statement because of the connected nature and possible cumulative impacts of the projects. (Comment 4)

- The Pāhala and Nāʻālehu projects should be considered together. (Comment 16)
- The Pāhala and Nāʻālehu projects were separated to evade NEPA review. The Pāhala project is violating NEPA procedural requirements. (Comment 23a)
- NHPA Section 106 consultation should have been conducted for both the Pāhala and Nāʻālehu projects together. (Comment 65)
- Demoruelle v. Beck evidence of misconduct in following NEPA/HEPA. (Comment 75)

Response

NEPA defines actions as connected if they satisfy any of the following criteria:

i. Automatically trigger other actions which may require environmental impact statements (EISs).

ii. Cannot or will not proceed unless other actions are taken previously or simultaneously.

iii. Are interdependent parts of a larger action and depend on the larger action for their justification. [40 CFR § 1508.25]

The proposed Pāhala LCC Replacement Project does not meet any of the above criteria. The proposed Pāhala LCC Replacement Project does not automatically trigger other actions which may require an EIS and is a stand-alone project which does not rely or depend on any other project. Therefore, the proposed Pāhala LCC Replacement Project is not considered connected to the Nāʻālehu Large Capacity Cesspools Closure Project (Nāʻālehu Project) for purposes of NEPA.

As stated in the Final EA Section 2.9 (Relationship to 2007 Final Environmental Assessment), in 2007 the County elected to evaluate the two projects in a single environmental review document under HRS 343 because at that time, both projects were expected to proceed along the same timeline and both were expected to be funded under the EPA SAAP grant. The County decided to not move forward with the proposed project as evaluated under that process for several reasons which are also described in the Draft EA Section 2.9.

Since then, the grant workplan for the EPA SAAP grant has been amended to include only the Pāhala community - LCCs Replacement Project. This decision was made based on two points: 1) the federal grant funds would only cover a portion of one of the projects and 2) it was expected that the Pāhala LCC Replacement Project could be completed faster than the Nāʻālehu Project, and there was therefore a lesser likelihood that funds associated with the grant would be de-obligated before they could be spent. Consequently, the Nāʻālehu Project will not receive any funding under the EPA SAAP grant.[4]

The funding of the Pāhala LCC Replacement Project under the SAAP grant is considered a federal action that requires environmental review under NEPA. Because funding from the EPA SAAP grant is allocated to the Pāhala LCC Replacement Project, and because the Nāʻālehu Project is not a connected action, it is not appropriate to include the Nāʻālehu Project as part of the Proposed Action examined in the Pāhala LCC Replacement Project EA. The EPA did consider the potential cumulative effects of other past, present, and reasonably foreseeable actions

[4] In 2011, EPA reimbursed the County for approximately $113,000 for preliminary designs for the Nāʻālehu Project. The Nāʻālehu Project will be completed with County and State funds and will not receive any additional EPA SAAP grant funds.

(including the Nāʻālehu Project) as required by NEPA in the Draft EA Section 4 (Cumulative Effects) and additional information is included in Section 2.2.3 (Cumulative Effects) of this Appendix.

The two projects are also considered separate for purposes of the National Historic Preservation Act (NHPA). Section 106 of the NHPA requires federal agencies to take into account the effects of federal undertakings on historic properties (*see* 40 CFR § 800.1(a)). Specifically, agency officials must assess whether historic properties occur within the "area of potential effect" for the project, and if so, whether they would be impacted by the project. NHPA regulations provide that agency officials should engage in consultation with the appropriate state historic preservation officer and consulting parties in order to determine whether the proposed project is expected to result in impacts to historic properties.

EPA and the County engaged in the NHPA Section 106 consultation process for the Pāhala LCC Replacement Project and determined the area of potential effect for the project did not extend outside the Pāhala area as described in Section 2.1.5 (Archeological and Cultural Resources) of this Appendix. Because Nāʻālehu is located 11 miles from Pāhala and is well outside of any area expected to be affected by the Pāhala LCC Replacement Project, the Nāʻālehu Project was not considered as part of the Pāhala LCC Replacement Project Section 106 consultation process. The Final EA Section 3.15 (Archeological and Cultural Resources) has been updated with additional information regarding the NHPA Section 106 Consultation process.

In accordance with state requirements, the Nāʻālehu Project would undergo a similar consultation process to assess potential impacts on historic properties as part of the separate environmental review for that project.

2.2.3 *Cumulative Effects*

Comment

- The project is evading NEPA requirements by not considering the cumulative impacts (including economic impacts on county with decreasing tax base) of both the Pāhala and Nāʻālehu projects. (Comment 1)
- The project is evading NEPA and crosscutting environmental review requirements by not considering the cumulative impact of both the Pāhala and Nāʻālehu projects. (Comment 2)
- The failure to consider aggregated and cumulative effects of the Pāhala and Nāʻālehu projects is legally unacceptable. These two projects should be analyzed in a single impact statement because of the connected nature and possible cumulative impacts of the projects. (Comment 4)
- The Pāhala and Nāʻālehu projects should be considered together. (Comment 16)
- The cumulative impacts of the Pāhala and Nāʻālehu projects need to be considered together in one EIS. (Comment 23a)
- The cumulative impacts of the Pāhala and Nāʻālehu WWTPs need to be considered. (Comment 27)
- The County and EPA have avoided consideration of the impacts of the Nāʻālehu Project on the Pāhala WWTP. (Comment 43)

Response

The community of Nāʻālehu is located approximately 11 miles from Pāhala. As stated in the Draft EA Section 4 (Cumulative Effects), "due to its distance from Pāhala, the effects of [the Nāʻālehu Project] are not expected to have a significant cause-and-effect relationship with the direct and indirect effects of the Proposed Action." The Nāʻālehu Project is undergoing separate community outreach and environmental review processes that have not yet been completed and therefore very little information regarding the impacts of that project is publicly available. However, information has been added to the Final EA Section 4 relating to the potential for cumulative effects between this project and similar construction projects within the Kaʻū district. Please refer to Section 2.2.5 (NEPA Procedures) of this Appendix for a discussion of why an EA was prepared rather than an EIS for the Proposed Action. The Nāʻālehu Project is not the subject of this EA.

2.2.4 *Federal and State Consultations*

Section 7, Endangered Species Act (ESA)

Comment

- EPA has failed to comply with the Endangered Species Act (subject of attached legal documents). (Comment 4)
- The Project is in violation of the ESA and is causing concrete harm to the citizens of Hawaiʻi. (Comment 14)
- The Project is in violation of environmental statutes and regulations including the Endangered Species Act. (Comment 14)
- COHDEM and its contractors are avoiding Section 7 consultation under the ESA for the Pāhala project. (Comment 57)

Response

The EPA has fulfilled its consultation requirements under Section 7 of the Endangered Species Act. A biological field survey was performed in August 2018 for the proposed wastewater collection system and the preferred site (Site 7) for the wastewater treatment and disposal facility. The field study did not identify any species of plants or wildlife that are currently listed or proposed for listing as threatened or endangered species under Federal or State of Hawaiʻi laws, and determined that Federally delineated Critical Habitat is not present in the Pāhala area. EPA initiated informal consultation with the U.S. Fish and Wildlife Service (USFWS) by letter dated December 21, 2018. The EPA received concurrence from the USFWS on February 15, 2019 that the project is not likely to adversely affect federally listed threatened or endangered species. A full discussion of the Section 7 consultation efforts and actions is included in the Final EA Sections 3.12 (Flora), 3.13 (Fauna), and 5.6 (Endangered Species Act).

Section 106, National Historic Preservation Act (NHPA)

Comment

- The NHPA Section 106 consultation for the Pāhala project is not valid because the Nāʻālehu project was not also considered. The consultation was also done hastily and without proper publication of notice. (Comment 65)
- The federal Section 106 and the Cultural Assessment of the Draft EA are inadequate. (Comment 40)
- Local Hawaiian groups and individuals were not pre-consulted before the Section 106. (Comment 65)

- EPA failed to reach out to local Hawaiian organizations. The following should be consulted (list of suggested affected organizations attached). (Comment 7)

Response

On March 8, 2018, the EPA notified all Native Hawaiian Organizations (NHOs) in the Pāhala area that the County had been authorized to act in EPA's behalf when initiating consultation under 54 U.S.C. § 300101 and 36 CFR §800.2(c)4 for the Pāhala Large Capacity Cesspool Replacement Project. The County conducted consultation outreach to NHOs by directly contacting the federally recognized Native Hawaiian organizations listed in the Draft EA Section 10 (Consulted Parties). As stated in the Draft EA Section 3.15 (Archeological and Cultural Resources), consultation letters were delivered to invite comments from organizations that may attach religious or cultural significance to properties affected by the Proposed Action. The selection of NHOs for this outreach was developed using the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization Notification List (Updated December 4, 2017). Letters requesting comments under Section 106 Consultation (54 U.S.C. § 32706) were sent to a total of 14 NHOs on March 29, 2018. No responses were submitted to the County.

On September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers. The public notice was to advertise the October 10, 2018 public information meeting that was to be conducted by the County in Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the Draft EA. The notice stated the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006). It was meant to involve consultation with NHOs and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and cultural religious attachment to the proposed project area. A Section 106 sign-in sheet was provided to those wishing to provide comments. No comments were made during the October 10, 2018 public information meeting. This information is added to the Final EA Section 7 (Public Participation).

As explained in the Final EA, EPA has concluded Section 106 consultation with a determination of "no historic properties affected" by the Preferred Alternative. This information is updated in the Final EA Sections 3.15 and 5.14 (National Historic Preservation Act).

The area of potential effect for the Pāhala LCC Replacement Project does not extend to Nāʻālehu, which is approximately 11 miles from Pāhala, meaning that there is no potential for the Pāhala LCC Replacement Project to impact historic properties in Nāʻālehu. The Nāʻālehu Project would go through a separate consultation process for historic properties in accordance with state requirements. Additional explanation for why these projects are considered separately is included in Section 2.2.2 (Scope of the Proposed Action) of this Appendix.

Please see Section 2.1.5 (Archeological and Cultural Resources) of this Appendix for further details on the Section 106 consultation for the Pāhala LCC Replacement Project. The Final EA Sections 3.15 and 5.14 have been updated to include additional information on the NHPA Section 106 Consultation process.

Other Agency Coordination

Comment

- The Hawaiʻi Department of Education (HIDOE) requests consultation and coordination with the Facilities Development Branch, Public Works as early as possible to ensure a timely connection to the new collection system and closure of the on-site septic system. (Comment 72)

- The HIDOE requests consultation and coordination with the school and the HIDOE Transportation Services Branch Manager to minimize construction and traffic impacts to the school such as noise, fugitive dust and HIDOE transportation of students. (Comment 72)

Response

The Ka'ū High and Pāhala Elementary School, including the Ka'ū District Gym and Shelter, would become accessible to the proposed County sewer system with the installation of two new laterals at the property line on Hala Street and Kamani Street. While typically only a single lateral is provided for a lot, the additional lateral on Hala Street is being installed to accommodate the project and create a gravity flow connection. This information is included in the Final EA Section 2.3.2 (Construct New Wastewater Collection System). Impacts and mitigation measures for addressing construction-related dust, traffic, and noise are addressed in the Draft EA Sections 3.14 (Air Quality), 3.17 (Traffic), and 3.18 (Noise). The County would provide information about the construction schedule for the treatment and disposal facility and the collection system to the Facilities Development Branch Public Works Administrator on request. Further, the County would coordinate with the HIDOE Student Transportation Services Branch Manager and the School in order to minimize construction-related impacts to student transportation services. Please refer to the County response to Comment 72 for further information.

Comment

- I request consulting party status under NEPA and Hawaiʻi Environmental Policy Act (HEPA) and all cross-cutting statutes. (Comment 4)
- I was not allowed to be a consulting party. I could have advised EPA and COH on proper procedures, but was never asked for my opinion or assistance. (Comment 65)

Response

A "consulting party" is a defined term specific to the NHPA that does not otherwise have meaning under NEPA. On October 19, 2018, EPA sent a letter to the commenter (Comment 4) indicating that, based on the information provided, the commenter did not meet the criteria for a consulting party under the NHPA. In addition, HRS 343 and HAR 11-200 have no requirements or definitions related to consulted party status for an EA.

All interested members of the public were invited to provide comments on the Draft EA and to attend the public information meeting on October 10, 2018. The public information meeting was conducted by the County in Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the Draft EA. This was immediately followed by a second meeting addressing Section 106 of the NHPA. A Section 106 sign-in sheet was provided to those wishing to provide comments.

2.2.5 *NEPA Procedures*

Comment

- The two Kaʻū WWTP projects are proceeding in violation of NEPA and HEPA. No EIS has been prepared or submitted for publication, and statutory and regulatory procedures for public participation have not been followed. (Subject of forwarded legal documents) (Comment 16)
- All wastewater systems with treatment units in Hawaiʻi have had an EIS. The Pāhala project is intentionally evading this process. (Comments 15, 18, 53)
- A combined EIS for the Kaʻū LCC Closure Project should be provided. (Comment 38)

Response

EPA determined that an EA is the appropriate evaluation for the proposed Pāhala LCC Replacement Project because this federal action is not expected to significantly affect the quality of the human environment within the meaning of NEPA. It is not accurate that an EIS is prepared for all wastewater systems or wastewater treatment units in Hawai‘i. As described in EPA NEPA implementing regulations, types of actions that normally require the preparation of an EA include “certain grants awarded for special projects authorized by Congress through the Agency’s annual Appropriations Act.” *See* 40 CFR § 6.205(b). An EIS, on the other hand, is normally prepared for new regional wastewater treatment facilities or water supply systems for a community with a population greater than 100,000 (*See* 40 CFR § 6.207). As stated in the Draft EA Table 3.1, the total population of Pāhala is 1,341. The Pāhala LCC Replacement Project does meet the definition of a project normally requiring preparation of an EA and does not meet the definition for a project normally requiring preparation of an EIS.

Moreover, as described in the Draft EA and the Preliminary Finding of No Significant Impact (FONSI), the Pāhala LCC Replacement Project is not expected to significantly affect the quality of the human environment. As such, an EA is the appropriate vehicle for environmental review of this project, and no EIS is required.

Additional information concerning applicable public outreach requirements and EPA and County compliance with such requirements is available in Section 2.3.1 (Outreach) of this Appendix, and in Final EA Section 7 (Public Participation). Information concerning the separation of the Nā‘ālehu Project and Pāhala LCC Replacement Projects can be found in Section 2.2.2 (Scope of the Proposed Action) of this Appendix.

HRS § 343-5(a)(9)(A) states that “(a) Except as otherwise provided, an environmental assessment shall be required for actions that: (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…” For further discussion on the appropriateness of an EA for purposes of HRS 343, please refer to the County response to Comment 15.

Comment

- The EPA and County are making an "irrevocable commitment of resources" to build the Pāhala and Nā‘ālehu plants. (Comment 23a)
- The project has taken "irrevocable siting action" before the environmental review is complete. (Comment 23a)
- The two WWTP projects in Ka‘ū are costing Hawai‘i taxpayers at least $23,340,000 because the meter is now running and COHDEM has their contracts already in place. (Comment 52)

Response

Neither EPA nor the County has made an irrevocable commitment of resources to the Pāhala LCC Replacement Project other than those required for planning and review of the project. As explained in both the Draft and Final EA, multiple sites and treatment technologies were evaluated for the Proposed Action, and a secondary wastewater treatment and land disposal system was deemed to satisfy the purpose and need for the Proposed Action (i.e., to close the LCCs in compliance with the SDWA by providing an alternate means of wastewater disposal). A Preliminary Engineering Report was prepared in order to facilitate both a comparison of different wastewater treatment systems and a discussion of site selection considerations. Property has not yet been acquired for the project, however, and final design of the facility has not been completed.

As such, there has been no irrevocable siting action or commitment of resources associated with the project.

Additional information on the County's commitment of resources to this project is included in the County response to Comment 23a.

2.3 Public Involvement and Outreach

Responses to comments regarding public involvement and outreach have been arranged into the following categories:

- Outreach
- Accessing the Draft EA
- Public Information Meeting Comments
- Nāʻālehu - Pāhala Large Capacity Cesspool (LCC) Conversion Project – 2007 Final EA Comments
- Public Agencies

2.3.1 *Outreach*

Comment

- The community is concerned about the condemnation of property. (Comment 67)

Response

The Preferred Alternative wastewater treatment and disposal facility site (Site 7) is currently owned by B. P. Bishop Estate Trustees (commonly known as Kamehameha Schools). Kamehameha Schools has agreed to transfer a portion of the property for the purpose of building the wastewater treatment and disposal facility, and legally it can transfer the property to the County through a condemnation proceeding. Thus, while the Preferred Alternative would involve condemnation of property, it would only be used to acquire Site 7. The County intends to purchase easements necessary to close the LCCs and construct the collection system. Apart from this specific property, the Preferred Alternative is not anticipated to result in the condemnation of additional private property.

Comment

- The COHDEM refuses to provide Pāhala meeting records (attendees, agenda, outcomes) or Pāhala environmental review records (except the PER and Draft EA) to the local libraries or online. (Comment 23a)

Response

EPA has fulfilled NEPA requirements for outreach and document availability/review by making the Draft EA available to the public for review and comment. The Draft EA Section 7 (Public Participation) included summaries of the talk story sessions and outcomes of these meetings. In addition, though not required to do so, EPA has made key documents related to the project continuously available through its website (https://www.epa.gov/uic/proposed-pahala-community-large-capacity-cesspool-replacement-project-draft-environmental). Furthermore, there is no requirement to publish notices of public meetings in the Office of Environmental Quality Control (OEQC) *The Environmental Notice*. OEQC may publish such notices on a space available basis. Finally, all project-related documents that have been released to any person under the Freedom of Information Act (FOIA) are available through the centralized FOIA Online system.

Comment

- Resident Edward Andrade should have been consulted as he was the manager of the C. Brewer Sewage system for years. (Comment 41)

Response

All members of the Pāhala community were welcome to attend the five talk story sessions held in December 2017 prior to the release of the Draft EA; to provide comments on the Draft EA; and to attend the October 10, 2018 public information meeting after the release of the Draft EA concerning the project. As a member of the public, Mr. Andrade has provided comments on the Draft EA which are addressed in this Appendix.

Comment

- The entire town was not notified about the three information meetings. (Comment 33)
- There was no disclosure of the proposed project to the residents of Pāhala. (Comment 40)
- There was no disclosure or consultation with the residents of Pāhala. Poor communication resulted in low turnout for all the meetings. (Comment 41)
- I own property in Pāhala, but do not reside there, and would like to be kept informed about the Project. (Comment 59)
- The county is fast tracking the project without input from the community. (Comment 41)
- Communication with residents was not done properly and with respect, so not everyone was informed about meetings. A lot of older people do not understand what is going on. (Comment 42)
- The County failed to thoroughly inform all Pāhala residents who will be affected by this system. (Comment 55)
- The community needs more information about the project. Information was presented poorly in the community meetings. (Comment 63)
- More input by the county on how this project is going to be handled fairly to benefit the community. (Comment 63)
- The Pāhala DEA notice failed to include the true purpose of project, which is to place a secondary sewage treatment plant with four open sewage lagoons in remote Ka‘ū. (Comment 53)
- Residents were not given sufficient time to address concerns about the EA. (Comment 40)

Response

NEPA requires agencies to use “appropriate communication procedures to ensure meaningful public participation throughout the NEPA process,” and to “make reasonable efforts to involve potentially affected communities where the proposed action is expected to have environmental impacts.” *See* 40 CFR § 6.203(a)(5). For an EA, EPA’s NEPA regulations require that the EA and Preliminary FONSI be made available for review and comment at least thirty calendar days before making a decision on whether, and how, to proceed with a proposed action.

As described below, EPA has complied with these public participation requirements and guidelines throughout the scoping process and development of the Draft EA and Final EA. The

Draft EA Section 7 (Public Participation) identifies the community public outreach efforts the County conducted to solicit input while preparing the Draft EA. Prior to the issuance of the Draft EA, the County held five talk story sessions in December 2017 to solicit community input on reactions and perceived effects of the proposed project. Notice about the talk stories was provided to the Pāhala community through several means: direct mailing to properties currently connected to the LCCs, fliers were left at properties which are not currently connected to the LCCs but would have access to the proposed sewer ('newly accessible properties'), fliers were provided to organizational leaders and posted in public venues in Pāhala, and several online announcements were made.

After collecting information on the anticipated scope and impacts of the proposed project, a Draft EA was prepared and published in *The Environmental Notice* issued by OEQC on September 23, 2018. The Draft EA was made available through the OEQC website, as well as through EPA's website, for public review and comment. EPA and the County initially solicited written comments on the Draft EA during the 30-day period from September 23 - October 23, 2018. In response to a request for extension, EPA and the County extended the public comment period for the Draft EA to December 10, 2018.

The Draft EA was made available through the following public notices and methods of outreach:

- The EPA provided notice of the Draft EA on their website (https://www.epa.gov/uic/proposed-pahala-community-large-capacity-cesspool-replacement-project-draft-environmental);
- Notice of the publication of the Draft EA was published in *West Hawaii Today* and the *Hawaii Tribune Herald* on September 26, 2018.
- A public notice was published in the October 1, 2018 print and online editions of the Kaʻū Calendar and made available on the Kaʻū News Briefs web site http://kaunewsbriefs.blogspot.com;
- The Kaʻū Calendar News Brief included an article on October 9, 10, and 11, 2018 with mention of an upcoming meeting (October 10, 2018 public information meeting); and
- Two notices for the Draft EA were published in *The Environmental Notice*:
    - September 23, 2018 – notice for the statutory 30-day public review and comment period for the Draft EA; and
    - November 8, 2018 – notice for republishing the Draft EA and extension of the public comment period for 30 days.
- Fliers were posted in public venues such as the community shopping center, realtor office, grocery store, library, and the Pāhala Community Center.
- Letters were mailed on September 10, 2018 containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 public information meeting to all property owners on record adjacent to the proposed collection system.

After the publication and distribution of the Draft EA, a public information meeting was held on Wednesday, October 10, 2018 at the Kaʻū Gym Multi-Purpose Conference Room. The County provided a presentation and display boards in an open-house format prior to the meeting to facilitate public understanding of the proposed project, and meeting facilitators were available to answer technical questions concerning the project and offer clarification where necessary.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 public information meeting were mailed to all property

owners on record adjacent to the proposed collection system. This direct mailout included an invitation from DEM to workshops conducted prior to the October 10 public information meeting. The workshop for owners served by C. Brewer lines was held on October 8, and the mailout for this meeting also included any non-owners currently receiving a wastewater bill. The workshop for owners of newly accessible properties was convened on October 9. In addition to the direct mailout, online announcements for the October 8 and 9 workshops were available on the Kaʻū News Briefs website.

A summary of this public involvement and outreach following the issuance of the Draft EA is included in the Final EA Section 7 (Public Participation). These efforts for public outreach and involvement exceeded NEPA outreach requirements.

For responses to comments on outreach related specifically to the HEPA HRS 343 process, please refer to the County's individual responses to the above comments.

As explained at various points in the Draft EA, including in Draft EA Section 1 (Summary), and in the coversheet accompanying the Draft EA published in *The Environmental Notice*, the Proposed Action is to construct "four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen and an adjacent disinfection system to remove pathogens and four slow-rate land treatment basins for disposal of the treated effluent."

Comment

- Why were residents who are not on the LCC system excluded from the decision-making process prior to December 2017? (Comment 55)

Response

On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County's Wastewater Division provided a brief history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those properties connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4 (History of Wastewater Management in Pāhala), 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated Mayor Kim's office advised the property owners the County would move forward with a new system for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated public meetings were held in both Nāʻālehu and Pāhala in November 2006 to discuss the wastewater system alternatives. The handout included that adequate land for the treatment and disposal system had not been identified in Pāhala. The Final EA Section 2.1.4 (History of Wastewater Management in Pāhala) has been updated with this information.

Subsequent to that, community outreach activities in the form of five talk story sessions took place in 2017 for the current Pāhala LCC Replacement Project and contributed to the development of the Draft EA. The community outreach program for the Pāhala LCC Replacement Project, as stated in the Draft EA Section 7 (Public Participation), began when the County held these five talk story sessions which were open to all residents and members of the public. This information is repeated in the Final EA.

2.3.2 *Accessing the Draft EA*

Comment

- I had difficulties downloading the Draft EA. (Comments 1, 2)
- I was not provided a copy of the EA despite having requested consulting party status. (Comment 1)
- The Notice for the Pāhala DEA was sent to the wrong address. (Comment 3)

Response

The commenter responsible for comments 1, 2, and 3 received a copy of the Draft EA via U.S. Postal Service certified mail on or about September 27, 2018. The comment period ended December 10, 2018, giving the commenter ample time to provide comments on the Draft EA. Efforts to distribute the Draft EA for public review and comment exceeded NEPA outreach requirements that are described in the comment response on pages 25 through 27 above.

Comment

- Only one copy of the Draft EA was sent to the Pāhala library, limiting access to the document, especially for the elderly. (Comment 41)

Response

The Draft EA was prepared and published in *The Environmental Notice* issued by OEQC on September 23, 2018. The Draft EA was made available through the OEQC website, as well as through EPA’s website, for public review and comment. Upon public request, 11 printed copies of the Draft EA were made available at both the Nā‘ālehu and Pāhala libraries on November 7, 2018. The public comment period ended on December 10, 2018.

These efforts to distribute the Draft EA for public review and comment exceed the NEPA outreach requirements. This information is included in the Final EA Section 7 (Public Participation).

Comment

- There was no physical copy of the Draft EA available at the October 10, 2018 meeting. (Comment 18)

Response

Federal NEPA regulations do not require a project proponent to hold a public meeting on a Draft EA, nor do they require hard copies of a Draft EA be available at a public meeting. The October 10, 2018 public information meeting included a presentation and display boards to facilitate public understanding of the project. The Draft EA, which is a 300-page-plus document, was made available online and in the Pāhala and Nā‘ālehu public libraries in advance of the public information meeting for any person to review, copy, or download. In response to a request from a member of the community, additional copies of the document were made available at public libraries as described in the response to the previous comment.

2.3.3 *Public Information Meeting*

Comment

- Oral comments should be collected at public meetings. Surely someone can take oral comments and make a transcription as OECQ has done? (Comments 9, 16)

- The written commenting process used during public meetings is not adequate for people with limited English. (Comment 10)
- Increments of project, if any, should be presented. What is presented is not complete. (in reference to the October 10, 2018 meeting). (Comment 62)
- Future subdivisions should be included in presentation (in reference to the October 10, 2018 meeting). (Comment 62)

Response

Unlike the process for preparing an EIS, there is no requirement under EPA's NEPA regulations to hold public meetings concerning an EA or Proposed FONSI. As such, agency officials are not required to collect and respond to oral comments on a Draft EA. Despite not being required, the County held a public information meeting on the Pāhala LCC Replacement Project during the comment period for the Draft EA in order to maximize the public's awareness of the proposal.

The Draft EA public information meeting included a presentation and display boards that showed the entire project being considered under the Proposed Action. Though the Pāhala LCC Replacement Project would be built in a manner consistent with good engineering practices so that it would not preclude expansion to treat additional flow associated with residences being added to the collection system, there are no current plans to do so. The Draft EA Section 6.2.2 (Ka‘ū Community Development Plan) discussed the Ka‘ū Community Development Plan and included a description of Policy 120, which is stated as "Extend the primary wastewater collection lines in Pāhala and Nā‘ālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems." Future subdivisions would be accommodated, as capacity allows, on a first-come, first-served basis. This information has been added to the Final EA.

Meeting facilitators verbally explained the Proposed Action and were available to answer technical questions concerning the project and its increments. As these meetings were not transcribed for the purpose of responding to oral comments, meeting facilitators made clear that persons seeking a formal response from the agencies to their comments should submit comments in writing to the County or EPA. The County provided staff at the October 10, 2018, public information meeting to personally assist commenters in preparing written comments, including those with limited English skills and those who preferred to dictate written comments instead of preparing the written comments themselves.

Comment

- The make-up of Pāhala is majority immigrants, where English is a second language. These residents do not fully understand the details of the project and legal jargon, so have not attended the community meetings. (Comment 56)

Response

The Draft EA Section 5.7 (Environmental Justice Executive Order 12898) indicated that Pāhala has a higher proportion of minority groups as compared to the County. The American Community Survey Data for 2012-2016 estimate that the majority of Pāhala residents (58.8 percent) speak only English at home, and that an additional 18.2 percent speak English "very well."[5] All notices and public outreach materials prepared and distributed for the Pāhala LCC Replacement Project

[5] U.S. Census Bureau, 2012-2016 American Community Survey. Table S1601 (Language Spoken at Home). U.S. Census Bureau's American Community Survey Office, 2017. Web. October 16, 2019.

(see Section 2.3.1 (Outreach) of this Appendix for more information on outreach efforts) were developed to be as easily readable and understandable by the general public as possible.

On October 10, 2018, a public information meeting was conducted by the County in the Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the Draft EA. During this meeting, the County identified community volunteers attending the meeting who were proficient in Hawaiian, Tagalog, and English to assist anyone who identified as needing assistance. The OEQC rules have no provision for receiving oral comments. However, the facilitator at that meeting offered assistance in putting any oral comments attendees may wish to offer into writing. This information has been included in the Final EA.

2.3.4 *Nāʻālehu and Pāhala LCC Conversion Project – 2007 Final EA*

Comment

- The 2007 Nāʻālehu and Pāhala Villages Large Capacity Cesspool Conversion Project called for the use of septic tanks for wastewater treatment. The county switched the plan from septic tanks to a lagoon system without public review. (Comment 30)
- Ballots were only sent to those homeowners that were connected to the C. Brewer system, not the whole community (in reference to COM 0293.004 2004-2006). (Comment 61)

Response

The Proposed Action described in the Pāhala LCC Replacement Project Draft EA was developed in response to new information and changed circumstances since the 2007 proposal that cast doubt on the viability of the proposal included in the 2007 Final EA.

The Draft EA Section 2.9 (Relationship to 2007 Final Environmental Assessment) describes the reasons for not implementing the project described in the 2007 Nāʻālehu and Pāhala Large Capacity Cesspool (LCC) Conversion project Final EA. Specifically, after the County published the Final EA in 2007, it performed additional studies and evaluation of the proposed LCC-to-septic conversion project and eventually concluded that the proposed system would not be feasible, and likely would not meet regulatory requirements for a new wastewater treatment/disposal system. As stated in the Draft EA Section 2.8.2(a), based on current design criteria and current flow projections, an approximately 800,000-gallon community septic tank would be necessary to provide the extended detention times needed to optimize treatment performance, to avoid the need for frequent septage pumping, and to account for peak flow rates. A community septic tank of this size would require pumping on a 3-year interval. Septic tanks produce hydrogen sulfide, reduced sulfur compounds, and other odorous gases; a community septic tank would concentrate these emissions to a single point source, requiring treatment with a dual-stage scrubber to avoid nuisance odor conditions. Therefore, use of a community septic tank is not considered to be feasible. In addition, Draft EA, Appendix B (Preliminary Engineering Report), Section 7.5.1 states that the use of a community septic tank would require the Department of Health to issue a variance to HAR § 11-62, which requires WWTPs with design capacities greater than 100,000 gallons per day (gpd) to produce effluent containing less than 30 mg/L of both BOD_5 [5-day biochemical oxygen demand] and TSS [Total Suspended Solids] – septic tanks are not able to produce effluent of this quality.

On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala LCC Conversion project. As part of the meeting, an informational handout prepared by the County's Wastewater Division provided a brief history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those residents who would no longer be served by the C. Brewer system after LCC closure.

As reported in the Draft Section 2.1.4 (History of Wastewater Management in Pāhala), 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated Mayor Kim's office advised the property owners the County would move forward with new systems for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated public meetings were held in both Nāʻālehu and Pāhala in November of 2006 to discuss the wastewater system alternatives. The handout included that adequate land for the treatment and disposal system had not been identified in Pāhala. This information is included in the Final EA Section 2.1.4.

The Pāhala LCC Replacement Project Draft EA was made available online and in public libraries in Nāʻālehu and Pāhala beginning on September 23, 2018. The County and EPA solicited input on the Proposed Action via the public comment period that lasted from September 23 to December 10, 2018. Information concerning the decision to abandon the 2007 proposal has been added to the Final EA Section 2.9.

2.3.5 *State and Local Agencies*

Comment

- The Department of Hawaiian Homelands acknowledges receiving the request for comments. After reviewing materials submitted, due to the project's lack of proximity to Hawaiian Home Lands anticipates no impacts to our lands or beneficiaries. We encourage agencies to consult with Hawaiian Homestead community associations when preparing EAs. Dated 9/27/2018. (Comment 35)
- The County of Hawaiʻi Police Department has reviewed the draft EA and does not have any additional comments or concerns at this time. Dated 10/2/2018. (Comment 36)
- The Hawaiʻi Department of Land and Natural Resources (Engineering Division, Division of Forestry and Wildlife, and Land Division) has reviewed the Draft EA for the Pāhala LCC Replacement Project and has no comments. Dated 10/22/2018. (Comment 77)
- The Hawaiʻi Department of Land and Natural Resources (Division of Forestry and Wildlife and Land Division) has reviewed the Draft EA (generated in response to the extension of public comment period) for the Pāhala LCC Replacement Project and has no comments. Dated 12/7/2018. (Comment 71)

Response

EPA acknowledges receipt of letters from the above organizations and appreciates their review of the Proposed Action and Draft EA.

Pre-assessment consultation letters were sent to 14 Native Hawaiian Organizations, as stated in the Draft EA Section 3.15.1 (Archeological Resources – Existing Conditions). These organizations included the Piʻihonua Hawaiian Homestead Community Association. No responses were received from any Native Hawaiian Organization. This information is updated in the Final EA.

2.4 State and Local Processes

Responses to comments regarding compliance with state and local processes have been arranged into the following categories:

- State of Hawaiʻi Office of Planning
- Hawaiʻi Environmental Policy Act (HEPA), HRS Chapter 343

- Hawaiʻi Department of Business, Economic Development and Tourism, Land Use Commission (LUC)
- Kaʻū Community Development Plan (CDP)

2.4.1 *State of Hawaiʻi Office of Planning*

Comment

- The State of Hawaiʻi Office of Planning indicates that the Final EA should include a discussion of the project's ability to meet all parts of the Hawaiʻi State Planning Act (HRS Chapter 226), and examine the project's consistency with these statutes, or clarify where it is in conflict. A discussion of Priority Guidelines, or a determination that these guidelines are not applicable to the proposed action, should be included in an examination of Part III statutes. (Comment 32)
- The State of Hawaiʻi Office of Planning requests that the Final EA should include a discussion of the project's compatibility with statewide sustainability goals and principles of sustainability (HRS § 226-108). (Comment 32)
- The State of Hawaiʻi Office of Planning indicates that the option of a District Boundary Amendment could be considered as a land use approval option (could be used instead of a Special Permit) and discussed in the EA. (Comment 32)

Response

The State of Hawaiʻi Office of Planning received a pre-assessment consultation letter on March 15, 2018 and provided a formal response on April 8, 2018 which included comments on the Proposed Action. These initial comments were incorporated into the project planning and the development of the Draft EA as appropriate. In addition to the pre-consultation response, the State of Hawaiʻi Office of Planning provided comments on the Draft EA (those described above) that requested an expansion of the discussion in the Draft EA Section 6 (Plans, Policies, and Controls) to include the Proposed Action's ability to meet all parts of the Hawaiʻi State Planning Act. Information and a brief discussion of sustainability principles from HRS § 226-108 have been added to the Final EA Table 6.1 in addition to information on other applicable sections of Part III of HRS § 226 as requested by the Office of Planning.

The State of Hawaiʻi Office of Planning's comment concerning the option of a District Boundary Amendment is noted.

2.4.2 *Hawaiʻi Environmental Policy Act (HEPA)*

Comment

- The project is in violation of HEPA and UIPA for disclosure of the August 15, 2018 environmental assessment records, and denial of requested records. (Comment 1)
- The COH/EPA/Contractors should fully explain why two new-build secondary sewage plants 11 miles apart in remote, rural Kaʻū would not require an EISPN Act 172-12 notice. (Comment 2)
- The Pāhala and Nāʻālehu projects are in violation of EIS requirements as established by HRS 343/ HAR 11-200 and 11-201. (Comment 13)
- The Pāhala and Nāʻālehu projects should be considered together under HEPA 343. (Comment 16)

- The project is not in compliance with HRS 343 because of the failure to prepare a HEPA EIS, the methods of public outreach and participation, lack of availability of documents, and lack of TEN public notice for the two "talkstory" sessions. (Comment 23a)
- The Pāhala Draft EA notice failed to include the 9A trigger; the project should trigger HEPA 343 Sec5(a)(9). (Comments 16, 53, 58)
- Demoruelle v. Beck evidence of misconduct in following NEPA/HEPA. (Comment 75)

Response

The above-listed comments relate to compliance with the Hawaiʻi Environmental Policy Act, otherwise known as Chapter 343 of Hawaiʻi Revised Statutes or HRS 343. The Final EA Section 6 (Plans, Policies and Controls) includes discussion of state and local requirements applicable to this project. Comments related specifically to compliance with state requirements including HRS 343 are addressed by the County in its separate responses to the above comments.

For discussion of compliance with NEPA procedures, please see Section 2.2 (NEPA Processes) of this Appendix. Discussion of public outreach and notice efforts is included in Section 2.3 (Public Involvement and Outreach) of this Appendix and in the Final EA Section 7 (Public Participation).

Comments regarding the Nāʻālehu Large Capacity Cesspools Closure Project are outside the scope of the Proposed Action. The Nāʻālehu Large Capacity Cesspools Closure Project is currently undergoing a separate environmental review, coordinated by the County of Hawaiʻi Department of Environmental Management, in accordance with HRS 343 requirements.

2.4.3 *Hawaiʻi Department of Business, Economic Development and Tourism, Land Use Commission (LUC)*

Comment

- Describing the project as 14.9 acres is an attempt to evade LUC scrutiny, as LUC review is required for projects of 15 acres or more. (Comments 1, 6, 23a, 40 and 41)
- The project covered a minimum 667,500 sq. ft. [15.3 acres] plus utility access must be considered as part of the project impacts no matter who will own it, so that is another 37,500 sq. ft., bring total acreage at Site 7 as 16.1 acres. (Comment 23a)
- The LUC should be given a chance to review the project even if the property was not within their range. (Comment 42)

Response

Because the Proposed Action is located within an Agricultural District, under Hawaiʻi law a Special Permit is needed. As described in the Draft EA Sections 3.10.2 (Agricultural Lands – Impacts and Mitigation Measures) and 6.1.3 (State Land Use District), "under Chapter 205, HRS, use of agricultural lands for non-agricultural purposes greater than 15.0 acres requires approval of a Special Permit by the Land Use Commission." The Final EA clarifies that, for the Preferred Alternative at Site 7, the County would apply for a Special Permit which requires approval by the County Planning Commission. For projects that would use agricultural lands for non-agricultural purposes greater than 15.0 acres, the County Planning Commission would then submit their decision to the State of Hawaiʻi Land Use Commission for their approval.

As stated in the Draft EA Section 3.10.2(a), "construction of the wastewater treatment and disposal facility at Site 7 would require removal of approximately 14.9 acres of macadamia nut trees." The 14.9-acre site has been selected to provide the necessary land area for the facilities needed to treat the incoming flows and to dispose the treated effluent from the treatment process.

The proposed project site minimizes the use of the adjacent lands which contain a commercial macadamia orchard. A larger project site is not required. Please refer to the County response to Comment 23a for more information.

As stated in the Draft EA Section 2.10.3 (Hawaiʻi Revised Statutes (HRS) Chapter 205 Considerations), within the agricultural district, public, private, and quasi-public utility lines are a permitted use. The area of the Proposed Action located within the ROWs and other easements within the residential areas of Pāhala is considered a permitted use within agricultural land and therefore does not add to the acreage of agricultural lands for purposes of the Special Permit for the LUC review. The County would therefore seek a Special Permit from the County Planning Commission. This information is repeated in the Final EA Section 2.10.3.

No attempt has been made to avoid review by the LUC. The County sent the LUC a pre-consultation letter for this project dated March 15, 2018 providing notice of the preparation of a Draft EA and inviting comments on the Proposed Action as part of the pre-assessment consultation process. No response was received. Also, the Department of Business, Economic Development and Tourism was directly notified (by mail) of the availability of the Draft EA.

2.4.4 *Kaʻū Community Development Plan (CDP)*

Comment

- The Pāhala Draft EA shows no respect for the Kaʻū CDP, specifically Policy 90, and does not follow its statutes. (Comments 46, 50, 65)

Response

Comments related to compliance with state and local requirements are addressed by the County in a separate response to the above comments. The Draft EA included a detailed discussion of the Kaʻū Community Development Plan in Section 6.2.2 (Kaʻū Community Development Plan). That section has been updated in the Final EA.

2.5 Project Location and Design

Responses to comments regarding the location and design of the proposed project have been arranged into the following categories:

- Proximity to Schools
- Location of preferred Alternative
- Extent of Collection System
- Treatment Alternatives
- Technical Design

2.5.1 *Proximity to Schools*

Comment

- How far away will the Plant be from the Pāhala schools? (Comment 23a)
- I am very concerned about the short distance between the proposed site and the school. (Comment 26)

Response

As stated in the Draft EA Section 4 (Cumulative Effects), the Kaʻū High School and Pāhala Elementary School are approximately one-half mile north of the wastewater treatment and

disposal facility at Site 7 under the Preferred Alternative. The facility would be separated from the schools by a macadamia nut orchard, the old Pāhala Sugar Mill maintenance yard, five streets and numerous private residences. The wastewater treatment and disposal facility would be enclosed with a 6-foot-high chain-link fence and posted to prevent public access. EPA does not anticipate that construction and operation of the proposed wastewater treatment and disposal facility would have any direct or indirect impact on the schools (e.g., due to visual, smell, or noise impacts), due to the distance between the proposed facility and the schools. This information has been added to the Final EA Sections 3.14 (Air Quality), 3.18 (Noise), and 3.19 (Visual Characteristics).

The schools currently discharge wastewater to eight (8) DOH-approved septic systems. At the time the septic systems were installed, two new laterals were also installed at the property line on Hala Street and Kamani Street to allow for eventual connection to the new collection system (see Draft EA Section 4.1.1 (Past, Present, and Reasonably Foreseeable Actions)). Upgrading the collection system in front of the school so that these laterals may be connected to the new collection system may result in temporary traffic impacts during construction but these impacts would be mitigated through the establishment of a traffic control plan which would be coordinated with HIDOE transportation services (see the Draft EA Section 3.17.2 (Traffic – Impacts and Mitigation Measures)).

Construction of the project would also result in temporary noise impacts for all areas with construction equipment and trenching as described in Draft EA Section 3.18.2. All construction activities would comply with the Community Noise Control provisions of HAR 11-46. Lastly, the Proposed Action could result in short-term impacts to air quality due to construction activities as a result of fugitive dust or exhaust emissions from mobile construction equipment as described in Draft EA Section 3.14.2. A dust control plan would be implemented to include mitigation measures such as watering of active work areas. EPA does not anticipate any long-term impacts to the Kaʻū High School and Pāhala Elementary School as a result of construction activities.

2.5.2 *Location of Preferred Alternative*

Comment

- The plant should be sited below/south of the highway. (Comments 23a, 27, 55, 56, 62, 63, 67, 68, 69, 70, 73) – Commenters provided the following rationales for this comment: concern over flooding risk, concern that caves and burial sites may be present at the proposed location, concern about visual and odor impacts, and concern about safety and health.
- I am very upset with this whole idea of where you are intending to put the new plant. (Comment 34)
- The plant should be sited south of the highway and make use of the existing culvert that was installed by the sugar industry. (Comments 31, 33)
- Please move the proposed Pāhala sewage treatment plant to the makai (seaward side) of the highway. The proposed site is too close for comfort and life quality. (Comment 37)
- The site should be relocated below the highway to be further away from the town due to safety, environmental, historical, and aesthetic concerns. (Comment 41)

Response

The Draft EA Section 2.7 (Development of Site Alternatives and Selection of Preferred Alternative) discussed the alternative sites for construction of a new wastewater treatment and disposal facility. One of the alternatives discussed, Site 9, is located below the highway. This alternative

scored lower than the Preferred Alternative location (Site 7) because it would require construction of additional access roads, a longer distance to available power and potable water, and a longer transmission line due to the further distance from the existing LCCs and collection system infrastructure. Site 9 would require approval by the State of Hawaiʻi Department of Transportation. It also scored lower than Site 7 because of presence of and/or proximity to archeological/cultural sites. In addition, it was determined that, depending on the configuration of the wastewater treatment facility and the land application groves, this alternative could require trenching and construction of piping across south flowing branches of the Hiʻonamoa Gulch, classified as a riverine wetland (per the National Wetland Inventory), which occurs within the site. To avoid this potential impact for Site 9 and to minimize costs, the headworks, lagoons, and the subsurface constructed wetlands could be sited in the upper portion of the site (i.e., the area closest to the highway) which would result in other impacts. Further discussion has been added to the Final EA Sections 2.5 (Proposed Action – Site 9 Alternative) and 3.7 (Surface Water).

Two additional parcels located below the highway were identified in the Draft EA as Sites 4 and 5. Site 4 was eliminated from consideration because, among other reasons, it contained an unnamed gulch that would need to be crossed by influent and fire protection lines and, because of the soil type, it was estimated that 200 acres would be needed to accommodate the slow-rate land treatment basins (See Draft EA Section 2.8.1(d) (Other Site Alternatives)). Site 5 was eliminated from consideration for similar reasons, as described in Section 2.8.1(e) of the Draft EA. No other parcels below the highway were identified as potentially suitable for the project.

The location and configuration of the Preferred Alternative (Site 7) were designed to minimize aesthetic impacts of the project. As described in the Draft EA Section 3.19.2 (Visual Considerations and Light Pollution – Impacts and Mitigation Measures), the existing pine trees along Maile Street would continue to obstruct the view of the facility from Maile Street. The facility would be visible from Māmalahoa Highway (State Route 11); however, impacts to the view plane would be mitigated by the planted trees in the disposal groves and by the rise in elevation between the highway and the facility. In addition, as described in the Draft EA Table 6.1, the project "does not include facilities or improvements that would adversely affect public safety of this area of Hawaiʻi." Potential impacts of the project on historic properties are addressed in Section 2.1.5 (Archeological and Cultural Resources) of this Appendix.

2.5.3 *Extent of Collection System*

Comment

- It was my understanding that the reason the sewage system was being expanded beyond what was required by the Feds was because it was part of the CDP. Can you please direct me to the section in the CDP that states this? (Comment 29)
- I really feel that the County of Hawaiʻi should concentrate on only people involved with LCC's first and foremost because of the Federal mandated regulations. We non-LCC are not in violation of any standards of the Federal Regulation's requestings. (Comment 55)
- The County has decided to expand the new sewage system beyond those homes currently on LCCs, and beyond what is required by the federal government. (Comments 31 and 73)
- There are some homes which will have the sewer line running near their homes but are not part of the original C. Brewer LCC line. The homes across the street and connecting are not part of the LCC line either, so it is perplexing as to why this initial phase of the project is including lines in areas that are not necessary. (Comment 61)

Response

The Draft EA Section 2.3.2 (Construct New Wastewater Collection System) discusses the construction a new sewer collection system in the Pāhala community to replace and expand upon the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in the Draft EA Section 6.2.1 (Hawaiʻi County General Plan), the current LCC collection system includes lines located the backyard of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from each landowner to enter them, through private property, to inspect, maintain, repair, or replace existing sewer facilities: all activities essential to an efficient, functioning system. As a result, the proposed new collection system would be located primarily within the public street rights-of-way and to close the LCCs, there would be parcels that become "newly accessible" to the collection system. The collection system is not being expanded under the Proposed Action beyond the area needed to close the LCCs. This information is repeated in the Final EA.

The collection system constructed as part of the Proposed Action would be designed to extend to all properties currently served by the LCC system. While the areal extent of the new collection system would mirror the old collection system, certain properties that are not currently served by the LCC system and that are adjacent to, or across the street from, the LCC properties, would become accessible to a sewer when the new collection system is installed. Under County code, properties that become accessible to a sewer are required to connect to sewer unless certain exceptions are met. While the Proposed Action does not include installation of laterals to connect these newly accessible properties to the new collection system, it is nonetheless foreseeable that these properties would be required to connect to the new system. These properties have therefore been included in the scope of the environmental review for this project.

The requirement for accessible properties to connect to sewer is discussed in detail in the Draft EA Section 2.3.2 and the Final EA Section 2.3.2. Comments related to state and local requirements, including the CDP, are addressed in the County's response to Comment 29.

2.5.4 *Treatment Alternatives*

Comment

- If all the County had wanted was compliance with clean-water requirements, and with the least distress to the taxpayer and payer of sewage-system user fees, it probably would have explored alternative means of sewage treatment. Methods such as constructed wetlands generally are less capital and labor intensive than traditional treatment plants. (Comment 5)
- The DEA gives no consideration to any decentralized, more cost-effective project for rural areas such as in Kaʻu. There should be remedial community meetings to consider alternatives, including the original conversion to septic, to close the LCCs. (Comment 23a)
- Mobile sewage treatment systems should be considered to address Hawaiʻi's problem with cesspools. Mobile units could be used when cesspools are at capacity, and they do not require pipelines, which are subject to damage. (Comment 44)
- No alternatives, including micro-sewage projects, have been offered to taxpayers. (Comment 52)
- The sewage flow could easily be handled by one or two small packaged plants, affordably modular to accommodate growth, on a very small footprint of land with no noxious odors. (Comment 66)

- The type of plant to be used should be reconsidered due to the history of flooding from rain, storms, and hurricanes from the slopes of Mauna Loa which would overflow the open sewer reservoir. (Comment 76)

Response

The proposed treatment method for the Pāhala LCC Replacement Project consists of an aerated lagoon treatment system with a constructed wetland and disinfection, followed by land application for effluent management. The system is described in detail in the Draft EA Section 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility). In addition to the proposed treatment method, the County and EPA considered numerous treatment alternatives, including septic tank alternatives (see Draft EA Section 2.8.2(a)), alternatives for onsite wastewater systems (see Draft EA Section 2.8.2(b)) and other "effluent management options" (see Draft EA Section 2.8.3). As described in the Draft EA, all these alternatives were removed from consideration due to their lack of feasibility and other concerns as outlined in the Draft EA Section 2.8 (Alternatives Considered but Not Carried Forward).

Specifically, septic tank alternatives were rejected because it was determined that a community septic system large enough to receive the projected flow from the community would not be capable of achieving the effluent quality standards required by HAR § 11-62-23.1 (see Draft EA Section 2.8.2). In addition, individual septic systems for the lots currently served by the LCCs were deemed infeasible because many of the lots in Pāhala are too small to construct individual septic systems (see Draft EA Section 2.8.2).

The commenter referring to micro-sewage may have been referring to individual wastewater systems such as composting toilets which would be too small to meet the purpose and need of the Proposed Action. A discussion of alternative individual systems is available in the Preliminary Engineering Report in Appendix B of the Final EA.

Flood risks associated with the proposed wastewater treatment and disposal system are discussed in Section 2.1.1 (Flood Risk) of this Appendix, and in the Final EA Sections 2.3.1 (Acquire Site 7 and Construct New Secondary Wastewater Treatment and Disposal Facility) and 3.23 (Infrastructure – Drainage System).

2.5.5 *Technical Design*

Comment

- The Brown and Caldwell engineer classified Pāhala wastewater flows (80,000 gallons a day) as municipal. EPA cites small wastewater flows (non-municipal) as under 1 million gallons a day. All consideration of packaged treatment plants were dismissed based on the engineer characterizing the Pāhala wastewater flow as municipal. Since a package plant that would be adequate to close the Pāhala LCCs would cost around $4 million…this option would be given real consideration as a cost effective alternative. It would also require far less land and fit closer to the exiting LCCs. Since packaged plants are modular, capacity could be expanded for future flows by just adding new units. The added cost of electricity and sludge removal would be offset by saving of $10 million in borrowed SRF funds. (Comment 64)
- The proposed facility is too large. The Pāhala WWTP will be built to handle 380,000 gal/day when the actual flow for a larger population base in the 2007 FEA was 80,000 g/d. Underutilized plants can become a "negative removal efficiency" - meaning what the plant pumped out was more contaminated that what went in. (Comment 5)

- The engineers fail to justify the extremely high Pāhala wastewater flow rates which should have been based on City and County of Honolulu Sewer Standards with an average wastewater flow rate of 320 gal/day per lot. The LCC closure only required disconnecting from around one hundred households, so the flow rate is around 32,00 gal/day. (Comment 66)

Response

Per HAR 11-62, wastewater treatment works must be designed in accordance with County standards, or City and County of Honolulu standards if a county does not have design standards. The County of Hawaiʻi does not have design standards; therefore, the City and County of Honolulu standards are applicable to the Pāhala LCC Replacement Project. The City and County of Honolulu updated their design standards in July 2017 and the 320-gpd standard is no longer applicable.

Based on these standards, the Pāhala LCC Replacement Project is designed to treat an average dry weather flow of 190,000 gpd including lots which are not in single family residential use or zoning, which is sufficient capacity to allow closure of the LCCs. Additional detail is provided in the Draft EA Appendix B (Preliminary Engineering Report). It should be noted that wastewater flows from a community are highly variable, and peak flow rates from small community wastewater collection systems are typically three to five times higher than the average flow rates. State and County design standards take this variability into account, and application of the standards results in conservatively designed facilities that are protective of human health and the environment under anticipated conditions. Information relating to applicable design standards has been added to the Final EA Section 2.3 (Proposed Action – Site 7 Alternative (Preferred Alternative)).

The wastewater treatment and disposal facility and the collection system would be designed to meet the purpose and need of the Proposed Action. The facility would be built to handle 190,000 gpd (average dry weather), not the full-buildout flow projections of 360,000 gpd associated with expansion to entire community. However, as a matter of good engineering practice, and to the extent practical, the wastewater treatment and disposal facility and collection system would be designed not to preclude expansion to treat future average dry weather flows up to 360,000 gpd should the County or community decide in the future that expansion is necessary in accordance with the requirements established in the Kaʻū Community Development Plan Policy 120.

The proposed treatment system for the Pāhala LCC Replacement Project includes aerated lagoons that are more energy efficient than conventional activated sludge wastewater treatment processes. The aerated lagoon process is less sensitive to underloading conditions than conventional activated sludge wastewater treatment processes and would provide excellent treatment performance during low flow conditions. The “negative removal efficiency” effect is not applicable to the aerated lagoon technology. The Pāhala LCC Replacement Project does include a constructed wetland treatment system and the proposed land treatment tree groves provide an energy efficient “natural” technology that would use sunlight, vegetation, and soil properties to achieve the desired results.

Comment

- The consideration of the use of alternative energy sources (wind, solar, methane) would decrease emissions. Hooking up to HELCO is not looking to the future. Please look beyond the grid for energy. (Comments 31, 73)

Response

The 14.9-acre area for the wastewater treatment and disposal facility under the Preferred Alternative (Site 7) minimizes use of the adjacent macadamia nut farm. The Draft EA Figure 2.3

shows the project site as fully utilized by the four lagoons, the four planted groves used for slow-rate land application system, the subsurface flow constructed wetland, and the headworks and operation building. The remaining land area would not be sufficient to accommodate construction of facilities for an alternative energy source.

The Preferred Alternative does not include utilizing alternative energy systems such as photovoltaic solar or wind as a total replacement for connecting to the HELCO grid due to:

- The need for consistent power supply;
- Emergency backup power requirements;
- Up-front capital cost;
- Full utilization of the 14.9-acre proposed site for the treatment and disposal facility;
- Objective to minimize the amount of land area removed from agricultural production; and
- EPA-enforced project implementation schedule deadlines.

Partial augmentation of traditional power utilizing photovoltaic solar panel arrays on the headworks and operations building rooftops, however, is feasible and would be further analyzed during the detailed design phase after loads and demand patterns are better understood. Additional alternative energy systems can be added in the future if prioritized and funded by County Council, and the electrical systems would be designed to accept additional alternative energy input.

Methane gas is generated at wastewater treatment plants using a process called anaerobic digestion. The proposed wastewater treatment and disposal facility would be too small for anaerobic digestion to be economical; the design flow to the Pāhala wastewater treatment and disposal facility would be 190,000 gpd, and anaerobic digestion is only economically attractive for wastewater treatment and disposal facilities that treat at least 5 to 10 million gpd. In addition, the anaerobic digestion process requires primary clarifiers as part of the liquid treatment process, but primary clarifiers tend to be odorous in tropical climates, due to the relatively high wastewater temperatures. The proposed facility would rely on natural treatment systems that require relatively low energy input. Additional detail regarding the preliminary analysis of alternative energy options can be found in the Final EA, Appendix B (Preliminary Engineering Report).

Comment

- I am concerned with the placement of the sewer lines near the water lines of Pāhala. Is there some kind of spec sheet that shows how far away the sewer line will be to the water line? (Comment 61)

Response

As stated in Draft EA Section 3.22.1(a) (Infrastructure – Water System – Existing Conditions), “the water lines are primarily located along or under the roadways in the area.” The Draft EA Appendix A included a letter from the County of Hawai‘i DWS that stated the following:

“The Department requests that the construction plans show, and the proposed sewer lines be installed with, the proper horizontal and vertical clearances from our existing water system facilities and concrete jacketing at waterline crossings, where necessary, as recommended by the Department's Water System Standards. In addition, backflow prevention devices must be installed where there are connections to our water system at wastewater processing and treatment facilities.”

The Pāhala LCC Replacement Project would not impact existing water lines in the community. This information was added to the Final EA Section 2.3.2 (Construct New Wastewater Collection System).

2.6 Other Comments

Responses to other comments have been arranged into the following categories:

- Miscellaneous and Other Comments
- Nāʻālehu Large Capacity Cesspools Closure Project

2.6.1 *Miscellaneous and Other Comments*

Comment

- A councilmember's name was listed incorrectly in the Draft EA. (Comment 8)

Response

Refer to the Final EA Section 10.1 (Pre-Assessment Consultation) for corrected spelling of the councilmembers name.

Comment

- The Draft EA incorrectly states that Pāhala is the largest town in Kaʻū District. (Comment 61)

Response

Refer to the Final EA Section 2.1.1 (Pāhala Community) for a correction to the text which has been revised to state "The Kaʻū district consists of several communities, including the Pāhala community, which has a population of approximately 1,341 persons."

Comment

- The Draft EA list of preparers did not include the outreach subcontractors. (Comments 23a, 27)

Response

The public outreach subcontractor did not prepare the EA and therefore no correction the List of Preparers in the Final EA is required.

Comment

- What were the agreements made between C. Brewer and the County during the transition of turnover? (Comment 67)

Response

The Draft EA Section 2.1.4 (History of Wastewater Management in Pāhala), which described the history of wastewater management in Pāhala, includes the following information: "Around 2006, C. Brewer requested that the County construct and maintain a new and improved community sewer system. A County Council Resolution approved the C. Brewer request. In anticipation of C. Brewer's dissolution, C. Brewer proposed, and the County agreed, to enter into a formal agreement to not only construct and maintain a new and improved community sewer system but to assume ownership of the existing system including the LCC's by April 30, 2010." As part of this agreement, for the majority of Pāhala properties connected to the LCCs, C. Brewer committed to complete the line (called a lateral) between the residences and the property line at the edge of

the public right-of-way adjacent to the new collection system. It was agreed, if the County did not complete its portion of the work by April 30, 2010, the County would assume pending and unfinished obligations to connect the new laterals installed by C. Brewer to the residences and new collection system when complete. Thus, because that date has passed and the County has not completed installation of the new collection system, this project includes connecting these C. Brewer laterals, which may now need to be replaced, or installing private laterals for currently connected properties if authorized by the property owner and approved by County Council. This information has been added to the Final EA Section 2.1.4.

Comment

- Since the Kealakehe WWTP is running so much over budget, why won't the Pāhala project? (Comment 27)

Response

The Kealakehe Aeration Upgrade and Sludge Removal Project is a repair and upgrade project that is outside of the original project scope for construction of that facility; comments regarding the cost of that repair and upgrade are not pertinent to the scope, cost, or impacts of the Proposed Action.

Comment

- A handout was distributed by then County Rep. Guy Enriques to everyone in the community. Why did the county waste money doing an EA regarding the same site? (Comment 41)
- The citizens of Kaʻū have been significantly harmed by COHDEM and EPA failure to incorporate environmental review from the initial proposal of the WWTP projects in 2012 DEM's CIP 2012-13 Budget. (Comment 23a)
- The Nāʻālehu/Pāhala 2007 Final EA/FONSI should have been supplemented or withdrawn prior to the publication of the Pāhala Draft EA/AFNSI notice in September 2018. (Comment 4)
- Why hasn't the 2007 Kaʻū LCC project Final EA/FONSI been withdrawn under HRS? (Comment 27)

Response

In 2007, the County prepared a Final EA for a project to install septic tanks to replace the existing cesspools in order to comply with HRS 343. Before EPA performed its environmental review of the project as required under NEPA, the project was abandoned because it was determined to be infeasible based on further engineering review. Additionally, the parcel considered in the 2007 EA for construction of a septic tank treatment system (TMK 9-06-002:016) is not the same parcel as the Preferred Alternative (Site 7) of the current Pāhala LCC Replacement Project (TMK 9-6-002:018). A discussion of the history of the projects is included in the Final EA Section 2.9 (Relationship to 2007 Final Environmental Assessment).

Comments relating to HRS 343 publication procedures for the project proposed in 2007 are not germane to the Pāhala LCC Replacement Project that is currently the subject of EPA's review under NEPA. As explained in the Draft EA Section 2.9 and in Section 2.3.4 (Nāʻālehu and Pāhala LCC Conversion Project – 2007 Final EA) of this Appendix, the EPA did not prepare or approve the 2007 County-led environmental review referenced in the comment. Comments related to compliance with publication requirements under HRS 343 are addressed by the County in their responses to the above comments.

2.6.2 *Nāʻālehu Large Capacity Cesspools Closure Project*

Comment

- EPA and CODEM are avoiding NEPA/HEPA, ESA, NHPA, Section 106 and the environmental review for the Nāʻālehu project. (Comments 1, 34, 43, 57, 65)
- EPA has separated the Kaʻu LCC closure grant into two separate projects and refused to follow NEPA/ESA procedures that EPA followed for the Pāhala project DEA as for the Nāʻālehu WWTP work plan. (Comment 4)
- I have concerns about the Nāʻālehu plant, including its location. (Comment 5)
- Nāʻālehu plant is sited too close to the school. The Nāʻālehu DEA has been withheld since April 2017, and no EA has been published, preventing the opportunity for public review and comments. (Comment 23a)
- There was no public participation in the decision to site the Nāʻālehu WWTP near the elementary school. (Comment 38)
- How can comments be made about the Nāʻālehu WWTP? We will share this information at the weekly Kaʻū community meeting about the WWTPs. (Comment 47)
- The Nāʻālehu project is sited too close to the well, school and in PONC Land. (Comments 43, 47, 48, 52, 75)
- Is the Nāʻālehu Preliminary Engineering Report available at the libraries? I did not know it had been published because two scheduled meetings about the Nāʻālehu project have not been held. (Comment 48)
- Did the libraries receive copies of the Preliminary Engineering Report for the Nāʻālehu sewage treatment plant? (Comment 54)
- EPA and COHDEM transferred funding away from the Nāʻālehu project to evade NEPA, NHPA-/ESA requirements. (Comment 65)
- The estimated costs for the Nāʻālehu project are suspicious. The large value of the administrative and legal expenses budget for suggests it may be a slush fund. (Comment 66)
- HI Department of Education requests to be included in the pre-draft assessment consultation and Draft EA for the Nāʻālehu LCC Replacement Project. (Comment 72)
- COHDEM and its contractors are avoiding Section 7 consultation under the ESA for the Nāʻālehu project. (Comment 57)

Response

Comments regarding the Nāʻālehu Large Capacity Cesspools Closure Project are outside the scope of the Proposed Action. As explained in the Draft EA Section 4.1.2 (Actions Considered but Excluded from Analysis), the Nāʻālehu Large Capacity Cesspools Closure Project is a separate project from the Pāhala LCC Replacement Project and the two are not expected to result in any cumulative impacts given the considerable distance between the two towns. This is further clarified and supported in the Final EA Section 4 (Cumulative Effects). In addition, neither project is dependent on the other for completion, nor does approval or completion of one project make it more likely the other would be similarly approved or completed. The Nāʻālehu Large Capacity Cesspools Closure Project is currently undergoing a separate environmental review, coordinated

by the County of Hawaiʻi Department of Environmental Management, in accordance with HRS 343 requirements.

2.7 Comments Not Related to NEPA

Comment

- EPA should consider a settlement because the third circuit will be considering the preliminary injunction. I am planning to file a personal injury claim. (Comment 17)
- The County should grandfather in the "newly accessible lots" with functional cesspools and septic tanks. (Comment 31)
- The plaintiff responds to the defendant's Opposition to the Motion for Preliminary Injunction. The Nāʻālehu wastewater system Draft EA should be immediately released, and the County of Hawaiʻi should cease any and all expenditures on consultant and subconsultant contractors and halt all planning and development activities on the Nāʻālehu and Pāhala WWTP projects. (Subject of forwarded legal documents) (Comment 21)
- The community plans to file multiple lawsuits. (Comment 23a)
- Is there any impact on rapport when there will be endless lawsuits based on violation of NEPA/HEPA for the twin Kaʻū WWTP projects? (Comment 27)
- Since the Kealakehe WWTP is the “most important” project in Kona, why isn’t the Kaʻū twin WWTP projects treated as “important”? (Comment 27)
- I did not receive any confirmation that comments were mailed. (Comment 39)
- I am having trouble finding an attorney and no one has attempted to talk to me about the case. (Comment 21)
- We will be suing on this forever! (Comment 22)
- Residents of Pāhala have experienced negative psychological impacts since 2005 or 2007. (Comments 40, 41)
- The judge dismissed the Preliminary Injunction, and the COH Motion to Dismiss. The court case will move forward. (Comment 49)
- You have not addressed the problem of an [APA Hawaiʻi Chapter] award for a Kaʻū CDP that has been totally ignored. The judges who awarded it were misled. (Comment 50)
- I am available as a consultant to produce a Cultural Impact Assessment if the project proceeds to the EIS phase. (Comment 60)
- Will police be present at the public meeting? (Comments 11 and 16)
- The LCC households of Kaʻū deserve reparations and should not pay for sewer service until the project is completed. (Comment 23a)
- Employee strikes (disputes). (Comment 67)

Response

These comments are not relevant to the environmental review.

Comment

- A Brown & Caldwell sub-contractor has approached community members seeking personal information about me, which is criminal invasion. I will be contacting the Pele Defense Fund and the FBI. (Comment 19)
- I will not be consulting the Pele Defense Fund. I have been traumatized by the Brown and Caldwell sub-contractor inquiring about me. The County Council will request an audit of this 13 year fiasco or I will take evidence of malfeasance to the FBI. (Comment 20)

Response

These comments are not relevant to the environmental review. EPA has found no indication that illegal conduct has occurred.

3 County of Hawaiʻi Response to Comments

The following is a compilation of all comment letters from agencies, organizations, and others who formally replied with comments to the Draft EA. Note that some of the comments were submitted as a letter and some via e-mail as shown by the date and time. As required by HAR § 11-200-9.1(c), all written comments and County of Hawaiʻi responses are reproduced in this appendix.

(*) denotes comment number shown in Table 1

State Agencies

(32) Office of Planning
(72) Department of Education
(35) Department of Hawaiian Home Lands
(77) Department of Land and Natural Resources, Engineering Division
(71; 77) Department of Land and Natural Resources, Land Division
(71; 77) Department of Land and Natural Resources, Division of Forestry and Wildlife

County of Hawaii Agencies

(36) County of Hawaiʻi Police Department

Interested Parties

(37) Ruby Javar
(26) Tina Tuttle
(27) Sandra Demoruelle
(28) Dr. Noelani Hong 10/10/2018; 11:38 am
(44) Dale A. Loper 9/29/2018; 7:46 am
(29) Ngaire Gilmour 10/17/2018; 10:30 am
(30) Jerome Warren
(31) Ngaire Gilmour 10/20/2018; 12:40 pm
(33) Edward Andrade, Jr.
(41) Sophia M. Hanoa 10/23/2018; 4:47 pm
(42) Jadelyn Kaapana-Moses 10/24/2018; 1:39 pm
(38) Lila Lopes
(34) Charles Tuttle and Tina Tuttle
(43) Amanda McDowell and Anthony McDowell
(40) Pele Defense Fund
(55) Alfred Ibarra and Mary Ibarra
(56) Walter T.L. and Debra A. Wong Yuen
(63) Gwendolyn Sorensen 11/2/2018; 2:43 pm

(62) Prodincio Fuerte
(59) Larry O. Navarro 11/19/2018; 11:27 am
(60) Lisa Gollin 11/19/2018; 11:46 am
(61) Tanya Ibarra 12/3/2018; 8:19 am
(68) Dorothy Kalua
(67; 69; 70) Pele Defense Fund (2 duplicates) 12/10/2018; 6:15 am; 6:26 am; 6:26 am
(73) Ngaire Gilmour 12/10/2018; 5:01 pm
(74) Keoni Fox 12/10/2018; 5:43 pm
(76) Noelani Hong

(1) Sandra Demoruelle 9/24/2018; 8:57 am
(2) Sandra Demoruelle 9/24/2018; 10:26 am
(3) Sandra Demoruelle 9/24/2018; 11:15 am
(4) Sandra Demoruelle 9/24/2018; 1:21 pm
(5) Sandra Demoruelle 9/25/2018; 8:32 am
(6) Sandra Demoruelle 9/25/2018; 9:39 am
(7) Sandra Demoruelle 9/25/2018; 12:28 pm
(8) Sandra Demoruelle 9/25/2018; 12:39 pm
(9) Sandra Demoruelle 9/28/2018; 9:54 am
(10) Sandra Demoruelle 9/28/2018; 11:52 am
(11) Sandra Demoruelle 9/28/2018; 1:21 pm
(12) Sandra Demoruelle 9/28/2018; 1:43 pm
(13) Sandra Demoruelle 9/29/2018; 5:50 pm
(14) Sandra Demoruelle 10/1/2018; 10:29 am
(15) Sandra Demoruelle 10/1/2018; 10:41 am
(16) Sandra Demoruelle 10/3/2018; 8:17 am
(17) Sandra Demoruelle 10/6/2018; 9:00 am
(18) Sandra Demoruelle 10/10/2018; 10:50 pm
(19) Sandra Demoruelle 10/12/2018; 10:20 am
(20) Sandra Demoruelle 10/13/2018; 8:51 am
(21) Sandra Demoruelle 10/21/2018; 4:12 pm
(22) Sandra Demoruelle 10/24/2018; 4:03 pm
(39) Sandra Demoruelle 10/23/2018; 2:48 pm
(46) Sandra Demoruelle 10/31/2018; 8:03 am
(45) Sandra Demoruelle 10/31/2018; 8:13 am
(48) Sandra Demoruelle 10/31/2018; 11:39 am
(47) Sandra Demoruelle 10/31/2018; 12:41 pm
(49) Sandra Demoruelle 10/26/2018; 11:12 am

(50)	Sandra Demoruelle	11/2/2018; 12:22 pm
(51)	Sandra Demoruelle	11/5/2018; 9:26 am
(52)	Sandra Demoruelle	11/6/2018; 11:51 am
(53)	Sandra Demoruelle	11/8/2018; 11:52 am
(54)	Sandra Demoruelle	11/13/2018; 12:40 pm
(57)	Sandra Demoruelle	11/16/2018; 10:03 am
(58)	Sandra Demoruelle	11/2/2018; 12:14 pm
(64)	Sandra Demoruelle	12/10/2018; 2:36 pm
(65)	Sandra Demoruelle	12/10/2018; 3:01 pm
(66)	Sandra Demoruelle	12/10/2018; 3:29 pm
(75)	Sandra Demoruelle	12/10/2018; 4:38 pm
(23a)	Sandra Demoruelle	10/22/2018; USPS

10349-01
10/22/18
CC: BC COH
EPA ENG

OFFICE OF PLANNING
STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

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LEO R. ASUNCION
DIRECTOR
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Telephone: (808) 587-2846
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Web: http://planning.hawaii.gov/

DTS201810160922NA

EM

October 17, 2018

Mr. William A. Kucharski
Director
Department of Environmental Management
County of Hawaii
345 Kekuanaoa Street, Suite 41
Hilo, Hawaii 96720

RECEIVED
OCT 22 2018
WILSON OKAMOTO CORPORATION

Attn.: Dora Beck, Wastewater Division Chief

Dear Mr. Kucharski:

Subject: Draft Environmental Assessment - Pahala Community Large Capacity Cesspool Replacement, Paauau, Kau, Hawaii Island, Hawaii
TMK: (3) 9-6-002: 018

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the Pahala community large capacity cesspool replacement project.

It is our understanding that the County of Hawaii, Department of Environmental Management (DEM) proposes the construction of a wastewater system that would replace the large capacity cesspool currently serving the community of Pahala, in order to comply with U.S. Environmental Protection Agency regulations. The project will include a new wastewater collection system located primarily within public streets in the town of Pahala, and a treatment and disposal system on land owned by the County of Hawaii.

The collection system will consist of approximately 12,120 linear feet of underground gravity fed flow piping. The treatment and disposal facility will occupy about 14.9 acres and consist of a headworks and an odor control unit, an operations building, four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen with an adjacent disinfection system to remove pathogens, and four slow rate land treatment basins for disposal of the treated effluent.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. Previous Comments
   Our pre-consultation response letter dated April 5, 2018 (DTS 201804051430RI), requested the following:

   i. The Draft EA offer an examination of the project's consistency with the objectives and policies of the Hawaii Coastal Zone Management (CZM) Program, Hawaii Revised Statutes (HRS) § 205A-2.

   ii. Provide an analysis on stormwater control methods, drainage, and mitigation strategies to safeguard the nearby surface water resources and the coastal/marine ecosystem.

   OP acknowledges that our comments cited above in our pre-consultation letter have been addressed in the Draft EA.

2. The following items will need further evaluation and discussion in the Final Environmental Assessment (Final EA).

   i. State Land Use District Unpermitted Use Considerations
   Section 2.10.3, pages 2-24 to 2-25 of the Draft EA examine State Land Use District issues, and address the incompatible land use of a wastewater treatment system within the State Land Use Agricultural District. Page 2-24 of the Draft EA acknowledges that the project site is within the State Land Use Agricultural District, and wastewater treatment facilities are not a permitted use pursuant to HRS § 205-4.5(a)(7).

   The Draft EA recognizes the need for a Special Permit. It states that DEM will submit a Special Permit application to the County of Hawaii Planning Commission. Another land use approval option that could be considered for this project is a District Boundary Amendment. The Final EA should indicate the option of a District Boundary Amendment, which if the petition area is less than 15 acres land use, can be processed and approved by the County of Hawaii.

   ii. The Hawaii State Planning Act
   Section 6.1.1, pages 6-1 to 6-4 addresses all of statutes associated with Part I – goals, objectives, and policies of the Hawaii State Planning Act in Table 6-1. Section 6.1.2, pages 6-4 to 6-5 examines applicable State Functional Plans. It provides analysis on the Agriculture Functional Plan and Historic Preservation Functional Plan, as applicable to this project.

   As for Part III – Priority Guidelines, Table 6-1, page 6-4 provides discussion on only HRS § 226-101 - Purpose. On this matter, Table 6-1 states "The Pahala project does not include facilities or improvements that would affect overall priority guidelines of statewide concern."

   The Final EA should include a discussion on the project's ability to meet all

parts of the Hawaii State Planning Act, as listed in HRS Chapter 226, examine the project's consistency with these statutes, or clarify where it is in conflict. The examination on Part III statutes should be expanded to include a discussion on all of the Priority Guidelines. If DEM finds that the priority guidelines are not applicable to the proposed action, the Final EA should affirmatively state such determination for each of these statutes (as was conducted for Part I statutes in Table 6-1) followed by discussion paragraphs.

iii. Principles of Sustainability
Item #2 of our April 5, 2018 pre-consultation response letter requested that the Draft EA include an examination on this cesspool removal and replacement project, and its compatibility with Statewide sustainability goals.

OP finds that removal of cesspools is consistent with the principles of sustainability, and HRS § 226-108 – Priority Guidelines on sustainability is applicable to this proposed action. The closure and replacement of cesspools with more environmentally friendly wastewater collection and treatment systems, corresponds with the principles of sustainability. Wastewater collection and treatment systems can lead to higher water quality levels for nearby surface water resources, and is beneficial for the vitality and health of the coastal and marine ecosystem.

The Final EA, should include a discussion on this project's compatibility with the principles on sustainability, HRS § 226-108. For more information on State sustainability goals for the environment and natural resources, please review the Hawaii 2050 Sustainability Plan.

The report on this plan is accessible through the State Office of the Auditor's website at http://files.hawaii.gov/auditor/Reports/2018/2018H2050.pdf.

We have no further comments on this matter. If you have any questions, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

c: ✓ Earl Matsukawa, Wilson Okamoto Corporation

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (32)
March 6, 2020

Ms. Mary Alice Evans, Director,
Office of State Planning
235 South Beretania Street, 6th Floor
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - October 17, 2018

Dear Ms. Evans:

Thank you for your October 17, 2018 comment letter (DTS201810160922NA) regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

1. No response required.

2. i. State Land Use Unpermitted Use Consideration
A District Boundary Amendment is an option to the County Special Permit. However, a District Boundary Amendment to Urban would result in a spot designation where the surrounding area is currently designated as Agricultural by the State Land Use Commission and by the County in both the General Plan and Kaʻū Community Development Plan. Also, this same surrounding area zoning designation is Agriculture (A-20a or A-1a) or MG-1a in the case of the adjacent macadamia nut facility. Overall, this spot zoning designation is not preferable in lieu of the Special Permit. This information will be included in the Final EA Section 2.10.3.

ii. The Hawaii State Planning Act
The Final EA will include the following discussion of Part III Priority Guidelines.

iii. Principles of Sustainability
The Final EA will include the following discussion on this project's compatibility with the principles on sustainability, HRS § 226-108.

The Final EA will include the following in Table 6.1:

PART II. PLANNING COORDINATION and IMPLEMENTATION

Part II does not apply to the Pāhala Community Large Capacity Cesspool Replacement project.

PART III. PRIORITY GUIDELINES

Objectives and Policies of the Hawai'i State Plan	Discussion
§226-101 Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.	The Pāhala project will support applicable overall priority guidelines, as follows:
§226-102 Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.	The Pāhala project will affect short-term economic development and jobs during the construction period. The Pāhala project will not affect economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education and climate change adaption. Removal of cesspools is consistent with the principles of sustainability.
§226-103 Economic priority guidelines. (a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy. (e) Priority guidelines for water use and development: (1) Maintain and improve water conservation programs to reduce the overall water consumption rate. (2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.	The Pāhala project will stimulate economic development and jobs during the construction period.
§226-104 Population growth and land resources priority guidelines. (a) Priority guidelines to effect desired statewide growth and distribution:	The Pāhala project will d not affect population growth but may help protect the environment and improve water quality in nearby surface water resources.

§226-105 Crime and criminal justice. Priority guidelines in the area of crime and criminal justice:	The Pāhala project will not affect crime or criminal justice in the Pāhala area.
§226-106 Affordable housing. Priority guidelines for the provision of affordable housing:	The Pāhala project will not affect affordable housing in the Pāhala area.
226-107 Quality education. Priority guidelines to promote quality education:	The Pāhala project will not affect education in the Pāhala area.
[§226-108] Sustainability. Priority guidelines and principles to promote sustainability include: (5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.	The Pāhala project will close 2 large capacity cesspools, replacing them with secondary treatment and disposal systems, thereby protecting ground water resources for future generations, potentially benefitting the health and vitality of the area coastal and marine ecosystem.
[§226-109] Climate change adaptation priority guidelines. Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy.	The wastewater treatment and disposal facility will be designed to contain the 100-year, 24-hour storm event while maintaining sufficient freeboard to account for the uncertainty of climate model projections..

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA; C. Lekven, BC; P. Goodwin, ERG

10349.01 EM

12/12/18

cc: BC COII
EPA ERG

DAVID Y. IGE
GOVERNOR

DR. CHRISTINA M. KISHIMOTO
SUPERINTENDENT

STATE OF HAWAI'I
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OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

RECEIVED
DEC 11 2018
WILSON OKAMOTO CORPORATION

December 7, 2018

Ms. Dora Beck
County of Hawaii
Department of Environmental Management
345 Kekuanaoa Street, Suite 41
Hilo, Hawaii 96720

Re: Republished Draft Environmental Assessment for the Pahala Large Capacity Cesspool Replacement, Pahala, Kau, Hawaii TMK: 9-6-002:018

Dear Ms. Beck:

The Hawaii State Department of Education (HIDOE) has the following comments for the Republished Draft Environment Assessment (DEA) for the proposed Pahala Large Capacity Cesspool Replacement (Project). According to the DEA, the proposed Project is to construct a new wastewater treatment facility and collection system to replace the existing large capacity cesspools currently serving the Pahala Community in the Kau District, Island of Hawaii.

The DEA notes that Kau High and Pahala Elementary School (School) will connect to the new wastewater treatment system (WWTS) and that the existing on-site septic system will be closed. The project implementation timeline, provided in Appendix B, has a May 20, 2021 deadline to complete the construction of the wastewater treatment plant (WWTP) and a June 30, 2021 deadline to complete the connection of the existing collection system to the WWTS. Construction of the new wastewater collection system will be done in two phases with no time frame provided.

We request consultation and coordination with the Facilities Development Branch, Public Works Administrator, as early as possible, to ensure a timely connection to the WWTS and closure of the on-site septic system. This future connection of the School to the WWTS and closure of the on-site septic system requires HIDOE to request funds from the Legislature to prepare the required environmental reports as well as to design and construct necessary onsite improvements.

The School will be subject to short term construction related impacts. Impacts from noise and fugitive dust are anticipated with the installation of the new wastewater collection, system adjacent to the School. Student transportation services will be impacted from changes to traffic patterns. The HIDOE currently has five school buses transporting students, residing in the Kau District, to and from School. We request consultation and coordination with the School prior to and during construction in order to further identify and minimize impacts in general and during schools hours. We also request consultation and coordination with the HIDOE Student Transportation Services Branch Manager, James Kauhi, to identify and minimize impacts to existing HIDOE transportation services.

The HIDOE became aware of this DEA after reviewing the November 8, 2018 issue of The Environmental Notice prepared by the Hawaii State Office of Environmental Quality Control. A review of the DEA confirmed that the HIDOE was not an agency consulted for the pre-draft assessment consultation and the initial publication of DEA for this project. The HIDOE is aware that a similar project is required to replace the Naalehu large capacity cesspool. The HIDOE requests to be included in the pre-draft assessment consultation and DEA for the Naalehu large capacity cesspool replacement project.

Thank you for the opportunity to comment. Should you have questions, please contact Robyn Loudermilk, School Lands and Facilities Specialist of the Facilities Development Branch, Planning Section, at 784-5093, or via email at robyn_loudermilk@notesnotes.k12.hi.us.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:rll

c: Sharon Beck, Principal, Kau High and Pahala Elementary School
Gaudencia Watarida, Administrative Services Assistance, Kau-Keaau-Pahoa Complex
✓Earl Matsukawa, Wilson Okamoto Corporation
Office of Environmental Quality Control
James Kauahi, Student Transportation Services Branch
John C.H. Chung, Facilities Development Branch

WILSON OKAMOTO CORPORATION
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10349-01 ref (72)
March 6, 2020

Mr. Kenneth G. Madsen II, Public Works Manager
Planning Section
Department of Education
State of Hawai'i
P.O. Box 2360
Honolulu, HI 96804

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'ū, Hawai'i
Response to Comment - December 7, 2018

Dear Mr. Madsen:

Thank you for your December 7, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management (DEM) Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Final EA Section 2.3.2 will include the following:

> As stated in Section 4.7.2 of the *County of Hawai'i, Department of Public Works, Final Environmental Assessment and Finding of No Significant Impact, Ka'ū Gym and Shelter, Pāhala, Ka'ū District. April 2012*: "In accordance with Section 21-5, Hawai'i County Code (HCC), Ka'ū High and Pāhala Elementary School, including the Ka'ū District Gym and Shelter, will be required to connect to the County sewer system when access becomes available. The State Department of Education will be responsible for coordinating and constructing the connection to the sewer system via a branch main on Hala Street and properly closing their onsite system. "

Further, the Ka'ū Gym and Shelter Final EA states: "The Ka'ū High and Pahala Elementary School, including the Ka'ū District Gym and Shelter, will become accessible to the proposed County sewer system with the installation of two new laterals at the property line on Hala Street and Kamani Street. While typically only a single lateral is provided for a lot, the additional lateral on Hala Street is being installed to accommodate the project and create a gravity flow connection."

Information regarding project schedules, including US Environmental Protection Agency (USEPA) compliance dates, project updates and milestones can be found on the USEPA website

at: https://www.epa.gov/uic/county-hawaii-administrative-order-consent-closure-cesspools-pahala-and-naalehu.

The County will also provide information about the construction schedule for the treatment and disposal facility and the collection system to the Facilities Development Branch Public Works Administrator on request. Impacts and mitigation measures for addressing construction-related dust, traffic and noise are addressed in the Draft EA Sections 3.14.2, 3.17.2 and 3.18.2.

Further, the County will coordinate with the HIDOE Student Transportation Services Branch Manager and the School in order to minimize construction-related impacts to student transportation services. This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

DOUGLAS S. CHIN
LT. GOVERNOR
STATE OF HAWAII

JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.
DEPUTY TO THE CHAIRMAN

10/1/18

cc: BC
COH
EPA
S
ERG
EM

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

September 27, 2018

RECEIVED
OCT 01 2018
WILSON OKAMOTO CORPORATION

Wilson Okamoto Corporation
1907 S. Beretania St., #400
Honolulu, Hawaii 96826

Dear Sirs:

Subject: Publication of Draft Environmental Assessment (DEA) on the proposed Pahala Community Large Capacity Cesspool (LCC) Replacement Project

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.

However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)native Hawaiian organizations when preparing environmental assessments, to better assess potential impacts to cultural and natural resources, access and other rights of Native Hawaiians.

Mahalo for the opportunity to provide comments. If you have any questions, please call Rae Ann Hyatt at 620-9480 or contact via email at raeann.p.hyatt@hawaii.gov.

Sincerely,

M. Kaleo Manuel
Acting Planning Program Manager

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (35)
March 6, 2020

M. Kaleo Manuel, Acting Planning Program Manager
State of Hawai‘i
Department of Hawaiian Home Lands
91-5420 Kaplolei Parkway
Kapolei, HI 96707

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment – September 27, 2018

Dear Mr. Manuel:

Thank you for your September 27, 2018 comment letter regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. The Final Environmental Assessment (EA) will note that due to the lack of proximity to Hawaiian Home Lands properties, the Department of Hawaiian Home Lands does not anticipate any impacts to the lands or beneficiaries from the project.

The Draft EA Section 10.1 lists the Native Hawaiian Organizations consulted in preparation of the Draft EA. This information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
12/14/18

Earl Matsukawa

cc: BC, COH, EPA, ERG

From: Nakamura, Darlene K <darlene.k.nakamura@hawaii.gov>
Sent: Wednesday, December 12, 2018 9:56 AM
To: Public Comment
Subject: FW: Request for Comments - Pahala Large Capacity Cesspool Extended DEA
Attachments: Pahala Large Capacity Cesspool Replacement Project.Extended DEA 12.12.18.pdf

Aloha,

Attached are additional comments from DLNR's Engineering Division.

Mahalo,
Darlene

From: Nakamura, Darlene K
Sent: Monday, December 10, 2018 10:07 AM
To: PahalaEA@wilsonokamoto.com
Subject: Request for Comments - Pahala Large Capacity Cesspool Extended DEA

To: Wilson Okamoto Corporation

Attached are DLNR's comments to the above-entitled subject matter.

Thank you,
Darlene

--
This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 12, 2018

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

via email: PahalaEA@wilsonokamoto.com

Gentlemen:

SUBJECT: Draft Environmental Assessment – Extension Public Comment Period for the **Pahala Large Capacity Cesspool (LLC) Replacement Project** located at Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018

Thank you for the opportunity to review and comment on the subject matter. In addition to our previous comments dated December 7, 2018, enclosed are comments from the Engineering Division on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

November 14, 2018

'18 NOV 14 AM 11:12 ENGINEERING

MEMORANDUM

TO: FROM

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

TO

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment – Extension Public Comment Period for the **Pahala Large Capacity Cesspool (LLC) Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: County of Hawaii, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **December 6, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oegc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Date: 12/7/18

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Draft Environmental Assessment - Extension Public Comment Period for the Pahala Large Capacity Cesspool (LCC) Replacement Project, Pahala, District of Ka'u, Island of Hawaii; (3) 9-6-002:018

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER
Date: 12/7/18

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (77)
March 6, 2020

Mr. Russell Y. Tsuji, Land Administrator
Land Division
Department of Land and Natural Resources
State of Hawai‘i
Post Office Box 621
Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of, Ka‘ū, Hawai‘i
Response to Comment, e-mail December 10, 2018

Dear Mr. Tsuji:

Thank you for your December 12, 2018 comment letter regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai‘i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai‘i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as Zone X on the FIRM and is outside the 500-year floodplain."

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

This information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

DAVID Y. IGE
GOVERNOR OF HAWAII

(10349-01)
12/17/18

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

cc: BC COH
EPA GRG

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 7, 2018

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400 via email: PahalaEA@wilsonokamoto.com
Honolulu, Hawaii 96826

Gentlemen:

SUBJECT: Draft Environmental Assessment – Extension Public Comment Period for the **Pahala Large Capacity Cesspool (LLC) Replacement Project** located at Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Division of Forestry & Wildlife and (b) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2018 NOV 15 P 1:08

RECEIVED
LAND DIVISION
HILO, HAWAII

November 14, 2018

MEMORANDUM

FROM:
TO:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

TO:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment – Extension Public Comment Period for the **Pahala Large Capacity Cesspool (LLC) Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: County of Hawaii, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **December 6, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed:
Print Name: GORDON C. HEIT
Date: 12/3/18

cc: Central Files

19283

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

November 14, 2018

MEMORANDUM

TO: FROM

DLNR Agencies:
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM: TO:
Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment – Extension Public Comment Period for the **Pahala Large Capacity Cesspool (LLC) Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: County of Hawaii, Department of Environmental Management

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **December 6, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed:

Print Name: **DAVID G. SMITH, Administrator**

Date: 11/28/18

cc: Central Files

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (71; 77)
March 6, 2020

Mr. Russell Y. Tsuji, Land Administrator
Land Division
Department of Land and Natural Resources
State of Hawai'i
Post Office Box 621
Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'ū, Hawai'i
Response to Comment - December 7, 2018

Dear Mr. Tsuji:

Thank you for your December 7, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Final EA will note the Land Division - Hawai'i District and the Division of Forestry and Wildlife had no comments.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
12/20/18

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

cc: BC COH
EPA ERG

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 22, 2018

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400 via email: PahalaEA@wilsonokamoto.com
Honolulu, Hawaii 96826

Gentlemen:

SUBJECT: Draft Environmental Assessment for the **Pahala Large Capacity Cesspool Replacement Project** located at Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division, (b) Division of Forestry & Wildlife, and (c) Land Division – Hawaii District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at (808) 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

'18 SEP 27 PM02:49 ENGINEERING

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 27, 2018

MEMORANDUM

FROM
TO:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for the **Pahala Large Capacity Cesspool Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **October 19, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

additional

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 9/28/18

cc: Central Files

19192

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 27, 2018

MEMORANDUM

TO: FROM:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM: TO: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for the **Pahala Large Capacity Cesspool Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **October 19, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed:
Print Name: **DAVID G. SMITH, Administrator**
Date: 10/3/18

cc: Central Files

8089619599 SOH DLNR SOH DLNR 08:39:31 a.m. 10-18-2018 1/1

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

2018 OCT -1 P 12:34
RECEIVED
LAND DIVISION
HILO, HAWAII

September 27, 2018

MEMORANDUM

FROM:
TO:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Hawaii District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for the **Pahala Large Capacity Cesspool Replacement Project**
LOCATION: Pahala, District of Ka'u, Island of Hawaii; TMK: (3) 9-6-002:018
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment is information on the above-referenced subject matter. We would appreciate your comments by **October 19, 2018.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on The Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Darlene Nakamura at 587-0417. Thank you.

Attachments

(✓) We have no objections.
( ) We have no comments.
( ) Comments are attached.

Signed:
Print Name: GORDON C. HEIT
Date: 10/17/18

cc: Central Files

→ 10/18/18 To: Darlene Nakamura
From: Gordon-HDLO

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (71;77)
March 6, 2020

Mr. Russell Y. Tsuji, Land Administrator
Land Division
Department of Land and Natural Resources
State of Hawai‘i
Post Office Box 621
Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment - October 22, 2018

Dear Mr. Tsuji:

Thank you for your October 22, 2018 comment letter regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Final EA will include the Department of Land and Natural Resources Engineering Division had no additional comments, the Division of Forestry and Wildlife had no comments, and the Land Division - Hawai‘i District had no objections.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10349-01
10/5/18
cc: BC EPA COH ERG

Harry Kim
Mayor

Paul K. Ferreira
Police Chief

Kenneth Bugado Jr.
Deputy Police Chief

EM

County of Hawai`i
POLICE DEPARTMENT
349 Kapi'olani Street • Hilo, Hawai'i 96720-3998
(808) 935-3311 • Fax (808) 961-2389

RECEIVED
OCT 05 2018
WILSON OKAMOTO CORPORATION

October 2, 2018

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai`i 96826

SUBJECT: PUBLICATION OF DRAFT ENVIRONMENTAL ASSESSMENT ON THE PROPOSED PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT

Dear Mr. Matsukawa:

Thank you for allowing us the opportunity to provide input during the 30-day public notice commenting period for the Environmental Assessment (EA) on the proposed Pāhala Community Large Capacity Cesspool Replacement Project.

The Hawai`i Police Department has reviewed the draft EA and does not have any additional comments or concerns at this time.

Should you have any questions or concerns, please contact Captain Miles Chong, Commander of our Ka`ū District, at phone number (808) 939-2520 or via email at Miles.Chong@hawaiicounty.gov.

Sincerely,

PAUL. K. FERREIRA
POLICE CHIEF

MC
RS180278

"Hawai`i County is an Equal Opportunity Provider and Employer"

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (36)
March 6, 2020

Chief Paul Ferreira, Police Chief
County of Hawai'i
Police Department
349 Kapiolani Street
Hilo, HI 96720

Attention: Captain Miles Chong, Commander Ka'ū District

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'ū, Hawai'i
Response to Comment – October 2, 2018

Dear Chief Ferreira:

Thank you for your October 2, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment for the Pāhala Large Capacity Cesspool Replacement project. The Final Environmental Assessment (EA) will note that the County of Hawai'i Police Department has reviewed the Draft EA and does not have any comments or concerns at this time.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

WILSON OKAMOTO CORPORATION
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1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

Please move proposed Pahala Sewage treatment plant makai (seaward side) of the highway/below Pahala town. The fines to county (taxpayers) regarding ~~the~~ project deadline shouldn't be reason to build at current proposed site. This site is too close for comfort & life quality. ~~over~~

I also have no $ to hook up to sewage plant

(include additional sheets as necessary)

PLEASE PRINT: Name: Ruby Javar Phone:

Organization:

Address: P.O. Box 847 Pahala, HI 96777

Email:

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (37)
March 6, 2020

Mr. Ruby Javar
P.O. Box 847
Pāhala, HI 96777

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 10, 2018

Dear Mr. Javar:

Thank you for your October 10, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool (LCC) Replacement project. Our responses follow:

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the

subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

The comment referencing fines is not specifically a comment to the content of Draft EA, and the potential for penalties to be levied against the County by the EPA for failure to close the LCCs is unrelated to the site selection process.

The Draft EA Section 2.3.2 states the new collection system would be subject to the County of Hawai'i Code (HCC) Chapter 21, Sewers. Specifically, HCC Chapter 21, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a)Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice*."

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, Department of Environmental Management voluntarily convened two additional public meetings in Pāhala, one on October 9, 2018 and the second on March 21, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Section 7 will be revised to add that the County held additional meetings in Pāhala including one to provide information on financing sources available to owners of parcels which would become accessible to the County collection system. The purpose of the March 21, 2019 meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community. At the meeting, Department of Environmental Management provided the preliminary results of the County investigation into funding sources and options available for newly accessible property owners once the new treatment and disposal facility and wastewater collection system have been designed, permitted and constructed.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

The Draft EA Section 3.16 discusses the socioeconomic characteristics of and impacts on the Pahala community.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

I am very concerned about the short distance of the proposed site in Pahala being so close to the school.

(include additional sheets as necessary)

PLEASE PRINT: Name: Tina Tuttle Phone: 769-3569
Organization:
Address: P.O. Box 727177
Naalehu, Hi. 96772
Email: ttuttle1962@G-mail

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (27)
March 6, 2020

Ms. Tina Tuttle
P.O. Box 727177
Naalehu, HI 96722

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 10, 2018

Dear Ms. Tuttle:

Thank you for your October 10, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Elementary School Complex, the portion of campus closest to the treatment and disposal facility within the Kaʻū High and Pāhala Elementary School campus, lies more than ½ mile directly or about 1 mile away from the treatment and disposal facility by road. From the school, one must travel on a portion of the school parcel and on 5 streets to reach the fenced wastewater treatment and disposal facility. The intervening streets access or abut residential parcels and other land uses. The distance and intervening land uses show the treatment and disposal facility is not located in close proximity to a school facility. This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

(10349.01)
10/17/18 10/16/18
Attached Comments M1 – 11 with supporting documents
cc: BLNR COH EPA ERS

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

M1- 11 Comments submitted by Sandra Demorueltc at Meeting

(include additional sheets as necessary)

PLEASE PRINT: Name: Sandra Demoruelle
Organization:
Address: Box 588 Naalehu HI 96772
Email: nadlehutheatre@yahoo.com

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

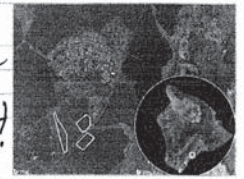
**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

MT Pahala DEA meeting Submitted by Sandra Demorueltc Oct 10 2018

HAWAI'I

Pāhala Large Capacity Cesspool Replacement--Draft EA (AFNSI)

HRS §343-5(a) Trigger	(1) Propose the use of state or county lands or the use of state or county funds (9A) Wastewater Treatment Unit Failure to state true nature of project! No Section (9A) Trigger Wastewater treatment Unit
District(s)	Ka'ū
TMK(s)	(3)
Permit(s)	var
Proposing/ Determining Agency	De ent, County of Hawai'i Do hawaiicounty.gov 34 720
Consultant	Wil St., Suite 400, Honolulu, HI 96826 Ear 7 / fax: (808) 946-2253, PahalaEA@wilsonokamoto.com
Status	Sta ent period starts. Comments are due by October 23, 2018. Please send comments to the proposing/determining agency and copy the consultant.



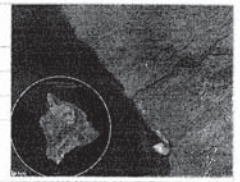
The County of Hawai'i Department of Environmental Management proposes to construct wastewater system improvements replacing the large capacity cesspools (LCCs) currently serving Pāhala, in order to comply with U.S. Environmental Protection Agency (EPA) reg ı new wastewater collection system located primarily within public streets in ıal system on land to be acquired by the County (TMK: 9-6-002: 018). The ı ınd by the Clean Water State Revolving Fund loan program.

Submitted 10/10/18 at Pahala DEA meeting Sandra Demorueltc Consulting Party Comments at Meeting (M1-11)

The collection s ar feet of 8 to 12-inch diameter underground gravity flow piping in Maile, Streets. The treatment and disposal facility would occupy about 14.9 acre unit, an operations building, four lined aerated lagoons, a subsurface flow ıdjacent disinfection system to remove pathogens, and four slowrate land t ıl of the treated effluent. A perimeter security fence would enclose the ent water collection system would be abandoned.

Kohala Shore

HRS §343-5(a) Trigger	f state or county funds
District(s)	
TMK(s)	
Permit(s)	
Proposing/ Determining Agency	Planning Department, County of [illegible] Bethany Morrison, (808) 961-8138, Bethany.Morrison@hawaiicounty.gov 101 Aupuni St., Suite 3, Hilo, HI 96720
Applicant	Kohala Shoreline, LLC, c/o Carlsmith Ball LLP Jennifer Lim, (808) 523.2557, jlim@carlsmith.com 1001 Bishop St., Suite 2100, Honolulu, HI 96813
Consultant	Geometrician Associates Ron Terry, (808) 969-7090, rterry@hawaii.rr.com P.O. Box 396, Hilo, HI 96721
Status	The Draft EA and Anticipated Finding of No Significant Impact, originally published on July 8, 2015, are being withdrawn.



The Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the proposed Kohala Shoreline, LLC Project, notice of which was published on July 8, 2015, in The Environmental Notice, are being withdrawn. The project proposed in that Draft Environmenal Assessment was a subdivision makai of Akoni Pule Highway, on a 37.88-acre parcel located 3 miles north of Kawaihae. Kohala Shoreline LLC's original development concept, as described in the DEA-AFONSI, was a 9-lot residential subdivision, with several building sites makai of the Ala Loa. The project also proposed a downzoning from Single-Family Residential (RS-15) to Residential and Agricultural (RA-3a) to permit less dense development. Kohala Shoreline LLC is no longer pursuing that project and for that reason the DEA-AFONSI is being withdrawn. Kohala Shoreline LLC intends to pursue a less dense project that has been substantially reduced in scale and moved away from the shoreline. A Draft EA for the reduced and reconfigured project is in preparation.

M3

Beck et al.

Exhibit 12

Hawai'i Notices

...this were prior to the fire. The owners of the units and other owners have suffered hardship due to the loss of property value, loss of use, the loss of potential income, and special assessments. As the project would take place entirely within an existing condominium complex on top of an existing foundation and first floor, very few impacts would occur, and all can be mitigated.

Submitted 10/10/2018 by Sandra Demoruelle

Why hasn't the Kau LCC Project FEA/FONSI 2007 been withdrawn under HRS HAR?

Nâ'âlehu Pahala Large Capacity Cesspool Conversion Project (HRS 343 Final EA-FONSI)

District: Ka'u
TMK: Pahala - (3) 9-06-014, (3) 9-06-015, (3) 9-06-016, and (3) 9-06-020, Nâ'âlehu - (3) 9-05-024, (3) 9-05-025, and (3) 9-05-026
Proposing Agency: Department of Environmental Management, County of Hawai'i - 25 Aupuni Street, Hilo, Hawai'i 96720 - Ms. Dora Beck-(808 961-8028)
Determining Agency: Same as above
Consultant: SSFM International, Inc. - 501 Sumner Street, Suite 620, Honolulu, Hawai'i 96817 - Mr. Jared K. Chang - 531-1308
Public Comment Deadline: September 24, 2007
Permits Required: NPDES, DOH Existing Well Registration and Underground Injection Control, Grading, Work within the Right-of-Way, Noise (only if required)

The County of Hawai'i, Department of Environmental Management – Technical Services Section (DEM), is proposing to provide sewer collection system and treatment improvements to serve the existing communities of Pahala and Nâ'âlehu Villages in the Ka'u District, Island of Hawai'i. These improvements would allow for the conversion of existing large capacity "gang" cesspools (LCC) currently serving these communities. A total of 127 lots in Pahala and 162 lots in Na'alehu would be serviced by this cesspool conversion project.

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LCCs t
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ground

mental concerns due to their likelihood of releasing diseases and other contaminants to ground water, streams, and the ocean.

The County is supporting these efforts by providing a new sewer collection system within existing public roadways and an IWS for its treatment. C. Brewer would provide for the connection of individual lots to the County's wastewater collection system.

Alternative sewer collection systems are being developed that are currently served by the C. Brewer system for each community and evaluated to determine the system most feasible and practicable to implement. These collection systems will be integrated with the IWS being developed for proper treatment of wastewater.

This project may be funded by Federal Funds through the State of Hawai'i's Clean Water State Revolving Fund (SRF) Program, which would constitute a federal action, and will require the project to meet all NEPA and Hawai'i SRF program requirements.

Maui Notices

Baldwin High School. Library (HRS 343 FEA-FONSI)

District: Wailuku
TMK: 3-8-007: 004, 047
Proposing Agency: Department of Education, Facilities Development Branch, 1151 Punchbowl Street, Room 501, Honolulu, Hawai'i 96813
Approving Agency: Same as above.
Consultant: Gerald Park Urban Planner, 1221 Kapiolani Boulevard, Suite 211, Honolulu, Hawaii 96814, (808 596-7484)
Status: Final environmental assessment (FEA) and Finding of No Significant Impact (FONSI).
Permits Required: Air conditioning and ventilation, NPDES, noise, historic preservation, building, electrical, plumbing, grubbing, grading, excavation and stockpiling

The Department of Education, State of Hawaii, proposes to construct a new school library at Henry Perrine Baldwin High

M4

LIST OF PREPARERS

Eastern Research Group, Inc. (ERG):

Braden Rosenberg
Patrick Goodwin
J.J. Johnson
April Eilers
Kettie Rupnik

Wilson Okamoto Corporation:

Earl Matsukawa
John Sakaguchi

Brown & Caldwell:

Craig Lekven

Why aren't the "Public participation - outreach" subContractors listed as preparers?

EPtan - Bernadette Senelly
BTC Michelle Sorenson

Signed:
Sandra Demoruelle
Submitted on Oct 10, 2018 at Pahala PEA meeting

MS

Proposed Pahala WWTP Project

Community Outreach Program

First Stage

11.10.2017

Long-Term Program Objectives

- **Understand Pahala** in terms of history, feelings about other projects, relationship with DEM, internal relationships, influences, needs, strengths, challenges, etc.
- **Share information**
  - Technical (where is the project located, what is the schedule, what technology is planned?)
  - Policy- related (how much will this cost me? how much will it cost my neighbor? Do I have to pay for my own connection?)
- **Establish constructive rapport**
  - between project team (DEM + consultants) and residents
  - among various community interests
  - between community and public agencies
  - among public agencies
- **Provide solution-based forums**, small and large, in which participants are encouraged to answer the question HOW CAN WE MAKE THIS WORK?

Is there any impact on the Rapport when there will be endless lawsuits based on violation of the NEPA NEPA procedural statutes for the two Kau WWTP projects?

Submitted 10/10/18 by Sandra Demosaulk

First Stage

Target outcomes

Assure residents we are there to **listen**
Help residents **understand** what is being proposed
Establish a **point of departure** to move towards **future** actions and solutions
Meet EPA deadline of December 15 to hold initial public meeting

Approach

An **inclusive** process that:

- Focuses on **those most affected**
- Respects **existing community influences** (leaders and organizations)
- Provides **the rest of Pahala** an opportunity to join in the conversation

3 Tiers of Community Contacts

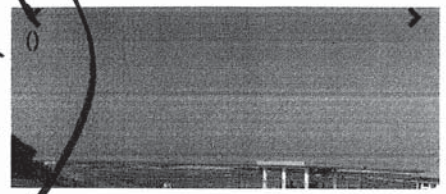
1. Property owners, or DEM bill payer on record (~109)
2. Community organizations and businesses– preliminary list
   a. O Kau Kakou (community volunteer group)
   b. Churches
      i. Pahala Holy Rosary Church
      ii. Pahala Assembly of God
      iii. River of Life
   c. Kupuna of Pahala
   d. Pahala Filipino Club
   e. Kau Rural Clinic Association
   f. Catholic Charities Hawaii
   g. Coffee companies
      i. Alii Hawaiian Hula Hands Coffee
      ii. Rusty Hawaiian Coffee
      iii. Kau Royal Coffee
3. General public
   a. http://kaunewsbriefs.blogspot.com/
   b. Fliers

Sequence of Activities -- Talk story sessions to be held on December 12, 13, 14

1. Schedule three evening meetings (6:00 PM) and one (or two) morning sessions (10:00 AM)
   a. Possible venues include Pahala Community Center, Pahala Holy Rosary Church, Pahala School and Public Library (Cisco Villa with DEM to help coordinate)
   b. Light refreshments: water, pastry
   c. Accommodate up to twelve, although we will not turn people away
2. Send letters to property owners directly affected by the proposed action. These letters will summarize project and invite them to the meeting.
   a. Need contact information, i.e. names, addresses, from DEM asap.
   b. Content: brief project description, purpose of meeting
   c. Invitation: List meeting times. They select one time and RSVP (phone and email).
   d. Letter sent by Brown & Caldwell local office with RSVP and questions directed to Earthplan (email or phone). Earthplan will draft letter.
   e. To encourage RSVP, letter will include self-addressed postcards.
3. Contact organizational leaders by phone and email (recommendations on contacts from Maile David, Susan Kim [Governor office] and Cisco Villa).
   a. Provide project description, purpose of meeting and schedule.
   b. Ask leaders to coordinate RSVP and contact Earthplan.
4. Inform general public.
   a. Contact Julia Neal who maintains http://kaunewsbriefs.blogspot.com/. Ask her to publish schedule for general public with specific information on RSVP.

b. Post notice in other locations as appropriate

5. Convene talk story sessions.
   a. 1.5 hours
   b. Earthplan facilitate; B&C historical and technical perspectives.
   c. Handout: 1-sheet (two sided) information sheet with map, proposed action, schedule, contact information. B&C and Earthplan to prepare.
   d. Talk story session approach
      i. Describe the best qualities of Pahala
      ii. Describe her challenges
      iii. Tell me about how you deal / have dealt with sewer
         1. History
         2. Successes and challenges
      iv. Project description
         1. What do you think?
         2. How do we move forward?
      v. Project team: Earthplan and B&C
6. Prepare a report summarizing First Stage and recommending next steps.



HILO — Costs have climbed for repair work on the Kealakehe Wastewater Treatment Plant, with the County Council voting Wednesday to add another $5 million to the $18 million estimated cost of the project.

(http://www.westhawaiitoday.com/2018/10/09/h news/no-charges-for-officer-suspected-of-stealing-drug-evidence/)

2 Gecko butt-dials 'bazillion' times from Kona monk seal hospital (http://www.westhawaiitoday.com/2018/10/09/f butt-dials-bazillion-times-from-kona-monk-seal-hospital/)

3 'Berlin Wall' plan splits Leilani homeowners (http://www.westhawaiitoday.com/2018/10/09/h news/berlin-wall-plan-splits-

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#7 Since the Kealakehe WWTP is running SO much over budget, why won't the Pahala project?

HILO — Costs have climbed for repair work on the Kealal Wastewater Treatment Plant, with the County Council vo Wednesday to add another $5 million to the $18 million estimated cost of the project.

The extra money, borrowed from the state water pollution control revolving fund, is needed to replace badly eroded liners several of the lagoons, county Environmental Management Director Bobby Jean Leithead Todd said.

The aeration upgrade and sludge removal project, which begar 2014, is anticipated to be completed later this year. All five lagoons will be undergoing aeration equipment upgrade and/o sludge removal. The project also involves upgrading the blower the equipment that supplies the air to the aeration equipment that is the backbone to the entire treatment system, by replacir them with energy efficient units that will reduce electrical costs the plant.

The contractor is working on one lagoon at a time to keep the plant operational to continue processing wastewater received from the Kona sewer system.

"This is the most important project in my district, even though i... not very glamorous," said North Kona Councilwoman Karen Eoff. "But it is serious."

#8 Since WWTP is the "most important" proj in Kona why can't the Kau town WWTP projects treated as "important"? submitted by Sandra Demoruda

Oct 10, 2018 Pahala DEA meeting

Eoff is one of several in West Hawaii looking forward to the day the county's first-ever wastewater reuse project is installed at that location. That's the second phase of the project, and it's still uncertain how much it will cost or how long it will take.

It can't happen soon enough for Stephen Holmes, a former councilman for the City and County of Honolulu and state conservation chairman for the Sierra Club, which took Maui County to court over its wastewater discharge issues. Holmes said the club was "geared up" to sue Hawaii County, but decided to give the county more time to fix its problem after talking with Eoff, now-former Managing Director Wally Lau and others.

"They are making movement in that direction," Holmes said. "These things never go as fast as you'd like."

The administration is currently in the process of contracting with a consultant for the approximately $1.6 million for planning and designing, Leithead Todd said. That includes geotechnical investigations, surveys, required permits, community meetings and an environmental impact statement. Once that work's done, the county will have a better idea of the design cost to produce construction plans and specifications for contractor bidding.

The county has been talking about a reuse plant to send much-needed water to thirsty West Hawaii parks and golf courses for almost two decades. The project, which could cost upward of $50 million for a distribution system, includes piping the water to Old Kona Airport Park and the long-anticipated Kealakehe Regional Park. The water would be stored in a tank uphill, and gravity would feed the water to its destination, she said.

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Not only should the county capture that precious resource, every drop of water that's filtered, cleaned and put to good use is that much less pollution threatening the nearshore waters off the Kona Coast, Holmes and Eoff said.

"It's a resource. It has value," Holmes said. "That's why you don't dump it in a hole in the ground."

PREVIOUS STORY (http://www.westhawaiitoda

NEXT STORY (http://www.westhawaiitoda

From the Web

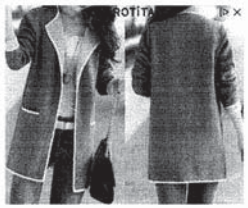
Another Troubling Story About Brett Kavanaugh Emerges
(http://www.zergnet.com/)

NASA Desperately Trying to Rescue Hubble Space Telescope
(http://www.zergnet.com/)

Cheerleader Pummels Girl Who Challenges Her to Fight
(http://www.zergnet.com/)

Ford Polygraph Regarding Kavanaugh Assault Revealed
(http://www.zergnet.com/)

The Brutal Truth Behind the Brett Kavanaugh Scandal
(http://www.zergnet.com/)



Hawaii News (http://www.westhawaiitoday.com/category/hawaii-news/)

Kealakehe sewer plant upgrades costly

By Nancy Cook Lauer West Hawaii Today ncook-lauer@westhawaiitoday.com | Thursday, February 4, 2016, 11:30 a.m.

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6. "One Thing"

At the end of the sessions, each participant was asked to share the "one thing" that they wanted to share with DEM. The following sessions lists comments.

6.1 December 12, 6 PM

I hope the department come back and respond to issues brought up tonight.

The devil is in the details. Don't make the same mistakes. Like the laterals on our street. When you connect sewage pipes, do not use sharp angles. Otherwise like Mauj, it blocks up. The mayor of Maui asked me to come help fix this.

Keep taxes down.

I need to know the price because I have two properties with cesspools.

Would love the County to look below the highway.

I want DEM to look at all these meetings and take input to heart. They have listened so far. Coming out early. Have faith in the director and appreciate that he listens. The cost impact is a big deal and I want them to reinvestigate funding to help. If the County can foot the cost to connect to main line, that would be a huge help.

I would like to see County help subsidize residents.

Biggest thing is cost. Lot of people have trouble meeting expenses. Not a lot of jobs.

Do archaeological study sooner than later. Gym project got held up.

I hope the conversation keeps going.

The cost is not just about the present. I am worried about what my kids will have to pay later on. That blue line coming through our yard – we didn't ask for that. We should be exempt if the County wants to raise property taxes to pay for this. The purple properties are projected to be hooked up later. Some people think not affect them.

Cost. And the director should be out here listening. They make you two come here and there is only the tape he's listening to. He gets paid a lot of money. He should look at us in the face.

6.2 December 13, 10 AM

The site not big enough for future growth.

Use land on either side of Maile Road.

Go to the other side of Belt Road; or old mill site.

I just wanted to come here and find out. I wasn't on the gang system. Now I understand sure enough, something's up. I'm on the system. How long before whole community part of system? Only handling half the community. Doesn't solve the problem.

Think long term.

Where is construction road on Maile Street?

6.3 December 13, 6 PM

Make it cheaper. Cut the cost.

The cost concerns me.

Be more transparent. Tell the truth. Be honest. Open lines of communication as soon as possible. We understand the County is under time constraints, but you cannot expect others to be.

I agree. We need to know. We are a small community. Nobody talks to us.

Cost. Keep it low.

Everything is going up and up and up. We don't know how much it will cost. I'm afraid of that.

When will next round of meetings take place?

What is problem with siting below the highway?

The County built the gym and in the gym, there were bones. What did they do with bones if they find on this site?

General comment at the end: Appreciate meetings

6.4 December 14, 10 AM

Why are we now paying monthly if the thing not so good?

Why do we have to pay if they're not using the lines in our yard?

Why don't they move to the other side (east) of Maile Road so it's not below the town?

If they allowed us to use cesspool to begin with and change to septic tanks and want us to absorb the cost because they want to change, why don't they help us out?

Like my daughter, she has a big bill she pays monthly. What's going to happen in 2021? We live in the back of the school. Below the elementary. Not in the blue. We have our own cesspool. We'll have to get our own line to connect to the street?

I strongly encourage them to look at the property below Maile Road. It appears on paper that it's not that much different. It's interesting with waterways and lava that you wouldn't even know when they are cracks because of percolation. Running under Belt Road, is there any chance if they did expand with those yellow things, could that be expanded to the other side of the road? What's ideal for the county is not always ideal for the town.

6.5 December 14, 6 PM

How much will this cost me?

I want the County to be responsible for this project. Let us know. Inform us and be honest and respectful to people.

This is about trust. Plus take into consideration we have a lot of elderly at these meetings. We need to get young people involved. Take it to school. Let kids give feedback.

I can help Cisco get people to meeting.

Project life expectancy? Pipes given slope and pressure. Mains. More detail.

I like this system. You can deal with waste environmentally. I'm excited.

I'm all about cost to individual homeowners.

As a homeowner, what kind of responsibilities is the County expecting of me?

How much will it cost?

Keep coming back to talking to people.

Thank you to both of you. A lot of time people come with arrogance and they will fix us. So thank you.

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10349-01 ref (27)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 10, 2018

Dear Ms. Demoruelle:

Thank you for your October 10, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

M-1
Hawaii Revised Statutes (HRS) Section 343-5 **Applicability and requirements** (a) states "Except as otherwise provided, an environmental assessment shall be required for actions that: (1) Propose the use of state or county lands or the use of state or county funds…" as well as, "(9) Propose any: (A) Wastewater treatment unit…"

However, Hawaii Administrative Rules (HAR) Title 11, Chapter 200, which implements HRS Chapter 343, differentiates between "agency actions" - those proposed by an agency to utilize state or county lands or funds; and, "applicant" actions" – those for which an applicant requires approval from an agency.

The Pāhala Large Capacity Cesspool Replacement project is a proposal by an agency (Department of Environmental Management) to use County funds, thereby "triggering" the need for an EA.

The September 23, 2108 Environmental Notice provided the following project description: "The County of Hawaiʻi Department of Environmental Management proposes to construct wastewater system improvements replacing the large capacity cesspools (LCCs) currently serving Pāhala, in order to comply with U.S. Environmental Protection Agency (EPA) regulations. The project improvements would include a new wastewater collection system located primarily within public streets in the Pāhala community, and a treatment and disposal system on land to be acquired by the County (TMK: 9-6-002: 018). The project would be partially funded by an EPA grant and by the Clean Water State Revolving Fund loan program.

The collection system would consist of approximately 12,150 linear feet of 8 to 12-inch diameter underground gravity flow piping in Maile, ʻIlima, Huapala, Hīnano, Hala, Puahala and Pīkake Streets. The treatment and disposal facility would occupy about 14.9 acres and consist of a headworks and an odor control unit, an operations building, four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen with an adjacent disinfection system to remove pathogens, and four slow rate land treatment basins for further treatment and disposal of the treated effluent. A perimeter security fence would enclose the entire facility. The existing LCCs and associated wastewater collection system would be abandoned."

M-2- N/A

M-3
Hawaii Administrative Rules Title 11 Department of Health Chapter 200 §11.1(d) does not include a requirement to withdraw a determination. Nor, is there a time stated for such a withdrawal.

M-4
The public outreach subcontractor did not prepare the Draft EA.

M-5
This is not a comment on the content of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

M-6
The quoted statement was from the Councilmember for the Kona district, in relation to the Kealakehe Aeration Upgrade and Sludge Removal project. The Kealakehe Aeration Upgrade and Sludge Removal project is not the subject of this Draft EA. The County of Hawaiʻi Department of Environmental Management considers the Pāhala Large Capacity Cesspool Replacement project important.

M-7
As stated in the article, additional funding for the Kealakehe Aeration Upgrade and Sludge Removal project was requested to replace the "badly eroded liners in several of the lagoons". The liner replacement was outside of the original project scope. Expanding the scope of any project generally necessitates additional cost in order to complete the work associated with that expanded scope.

M-8
Hawaiʻi Administrative Rules (HAR) Title 11 Chapter 200-10 **Contents of an environmental assessment** does not include a requirement for evaluating the fiscal impacts of a project on a County's budget or ability to obtain funding.

M-9
The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA, Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai‘i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be repeated in the Final EA.

M-10
The Draft EA Section 2.2 sets forth the purpose of the Pāhala Large Capacity Cesspool Replacement project: “The purpose of the actions considered in this Environmental Assessment (EA) is to provide the infrastructure necessary to enable the County to comply with the SDWA and fulfill the compliance provisions of the AOC between EPA and the County with respect to closure of the Pāhala LCCs”. The remaining portions of the Pāhala community are not serviced by the LCCs and hence not included in the Pāhala Large Capacity Cesspool Replacement

project. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection system.

The Draft EA Section 2.3.1 states the treatment and disposal facility will be designed to provide an average dry weather flow capacity of 190,000 gallons per day, which will be sufficient capacity to allow the closure of the two LCCs. In addition, the Draft EA Appendix B states the wastewater treatment plant (WWTP) designed not to preclude treating future average dry weather flows up to 360,000 gpd to meet the future needs of the community, in accordance with the requirements established in the Ka‘ū Community Development Plan Policy 120.

M-11
The Draft EA Section 4 discusses Cumulative Effects including the scope of analysis and also actions considered but excluded from analysis.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/16/18

Earl Matsukawa

cc: BC, COH EPA, ERG

From: B. Noelani Hong <noealoha@gmail.com>
Sent: Wednesday, October 10, 2018 11:38 AM
To: Public Comment
Cc: B. Noelani Hong; josh green senator; kaiali'i Senator Kahele; Representative Tulsi Gabbard
Subject: proposed site pahala waste water treatment plant

dear EA consultant mr okamoto,

what will prevent the "lagoon style treatment plant" from overflowing and running downhill over hwy 11 and lower lands in the event of heavy rains and flooding? hurricanes and tropical storms cause tremendous flooding from the slopes of mauna loa and have broken the roads and bridges along hwy 11. the bridge on hwy 11, at pahala entrance, ka'u hospital broke several years ago due to heavy rains and many bridges and roads on the road to wood valley, as well as the upland road from pahala to na'alehu also broke.
with climate changes, i'm guessing that we will be facing more frequent heavy rains and flooding. This may present a serious health hazard, if the treatment plant overflows from excessive ground water.

if unable to address my question, pls forward my email to the appropriate county/state personnel. thank you.

Dr. Noelani Hong

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10349-01 ref (28)
March 6, 2020

Dr. B Noelani Hong
Via email: noealoha@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of, Kaʻū, Hawaiʻi
Response to Comment - October 28, 2018 11:38 a.m.

Dear Dr. Hong:

Thank you for your October 28, 2018 11:38 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follow:

The County is aware of two existing culverts that allow stormwater to flow across the Māmalahoa Highway in the vicinity of the project. The first is a box culvert located at the intersection with Maile Street that conveys stormwater under the highway. The second culvert is located approximately 600 feet east of the Maile Street intersection and was used to convey sugar mill flume water across the highway for disposal.

The Draft EA Figure 2.3 shows the intersection of Maile Street and Māmalahoa Highway lies at about 580 feet above mean sea level (MSL). The Draft EA Figure 2.2 shows the Pāʻauʻau Gulch crosses under Māmalahoa Highway near the hospital about 0.88 miles north of that intersection and lies at approximately 780 feet MSL or about 200 feet higher in elevation than the culvert at the Maile Street and Māmalahoa Highway intersection. Due to this distance and the elevation difference, surface flows at Site 7 would not affect the gulch. Similarly, the Kaimani Street and Māmalahoa Highway intersection lies about 0.84 miles north of the proposed facility site and at about 780 feet MSL. Surface flows at the facility would also not affect that intersection. Figures 2.2 and 2.3 will be repeated in the Final EA.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2- percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent

> annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT

owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facility will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event, as shown in the department of public works "Storm Drainage Standards".

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows during. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(1034-01)
10/16/18

Earl Matsukawa

cc: BC, COH
EPA, ETRG

From: Dale A. Loper <z75dloter_sv9@dallop.us>
Sent: Saturday, September 29, 2018 7:46 AM
To: Dora.Beck@hawaiicounty.gov
Cc: Public Comment
Subject: Pāhala Large Capacity Cesspool Replacement--Draft EA (AFNSI)

I urge you to rethink these large expense of land of money when there is an alternative to Hawaii's problem with cesspools.
Mobile system can be uses to travel to site where cesspools are at capacity.
Small systems at residential in rural areas with the need to pipelines(subject to breakage and or damage)

http://www.busse-gt.com/

Welcome ...

Green Technologies Inc. was founded by Ralf-Peter Busse, Ingo Schaefer and Anja Busse. Ralf-Peter Busse is the owner and manager of Busse GmbH Germany that developed the Busse MBR system and holds the patent. An independent engineering firm Busse GmbH has over 25 years of experience in the area of plant construction, especially the commissioning of industrial and waste water treatment systems. As a result of this extensive know-how the membrane activated sludge treatment process for the treatment of on-site waste water was developed.

Ingo Schaefer has been working since 2002 to increase the interest and awareness for the decentralized waste water treatment with membrane technology in the US and to get the Busse system certified, approved and established in North America. He is a US citizen based out of Chicago, Illinois.

Anja Busse owns and manages the German company Busse Innovative Systems GmbH that produces the Busse MBR systems and distributes them within Europe.

The Busse Innovative Systems GmbH is the current production facility for Busse MBR systems certified by NSF International. In the future it is planned to also establish a production facility in the US to manufacture the Busse small scale waste water treatment systems with MBR for the North American market.

MBR sewage treatment systems designed for 250 to 2000 Gal/d

The small scale sewage treatment system BusseGT with membrane bioreactor technology (MBR) turns domestic waste water into useable non-potable water that meets all reduction standards.

Wastewater Recycling

The domestic waste water from decentralized and centralized buildings is recycled by the Busse membrane bioreactor technology and can be re-use as non-potable water, for example for toilet flushing or garden irrigation.

Closing this ecological loop is not only protects the environment and saves drinking water resources but also results in cost savings.

Special Applications

The application range of the BusseGT systems compasses solutions for yachts, theatre & restaurant ships, house boats, hotel resorts, campgrounds, historical buildings, like castles and palaces as well as mobile container systems. The MBR technology is even used for waste water free fish farming.

Container plant

The modular structure makes the Busse MBR systems fit for installation in a container as a mobile solution for waste water recycling at any place in the world. Turn-key MBR system can be delivered in small sizes from 4 to 100 inhabitants. A water holding tank next to the building is used as a pre-cleaning chamber.

MBR module for underground installation

The system consists of an MBR module which is made out of polyethylene and has to be installed partly below ground. It is easily accessible. A pumping station with aerated coarse matter separator is part of the system. This pumping unit has to be installed in an existing waste water holding tank.

Systems for ships and house boats

Due to its compact and modular structure the Busse MBR system can be adapted for installations on house boats, theatres, museums and restaurant ships, river boats as well as larger yachts. The effluent from the system can be re-used for flushing toilets, cleaning the deck or can be discharged directly into the surrounding waters.

MBR sewage treatment systems designed for 250 to 2000 Gal/D

Small scale BusseGT systems for complete installation in houses for 250 / 500 / 750 Gal/d

Due to its small footprint and odourless operation the BusseGT small scale sewage treatment systems can be installed in the basement of a house. The waste water from the household enters the system by gravity flow. No expensive earthmoving is necessary.

Small scale BusseGT systems in combination with existing septic tanks for 250 / 500 / 750 Gal/d

If the waste water cannot enter the system by gravity flow an outside in ground waste water buffer tank is needed or an existing septic tank can be used. The tank is then equipped with a pumping unit with an aerated coarse matter separator and serves as the first stage of the system. The pre-cleaned water is then pumped into the MBR stage of the BusseGT.

Small scale sewage treatment systems BusseGT for 1000 Gal/d

Compartments in different sizes and made of different materials are available to build the BusseGT system types for 16 und 24 inhabitant equivalents. Depending on the size and floor plan of the building tanks in sizes of 1000, 1500, 2000 or 3000 liters can be selected for use in the system.

Small scale sewage treatment systems BusseGT for 1500 Gal/d

Due to its modular structure the BusseGT allows for individual solutions that can be adapted to almost any room. Even longer distances between the existing in ground septic tank and the room where the MBR stage is installed pose no problems.

Small scale sewage treatment systems BusseGT for 2000 Gal/d

The odourless and extremely quiet operation of the BusseGT systems allow for an installation inside of buildings that are designed for living and working. The installation inside closed rooms makes the maintenance service and operational inspection of the systems very easy.

Dale A. Loper
z75dloter_sv9@dallop.us

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10349-01 ref (44)
March 6, 2020

Mr. Dale A. Loper
z75dloter_sv9@dallop.us

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - September 29, 2018 7:46 a.m.

Dear Mr. Loper:

Thank you for your September 29, 2018 7:46 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows.

As stated in the Draft EA Section 2.1.4, in 2003, C. Brewer requested assistance from the County to close the large capacity cesspools (LCCs) in Pāhala. Further, "Voting took place via mail for the Pāhala community to choose the preferred sewer improvement alternative resulting in 87 percent of the returned ballots in favor of installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County."

The Draft EA Section 2.3.1 states the treatment and disposal facility will be designed to provide an average dry weather flow capacity of 190,000 gallons per day. In addition, the Draft EA Appendix B states the wastewater treatment plant (WWTP) will be designed not to preclude expansion to treat future average dry weather flows up to 360,000 gpd to meet the future needs of the community, in accordance with the requirements established in the Kaʻū Community Development Plan Policy 120. The information provided in your message shows units with a treatment capacity of 250 to 2,000 gallons per day. Thus, these systems do not have sufficient capacity to accommodate the flows for the Pāhala Large Capacity Cesspool Replacement project.

Use of a system of 250 to 2,000 gallons per day to treat the wastewater generated by each privately-owned parcel in the community currently served by the LCCs would likely necessitate siting multiple units within private property. As outlined in the Draft EA, Appendix B Section 7.5.4, issues associated with individual wastewater systems include:

- locating the treatment units within developed private parcels, many of which are small (less than 10,000 square feet) and significantly improved,
- insufficient land area within developed private parcels to effectively use/dispose of treated effluent without impacting adjacent parcels, and

- soil conditions and subsurface geology unsuitable for effluent disposal compliant with Hawai‘i Administrative Rules (HAR) Title 11 Chapter 62-34 requirements, potentially necessitating the import of suitable fill soils or elevated mound systems.

This information will be repeated in the Final EA.

Additional issues include: access for construction equipment, ownership of the units, and operation and maintenance of the units either by the County of Hawai‘i on private property or by individual property owners in this remote location.

This information will be added to the Final EA, section 2.8.2.

Based on the above, use of small capacity treatment units for this project does not appear to be a practical and feasible option for the County.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/2/19

Earl Matsukawa

cc: BC COM EPA ERG

From: ngaire gilmour <ngaire.joy@gmail.com>
Sent: Wednesday, October 17, 2018 10:30 AM
To: Public Comment
Subject: A question regarding the DRAFT EA:PAHALA Attn: Earl Matsukawa

Aloha,
I appreciate any time you can afford me with my question so I may submit an accurate comment.

In preparing my comments for the Pahala draft EA I came upon something that I need your assistance in clarifying.
It was my understanding that one of the gentlemen presenting said the reason the sewage system was being expanded beyond what was required by the FEDS was because it was part of the CDP.

Can you please direct me to the section in the CDP that states this? All I could find (admittedly, I did not read it in its entirety) was 5.8.2, Policy 120 that states: "Extend the primary wastewater collection lines in Pahala and Na'alehu so that infill development projects can connect wastewater systems built for new subdivisions to the County system".
Obviously, this does not speak to what is being referred to as "Newly Accessable Lots".

Thanking you in advance for getting back to me as soon as possible, as I wish to submit my comments in a timely fashion.

Ngaire Gilmour
96-3190 Pakalana St.
Pahala, HI 96777

--
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10349-01 ref (29)
March 6, 2020

Ms. Ngaire Gilmour
ngaire.joy@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - October 17, 2018 10:30 a.m.

Dear Ms. Gilmour:

Thank you for your October 17, 2018 10:30 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Community Large Capacity Cesspool (LCC) Replacement project.

The Draft EA Section 6.2.2 discusses the Kaʻū Community Development Plan (CDP): "Section 5 of the CDP prioritizes improvements in infrastructure, facilities, and services, including Section 5.8 which applicable to …Environmental management facilities, including expanded sewer lines, …". As you noted, Policy 120 is to "Extend the primary wastewater collection lines in Pāhala and Nāʻālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems."

The collection system will be consistent with Policy 120 as the improvements for the Pāhala (LCC) Replacement project have been designed not to preclude accommodating the Pāhala community. Similarly, the treatment and disposal facility has been designed not to preclude accommodating the wastewater flows from the collection system from the Pāhala community.

The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala large capacity cesspools (LCC). The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system. As a result, the proposed new collection system would consist of a total of approximately 12,150 linear feet (LF) (2.3 miles) of corrosion-resistant polyvinyl chloride (PVC) piping located almost entirely within the right of way (ROW) of eight public streets.

Also as outlined in the Draft EA, Section 2.3.2, the new collection system would be subject to the Hawai‘i County Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice."*

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

The above information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10379.01

RECEIVED
OCT 19 2018
WILSON OKAMOTO CORPORATION

10/21/18

cc: BC
COH
EPA
ERG

Jerome Warren
P.O. Box 951
Naalehu, HI 96772
(808) 929-8192
17 oct 2018

Earl Matsukawa
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

SUBJECT: **DRAFT EA: PAHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT**
INFORMATIONAL MEETING, OCTOBER 10, 2018

COMMENTS [Continued]

Back in 2004 the large capacity septic tank system was approved by the Ka'u homeowners who are on the old plantation gang-cesspools.

In 2007, Hawaii County published a Final Environmental Assessment for Naalehu and Pahala Villages Large Capacity Cesspool Conversion Project. The plan implements septic tanks for wastewater treatment. Then the County switched the plan without telling the public. They abandoned the septic tank system and started planning for a lagoon system and started planning for a lagoon system without public review.

Jerome Warren

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: **DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT**
INFORMATION MEETING, OCTOBER 10, 2018

(include additional sheets as necessary)

PLEASE PRINT: Name: Jerome Warren Phone (808) 929-8192
Organization: Self
Address: P.O. Box 951
Naalehu HI 96772
Email: NONE

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

Draft Environmental Assessment on the

Proposed Pahala Community Large Capacity Cesspool (LCC) Replacement Project

Public Information Meeting 10/10/2018

PERSONAL NOTES

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (30)
March 6, 2020

Mr. Jerome Warren
P.O. Box 951
Naalehu, Hawaii 96722

Subject: Draft Environmental Assessment (EA)
Pāhala Large Capacity Cesspool Replacement Project
District of, Ka'ū, Hawai'i
Response to Comment - October 19, 2018

Dear Mr. Warren:

Thank you for your October 19, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA, Section 2.8.2(a), discusses use of a community septic tank as follows:

"Community Septic Tank. Based on current design criteria and current flow projections, an approximately 800,000-gallon community septic tank would be necessary to provide the extended detention times needed to optimize treatment performance, to avoid the need for frequent septage pumping, and to account for peak flow rates. A community septic tank of this size would require pumping on a 3-year interval. Septic tanks produce hydrogen sulfide, reduced sulfur compounds, and other odorous gases; a community septic tank would concentrate these emissions to a single point source, requiring treatment with a dual-stage scrubber to avoid nuisance odor conditions. More significantly, a community septic tank would not be capable of achieving the effluent quality standards (less than 30 mg/L of both BOD5 and TSS) specified in HAR 11-62-23.1. Therefore, use of a community septic tank is not considered to be feasible."

Further details for the use of community septic tanks are also provided in the Draft EA, Appendix B, Section 7.5.1 and 7.5.2 including the need for a DOH variance from HAR 11-62-23.1 requirements (which must be renewed every five years), and the need to provide for wastewater treatment and disposal capacity to meet the rest of the community's current and future needs.

The Draft EA Section 2.9 discusses the relationship between the current project and the 2007 Final EA for the Naalehu-Pāhala Large Capacity Cesspool (LCC) Conversion project. As stated in Section 2.9:

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> "After the issuance of the Final EA and Negative Declaration/FONSI in 2007, the County conducted additional study and evaluation of the proposed LCC conversion project. The County eventually concluded that the LCC conversion project described in the 2007 Final EA would not meet the need to provide a collection system and a treatment and disposal facility, close the LCCs, and provide for the future needs of the Pāhala community. This determination was based on several factors…"

The Draft EA Section 2.8.2 (a) discusses the conversion of LCC1 to a seepage pit for septic tank effluent disposal, as documented below:

- "Converting LCC to Seepage Pit. Converting LCC 1 to a seepage pit regulated as an injection well (LCC 2 could not be converted as it is on private land) would lead to numerous potential compliance issues with HAR 11-23-07, which regulates injection wells. The condition and structure of LCC 1 is unknown, and HAR 11-62-25 requires all new and proposed effluent disposal systems are required to have a backup system. No such system could be feasibly constructed as new injection wells are not allowed."

Pāhala is located mauka of the UIC line, as such conversion of one or more LCC to a seepage pit for disposal of septic tank effluent would be subject to HRS 340E and Hawai'i Administrative Rules Title 11, Department of Health, Chapter 23, Underground Injection Control (HAR Chapter 23). In 2018, H.B. No, 1934, H.D. 1, S.D. 2 was enacted as Act 131 which amended Section 340E-2 to add:

> *"The director shall promulgate regulations establishing an underground injection control program. Such program shall prohibit any underground injection which is not authorized by a permit issued by the director; provided that the director shall not issue permits for the construction of sewage wastewater injection wells unless alternative wastewater disposal options are not available, feasible, or practical;"*

The Draft EA Section 2.8.2 (a) also discusses the leachfield option considered for septic tank effluent disposal as outlined below: "Leachfield Disposal. To meet DOH's leachfield design criteria, a minimum of 30 acres of land would be required to meet loading rate and redundancy requirements. Achieving even distribution of effluent over a leachfield of this size would be challenging. Therefore, leachfield disposal is not considered to be feasible."

The above information will be repeated in the Final EA.

The Draft EA Section 7.0 provides information regarding the community outreach program for the current proposed action, including meetings starting in December 2017.

The Draft EA Section 2.1.4, History of Wastewater Management in Pāhala, will be expanded in the Final EA to provide the following additional information:

Field investigation conducted on February 4, 2009 on the property conveyed by C. Brewer for a treatment/disposal site in Nā'ālehu showed unacceptable percolation rates, making converted seepage pit or leach field options less desirable in this area.

On December 13, 2008 a community meeting sponsored by Councilman Guy Enriques was held at the Nā'ālehu Community Center to discuss the Nā'ālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County's Wastewater Division stated that adequate land for the treatment and disposal system had not been identified in Pāhala. A preliminary location for a treatment and disposal site below the Old Pāhala Mill site was not acceptable due to reports of archaeological sites in the area, and outlined the benefits of a lagoon type treatment and disposal system. At an April 25, 2010 community meeting at the Pahala Community Center, which was also sponsored by Councilmember Enriques, the meeting informational handout stated the County was investigati
ng available properties for siting wastewater treatment/disposal facility in Pahala. The handout also stated that all properties accessible to the new sewer system would be required to connect in accordance with Hawaii County Code Chapter 21.

Also, although not specific to the Pāhala project, it was stated at a July 22, 2016 2:00 p.m. presentation at the Nā'ālehu Community Center that the County had purchased the parcel containing the makahiki grounds in Nā'ālehu for a lagoon type wastewater treatment/leach field disposal system.

The Draft EA Section 7 provides information regarding the five "talk story" sessions held in December 2017. Section 7 identifies the various issues, concerns, environmental impacts and mitigations measures which were addressed in the Draft EA.

On September 26, 2018, a public notice was published in both the Hawaii Tribune Herald and West Hawaii Today to advertise the October 10, 2018 public information meeting conducted by the County in Pāhala at the Ka'ū Gym Multi-Purpose Conference Room to discuss the availability of the Draft EA and process for submitting comments. A public notice was also published in the October 1, 2018 online and print editions of the Ka'ū Calendar and made available on the Ka'ū News Briefs web site http://kaunewsbriefs.blogspot.com.
All materials circulated, posted and published for the October 2018 meetings included the electronic link to the Draft EA at http://health.hawaii.gov/oeqc/.

The Draft EA was made available online on the County of Hawai'i and EPA websites and in public libraries in Nā'ālehu and Pāhala beginning on September 23, 2018. Upon public request, 11 printed copies of the Draft EA were made available at both the Nā'ālehu and Pāhala libraries on November 7, 2018. The County's transmittal requested the library make the copies available for checkout. The Draft EA was also posted on the County of Hawaii and EPA websites at:

http://records.co.hawaii.hi.us/weblink/1/edoc/96064/Pahala%20FINAL%20DRAFT%20EA%20and%20Appendices_508_9-11-18.pdf
https://www.epa.gov/uic/proposed-pahala-community-large-capacity-cesspool-replacement-project-draft-environmental

At the October 10, 2018, public information meeting, the County provided staff to personally assist commenters in preparing written comments on the Draft EA. In addition, during this meeting, the County identified community volunteers attending the meeting who were proficient in Hawaiian, Tagalog, and English to assist anyone who identified as needing assistance in providing written comments on the Draft EA.

The public notice also stated that a second part of the meeting on October 10, 2018 would address Section 106 of the National Historic Preservation Act (NHPA) involving consultation with Native Hawaiian Organizations and Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, or cultural religious attachment to the proposed project area. Eight persons placed their names on a sign-in sheet to contribute during the Section 106 part of the meeting; however, no comments or information from the public were forthcoming during this meeting.

Appropriate portions of this historical information related to public outreach regarding closure of the Pāhala LCCs will be included in the Section 7 of the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/22/18
CC RC COH EPA ERG

Earl Matsukawa

From: ngaire gilmour <ngaire_@hotmail.com>
Sent: Saturday, October 20, 2018 12:40 PM
To: Public Comment
Subject: Comments on Draft EA for Pahala LCC Replacement Project
Attachments: Large Capacity Cesspool EA 10.20.18.odt

Please find my comments in the attached document.
Mahalo,
Ngaire Gilmour

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10349-01
10/22/18
cc: BC COH
EPA ERG

Ngaire Gilmour,
PO Box 843,
Pahala, HI 96777
ngaire_@hotmail.com

October 20, 2018October 20, 2018

Wilson Okamoto Corp.,
1907 South Beretania St, Suite 400,
Honolulu, HI 96826

Attention: Mr. Earl Matsukawa

Subject: Draft EA: Pahala Community Large Capacity Cesspool (LCC) Replacement Project

1. My first concern is regarding 'newly accessible lots' for the near future as well as more long term.
   a) Homes on gang cesspools (LCC) will be grandfathered onto the new sewage system, as they should be, but (it is my understanding) the County has decided to extend the system beyond the LLC's and beyond what is required by the Federal Government at this time.
      - This will require 'newly accessible lots' to join the new sewage system at the lot owner's expense`.
   b) I fully support a project that will benefit the environment, as this will, but the impact of the cost of connecting on each 'newly accessible lot' will have a devastating financial impact on a community that is working very hard to get by.
      - Pahala is not a community of income properties. For the most part, the homes in this community are single family, passed down through the generations, and often housing multiple generations. For the County to consider penalizing these owners because they were on independent systems that were installed legally will only bring confrontation and opposition to a plan that, in the long run, will be beneficial. This could cause the County to loose support for the project in the community, rather than it being perceived as a welcome benefit.
   c) The County should consider grandfathering in all existing 'newly accessible lots' with functional cesspools and septic tanks.

2. It was disappointing to be informed that there will be no independent energy source for the sewage facility. Solar, wind and methane are all possibilities, but just "hooking up to HELCO" is not looking to the future. Please look beyond the 'grid' for energy.

3. Please consider the suggestion made at the meeting on 10/10/18 to look at the possibility of moving the project across the highway, using the current tunnel that runs under the highway that was installed by the sugar industry.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (31)
March 6, 2020

Ms. Ngaire Gilmour
ngaire.joy@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - October 20, 2018 12:40 p.m.

Dear Ms. Gilmour:

Thank you for your October 20, 2018 12:40 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

1.

a) The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala large capacity cesspools (LCC). The Draft EA Section 2.3.2 discusses the construction a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current LCC collection system includes lines located the backyard of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from each landowner to enter them, through private property, to inspect, maintain, repair, or replace existing sewer facilities: all activities essential to an efficient, functioning system. As a result, the proposed new collection system will be located within the public street rights-of-way and to close the LCCs, there will be parcels that become "newly accessible" to the collection system. The collection system is not being expanded under the proposed action beyond the area needed to close the LCCs. This information will be repeated or included in the Final EA.

b) The Draft EA Section 2.3.2 discusses Hawaiʻi County Code, Chapter 21, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"(a)Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 21, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue.
This information will be added to the final EA Section 7.

c) County Council approval would be required to grandfather or fund connections of newly accessible properties to the new collection system.

2.
Although the project does not currently include alternative energy systems such as photovoltaic, solar or wind power as a total replacement to the HELCO grid, feasible alternatives utilizing energy systems can be added in the future if prioritized and funded by County Council. A source of methane is not currently available in the Pāhala area, natural gas distribution infrastructure is not in place in this remote location, and the Proposed Alternative, utilizing natural, low energy, treatment systems does not provide for wastewater-related methane production and capture.

3.
The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected

configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai‘i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

The above information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(1039-01)
10/22/18
CC: BC COH
EPA ERG

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W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

COMMENTS BY EDWARD ANDRADE JR.
1. I'M NOT IN FAVOR OF THE LOCATION OF THE WASTE TREATMENT PLANT.
REASON: A. PAHALA HAS ONLY TWO ENTRANCE FROM HIGH WAY 11. SHOULD WE BE BLOCK IN WHEN THE BIG RAINS FLOOD ONE SIDE WE HAVE THE OTHER. WATER THAT RUNS FROM PAHALA TOWN ENDS UP AT THE LOCATION OF THE TREATMENT PLANT. IF SOMETHING SHOULD HAPPEN AND YOU WILL FLOOD THE HIGH WAY. THAT IS DANGEROUS.
B. I BELIEVE THEIR IS A CAVE WERE PEOPLE WERE PLACED ON SELVES. AS I GROW UP IN PAHALA I SAW THIS BURIAL PLACE. I DON'T REMEMBER THE LOCATION. ALL I REMEMBER IT WAS BETWEEN THE HUSKING PLANT AND THE PLANTE SITE, SOMEWERE. I HAVE AN INFORMATION HANDOUT DATED APRIL 25, 2010? IT SAID THAT BELOW THE MILL WAS NOT A GOOD LOCATION BECAUSE OF THE ARCHALOGICAL SITE.

(include additional sheets as necessary)

PLEASE PRINT: Name: EDWARD ANDRADE JR Phone: 928-0808
Organization: HOME OWNER & EX MILL SUPT: FOR C. BREWER AND MAITAIN THE SEWAGE FOR PAHALA & NAALEHU
Address: P.O. BOX 514 PAHALA HI 96777
Email:

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).

WILSON OKAMOTO CORPORATION
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W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

CC: 10/19/18

REASONS: SMELL – I DON'T WANT TO ENTER THROUGH THEIR SMELL SEWAGE.
DO I WOULD LIKE TO SEE YOU RELOCATE THE PLANT BE LOW THE HIGH WAY. THEY TOLD ME IT WILL COST BIG BUCKS TO GO UNDER THE HIGH. I KNOW IT WOULDN'T BECAUSE THIER IS A CULVIT THAT IS LOCATED NEXT TO THE ENTRANCE OF MAC NUT HUSKING PLANT. THAT CULVIT WAS MADED AND USED TO TRANSPORT TRASH TO FILL THE WASTE LAND. IT'S THEIR USE IT. SO PLEASE THINK ABOUT IT. BE LOW THE HIGHWAY WILL NOT ENDANGER THE HIGH IF ANYTHING SHOULD HAPPEN. BELOW THE HIGHWAY WILL BE A GOOD SITE.

ALL of PAHALA WAS NOT NOTIFIED ABOUT THESE 3 MEETINGS

(include additional sheets as necessary)

PLEASE PRINT: Name: EDWARD ANDRADE JR Phone: 928-0808
Organization: HOME OWNER
Address: P.O. BOX 514 PAHALA HI 96777
Email:

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (33)
March 6, 2020

Mr. Edward Andrade, Jr.
P.O. Box 514
Pāhala, Hawaii 96777

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - October 19, 2018

Dear Mr. Andrade:

Thank you for your October 19, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

A.
The County is aware of two existing culverts that allow stormwater to flow across the Mamalahoa Highway in the vicinity of the project. The first is a box culvert located at the intersection with Maile Street that conveys stormwater under the highway. The second culvert is located approximately 600 feet east of the Maile Street intersection and was used to convey sugar mill flume water across the highway for disposal.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

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The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Mamalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Mamalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facility will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system will meet the requirements of Hawai‘i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to “comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event, as shown in the Department of Public Works Storm Drainage Standards.

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project “shall not alter the general drainage pattern above or below the development”. Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be lined with liners to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA’s “Process Design Manual, Land Treatment of Municipal Wastewater Effluents”. Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

B.
The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked

to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3 provides the Preliminary Site Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019, a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary and outside of the area of potential effect considered in consultation with SHPD as required by the National Historic Preservation Act.

The complete document is available for download from the County’s website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey of the proposed area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the Final EA.

C.
The Draft EA Section 3.14.2 states:

> “Wastewater treatment plants can be a source of nuisance odors to the surrounding community if not properly designed or operated. Typically, nuisance odors are most commonly associated with anaerobic (without oxygen) conditions and with processing of residual solids. Incoming raw sewage flows to the proposed wastewater treatment and disposal facility would first be routed to the headworks, which is the facility where the solids are removed from the flows.
>
> To mitigate potential nuisance odors, the headworks would be equipped with an odor control system with a granulated activated carbon (GAC) scrubber to remove odors. A package GAC scrubber passes the odorous air through a bed of activated carbon, which

adsorbs the odorous constituents within the pore spaces of the carbon. The County currently operates GAC scrubbers at other facilities, and it has been proven to be an effective means of odor control both locally and nationwide. The treatment lagoons would be equipped with mechanical aerators capable of maintaining sufficiently aerobic (with oxygen) conditions within the water column, which would prevent nuisance odor conditions from occurring. The disposal groves would be irrigated with fully-treated and aerobic secondary effluent from the treatment process; irrigation with secondary effluent is not associated with development of nuisance odor conditions."

This information will be included in the Final EA Section 3.14.2.

D.
The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal

facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

On September 26, 2018, a public notice was published in both the *Hawaii Tribune Herald* and *West Hawaii Today* which stated a public meeting was to be held on October 10, 2018 for the Pāhala Community Large Capacity Cesspool Replacement Project Draft EA. A public notice was also published in the October 1, 2018 print and online editions of the *Ka'ū Calendar* and made available on the Ka'ū News Briefs web site http://kaunewsbriefs.blogspot.com. Fliers were also posted in public venues such as the community shopping center, realtor office, grocery store, library, and the Pāhala Community Center.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to all property owners on record adjacent to the proposed collection system. This direct mailout included an invitation from DEM to workshops conducted prior to the October 10 public meeting. The workshop for owners served by C. Brewer lines was held on October 8, and the mailout for this meeting also included anyone with a current sewer account. The workshop for owners of newly accessible properties was convened on October 9. In addition to the direct mailout, online announcements for the October 8 and 9 workshops were available on the Ka'ū News Briefs website.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

Earl Matsukawa

(1034-01 10/25/18)

cc: BC COH EPA ERG

From: Sophia Hanoa <hanoa.sophia@aol.com>
Sent: Tuesday, October 23, 2018 4:47 PM
To: Public Comment
Subject: Draft EA PAHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) Sophia Hanoa

October 23, 2018

Attention Mr. Earl Matsukawa,

My name is Sophia Hanoa, I was born in Pahala and currently a resident. I am in opposition of the EA and proposed site selected for the sewage wastewater treatment plant for the following reasons.

1. No disclosure or consultation with the residents of Pahala.
   a. In December of 2018 five meetings were held in Pahala. The County failed to address and communicate with residents resulting in low turn out for all meetings.
   b. I attended the last meeting because I was notified by a neighbor 30 minutes prior to the fifth meeting. There, the few residents voiced their opinions about not being notified.
   c. At the meeting we were assured that this was just a display of things that the County was working on. No site was chosen. Everything is still up in the air. We were told that the team would return in April to update the community.
      They never did.
   d. In September 2018 some id the residents received notification about scheduled meetings and a draft EA being released on the 23rd. Again, poor communication, resulting in low turn out for meetings.
   e. One copy of the Draft EA was sent to the Pahala Library. I was not able to check it out because it was a reference item. How was the community to review the EA? Especially the elderly.

2. The proposed site has significant value to the community.
   a. There are burials and caves within the proximity of proposed site. Community members have witnessed seeing the caves and burials. It was deemed a site not to be used by the County back in 2008.
      A handout was distributed by then County Council Rep. Guy Enriques to everyone in the community. Why did the County waste money on doing an EA regarding the same site?
   b. Not only is Maile street the original road in and out of Pahala. It serves as an emergency exit. If the County fences of that property, will the road be closed if there's an emergency? Will Mamalahoa Highway be closed too?
      If the gulch near the hospital overflows the people will be locked in. What happens to the patients who receive dialysis?

3. The proposed site should be relocated below Mamalahoa Highway. Futher away from the town, for reasons of safety, environmental hazards, historically and aesthetically.
   a, The County should have consulted with resident Edward Andrade. He was the manager of the C. Brewer Sewage system for years. No one consulted him. He says the best place for the Sewage Plant would be below the highway.
      C. Brewer had a drain going under the highway that was used by the Sugar Plantation. Flooding here in Pahala would be hazardous for the residents should the sewage plant be at the proposed site as all of the flood waters from the town end up at the proposed site.
   b. The residents of Pahala have a high rate of asthma. Not only do we have the chemicals left in the ground by C. Brewer, we have the dust and chemicals from the Macadamia Nut Co. and the vog from Tutu Pele.
      There have been studies showing negative impacts on residents who live next to a sewage plant.
   c. Ka'u High School is the oldest school here on the island and second in the State. Ka'u Hospital is just around the bend from the proposed site. Why should the people here in Pahala have to see a sewage plant when entering our town?
   d. Kamehameha Schools owsn the proposed site and they also own the site below the highway.

4. The County has not been honest with the residents of Pahala and has caused undued psychological and financial stress while dividing the community since 2007 until present.
   a. The County is fast tracking this project without input from the community. Residents have been forced to pay sewage fees since 2007 and are still connected to their original cesspools.
   b. Some residents won't have any cost for this conversion project, while others will have to pay 20,000 to tie into the system and also pay to cover their existing cesspools. The elderly are on fixed incomes.

   c. It was stated at the meeting in October that the residents will have to come up with their own funds and that some of them will have to be hooked up by 2021 and the rest by 2050.
   d. It was stated at the same meeting that this was not a segmented project of a whole, yet according to documents, Na'alehu and Pahala was a joint venture. No one told the community otherwise and that funding was changed from Na'alehu to Pahala.
   e. Documents show that the County purposefully chose a site under 15 acres so that they would not have to deal with the land use commission. This must be investigated. The land use commission states 15 acres or prime agricultural land which is what the proposed site is listed as on the County map.

I believe that what I have stated should be taken into consideration. I do know that a sewage plant is needed. It should be placed in a proper area, with the least negative impact on the community.
We care about our quality of life here and it is our responsibiliy to make wise decisions for the generations to come. I hope you do too.

Mahalo,
Sophia M. Hanoa

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (41)
March 6, 2020

Ms. Sophia Hanoa
sohia.hanoa@aol.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - October 23, 2018 4:47 p.m.

Dear Ms. Hanoa:

Thank you for your October 23, 2018 4:47 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Community Large Capacity Cesspool Replacement project. Our responses follow:

1. a. b. c. d. The Draft EA Section 7 documents the 5 public meetings held in Pāhala December 12, 13 and 14, 2017 to discuss the Pāhala Large Capacity Cesspool Replacement project. As documented in the Draft EA, the community outreach program for the current project was designed as "talk story" sessions to optimize community conversations in informal sessions. Further, as documented in the Draft EA, invitations and announcements for the talk story sessions were intended to reach all audiences, as follows:

- Property owners with C. Brewer lines on their property were mailed letters from DEM inviting them to these sessions. The letters included stamped, mail-in postcards to facilitate the RSVP process.
- Fliers were hand-delivered to "newly-accessible" properties.
- Organizational leaders were provided copies of fliers announcing meetings and asked to circulate among their members.
- Fliers were posted in public venues, such as the post office, the Pāhala Community Center and the Kaʻū Hospital.
- Several online announcements were included in Kaʻū News Briefs available at http://kaunewsbriefs.blogspot.com.

This information will be repeated in the Final EA.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to all property owners on record adjacent to the proposed collection system. On October 26, 2018 letters were mailed to property owners on record adjacent to the proposed collection system informing them of the extension of the public comment period to December 10, 2018.

On September 26, 2018, a public notice was published in both the *Hawaii Tribune Herald* and *West Hawaii Today* which stated a public meeting was to be held on October 10, 2018 for the Pāhala Community Large Capacity Cesspool Replacement Project Draft EA. A public notice was also published in the October 1, 2018 online and print editions of the *Kaʻū Calendar* and made available on the Kaʻū News Briefs web site http://kaunewsbriefs.blogspot.com.

This information will be included in the Final EA.

The Draft EA Section 7 will be revised to add that, on March 21, 2019, the County held another meeting in Pāhala which included a presentation to provide information on financing options available to owners of parcels which would become accessible to the County collection system. The purpose of the meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community by March, 2019.

1. e. On, November 7, 2018, the County of Hawaiʻi hand delivered eleven copies of the Draft EA to the Pāhala Public Library and eleven copies to the Nāʻālehu Public Library. The County's transmittal requested the library make the copies available for checkout. This information will be included in the Final EA Section 7.

All materials circulated, posted and published for the October 2018 meetings included the electronic link to the Draft EA at http://health.hawaii.gov/oeqc/. The Draft EA was also posted on the County of Hawaii and EPA websites at:

- http://records.co.hawaii.hi.us/weblink/1/edoc/96064/Pahala%20FINAL%20DRAFT%20EA%20and%20Appendices_508_9-11-18.pdf
- https://www.epa.gov/uic/proposed-pahala-community-large-capacity-cesspool-lcc-replacement-project-draft-environmental

This information will be included in the Final EA.

2. a. The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it

will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with SHPD as required by the National Historic Preservation Act.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the final EA.

On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County's Wastewater Division provided a brief history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those property owners connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4, 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated that Mayor Kim's office advised the property owners the County would move forward with new systems for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated public meetings were held in both Nāʻālehu and Pāhala in November 2006, to discuss the wastewater system alternatives. The handout included that adequate land for the treatment and disposal system had not been identified in Pāhala. The

handout also stated that all properties accessible to the new sewer system would be required to connect in accordance with Hawaii County Code Chapter 21.

2. b. As shown in Figure 2.3 the 14.9-acre treatment and disposal facility project site does not extend into Maile Street. Similarly, Figure 2.3 shows the 14.9-acre treatment and disposal facility does not extend into Māmalahoa Highway. The site fencing will not extend into the Maile Street or Māmalahoa Highway rights-of-way. The Draft EA Figure 2.3 shows the intersection of Maile Street and Māmalahoa Highway lies at about 580 feet above mean sea level (MSL). Figure 2.3 will be repeated in Final EA.

The Draft EA Figure 2.3 shows the intersection of Maile Street and Māmalahoa Highway lies at about 580 feet above mean sea level (MSL). The Draft EA Figure 2.2 shows the Pāʻauʻau Gulch crosses under Māmalahoa Highway near the hospital about 0.88 miles north of that intersection and lies at approximately 780 feet MSL or about 200 feet higher in elevation than the culvert at the Maile Street and Māmalahoa Highway intersection. Due to this distance and the elevation difference, surface flows at Site 7 would not affect the gulch. Similarly, the Kaimani Street and Māmalahoa Highway intersection lies about 0.84 miles north of the proposed facility site and at about 780 feet MSL. Surface flows at the facility would also not affect that intersection. Figures 2.2 and 2.3 will be repeated in the Final EA.

3. The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of

the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

3. a. Mr. Andrade has provided comments to the Draft EA.

The County is aware of two existing culverts that allow stormwater to flow across the Māmalahoa Highway in the vicinity of the project. The first is a box culvert located at the intersection with Maile Street that conveys stormwater across the highway. The second culvert is located approximately 600 feet east of the Maile Street intersection and was used to convey sugar mill flume water across the highway for disposal.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facility will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water

disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the department of public works "Storm Drainage Standards".

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1, states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

3 b. Without specific citations it is not possible to confirm the issue related to negative impacts to residents near wastewater treatment plants.

3 c. The proposed site plan is included in the Draft EA as Figure 2.3. As noted in Section 2.3.1, "disposal of the treated and disinfected effluent would be accomplished through land treatment in four groves of native, water-tolerant trees occupying a total area of approximately 8.0 acres." This 8.0 acre planted area, combined with the sloping site topography and existing Cook pine trees (*Araucaria columnaris)* on Maile Street, will provide a visual buffer from both the Māmalahoa Highway and Maile Street. As outlined in Section 3.19.2 of the Draft EA, the Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. The wastewater collection system would be installed below the streets and therefore would not impact views. Above-ground structures may include the operations building, headworks and UV cover structures, and berms around the basins. The existing pine trees along Maile Street, most of which would remain with no changes, would continue to obstruct the viewplanes from Maile Street. The facility site would be adjacent (mauka) to, and

visible from, Māmalahoa Highway (State Route 11); however, impacts to the viewplane would be mitigated by the planted trees in the basins and by the rise in elevation between the highway and the facility.

3. d. The Draft EA Section 2.3.1 states Site 7 is owned by Kamehameha Schools and Section 2.5 states Site 9 is owned by Kamehameha Schools. The Final EA will clarify that the current landowner is BP Bishop Estate Trustees (Kamehameha Schools).

4. a. As outlined above and in the Draft EA Section 2.1.3, the County has been discussing the need for a new collection system, treatment and disposal facility to replace the existing collection system and LCCs, which have been prohibited by the U.S. Environmental Protection Agency, with the community since 2004. The County has not fast-tracked this project. Although not a comment specific to the content of the Draft EA, for clarification, fees currently paid by Pāhala residents serviced by the existing County-owned collection and LCC disposal system are collected for operation and maintenance of that system. All properties connected to County of Hawai'i wastewater collection systems pay fees as outlined in County of Hawaii Code (HCC) Chapter 21 Section 21-36.1. Currently, users connected to gang cesspools (LCCs) pay a reduced charge per unit as compared to rates charged to other user categories.

4. b. and c. The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala large capacity cesspools (LCC). The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system.

As a result, the proposed new collection system would consist of a total of approximately 12,150 linear feet (LF) (2.3 miles) of corrosion-resistant polyvinyl chloride (PVC) piping located almost entirely within the right of way (ROW) of eight public streets.

Also as outlined in the Draft EA, Section 2.3.2, the new collection system would be subject to the Hawai'i County Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice*."

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 26, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue. This information will be added to the final EA.

The County's intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community to eliminate underground injection from LCCs it operates to help protect underground drinking water sources. Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently using cesspools for sewage disposal.

4. d. The Draft EA Section 2.9 provides information regarding the 2007 Final EA for the Nā‘ālehu- Pāhala Large Capacity Cesspool Conversion project. There is no statement in the 2007 Final EA that the project was a joint venture.

4. e. The Pāhala wastewater treatment plant (WWTP) 14.9-acre project site has been developed to provide the necessary land area for the facilities needed to treat the incoming flows and to dispose the treated effluent from the treatment processes. The project site minimizes the use of

the adjacent lands which contain a commercial macadamia orchard. A larger project site is not required. The special permit requirement applies to the proposed WWTP parcel only, not to the proposed utility easement. The County will apply for the required special permit through the Planning Commission. This information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/25/19
cc: BC CDH
EPA ERG

Earl Matsukawa

From: Jade Moses <mamajpapab71@gmail.com>
Sent: Wednesday, October 24, 2018 1:39 AM
To: Public Comment
Subject: Comment on the Pahala Sewer Waste Water treatment Plant

I received a piece of mail letting me know that there was a meeting to be taking place sometime in October 9 and 10 regarding the sewer system that was to be put into the Pahala area. The meeting was to take place at the new gym in a smaller room. So I went, but was soooo disappointed and upset. I listened, but what I heard was meetings had started since 2004, the County had taken over the connections of the sewer line that C. Brewer had connected to the homes in the Pahala area.and had the pipings for those that was hooked up to the lines were the only ones that the pipes were being prepared for hooks up with the new sewer line that being put into the Pahala area and the Private people that had their own cesspools were not included in that because the agreement was only those that was hooked up the pahala lines would be taken cared of by the County of Hawaii.

As for those that had their own private cesspools would have to find their own contractors to help them with their own hooks ups between the hook up from the house to the lines, then from there to the line to the new sewer lines, and also we would be responsible also to close and cover our cesspools, and if you are lucky, would be one of the homeowners that might also need a pump. I asked about prices and how much this cost, but no one knew nothing about it. I on the other had found that it would run the homeowner between 20,000.00 to 50,000.00 and maybe more for them to get completely hooked up to the sewer lines, then on top of that we would have to pay the county for that honor, and all of that would have to be done before the year 2021. We were also told, if you are a private owner, you are responsible for getting our home hooked up to their system, which we would also pay for.

I was told that the agreement with County and C. Brewer was only for the line that were hooked up to C. Brewer only. I was really upset

First of all, We were NEVER EVER told about any meetings that were held here in Pahala regarding the system. I found out that there was one in 2004, and again later on during the years. There was also a Study done for the location in 2008 and was found not too be suitable because of the history, so since then nothing happened. Then I heard there was a meeting in December of 2017 and then again a meeting in October with some of the C. Brewer people, then a meeting with the owners that owned their Own Cesspools,then a general meeting.with everyone. Somehow, not everyone got notifications regarding these meetings, I by chance received a notice in my mail box, not everyone did. Communication with the people that live in the area was not being done properly, so not everyone, not everyone knew.

Well, a lot of the people that own their own private cesspools, are low income and elderly people that are being asked to pay, I want to share how upset and down graded I felt. My father Died working for C. Brewer, my brother died when the cane truck fell on him, and many of the families worked there till they closed and also a lot of them retired from there, but did not live long enough to enjoy their retirement, they died of Emphysema, or heart attacks or some other type of illness. Then going to one of these meetings to find out that we were short changed, and now we would have to pay for all the hook ups that need to be done to be able to have the sewer system work properly, but yet some of the people do need to pay for hook ups, County of Hawaii is taking care of their portion because they were already hooked up to the line with C Brewer and we were not, and also we were not notified since all of this started since 2004.

Then there is a question as to the home that were owned by C. Brewer workers then sold, and you have people from away that has purchase the home and is living in there now, and their home is being hooked up as well for free, but yet a lot of these homeowners that have private Cesspools need to front their own money for their own hooks up. Then there is another question. We are a very small and close nit community and I feel that by County paying for some and not others brings up the point about separation issues. It is like separating the town, which is not true. If you worked for C. Brewer, owned your home through C. Brewer, if County works with some, they should be helping all.

There is a lot of us that are over 60 and above that still live in our homes, We have a lot of people on fixed incomes and cannot afford to do this on their own, and then there is a lot of the older people that do not understand what is going on, and I feel that they should not be taken advantage of because of their age, and they truely do not understand, but do what they are told to do because they are scared.

The people in this community comes from households that only knew C. Brewer and that it went on generations by generations, and when they closed these people had to find other means, and that would also include, commuting to work, which would be from pahala to hilo, pahala to kona or anywhere they could find a job, even driving to hilo then catching the buses to work at Waikoloa. And now choices to make regarding the sewer system.

The respect for the community was NOT taken under consideration properly, Talking and speaking with the people that live in the area is another issue that was not done. If you will be putting the system in the Pahala area, you need to speak with the people from Pahala, not from Honokaa, not from Hilo, not from Kohala etc. Every area is different and not the same. There is history, bones,caves and other history buried in this town. Also, research should have been done before each meeting so that people would have a better understanding as to what kind of help they might be able to get as far as working with County of Hawaii, or for anything that needed to be done so that they would be able to see the bigger picture more thoroughly as to the aspects of the situation. Research should have done and anything that would help the people with options, and finding out what they could do to help the WHOLE community, not just a few. EVERYONE that grew up here, worked for C. Brewer one time or another. We are all important to each other here in Pahala, we do not single anyone out, we all live together so, everything should have be thought through about EVERYONE in Pahala not just the ones that was hooked up to the system prior to County taking over. Also meetings should have been told ahead of time, and the time for the meetings should have been done when everyone was in town, and not on a week night, everyone works and they also commute to work. All that should have been considered for the people in order to have gotten all or much of the in put from the Pahala People for the Pahala Waste Treatment plant. Also no discussion was even given to furture development which we were aware that they has been talk.

Really upset, no disclosure to people and with that comes no time from the community for their input, and County denied reports of cultural sites, historical sites. I feel the hook up funding should have been made available at time of meeting, and also, previous agreement with C. Brewer and County was not known until was told. That is where the division of community comes into play
I think the LUC should have been given a chance to review it even if the property was not within their range.

I thank you all for the opportunity to give you my complaint and my input. It is very disturbing and I feel we were not given the chance to defend ourselves,

Just a little note, my family was living up next to the shopping center. Before the shopping center was built, our home was where the road is right now. My home was moved by C Brewer down to where we live now, on the corner of Huapala and Hinano. When we were living up by the shopping center, we were hooked up to their line, but when they moved us to make room for the road to make a shopping center, they helped us make a cess pool until further notice, and we have been like that to present. I just wanted to share that.

Mahalo
Jadelyn Kaapana-Moses
Residence since 1959

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10349-01 ref (42)
March 6, 2020

Jadelyn Kaapana Moses
mamajapab71@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment October 24, 2018 1:39 a.m.

Dear Ms. Moses:

Thank you for your October 24, 2018 1:39 a.m. comment message regarding the Draft Environmental Assessment (EA) for the County of Hawai'i Department of Environmental Management Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

We appreciate you taking the time to attend meetings and encourage you to continue your engagement. The purpose of this letter is to address your emailed comments as they relate to the content requirements of the Draft EA.

Section 2.1.4 of the Draft EA provides a history of wastewater management for Pāhala. As stated, in 2003 C. Brewer requested assistance from the County to close their large capacity cesspools as required by the Environmental Protection Agency. Section 2.14 discussed that, around 2006, C. Brewer requested that the County construct and maintain a new and improved sewer system for the Pāhala community. A County Council Resolution approved the C. Brewer request. In anticipation of C. Brewer's dissolution, the company proposed, and the County agreed in April 2007, to enter into a formal agreement to construct and maintain a new and improved community sewer system or assume maintenance and required service of the existing systems by April 30, 2010. The Final EA will clarify that C. Brewer committed to complete the line (called a lateral) between the residences and the property line at the edge of the public right-of-way adjacent to the new collection system for specific private properties in Pāhala and Nāʻālehu. It was agreed, if the County did not complete its' portion of the work by April 30, 2010, it would assume pending and unfinished obligations to connect the new laterals installed by C. Brewer to the residences and new collection system when complete. Thus, the project includes connecting these C. Brewer laterals, which may now need to be replaced.

As outlined in the Draft EA Section 2.1.3, the County has been discussing the need for a new collection system, treatment and disposal facility to replace the existing collection system and LCCs, with the community since 2004.

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On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County Wastewater Division, provided a history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those property owners connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4, 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated that Mayor Kim's office advised the property owners the County would move forward with a new system for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated that public meetings were held in both Nāʻālehu and Pāhala in November 2006 to discuss the wastewater system alternatives.

This historical information related to public outreach regarding closure of the LCCs will be included in the Final EA.

The Draft EA Section 7 documents the five public meetings held in Pāhala December 12, 13 and 14, 2017 to discuss the Pāhala Large Capacity Cesspool Replacement project. As documented in the Draft EA, the community outreach program for the current project was designed as "talk story" sessions to optimize community conversations in informal sessions. Further, as documented in the Draft EA, invitations and announcements for the talk story sessions were intended to reach all audiences, as follows:

- Property owners with C. Brewer lines on their property were mailed letters from DEM inviting them to these sessions. The letters included stamped, mail-in postcards to facilitate the RSVP process.
- Fliers were hand-delivered to "newly-accessible" properties.
- Organizational leaders were provided copies of fliers announcing meetings and asked to circulate among their members.
- Fliers were posted in public venues, such as the post office, the Pāhala Community Center and the Kaʻū Hospital.
- Several online announcements were included in Kaʻū News Briefs available at http://kaunewsbriefs.blogspot.com.

This information will be repeated in the Final EA.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to all property owners on record adjacent to the proposed collection system. This direct mailout included an invitation from DEM to workshops conducted prior to the October 10 public meeting. The workshop for owners served by C. Brewer lines was held on October 8, and the mailout for this meeting also included

anyone with a current sewer account. The workshop for owners of newly accessible properties was convened on October 9. In addition to the direct mailout, online announcements for the October 8 and 9 workshops were available on the Kaʻū News Briefs website.

On September 26, 2018, a public notice was published in both the *Hawaii Tribune Herald* and *West Hawaii Today* which stated a public meeting was to be held on October 10, 2018 for the Pāhala Large Capacity Cesspool Replacement Project Draft EA. A public notice was also published in the October 1, 2018 print and online editions of the *Kaʻū Calendar* and made available on the Kaʻū News Briefs web site http://kaunewsbriefs.blogspot.com. Fliers were also posted in public venues such as the community shopping center, realtor office, grocery store, library, and the Pāhala Community Center.

This information will be included in the Final EA.

All accessible properties will be required to connect to the new wastewater collection system in accordance with Hawaiʻi County Code, Chapter 21, Article 2, Section 21-5. However, as you have noted, the County entered into an agreement with C. Brewer (in April 2007) to eliminate LCCs from the existing community sewer system and connect properties discharging to them to new County collection, treatment and disposal systems. Once the actual costs are determined, County Council action is still required to approve the expenditures.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA and again during the October 2018 meetings. Although not required by Hawaiʻi Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened an additional public meeting on March 21, 2019 to gain further input from newly accessible property owners and fulfill a County commitment made in October 2018 to research and provide financing options available for the newly accessible residents of the Pāhala Community to pursue.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaiʻi Office of Housing and Community Development Residential Repair Program-Community Block Grant Program, and
- US Department of Agriculture – Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years and additional options may be added to this preliminary list. Hawaiʻi Legislature, Senate Bill 221 SD1, which could amend Hawaiʻi Revised Statutes (HRS) Chapter §342D to establish a low interest loan program offering financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

The County has investigated reports of cultural and historical sites in the context of this project in consultation with the State Historic Preservation Division (SHPD), as follows:

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents, that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site Plan for the New Treatment and Disposal Facility shows the 14.9-acre project site has been developed to exclude the area identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawai‘i Department of Land and Natural Resources SHPD requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The archaeological inventory survey submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey and geotechnical investigation of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site, conduct infiltrometer testing, and determine subsurface soil characteristics that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the Final EA.

The project will be designed to accommodate the future needs of the Pāhala community in accordance with the Ka‘ū Community Development Plan Policy 120 as discussed in the Draft EA Sections 2.9, 6.2.2, 7 and Appendix B. Additional information will be included in the appendices of the Final EA to clarify how accommodations will be made not to preclude future expansion of the new collection system. Future development will be accommodated as capacity allows on a first-come, first-served basis.

As stated in the Draft EA Section 2.10, the County of Hawai‘i Department of Environmental Management will submit a Special Use Permit application, Subdivision Application, and obtain plan approval as required by applicable Hawai‘i County Code and Hawai‘i Revised Statutes. This information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(10349-01)
10/25/18 cc: BC COH EPA ERG

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT

SUBMITTED TO:

Earl Matsukawa, AICP

Project Manager

Wilson Okamoto Corporation

1907 South Beretania Street, Suite 400

Honolulu, HI 96826

Fax: 808/946-2253

RECEIVED
OCT 25 2018
WILSON OKAMOTO CORPORATION

SUBMITTED BY:

Lila Lopes

Naalehu HI 96772

Comment:

In 2010, when the County acquired the illegal Ka'u LCCs from the C. Brewer Company, the COHDEM was simply tasked with closing the LCCs – beyond that is wastewater dreamland. And which bureaucrat in came in one day and said: "I have a great idea – let's put a sewage plant next to a school – yeah, that will work! Which school? Naalehu Elementary School!"

There has been no public participation in the decision to place a secondary sewage plants beside my grandson's classroom at Naalehu School and I want my voice to be heard. Do the right thing and provide a single EIS for the Ka'u LCC Closure Project – and take the school-site off the table immediately!

Signed in Naalehu, Hawaii on October 22, 2018

Lila Lopes

Lila Lopes

WILSON OKAMOTO CORPORATION
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10349-01 ref (38)
March 6, 2020

Ms. Lila Lopes
Naalehu, 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 22, 2018

Dear Ms. Lopes:

Thank you for your October 22, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Nāʻālehu LCC project is not the subject of the Draft EA for the Pāhala Large Capacity Cesspool (LCC) Replacement project.

Hawaii Administrative Rules (HAR) 11-200-7 **Multiple or phased applicant or agency actions** states that "A group of actions proposed by an agency or an applicant shall be treated as a single action when (1) The component actions are phases or increments of a larger total undertaking, (2) An individual project is a necessary precedent for a larger project; (3) An individual project represents a commitment to a larger project; or (4) The actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole." The wastewater projects at Pāhala and Nāʻālehu are not phases or increments of a larger total undertaking, are not precedents or commitments for a larger project, nor are they identical. Hence, there is no requirement to consider them in a single environmental review document.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/25/18 cc BC COH EPA ERG

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT

SUBMITTED TO:

Earl Matsukawa, AICP

Project Manager

Wilson Okamoto Corporation

1907 South Beretania Street, Suite 400

Honolulu, HI 96826

Fax: 808/946-2253

RECEIVED
OCT 25 2018
WILSON OKAMOTO CORPORATION

SUBMITTED BY:

Charles Tuttle + Tina Tuttle

94-1513 Kaalualu Road

Naalehu HI 96772

Comment:

It seems extremely wrong - in fact "green collar crime," that the EPA grant was moved to Pahala on May 30, 2018 and now you all are refusing to do any NEPA or crosscutters, importantly NHPA and ESA, environmental review on the Naalehu LCC Project.
I am very upset with this whole idea of where you are intending to put the new plant.

Signed in Naalehu, Hawaii on October 22, 2018

Charles Tuttle

Tina Tuttle
Tina Tuttle

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (34)
March 6, 2020

Mr. Charles Tuttle
Ms. Tina Tuttle
95-1513 Kaalualu Road
Naalehu 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 22, 2018

Dear Mr. and Ms. Tuttle:

Thank you for your October 22, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool (LCC) Replacement project. Our responses follow:

The Nāʻālehu LCC project is not the subject of the Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

The Draft EA Section 5 discusses the federal cross cutter requirements for the Pāhala Large Capacity Cesspool Replacement project.

The Draft EA Sections 2.3 through 2.8 discuss project siting issues.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/25/18 CC BC COH EPA EPG

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT

SUBMITTED TO:

Earl Matsukawa, AICP

Project Manager

Wilson Okamoto Corporation

1907 South Beretania Street, Suite 400

Honolulu, HI 96826

Fax: 808/946-2253

RECEIVED
OCT 25 2018
WILSON OKAMOTO CORPORATION

SUBMITTED BY:

Amanda and Anthony McDowell

95-5587A Mamalahoa Hwy.

Naalehu HI 96772

Comment:

The County and EPA have avoided any consideration of the impacts of the Naalehu LCC Closure Project on this Pahala WWTP and it is only sited 11 miles away.

It is not right that our sons should have to go to school next to a new-build wastewater plant just because the County and EPA conspired to move the EPA grant to Pahala on May 30, 2018, and so the Naalehu School site has not had any EA or NHPA or ESA environmental review.

Signed in Naalehu, Hawaii on October 22, 2018

Amanda McDowell

Anthony McDowell

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (43)
March 6, 2020

Ms. Amanda McDowell
Mr. Anthony McDowell
95-5587A Māmalahoa Highway
Naalehu, Hawaii 96772

Subject: Draft Environmental Assessment for the
Pāhala Large Capacity Cesspool Replacement Project
District of, Kaʻū, Hawaiʻi
Response to Comment – October 22, 2018

Dear Ms. and Mr. McDowell:

Thank you for your October 22, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool (LCC) Replacement project. Our responses follow:

The Draft EA Section 4.1.2 states: "The community of Naʻālehu, approximately 11 miles southwest of Pāhala, is also considering options for closure of LCCs and development of a new wastewater treatment system. The Naʻālehu project was excluded from this analysis of cumulative improvements and impacts because, due to its distance from Pāhala, the effects of that project are not expected to have a significant cause-and-effect relationship with the direct and indirect effects of the Proposed Action. The Naʻālehu project is undergoing separate community outreach and environmental review processes that will identify potential impacts for that project separately from the Pāhala wastewater system improvements."

This information will be included in the Final EA.

The Nāʻālehu LCC project is not the subject of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
10/25/18

Received.
OCT 23 2018
4:10 pm
mcf

October 23, 2018

cc: EC COH
EPA ERG

PELE DEFENSE FUND

Our Mission Statement
Pele Defense Fund is dedicated to the Preservation and Perpetuation of Native Hawaiian Traditional Rights, Customs, and Practices, and to the Protection of our Unique Island Environment for all of Hawai'i to enjoy Now and in the Future

P.O. Box 4969
Hilo, Hawai'i
96720

808.315.9996

e-mail:
peledefensefund
@gmail.com

County of Hawaii
Department of Environmental
Waste Water Management
345 Kekua'anaoa St. #41
Hilo, Hawaii 96720

Dear Mr. William Kucharski, DEM

We the residents of Pahala request an extension to the proposed Large Capacity Cesspool (LCC) Replacement Project for the following reasons/concerns:

1. There was no disclosure of the proposed project to the residents of Pahala.
2. There is insufficient time for residents to address their concerns on the EA.
3. The Federal Section 106 is inadequate.
4. The Cultural Assessment of the DEA is inadequate.
5. There has been historical flooding that is a major concern to the community, to the proposed area.
6. The project action is claiming that proposed site is only 14.9 acres, but the residents know that it is more than 14.9 acres and feel that County of Hawaii is intentionally evading the need to be in compliance with the Land Use Commission.
7. Being that Pahala is declared a poor and poverty district due to the fact that 85% are either retired or on fixed incomes and are also experiencing the lack of employment opportunities. We are strongly demanding that funding be available for the entire project.
8. Negative psychological impacts have been imposed on the residents since 2005.

For all of the above reasons we are strongly requesting an extension be granted so the above can be further investigated and resolved.

Mahalo,

The residents of Pahala, Hawaii

*Please see the attached items:

1. Resident petition. 2. Hawaii Notary Acknowledgement

October 22, 2018

To: The County of Hawai'i, U.S. Environmental Protection Agency,

Brown & Caldwell, Wilson Okamoto Corporation

Re: Move this proposed site! Pāhala Large Capacity Cesspool (LCC) Replacement Project
EPA Grant XP-96942401

We the undersigned, are in opposition of the proposed site for the sewage and wastewater treatment plant located on the corner of Maile St. and Mamalahoa Highway. We feel that this proposed site will have a negative effect on the entire Pahala Community. The residents were not informed or consulted in the selection of this site by the County of Hawai'i, EPA, and their contractors. Concerns relating to this project are, health & safety, environmentally, financially, visually and historically. We propose that the site be relocated below the Mamalahoa Highway, further away from the community. We sign this petition because we care about the quality of life here which we feel will be permanently and negatively impacted by the proposed site.

Name	Signature	Address	Email
ALFRED IBARRA SR.		PAHALA, HI. 96777	
Mary Ibarra		Pahala HI 96777	
Janette Gaston		PO Box 845 Pahala, HI 96777	slack2265@aol.com
Sandra Demoruelle		Naalehu HI 96772	
Jerry Warren	J. Warren	P.O. Box 951 96772	
Tony Oomoto		" " 118 96777	
Gracelyn Keapaa Moses		P.O. Box 432	manoy papab @ gmail.c
Blakely Moses		" "	
Clyde Silva		Pahala HI 96777 P.O. Box 428	
Rodney Farinas		P.O. Box 580 96777	
Cheri Farinas		P.O. Box 580 96777	
Marlene Moniz		P.O. Box 580 96777	
John Sayer		P.O. Box 580 96777	
Dolly Kailiawa		P.O. Box 762 "	
Kimo Kailiawa		P.O. Box 762 96777	
Zyrae Kailiawa		P.O Box 762 96777	
Kuuipo Decalo		Pahala	
KEONA PAKLUHI		P.O. Box 946 Pahala, HI 96777	pachukeona@gmail.com.
Jessie Ke		Bx 562 Pahala HI 96777	
Kenneth Gaston		PO Box 845 Pahala, HI 96777	

October 22, 2018

To: The County of Hawai'i, U.S. Environmental Protection Agency,

Brown & Caldwell, Wilson Okamoto Corporation

Re: Move this proposed site! Pāhala Large Capacity Cesspool (LCC) Replacement Project
EPA Grant XP-96942401

We the undersigned, are in opposition of the proposed site for the sewage and wastewater treatment plant located on the corner of Maile St. and Mamalahoa Highway. We feel that this proposed site will have a negative effect on the entire Pahala Community. The residents were not informed or consulted in the selection of this site by the County of Hawai'i, EPA, and their contractors. Concerns relating to this project are, health & safety, environmentally, financially, visually and historically. We propose that the site be relocated below the Mamalahoa Highway, further away from the community. We sign this petition because we care about the quality of life here, which we feel will be permanently and negatively impacted by the proposed site.

Name	Signature	Address	Email
Pamell Hanoa		P.O. Box 488 Pahala	Poelo8@aol.com
Sophia Hanoa		P.O. Box 488 Pahala	Emmajean1am26@aol.com
HAWK HANOA		P.O. BOX 488 PAHALA 96777	
EDWARD ANDREWS II		P.O. Box 514 Pahala 96777	

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Jadelyn Kaapana-Moses have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On Oct 22, 2018 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Jadelyn Kaapana-Moses (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

Jadelyn Kaapana-Moses

Notary Public Signature

Print Jonette O Gaston

My commission expires: 07/13/2019

JONETTE O. GASTON NOTARY

(Seal)

State of Hawaii)

) SS

County of Hawaii)

On this 22nd day of October, 2018, before me personally appeared, Jadelyn Kaapana-Moses, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

JONETTE O. GASTON NOTARY 03-379 PUBLIC STATE OF HAWAII

Jadelyn Kaapana-Moses
Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment
Physically observed / heard of burial cave
Pahala Sewage Wastewater
Notary Signature: _____ Date: 10/22/2018

JONETTE O. GASTON NOTARY 03-379 PUBLIC STATE OF HAWAII

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Jessie Ke have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On Oct 22, 2018 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Jessie Ke, (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

_____
Notary Public Signature

Jessie Ke
Jessie Ke

Print Jonette O Gaston

My commission expires: 07/13/2019

JONETTE O. GASTON NOTARY 03-379 PUBLIC STATE OF HAWAII

(Seal)

State of Hawaii)

) SS

County of Hawaii)

On this 22nd day of October, 2018, before me personally appeared, Jessie Ke, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

Jessie Ke

Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment
Physically observed/heard of a burial cave
Pahala Sewage wastewater
Notary Signature: _____ Date: 10/22/18

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Edward Andrade Jr have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On Oct 22, 2018 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Edward Andrade Jr, (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

Notary Public Signature

Edward Andrade Jr.

Print Jonette O Gaston

My commission expires: 07/13/2019

(Seal)

State of Hawaii)

) SS

County of Hawaii)

On this 22nd day of October, 2018, before me personally appeared, Edward Andrade Jr., to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment Physically observed / heard of burial cave Pahala Sewage Waste water
Notary Signature: _____ Date: 10/22/18

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Alfred Ibarra Jr. have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On Oct 22, 20 18 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Alfred Ibarra Jr., (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

Notary Public Signature

Alfred Ibarra

Print Jonette O Gaston

My commission expires: 07/13/2018

(Seal)

State of Hawaii)

) SS

County of Hawaii)

On this 02nd day of October, 2018, before me personally appeared, Alfred Ibarra Jr., to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

JONETTE O. GASTON NOTARY PUBLIC STATE OF HAWAII 03-379

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment
Physically observed/heard of burial cave
Pahala Sewage Wastewater
Notary Signature: _____ Date: 10/02/18

JONETTE O. GASTON NOTARY PUBLIC STATE OF HAWAII 03-379

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Mary Ibarra have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On Oct 02, 2018 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Mary Ibarra, (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

Mary Ibarra
Mary Ibarra

Notary Public Signature

Print Jonette O Gaston

My commission expires: 07/13/2019

JONETTE O. GASTON NOTARY PUBLIC STATE OF HAWAII 03-379

(Seal)

State of Hawaii)

) SS

County of Hawaii)

On this 22nd day of October, 2018, before me personally appeared, Mary Ibarra, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

STATE OF HAWAII PUBLIC NOTARY 03-379 JONETTE O. GASTON

Mary Ibarra
Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment Physically observed/heard of burial cave Pahala Sewage Wastewater
Notary Signature: _____ Date: 10/22/18

STATE OF HAWAII PUBLIC NOTARY 03-379 JONETTE O. GASTON

HAWAII NOTARY ACKNOWLEDGMENT

THE STATE OF HAWAII

COUNTY OF Hawaii

I Eleanora Louis have physically observed or heard of a burial cave with human skeletal remains and or shelving. It is located in Pahala, Hawaii, above Mamalahoa Highway. It is in the area where the County of Hawaii wants to put a Sewage wastewater treatment plant. I am against the use of that proposed site.

On October 22, 2018 before me, Jonette O Gaston, Notary Public in and for said county, personally appeared Eleanora Louis, (signer/witness) who has/have satisfactorily identified him/her/themselves as the signer(s) or witness(es) to the above-referenced document.

_____
Notary Public Signature

Eleanora Louis
Eleanora Louis

Print Jonette O Gaston

My commission expires: 07/13/2019

STATE OF HAWAII PUBLIC NOTARY 03-379 JONETTE O. GASTON

(Seal)

State of Hawaii)
) SS
County of Hawaii)

On this 02nd day of October, 2018, before me personally appeared, Eleanora Louis, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he/she executed the same as his free act and deed.

JONETTE O. GASTON NOTARY PUBLIC STATE OF HAWAII 03-379

Eleanora Louis
Signature of Notary Public
Print Name: Jonette O Gaston
My Commission Expires: 07/13/2019

Doc. Date: _____ #Pages: _____
Notary Nam: Jonette O Gaston Third Circuit
Doc Description: Hawaii Notary Acknowledgment for Physically observed / heard of David Chee - Pahala Sewage Wastewater
Notary Signature: _____ Date: 10/22/18

JONETTE O. GASTON NOTARY PUBLIC STATE OF HAWAII 03-379

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (40)
March 6, 2020

Pele Defense Fund
Residents of Pāhala
P.O. Box 4969
Hilo, Hawaii 96720

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 23, 2018

Dear Sir/Madam:

Thank you for your October 23, 2018 comment letter regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

Please note that in response to requests from your organization and others in the community, the public comment period was extended through December 10, 2018. See #2 below for additional detail.

Our responses follow:

1. As outlined in the Draft EA Section 2.1.3, the County has been discussing the need for a new collection system, treatment and disposal facility to replace the existing collection system and LCCs, which have been prohibited by the U.S. Environmental Protection Agency, with the community since 2004. The Draft EA Section 7 documents the 5 public meetings held in Pāhala December 12, 13 and 14, 2017 to discuss the Pāhala Large Capacity Cesspool Replacement project. As documented in the Draft EA, the community outreach program for the current project was designed as "talk story" sessions to optimize community conversations in informal sessions. Further, as documented in the Draft EA, invitations and announcements for the talk story sessions were intended to reach all audiences, as follows:

   - Property owners with C. Brewer lines on their property were mailed letters from DEM inviting them to these sessions. The letters included stamped, mail-in postcards to facilitate the RSVP process.
   - Fliers were hand-delivered to "newly-accessible" properties.
   - Organizational leaders were provided copies of fliers announcing meetings and asked to circulate among their members.

- Fliers were posted in public venues, such as the post office, the Pāhala Community Center and the Kaʻū Hospital.
- Several online announcements were included in Kaʻū News Briefs available at http://kaunewsbriefs.blogspot.com.

This information will be repeated in the Final EA.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to all property owners on record adjacent to the proposed collection system. This direct mailout included an invitation from DEM to workshops conducted prior to the October 10 public meeting. The workshop for owners served by C. Brewer lines was held on October 8, and the mailout for this meeting also included- anyone with a current sewer account. The workshop for owners of newly accessible properties was convened on October 9. In addition to the direct mailout, online announcements for the October 8 and 9 workshops were available on the Kaʻū News Briefs website.

On September 26, 2018, a public notice was published in both the *Hawaii Tribune Herald* and *West Hawaii Today* which stated a public meeting was to be held on October 10, 2018 for the Pāhala Large Capacity Cesspool Replacement Project Draft EA. A public notice was also published in the October 1, 2018 print and online editions of the *Kaʻū Calendar* and made available on the Kaʻū News Briefs web site http://kaunewsbriefs.blogspot.com. Fliers were also posted in public venues such as the community shopping center, realtor office, grocery store, library, and the Pāhala Community Center.

This information will be included in the Final EA.

The Draft EA Section 7 will be revised to add that, on March 21, 2019, the County held another meeting in Pāhala which included a presentation to provide information on financing sources available to owners whose property would become accessible to the County collection system. The purpose of the meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community by March, 2019.

2. On October 26, 2018, the County requested the Office of Environmental Quality Control issued a Re-Publication notice of the Draft EA in the November 8, 2018 issue of The Environmental Notice. This was to allow additional time for public comments. Public comments were accepted from September 23, 2018 to December 10, 2018.

3. and 4. The Draft EA Section 3.15 provides information on the archaeological and cultural resources related to the Pāhala Community Large Capacity Cesspool Replacement project. The Draft EA Section 3.15 states, on March 29, 2018, consultation was initiated for the

project under the National Historic Preservation Act. The Draft EA Section 10 provides a list of the consulted parties. The Final EA Section 3.15 will include that the list of Native Hawaiian Organizations (NHO) was generated by the EPA for NHPA Section 106 and HRS Chapter 6E compliance from the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization (NHO) Notification List. Letters were sent to 14 NHOS during the pre-assessment consultation. No responses were received from these organizations.

The HRS Chapter 6E determination and Section 106 review packet were submitted to SHPD with a draft archaeological inventory survey (AIS) on March 13, 2019. SHPD response is pending. The Draft EA Section 3.15.2 states that prior to finalization of this EA and initiation of the Proposed Action, the Environmental Protection Agency (EPA) and the County of Hawai'i will conclude consultation with SHPD in accordance with Section 106 of the NHPA and will incorporate additional impact avoidance and minimization measures as necessary to result in a finding of no adverse effects to historic properties.

The Draft EA Section 7 will be revised to include that on September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers to advertise the October 10, 2018, public information meeting conducted by the County in Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the availability of Draft EA and the process for submitting comments. The notice stated that the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006) involving consultation with Native Hawaiian Organizations and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and cultural religious attachment to the proposed project area. Eight persons placed their names on a sign in sheet at the beginning of the October 10, 2018 meeting to contribute during the second part of the meeting dedicated to the Section 106 consultation. There were no comments or information forthcoming during the Section 106 portion of the meeting.

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which included Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site

Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

The Final EA will include the pedestrian survey included residential streets within the project area, including Pikake Street, Kamani Street, Puahala Street, Huapala Street, Hala Street, Hinano Street, Ilima Street and Maile Street. The survey found these typically streets consist of one-to-two-lane asphalt travel ways with no curbing or sidewalks, except for a short segment portion of Maile Street which has a sidewalk.

Two historic properties were newly documented within the project area based on a review of historic maps. These include Pikake Street which is a portion of a historic road alignment (SIHP # -31088, Wood Valley Road/Coastal Road) and Maile Street which is a portion of a historic road alignment (SIHP # -31089, Volcano Road). These two streets overlap historic-era road corridors which functioned as primary transportation routes throughout the greater Pāhala/eastern Kaʻū area. None of the constructed elements of the subject portions of the original SIHP #s -31088 or -31089 roadways are evident today, and these portions of the historic properties lack integrity apart from their location.

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the final EA.

5. The Draft EA Section 3.9.1 (a) states:

"The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.

According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.

On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM Panel is reproduced in Appendix B as Figure 4-13. This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

"The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

The preceding information does not support significant historic flooding to the proposed project area.

This information will be included in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land

surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at this location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system will meet the requirements of Hawai'i County Code (HCC), Chapter 27 **Floodplain Management**, Section 20, **Standards for subdivisions and other developments** (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the department of public works "Storm Drainage Standards"."

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the detailed design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard

that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

6. The Pāhala wastewater treatment plant (WWTP) 14.9-acre project site has been developed to provide the necessary land area for the facilities needed to treat the incoming flows and to dispose the treated effluent from the treatment processes. The project site minimizes the use of the adjacent lands which contain a commercial macadamia orchard. A larger project site is not required. The special permit requirement applies to the proposed WWTP parcel only, not to the proposed utility easement. The County will apply for the required special permit through the Planning Commission.

7. The following is a summary of information from Final EA.

The U.S. Census Bureau provides the American Community Survey (ACS), which updates selected demographic, social, and economic information for various years. This includes age, racial composition, and economic information, including employment and household income by Census Designated Place for several locations in Hawai'i County. The most recent version of the ACS is the 2012-2016 5-Year Estimates, released in 2017.

The ACS shows the Pāhala population has a similar age distribution to Hawai'i County, although Pāhala has a higher proportion of individuals in the "Under 5 to 19" age category, 28.5 percent compared to 24.4 percent for the County. The median age for Pāhala is 42.4 years compared to 41.8 years for the County.

Overall, Pāhala is characterized by a racial composition that includes a greater proportion of minorities than the County. The racial distribution includes a much lower proportion of White residents, a much higher proportion of Filipino residents, and lower populations of other minority groups, including Native Hawaiians when compared to the County. There are also more residents of two or more races in Pāhala than in the County.

Pāhala has a higher proportion of residents that have completed high school and some college than the County overall, but a lower proportion with college degrees (bachelor's and graduate or professional degrees). From an economic perspective, Pāhala generally has more households in lower income brackets than the County, and a lower median household income. For analysis

purposes and to correspond with the available ACS demographic characteristic data, "low income" is defined as having a household income of less than $24,999; "minority" is defined as any race population other than White; and "children" is defined as the "Under 5 to 19" age category

Despite the relatively high proportions of low-income, minority, and children residents in Pāhala compared to the County, the project would not result in disproportionately high and adverse human health or environmental effects on these sensitive populations. The design shows the proposed wastewater treatment and disposal facility would include odor controls to minimize odor and air quality impacts to nearby areas. Construction of the wastewater collection system would result in intermittent and unavoidable noise from construction vehicles and equipment within the Pāhala community, including noise associated with the removal of bedrock. However, construction activities within the community would need to comply with provisions of HAR 11-46 (Community Noise Control). This includes the contractor obtaining a noise permit for any activities that would generate noise exceeding the permissible sound levels specified in HAR 11-46. The permit would limit excessive noise sources to daytime hours; would require the use of best available control technology to control noise levels from excessive noise sources; and would require the applicant to notify affected members of the public in advance of any planned nighttime construction activity (which must not exceed the permissible sound levels). Overall, with replacement of the substandard collection system and closure of the LCCs, the project is expected to result in positive human health and environmental effects to Pāhala residents by providing a cleaner and longer-lasting wastewater collection and treatment and treatment and disposal system.

The Final EA Section 3.16 will include further detail information.

The Draft EA Section 2.1.4 provides a history of wastewater management for Pāhala. In 2003, C. Brewer requested assistance from the County to close their large capacity cesspools as required by the Environmental Protection Agency. The County entered into an agreement with C. Brewer (in April 2007) and is moving forward with the Pāhala Large Capacity Cesspool Replacement project. The Draft EA Section 2.1.2 states the project may also be funded by the State of Hawai'i DOH Clean Water State Revolving Fund (CWSRF) Program. The CWSRF Program was created by the federal Water Quality Act of 1987 and authorizes low interest loans for the construction of publicly owned wastewater treatment works.

The Draft EA Section 2.3.2 states the new collection system would be subject to the County of Hawai'i Code (HCC) Chapter 21, Sewers. Specifically, HCC Chapter 21, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a)Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at*

their expense to connect directly with the public sewer within 180 days after date of official notice."

All accessible properties will be required to connect to the new wastewater collection system in accordance with Hawaii County Code, Chapter 21, Article 2, Section 21-5. However, the County entered into an agreement with C. Brewer (in April 2007) to eliminate LCCs from the existing community sewer systems and connect properties discharging to them to new County collection, treatment and disposal systems. Once the actual costs are determined, County Council action is still required to approve the expenditures. The agreement with C. Brewer did not address newly accessible properties.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 21, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Section 7 will be revised to add that the County held additional meetings in Pāhala including one to provide information on financing sources available to owners of parcels which would become accessible to the County collection system. The purpose of the March 21, 2019 meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community. At the meeting, DEM provided the preliminary results of the County investigation into funding sources and options available for newly accessible property owners once the new treatment and disposal facility and wastewater collection system have been designed, permitted and constructed.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, the programs may change in the coming years and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

8. This is not a comment pertinent to the content requirements of the Draft EA for the Pahala Large Capacity Cesspool Replacement project.

Regarding the attached resident petition, the Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. The section further describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai‘i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

The proposed site plan is included in the Draft EA as Figure 2.3. As noted in Section 2.3.1, “disposal of the treated and disinfected effluent would be accomplished through land treatment in four groves of native, water-tolerant trees occupying a total area of approximately 8.0 acres.” This 8.0 acre planted area, combined with the sloping site topography and existing Cook pine

trees (*Araucaria columnaris*) on Maile Street, will provide a visual buffer from both the Māmalahoa Highway and Maile Street. As outlined in Section 3.19.2 of the Draft EA, the Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. The wastewater collection system would be installed below the streets and therefore would not impact views. Above-grade structures may include the operations building, headworks and UV cover structures, fuel storage tank, and low berms around the basins. The existing pine trees along Maile Street, most of which would remain with no changes, would continue to obstruct the viewplanes from Maile Street. The facility site would be adjacent (mauka) to, and visible from, Māmalahoa Highway (State Route 11); however, impacts to the viewplane would be mitigated by the planted trees in the basins and by the rise in elevation between the highway and the facility.

Please note, the attached documentation shows the County’s attempt to gather information related to the 6 notarized attachments to your October 23, 2108 letter. Refer to response 4 above for additional information regarding additional archaeological and geophysical investigations undertaken since the publication of the Draft EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
11/16/18

CC: BC COH
EPA EBG

Attention: Mr. Earl Matsukawa, Mayor Kim, Malie David
Subject: Draft EA: Pahala Community LCC
Replacement Project

Alfred/Mary Ibarra

Comments and Concerns:

We were notified in December 2017 ,by the County, that LCC's was having a meeting. We were so surprised to hear of it because we are not LCC's - for we have our own sewer system not affiliated with any LCC. We were never notified that we would be on this system. County has failed to throughly inform residence in Pahala who would be affected by this system, nor the options to consider for this project. Meetings were held in 2003 and we were never included in this great enormous decision making. It took the County about 14 years to reach us, and County already had us in the plans for the system. And even the voting for choosing the preferred sewer alternative was not offered to us. I would like to know who participated in this vote of 87% returned ballots via mail-was it only LCC people? And why wasn't non-LCC able to address their concerns or thoughts on this matter and be able to vote on this costly project. I can't believe how some of the formal meetings, when we went in 2017 with the County/Brown Caldwell presentation, how most of the questions we asked were answered vaguely or with no empathy. I think they forgot that we the people of Pahala are human beings too, and should have the opportunities to voice opinions,and have questions when it concerns us.

I cannot comprehend that we are facing this problem at this age. Retired, living in this community all our life, and with a set income to be encumbered with such a burden. I cannot see that my neighbor across the street from me is not on the LCC, and I am not on the LCC too, and yet we are required to hook up to the County line. WHY DOES THE LINE CONTINUE TO MOVE PASS OUR HOME WHEN THE PEOPLE BELOW US IS THE LAST LCC HOME? AND HOW DID YOU COME TO THE CONCLUSION OF STOPPING AT THE INTERSECTION OF PIKAKE ST./PAKALANA ST., WHEN PIKAKE ST. CONTINUES UP ANOTHER 7 MORE HOMES? I am confused on how this decision came about, and there is no transparency.

Cost- Another concern is what is the cost to be on this County Sewer? It seems that we who are not LCC are penalized with this enormous fees and others are exempt. The Federal Regulation was for the LCC, it didn't say individual sewers. It is the County who created Chapter 21 and other laws to satisfy their own agenda. Why don't the County consider for filling their obligation to the mandated Federal Regulations toward the LCC's instead of jumping into something bigger. There are other communities on the island like Puako, Hilo, Keaau, who are in dire need of assistance with their sewage. They should be priority.

Reconsidering Type/Location of Sewage Plant- The location now,(Site 7), has a long history of flooding from rain and storms…water collections in open sewer reservoir would flood and over flow it bringing toxic air, water, bacteria, and chemicals overground, over highway 11 and to all the lower lying areas-ocean, conservations, preservations areas of Ka'u. Therefor polluting our land and ocean. I am very dishearten by this situation. Please reconsider site location to be across highway 11.

Closing- I really feel that the County of Hawaii should concentrate on only people involved with LCC's first and formost because of the Federal mandated regulations set before them. We non-LCC are not in violation of any standards of the Federal Regulation's requestings. Thank you for hearing my voice in this situation.

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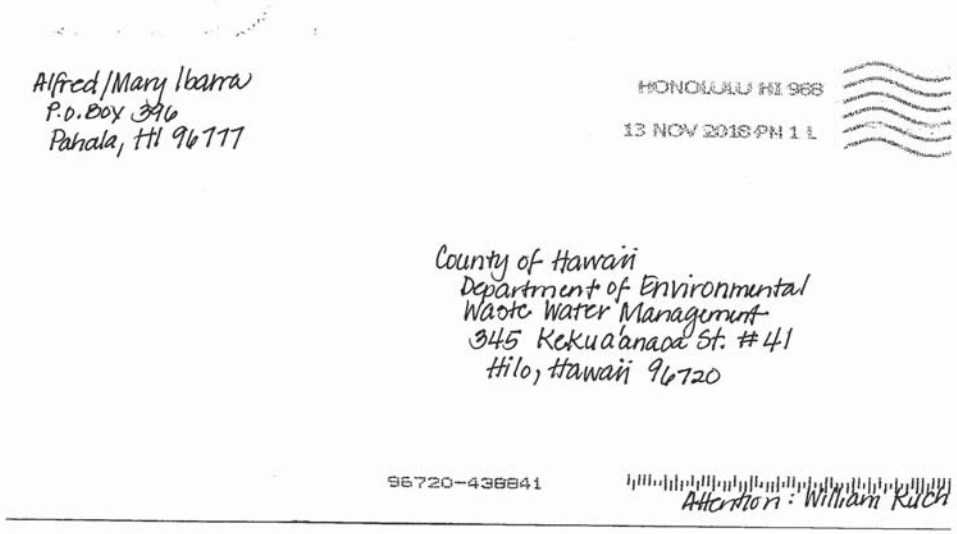

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10349-01 ref (55)
March 6, 2020

Mr. Alfred Ibarra
Mrs. Mary Ibarra
P.O. Box 396
Pāhala, Hawaii 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – post marked November 13, 2018

Dear Mr. and Ms. Ibarra

Thank you for your comment letter post marked November 13, 2018 regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The County's intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent (AOC), is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources. The AOC, which was issued on June 22, 2017 states: "The Pahala Wastewater Treatment Facility shall be designed in accordance with good engineering practices and capable of servicing all residential properties currently connected to the Pahala Community Cesspools, plus a minimum of sixty-five (65) additional properties…". An electronic version of the AOC can be found on the USEPA website at: https://www.epa.gov/sites/production/files/2017-06/documents/sdwa-uic-aoc-09-2017-0002-aoc-2017-04-26.pdf.

Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted by the Hawaiʻi State legislature requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently utilizing cesspools for sewage disposal.

The Draft EA Figure 2.2 shows the collection system on the various streets within the community. The extent of the collection system is to ensure the parcels connected to the former C. Brewer system will have access to the treatment and disposal facility so the large capacity cesspools can be closed. It is conventional to extend the utility to the nearest intersection to minimize the number of manholes. Similar to Huapala and Puahala Streets, the collection

system in Pīkake Street extends to Pakalana Street to meet the objectives of the Kaʻū Community Development Plan and not preclude a future line in Pakalana Street. As stated in the Draft EA, the proposed collection system is routed primarily within the County right-of-way, for ease of access for both construction and maintenance.

As outlined in the Draft EA, Section 2.3.2, the new collection system would be subject to the Hawaiʻi County Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice."*

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

All accessible properties will be required to connect to the new wastewater collection system in accordance with Hawaii County Code, Chapter 21, Article 2, Section 21-5. However, the County entered into an agreement with C. Brewer (in April 2007) to eliminate LCCs from the existing community sewer systems and connect properties discharging to them to new County collection, treatment and disposal systems. Once the actual costs are determined, County Council action is still required to approve the expenditures.

Although not a comment related to the content requirements of the Draft EA, County of Hawaii sewer rates are outlined in HCC Chapter 21, Article 4 (Sewer Service Charges):

"Sewer user charges for residential customers shall be assessed to all lots accessible to a public sewer or public gang cesspools whether connected or not. User charges for sewer service… shall be according to the schedule shown under section 21-36.1"

The Hawaii County Code Chapter 21 was adopted in 1983.

On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County's Wastewater Division provided a brief history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/ disposal alternatives for those property owners connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4, 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated that Mayor Kim's office advised the property owners the County would move forward with a new system for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated public meetings were held in both Nāʻālehu and Pāhala in November 2006 to discuss the wastewater system alternatives. The handout included that adequate land for the treatment and disposal system had not been identified in Pāhala. The handout also stated that all properties accessible to the new system would be required to connect in accordance with Hawaii County Code Chapter 21.

The Draft EA Section 7 documents the 5 public meetings held in Pāhala December 12, 13 and 14, 2017 to discuss the Pāhala Large Capacity Cesspool Replacement project. As documented in the Draft EA, the community outreach program for the current project was designed as "talk story" sessions to optimize community conversations in informal sessions. Further, as documented in the Draft EA, invitations and announcements for the talk story sessions were intended to reach all audiences, as follows:

- Property owners with C. Brewer lines on their property were mailed letters from DEM inviting them to these sessions. The letters included stamped, mail-in postcards to facilitate the RSVP process.
- Fliers were hand-delivered to "newly-accessible" properties.
- Organizational leaders were provided copies of fliers announcing meetings and asked to circulate among their members.
- Fliers were posted in public venues, such as the post office, the Pāhala Community Center and the Kaʻū Hospital.
- Several online announcements were included in Kaʻū News Briefs available at http://kaunewsbriefs.blogspot.com.

This information will be repeated in the Final EA.

On September 26, 2018, a public notice was published in both the *Hawaii Tribune Herald* and *West Hawaii Today* which stated a public meeting was to be held on October 10, 2018 for the Pāhala Large Capacity Cesspool Replacement Project Draft EA. A public notice was also published in the October 1, 2018 print and online editions of the *Kaʻū Calendar* and made available on the Kaʻū News Briefs web site http://kaunewsbriefs.blogspot.com. Fliers were also

posted in public venues such as the community shopping center, realtor office, grocery store, library, and the Pāhala Community Center. This information will be included in the Final EA.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to all property owners on record adjacent to the proposed collection system. On October 26, 2018 letters were mailed to all property owners on record adjacent to the proposed collection system informing them of the extension of the public comment period to December 10, 2018.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA and again during the October 2018 meetings. Although not required by Hawai‘i Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened an additional public meeting on March 21, 2019 to gain further input from newly accessible property owners and fulfill a County commitment made in October 2018 to research and provide financing options available for the newly accessible residents of the Pāhala Community to pursue.

Programs discussed and included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan program offering financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

The Draft EA Section 3.9.1 (a) states:

> “The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2- percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai‘i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai‘i Department of Public Works confirmed that the proposed treatment and disposal Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain.”

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2(a) states:

> “The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins.”

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows drain through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai‘i Department of Transportation (DOT) Hawai‘i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT

owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flows back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC), Chapter 27 **Floodplain Management**, Section 20, **Standards for subdivisions and other developments** (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the department of public works "Storm Drainage Standards".

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project site "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements that are necessary to comply with Chapter 27 HCC requirements.

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This information will be included in the Final EA.

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(10347-01) EM
11/16/18

RECEIVED
NOV 16 2018
WILSON OKAMOTO CORPORATION

cc: BC COH EPA ERG

Nov. 14, 2018

TO: Earl Matusukawa

SUBJECT: DRAFT EA: PAHALA COMMUNITY LARGE CAPACITY CESSPOOL REPLACEMENT PROJECT

My questions/concerns are:

Why is Pahala community a priority to have this wastewater treatment plant? What qualifies our small population community to be a priority over other areas in East Hawaii or even Kona, with much larger populations, more homes and businesses that continue to grow?

Pahala is an economically depressed community with a high percentage of people on welfare, social security, pension, or other fixed income. How are they going to afford any hook-up fees, maintenance fees, or any other fees that will likely come with this wastewater treatment plant; additional expenses that don't fit into their current family living expenses? On top of that, the make-up of Pahala is majority immigrants, where English is a second language. Do you think they fully understand all these detail and legal jargon? All this is beyond them, they don't know how to express themselves and their concerns. That's why there's poor attendance at community meetings, not because they do not care, or approve of all this...they do not understand all what's going on and how it's going to affect them.

The people I have talked to are not in favor of the wastewater treatment plant in Pahala. If it HAS TO BE BUILT, we are not in favor of the location at the corner of Maile Street and Hwy 11, and if we have NO SAY in the building of the treatment plant, we would rather it be BELOW Hwy 11 (site 9), for the following reasons:

-reading through the draft EA, there has been no complete EIS done in the area. There are many caves and unrecorded burial sites all over Pahala. There needs to be a thorough EIS, and in-depth testing, not just surface testing that was done, to document any archeological findings.

-flooding is always a big concern in Pahala. Roads/highways that never flooded in the past, are now flooding during heavy rains. What safe guard will there be that in the event of days of rain/heavy rains and flooding, there will be no sewage spillage on Hwy.11, closing down the highway or Maile Street until the spillage is cleared/cleaned.

For this reason, it makes more sense to have the treatment plant BELOW Hwy 11! Pahala is 3+ miles away from the shoreline. There will be no concern of waste leaching into the coastline if there was a problem from natural flooding (heavy rains), or other overspills from the treatment plant, like down in Keaukaha in Hilo.

-do you really think tall trees and other foliage will cover up the site of the treatment plant! With the strong winds we have, the foliage will bend and sway...exposing the area. We don't want the entrance to Maile Street into Pahala town to become a "marker" to turn from Hwy 11 "by the treatment plant". We deserve a cleaner looking community...not one marked by a sewage treatment plant! I lived with that in my growing years in Hilo and going to the beach to swim, passing the sewage treatment plant in Keaukaha...not a nice site to see.

-which leads me to the smell. Is there a 100% guarantee there will be NO smell. I know the problems and smelt the problems the Keaukaha community suffers with for umpteen years. My home is the nearest subdivision to this proposed treatment plant. We lived through the years the plantation mill was in operation with noise, and smell!!

We DON'T want to go through something that is even worst...MOVE it...or better yet... we DON'T want this at all for all the above reasons!!!

Walter TL & Debra A Wong Yuen

PO Box 29, Pahala, HI 96777

PH. 808-928-8039

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (56)
March 6, 2020

Mr. Walter T.L. and Ms. Debra A. Wong Yuen
P.O.Box 29
Pāhala, Hawai‘i 96777

Subject: Draft Environmental Assessment for the,
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment - November 14, 2018

Dear Mr. and Ms. Wong Yuen:

Thank you for your November 14, 2018 comment letter regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Draft EA Section 2.1.3 states: “In 1999, EPA promulgated regulations under the Safe Drinking Water Act’s Underground Injection Control (UIC) Program which prohibited the construction of new large capacity cesspools (LCCs) as of April 2000 and required the closure of all existing LCCs by April 5, 2005 (see 40 C.F.R. § 144.88). Under federal regulations, an LCC is a cesspool which serves multiple dwellings, or for non-residential facilities has the capacity to serve 20 or more persons per day. Cesspools can release disease-causing pathogens and other pollutants (e.g., nitrates) into ground water aquifers, streams, and eventually the ocean, thus leading to public health and environmental concerns. In June 2017, EPA and the County entered into an Administrative Order on Consent (AOC) to close the County-operated LCCs serving the Pāhala Community by June 2021.”

The Final EA Section 2.1.3 will include the County has previously abandoned or assisted with closure of other LCCs in locations including Hilo, Kona, Honokaa and Pāhala.

The County’s intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources. Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted by the Hawai’i State legislature requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently using cesspools for sewage disposal.

The Final EA Section 3.16 will include further detail information.

The Draft EA Section 5.7 will be revised as follows

Executive Order 12898, Environmental Justice (full title Federal Actions to Address Environmental Justice to Minority and Low Income Populations), was signed on February 11, 1994. The intent of Executive Order 12898 is to avoid disproportionately high adverse human health or environmental effects of projects on minority and low income populations. Executive Order 12898 also requires federal agencies ensure that minority and low-income communities have adequate access to public information related to health and the environment.

The 2017 American Community Survey (ACS) (5-Year Estimates) is the most recent information related to socioeconomic conditions in the state and County. The 2017 ACS includes Hawai‘i Geographic Area Profiles – Census Designated Places: Neighbor Islands. The ACS noted it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

For purposes of this assessment, and to correspond with the available ACS demographic characteristic data, “low income” is defined as having a household income of less than $24,999; “minority” is defined as any race population other than White; and “children” is defined as the “Under 5 to 19” age category. Pāhala has more households in the “less than $24,999” income bracket (33.7 percent) than the County as a whole (26.3 percent).

Overall, Pāhala is characterized by a racial composition that includes a greater proportion of minorities (92.1 percent non-White) than the County at large (66.8 percent non-White). The racial distribution includes a much lower proportion of White residents, a much higher proportion of Filipino residents, and lower populations of other minority groups, including Native Hawaiians when compared to the County. There are also more residents of two or more races in Pāhala than in the County.

Pāhala has a similar age distribution to Hawai‘i County, although Pāhala has a higher proportion of individuals in the “Under 5 to 19” age category (28.5 percent) compared to the County as a whole (24.4 percent).

Based on the above, Pāhala has a higher proportion of low-income, minority, and children residents as compared to the County as a whole. However, the Proposed Action will not result in disproportionately high and adverse human health or environmental effects on these sensitive populations. The design and location of the proposed wastewater treatment and disposal facility will minimize odor and air quality impacts. Construction of the wastewater collection system will result in intermittent and unavoidable noise from construction vehicles and equipment within the Pāhala community, including noise associated with the removal of bedrock. However,

construction activities within the community will comply with provisions of HAR 11-46 (Community Noise Control). This includes obtaining a noise permit for any activities that will generate noise exceeding the permissible sound levels specified in HAR 11-46. The permit will limit excessive noise sources to daytime hours; will require the use of best available control technology to control noise levels from excessive noise sources; and will require the applicant to notify affected members of the public in advance of any planned nighttime construction activity (which must not exceed the permissible sound levels). Overall, the Proposed Action is expected to result in positive human health and environmental effects to Pāhala residents by providing a cleaner and longer-lasting wastewater treatment system.

Based on the above, construction and operation of the collection system and the treatment and disposal facility would have a disproportionately high adverse impact on the minority and low income population in the Pāhala community."

This information will be included in the Final EA.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM convened two additional public meetings one on October 9, 2018 and another on March 21, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Section 7 will be revised to add that the County held additional meetings in Pāhala including one to provide information on financing sources available to owners of parcels which would become accessible to the County collection system. The purpose of the March 21, 2019 meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pāhala Community. At the meeting, DEM provided the preliminary results of the County investigation into funding sources and options available for newly accessible property owners once the new treatment and disposal facility and wastewater collection system have been designed, permitted and constructed.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan

program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

The Final EA Section 7 will include that on September 26, 2018 a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers. The public notice was to advertise the October 10, 2018, public information meeting conducted by the County in the Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the availability of the Draft EA and process for submitting comments. The notice stated that the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006) involving consultation with Native Hawaiian Organizations and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and cultural religious attachment to the proposed project area. The Office of Environmental Quality Control rules have no provision for receiving oral comments. However, the facilitator at that meeting offered assistance by persons available at the meeting in putting any oral comments attendees may wish to offer into writing.

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to

maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

HRS 343 Section 5 (a)(9)(A), states as follows: "(a) Except as otherwise provided, an **environmental assessment** (emphasis added) shall be required for actions that: ... (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…".

HRS 343-5 **Applicability and requirements** states under item (c) (4) "A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…" The criteria by which the proposing agency makes the significance determination is provided in HAR 11- 200-12 (a) and (b) which states: "(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences,… and the…effects of the action."

HAR 11-200-10 **Contents of an environmental assessment** includes "(9) Findings and reasons supporting the agency determination or anticipated determination…" The Draft EA provides this information in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an EIS.

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report undertaken as part of the initial planning for the LCC closure. The report states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will include that the November 2016 archaeological field inspection report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut plant, is the location of a known (but sealed) lava tube opening that local informants have

indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection system.

This information will be included in the Final EA.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.

> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pāhala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated from mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain

events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC), Chapter 27 **Floodplain Management**, Section 20, **Standards for subdivisions and other developments** (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the department of public works "Storm Drainage Standards"."

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project site "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1, states the aerated lagoons will be lined with high density polyethylene liners to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

Final EA Section 2.3.1 will state the entire wastewater treatment and disposal facility would be enclosed with a six-foot-high chain-link fence to prevent public access at the gated access driveway entrance.

The proposed site plan is included in the Draft EA as Figure 2.3. As noted in Section 2.3.1, "disposal of the treated and disinfected effluent would be accomplished through land treatment in four groves of native, water-tolerant trees occupying a total area of approximately 8.0 acres." This 8.0 acre planted area, combined with the sloping site topography, berms, and existing Cook pine trees (*Araucaria columnaris*) on Maile Street, will provide a visual buffer from both the

Māmalahoa Highway and Maile Street. As outlined in Section 3.19.2 of the Draft EA, the Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. The wastewater collection system would be installed below the streets and therefore would not impact views. Above-grade structures may include the operations building, headworks and UV cover structures, fuel storage tank and berms around the basins. The existing pine trees along Maile Street, most of which would remain with no changes, would continue to obstruct the viewplanes from Maile Street. The facility site would be adjacent (mauka) to, and visible from, Māmalahoa Highway (State Route 11); however, impacts to the viewplane would be mitigated by the planted trees in the basins and by the rise in elevation between the highway and the facility.

The Draft EA Section 2.3.1 states the driveway access to the wastewater treatment and disposal facility will be located west (mauka) of the Maile Street and Māmalahoa Highway intersection. Appropriate signs identifying the plant will be posted at the driveway access.

This information will be included in the Final EA.

The Draft EA Section 3.14.2 states:

> "Wastewater treatment plants can be a source of nuisance odors to the surrounding community if not properly designed or operated. Typically, nuisance odors are most commonly associated with anaerobic (without oxygen) conditions and with processing of residual solids. Incoming raw sewage flows to the proposed wastewater treatment and disposal facility would first be routed to the headworks, which is the facility where the solids are removed from the flows.
>
> To mitigate potential nuisance odors, the headworks would be equipped with an odor control system with a granulated activated carbon (GAC) scrubber to remove odors. A package GAC scrubber passes the odorous air through a bed of activated carbon, which adsorbs the odorous constituents within the pore spaces of the carbon. The County currently operates GAC scrubbers at other facilities, and it has been proven to be an effective means of odor control both locally and nationwide. The treatment lagoons would be equipped with mechanical aerators capable of maintaining sufficiently aerobic (with oxygen) conditions within the water column, which would prevent nuisance odor conditions from occurring. The disposal groves would be irrigated with fully-treated and aerobic secondary effluent from the treatment process; irrigation with secondary effluent is not associated with development of nuisance odor conditions."

This information will be repeated in the Final EA Section 3.14.2.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349.01
11/16/18

cc: PBC COH EPA ERG

Earl Matsukawa

From: Gwen Sorensen <gwendolyn_sorensen@hotmail.com>
Sent: Friday, November 2, 2018 2:43 PM
To: Public Comment
Subject: DRAFT EA: PAHALA COMMUNITY (LLC) REPLACEMENT PROJECT
Attachments: 2018 GS Pahala LCC Replacement Project Response.pdf; 2018 PF Pahala LCC Replacement Project Response.pdf

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WILSON OKAMOTO CORPORATION
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W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

Objective is the "relocation" of the sewage plant that has been proposed.

1. Locate below the highway of the community.
   a. It would be an eye sore to the entrance of our community.
   b. It would be a safety and health issue in the event of floods or any other overflows. Historical flooding have proved this concern.
2. Community need more information about the project. It was poorly presented in the mutiple meetings. Not enough data on the proposal.
3. More input by the County on how this project is going to be handled fairly to benefit the community.

(include additional sheets as necessary)

PLEASE PRINT: Name: GWENDOLYN SORENSEN Phone: 808-928-8382
Organization: RESIDENT
Address: BOX 27 PAHALA, HI 96777
Email: gwendolyn_sorensen@hotmail.com

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (63)
March 6, 2020

Ms. Gwendolyn Sorensen
P.O. Box 27
Pāhala, Hawai‘i 96777

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment- November 2, 2018; 2:37 p.m.

Dear Ms. Sorensen:

Thank you for your November 2, 2018 2:37 p.m. comment letter regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

1. a.
The proposed site plan is included in the Draft EA as Figure 2.3. As noted in Section 2.3.1, "disposal of the treated and disinfected effluent would be accomplished through land treatment in four groves of native, water-tolerant trees occupying a total area of approximately 8.0 acres." This 8.0 acre planted area, combined with the sloping site topography and existing Cook pine trees (*Araucaria columnaris*) on Maile Street, will provide a visual buffer from both the Māmalahoa Highway and Maile Street. As outlined in Section 3.19.2 of the Draft EAthe Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. The wastewater collection system would be installed below the streets and therefore would not impact views. Above-grade structures may include the operations building, headworks and UV cover structures, fuel storage tank, and low berms around the basins. The existing pine trees along Maile Street, most of which would remain with no changes, would continue to obstruct the viewplanes from Maile Street. The facility site would be adjacent (mauka) to, and visible from, Māmalahoa Highway (State Route 11); however, impacts to the viewplane would be mitigated by the planted trees in the basins and by the rise in elevation between the highway and the facility. The property will be fenced and driveway access will be gated to prevent public access along with appropriate signage.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9 including its visibility from the highway. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway, without the benefit of viewplane mitigation by the planted trees in the basins and by the rise in elevation between the highway and the facility."

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

1. b.
The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in Zone X, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai‘i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai‘i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb

or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai‘i Department of Transportation (DOT) Hawai‘i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On a telephone call on February 20, 2019, the District office indicated the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facility will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai‘i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to “comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event, as shown in the department of public works “Storm Drainage Standards”.”

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project “shall not alter the general drainage pattern above or below the development”. Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1, states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be

conducted during the design process for any berms intended to act as secondary containment. The tree groves will be designed in accordance with the EPA’s “Process Design Manual, Land Treatment of Municipal Wastewater Effluents”. Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

2.
The Draft EA Section 2.3.1 provides a detailed description of the proposed treatment and disposal system, descriptions of the various facilities and their functions, a schematic drawing of the various processes, the proposed site plan, and a description of the various areas which have the potential to be disturbed during construction. Further, Section 2.3.2 describes the wastewater collection system, including the streets where the system would be routed and the two phases for construction. Lastly, Section 2.3.3 describes closure of the two large capacity cesspools, as required by the US Environmental Protection Agency, and abandonment of the existing collection system.

The County’s intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources. Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted by the Hawai‘i State legislature requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently utilizing cesspools for sewage disposal.

3.
The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA and again during the October 2018 meetings. Although not required by Hawai‘i Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened an additional public meeting on March 21, 2019 to gain further input from newly accessible property owners and fulfill a County commitment made in October 2018 to research and provide financing options available for the newly accessible residents of the Pāhala Community to pursue.

Programs discussed and included:

- US Department of Housing and Urban Development (HUD) with County of Hawai‘i Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawai‘i Legislature, Senate Bill 221 SD1, which could amend Hawai‘i Revised Statutes (HRS) Chapter §342D to establish a low interest loan program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
11/13/18
cc PBC COH
EPA ENG

WILSON OKAMOTO CORPORATION
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
W http://www.wilsonokamoto.com
Attention: Mr. Earl Matsukawa

SUBJECT: DRAFT EA: PĀHALA COMMUNITY LARGE CAPACITY CESSPOOL (LCC) REPLACEMENT PROJECT
INFORMATION MEETING, OCTOBER 10, 2018

Concerns: Relocation of Sewage Plant to below the highway of Pahala Community.
Is this project going to effect the whole community?
Increments of Project if any should be presented. What is presented is not complete.
Future subdivisions should be included in presentation.

(include additional sheets as necessary)

PLEASE PRINT: Name: PRODINCIO FUERTE Phone: 808-987-4361
Organization: RESIDENT
Address: BOX 725 PAHALA, HI 96777
Email: gwendolyn_sorensen@hotmail.com

Please submit comments by October 23, 2018 or email PahalaEA@wilsonokamoto.com

**Receipt of e-mailed comments will be confirmed via e-mail. If you do not receive a confirmation message, please contact our office (see contact information, above).*

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10349-01 ref (62)
March 6, 2020

Mr. Prodincio Fuerte
P.O. Box 725
Pāhala, Hawai‘i 96777

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment - November 18, 2018

Dear Mr. Fuerte:

Thank you for your comment letter received on November 18, 2018 regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9 which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the

subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW, and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA

The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala LCCs. The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system. The Draft EA Section 2.3.2 states the new collection system would be subject to the County of Hawai'i Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following

> *"(a)Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice.*

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

All accessible properties will be required to connect to the new wastewater collection system in accordance with Hawaii County Code, Chapter 21, Article 2, Section 21-5. However, the County entered into an agreement with C. Brewer (in April 2007) to eliminate LCCs from the existing community sewer systems and connect properties discharging to them to new County collection, treatment and disposal systems. Once the actual costs are determined, County Council action is still required to approve the expenditures.

This information will be included in the Final EA.

The County's intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent, is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources.

The Draft EA Section 2 provides the scope of the Proposed Action. The Draft EA Section 2.3.1 provides a detailed description of the proposed treatment and disposal system, descriptions of the various facilities and their functions, a schematic drawing of the various processes, the proposed site plan, and a description of the various areas which have the potential to be disturbed during construction. Further, Section 2.3.2 describes the wastewater collection system, including the streets where the system would be routed and the two phases for construction. Lastly, Section 2.3.3 describes closure of the two large capacity cesspools, as required by the US Environmental Protection Agency, and abandonment of the existing collection system. Figure 2.6 shows the extent of the proposed collection system and preferred wastewater treatment and disposal facility location within the community.

Although not a comment specific to the content of the Draft EA, information regarding project schedules, including US Environmental Protection Agency (USEPA) compliance dates, project updates and milestones can be found on the USEPA website: https://www.epa.gov/uic/county-hawaii-administrative-order-consent-closure-cesspools-pahala-and-naalehu

Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted by the Hawai'i State legislature requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently utilizing cesspools for sewage disposal.

The Draft EA Section 6.2.2 discusses the Ka'ū Community Development Plan (CDP): "Section 5 of the CDP prioritizes improvements in infrastructure, facilities, and services, including Section 5.8 applicable to … Environmental management facilities, including expanded sewer lines, …". Policy 120 is to "Extend the primary wastewater collection lines in Pāhala and

Nā‘ālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems."

The collection system will be consistent with Policy 120 as the improvements for the Pāhala (LCC) Replacement project have been designed not to preclude accommodating the Pāhala community. Similarly, the treatment and disposal facility has been designed not to preclude accommodating wastewater flows from the collection system from the Pāhala community.

Further, the Draft EA, Appendix B, Section 5.6 provides information related improvements needed to wastewater services to the Pāhala community as envisioned in the CDP. Appendix B, Section 5.6.2 states:

> "To accommodate the flow increase anticipated from the full buildout of the Pāhala wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the14.9-acre site. Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solid recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater opportunity for contact between the naturally-occurring micro-organisms in the lagoon and dissolved organic matter. As a result, complete mix lagoons provide greater levels of treatment within a smaller volume than partial mix lagoons. However, facilities must be provided downstream of complete mixed lagoons to allow removal of settleable solids from the water column. To provide a place for solid settling, lagoons 2 through 4 will continue to act as partial mix aerated lagoons downstream of the complete mix lagoon 1. Lagoon 4 will require no aeration and will continue to be covered to deprive algae of sunlight and allow suspended solids to settle out of the system effluent. Utilizing this lagoon system approach, the Pāhala WWTP will require modification at full buildout flow, but is not anticipated to expand beyond the initial build 14.9-acre site."

This information will be repeated in the Final EA.

The Draft EA Section 2.3 states that under the Preferred Alternative, the County of Hawai‘i would acquire, or otherwise obtain the right to develop and use, a portion of the 42.5-acre Site 7 then construct a new secondary wastewater treatment and disposal facility within a portion of the parcel (see Figure 2.3). Further, as stated in Section 2.3.1:

> "The County would work with the current landowner to subdivide the 42.5-acre parcel into two parcels: 1) a 14.9-acre parcel that would be owned by the County; and 2) a 27.6-acre parcel that would include a 25-foot-wide by 1,500-foot-long utility easement and would continue to be owned by the current owner. See Figure 2.3 for a preliminary site plan showing the proposed location of the treatment and disposal facility within the southeast portion of Site 7."

The Final EA will note, the County is working with the current landowner, BP Bishop Estate Trustees (Kamehameha Schools), to subdivide the 42.5-acre parcel (Tax Map Key (TMK): 9-6-002:018) to acquire the property.

The Draft EA Section 2.10.2 states:

> "Construction of the portions of the collection system located within County ROWs would not require further land transfer approvals. As previously discussed, two short segments of the planned collection system would be located with privately owned parcels. The County would obtain easements from the land owner(s) as part of the construction process. The Hawai‘i County Code Chapter 23, Subdivisions, states that all subdivision plats and all streets or ways within the County created for the purpose of partitioning land shall be approved by the County Planning Department Director."

Future sewer main extensions and subdivisions will be accommodated, as capacity allows, on a first come, first served basis.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(10349-01)
12/3/18

Earl Matsukawa

cc: BC COR
EPA ERG

From: Larry Navarro <ldnava1@gmail.com>
Sent: Monday, November 19, 2018 11:27 AM
To: Public Comment
Subject: Pahala Large Capacity Cesspool (LCC)

Hello,

My name is Larry D. Navarro and my property is at 96-1255 Hinano St., Pahala, HI. 9677. I live in California and am only home once a year. My sister who, lives in Pahala has been trying to keep me abreast with what's going on there in reference to the (LCC). I've been in contact with Sandy Mendonca. She spoke about the possibilities of an exemption plan or possibly a financial assistant plan for the home owners that are required to connect to the new sewer system. I would appreciate being kept informed of any new or upcoming issues in reference to the Pahala LCC.

Mahalo,
Larry D. Navarro

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10349-01 ref (59)
March 6, 2020

Mr. Larry Navarro
ldnava1@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - November 19, 2018 11:27 a.m.

Dear Mr. Navarro:

Thank you for your November 19, 2018 11:27 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management (DEM) Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA Section 2.3.2 states the new collection system would be subject to the County of Hawaiʻi Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice."

Further:

"(c) The director may grant a variance/exemption of the foregoing connection requirements to owners of single-family dwellings existing at the time of installation of the public wastewater system, if the following is found:

(1) There are special or unusual circumstances applying to the subject real property which exist that render the ability to connect to a wastewater system an extreme physical or financial hardship; and
(2) There are no other reasonable alternatives; and
(3) The variance is consistent with the general purpose of the chapter and will not be materially detrimental to public health, safety, or welfare."

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 21,

2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Section 7 will be revised to add that the County held additional meetings in Pāhala including one to provide information on financing sources available to owners of parcels which would become accessible to the County collection system. The purpose of the March 21, 2019 meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community. At the meeting, DEM provided the preliminary results of the County investigation into funding sources and options available for newly accessible property owners once the new treatment and disposal facility and the wastewater collection system have been designed, permitted and constructed.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

Some ways to stay informed about the project include:

- The County will submit the Final EA to the State of Hawaii Department of Health Office of Environmental Quality Control (OEQC), which facilitates Hawaii's environmental review process and announces the availability of EAs for public review and comment in *The Environmental Notice* (TEN). Issues of TEN can be found on the OEQC website at: http://health.hawaii.gov/oeqc/.
- The Draft EA and other project information can be found on the County of Hawaii website at: http://www.hawaiicounty.gov/dem-wastewater-division.
- Information regarding project schedules, including US Environmental Protection Agency (USEPA) compliance dates, project updates and milestones can be found on the USEPA website at: https://www.epa.gov/uic/county-hawaii-administrative-order-consent-closure-cesspools-pahala-and-naalehu.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(10349-01
12/3/18

Earl Matsukawa

CC BC COH EPA EPG

From: Lisa Gollin <lxgollin@hawaii.edu>
Sent: Monday, November 19, 2018 11:46 AM
To: Public Comment
Subject: Pahala Large Capacity Cesspool EA
Attachments: LX Gollin Resume (CRM) September 2018.pdf

Aloha Earl,

I understand from the OEQC Environmental Notice that you are the contact for the proposed Pahala Large Capacity Cesspool Project for Hawai`i Island Final EA. I introduced my consultancy in a prior email to you regarding the Mililani Middle School Classroom Project. Should Pahala Project proceed to the EIS phase and Wilson Okamoto be looking for a CRM firm to produce the Cultural Impact Assessment, please consider my services. I produce quality reports, on time and on budget. I can be hired via a choice of archeology firms.

Attached please find my resume and a CIA prepared for DOTA.

Mahalo for your consideration, Lisa

Lisa Gollin, PhD

Adjunct Faculty, Anthropology Department;
Affiliate Researcher, Dept. of Complementary and Alternative Medicine,
Ecology and Health Group, John A. Burns School of Medicine, University of Hawai`i
& ***LX Gollin Research Hawai`i, LLC***

Kalaupapa Airport CIA _final 2-1-2018.pdf

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Lisa Gollin, PhD
lxgollin@hawaii.edu
808.783.9877

25 Years Conducting Social Science Research in Hawai'i, California and Abroad on Natural-Cultural Resources, Ethnobiology and Botany, Health &Medicine

Capabilities

Project Management/Leadership
Qualitative & Quantitative Research
State & Federal Ethnography Studies
◊ Cultural Impact ◊ Landscape
◊ Oral History ◊ Trad. Use
◊ Rapid Assessment
Academic & Nonacademic Writing
Training & Instruction

Research Areas

Cultural Resource & Heritage Mgmt.
Wildfire Prevention & Response
Ethnobotany & Biology
Medical Anthropology

Consultancy Contracts (Selected)

Guide & Training for Improving Cultural & Archeology Studies: Methods & Report Preparation (2018)

Kalaupapa, Airport Improvements Project CIA, Moloka'i (2017)

Pua Loke Multi-Family Affordable Housing Development CIA, Līhu'e, Kaua'i (2017)

Ala Wai Canal Dredging, Wall Repair & Improvements Project CIA, Pālolo, Makiki, & Mānoa Ahupua'a Honolulu, O'ahu (2016)

Challenges to Rapid Wildfire Containment in Hawai'i (2015)

State & Federal Reports (Selected)

Traditional Cultural Property & Ethnographic Report for Mākua, prepared for the US Army Corps of Engineers, Environmental Branch. (2013 | *Classified*)

Thirty Meter Telescope Observatory & Hale Pohaku Support Facilities Project CIA, Maunakea, Hawai'i Island (2010)

Sheraton Waikīkī Hotel Gray's Beach Restoration Project CIA, Waikīkī Ahupua'a, Honolulu (Kona) District, O'ahu. (2009)

Guest Blog

The Power of Sharing Life Stories: A Guide for Interviewing Elders

EXPERIENCE

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Specialize in cultural impact assessment (CIA), traditional cultural properties (TCP) & other ethnographic studies to comply with state & federal environmental & historic preservation laws. Produce customized guides & staff training on ethnographic methods for Cultural Resource Management (CRM) firms. Responsible for social science component (in-depth interviews with incident commanders across Hawai'i, study design, data analysis, synthesis, report preparation, grant writing, conference presentations & publications) as part of interdisciplinary team on the *Challenges to Rapid Wildfire Containment in Hawai'i Project*.
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♦ Complex, multi-stakeholder studies performed across the Hawaiian Islands
♦ Leadership & participation in academic & professional workshops, panels & publications

CULTURAL SURVEYS HAWAI'I, INC.
Waimānalo, Hawai'i| 2006 - 2013

Supervisor & Lead Researcher, Cultural Studies Division (2011 - 2013)
♦Trained & led 5-member team in the production of a TCP Survey & preparation of a National Register of Historic Places nomination application
♦Lead researcher & author of the TCP Survey & second author of the NRHP nomination.
♦Supervised, co-wrote, edited & advised on cultural & archeology reports.

Manager, Cultural Studies Division (2006 - 2010)
♦ Performed & managed over 100 studies on cultural-natural resources & historic properties across the Hawaiian Islands.
♦ Built/managed staff from 2 to 13 cultural specialists on O'ahu & Hawai'i Island offices
♦ Raised standards for methods, compliance & publications, creating the first in-house guidelines & procedural manuals on CIAs, Anthropology Methods, Scientific Referencing of Plants & Animals, Assessing Local Ecological Knowledge, & Report Editing.

JOHN A. BURNS SCHOOL OF MEDICINE
University of Hawai'i Mānoa, Hawai'i | 2002 - 2005

COMPLEMENTARY & ALTERNATIVE MEDICINE DEPARTMENT (2005)
Coordinator, Minority Involvement in Clinical Research Opportunities
Managed staff, designed survey & conducted focus group interviews, data analysis & co-authorship of articles on National Institute of Health (NIH) research grant investigating Asian Pacific Islander (API) participation in medical research.

DIVISION OF ECOLOGY & HEALTH (2002 - 2005)
Assistant Research Faculty Helped develop new program exploring the nexus of ecosystem & human health. Performed grant-writing, interdisciplinary & international collaborations, education & community outreach projects & research as co-investigator or PI on: Strengthening Community Capacity for Health in Waimānalo; Biocultural Dimensions of Leptospirosis & Taro Farming, Ethnobotanical Evaluation of Native vs. Nonnative Plants for Conservation Management & more.

SCHOOL OF NURSING & DENTAL HYGIENE
University of Hawai'i Mānoa, Hawai'i | 2001-2002

Curriculum Coordinator, Master in Clinical Research Program
Helped develop a Master degree program in clinical research for the Schools of Medicine & Nursing (NIH R21 grant). Evaluated campus courses relevant to clinical research; developed curriculum; recruited instructors & mentors; conducted needs assessment survey on clinical research programs in the US; collaborated with the University of California, San Francisco on didactic material & workshop; co-wrote a NIH R25 training grant proposal.

Advanced Training

Advisory Council on Historic Preservation, Section 106 (2011)

Academic Appointments

Adjunct Assist. Faculty & Guest Lecturer, Anthropology Dept.
Univ. of Hawai'i |2012 - present

Adjunct Assist. Faculty, Complementary & Alternative Medicine Dept.
Univ. of Hawai'i|2005 - 2017

Affiliate Researcher, Ecology & Health Group
Univ. of Hawai'i| 2005 - 2008

Visiting Colleague, Botany Dept.
Univ. of Hawai'i| 2005 - 2006

Research Assoc., National Tropical Botanical Garden
Kaleho, Kaua'i |2002 - 2004

Journal Reviews & Boards

Anthropology of Food |2017
Journal of Ethnobiology |2016
Economic Botany | 2015
Ethnobotany Research & Applications: Reviewer & Editorial Board | 2005 - 2008
EcoHealth Journal | 2004

Affiliations

American Anthropological Assn.
Anthropology & the Environment
International Soc. of Ethnobiology
Natl. Assn. of Practicing Anthros.
Society for Applied Anthropology
Society for Medical Anthropology
Society of Economic Botany
Society Of Ethnobiology

Education

UNIVERSITY OF HAWAI'I, MĀNOA
PHD, Anthropology 2001
MA, Anthropology 1995

UNIVERSITY OF CALIFORNIA, SANTA CRUZ
BA, Anthropology & Southeast Asian Studies 1981

September 2018

PEER REVIEWED PUBLICATIONS (SELECTED)

2018 Gollin LX, Trauernicht, CP. The Critical Role of Firefighters' Place-Based Environmental Knowledge in Responding to Novel Fire Regimes in Hawai'i. In: C. Fowler, J. Welch & A. Sullivan (eds). Fire Otherwise: An Ethnobiological Approach to Understanding the Impacts of Social & Environmental Change on Fire Ecology. University of Utah Press, Salt Lake City.

2008 Gollin LX. Integrating Ethno & Bio-Medical Health Care: Focus on Polypharmacy in Kalimantan (Indonesian Borneo). In: Forests & Health. C. Colfer (ed). Center for International Forestry Research & Earthscan, London.

2006 McClatchey WC, Gollin LX. An ethnobotany research training workshop in Madagascar. Ethnbobotany Research & Applications, 3(4):309-328.

2006 Rakotonandrasana SR, McClatchey WC, Gollin LX. An ethnobotany training workshop in Madagascar: Photo essay. Ethnbobotany Research & Applications, 3(4):391-404.

2005 Gollin LX, Harrigan RC, Calderón JL, Perez J, Easa D. Improving Hawai'i an & Filipino involvement in clinical research opportunities: Qualitative findings from Hawai'i. Ethnicity & Disease 15(4):111-119.

2005 Vinetz J, Wilcox B, Aguirre A, Gollin LX, Katz AR, Fujioka RS, Maly K, Horwitz P, Chang H. Beyond disciplinary boundaries: Development of novel methodologies to study leptospirosis as a transdisciplinary model of understanding infectious disease emergence. EcoHealth 2:1-16.

2004 Gollin LX, McMillen H, Wilcox B. Participant-observation & pile sorting: Methods for eliciting local understandings & valuations of plants as a first step towards informed community participation in environment & health initiatives in Hawai'i. Applied Environmental Education & Communication 3(4):259-267.

2004 Gollin LX. Subtle & profound sensory attributes of medicinal plants among the Kenyah Leppo' Ke of East Kalimantan, Borneo. Journal of Ethnobiology 24(2):173-201, Fall/Winter.

2003 Harrigan RC, Gollin LX, Casken J. Barriers to increasing native Hawai'i an, Samoan & Filipino nursing students: Perceptions of students & their families. Nursing Outlook 51:25-30.

1997 Gollin LX. Having your medicine & eating it too: A preliminary look at medicine & meals in Kayan-Mentarang, Kalimantan, Indonesia. Borneo Research Bulletin. 28:28-41.

CONFERENCE PRESENTATIONS (SELECTED)

2017 Society of Applied Anthropology (Santa Fe, NM). "The Critical Role of Firefighters' Place-Based Environmental Knowledge in Responding to Novel Fire Regimes in Hawai'i." Lead author-presenter with C. Trauernicht.

2015 Society of Ethnobiology (Santa Barbara, CA). "The Wicked Problem of Wildfires in Hawai'i & the Critical Role of Place-Based Environmental Knowledge of Firefighters Responding to Novel Fire Regimes." Lead author-presenter with C. Trauernicht.

2014 Intl. Society of Ethnobiology (Bhutan). "Caring for the 'Rolling Beauty of Time'—the Regeneration of Ka'anani'au, a Hawaiian Bio-cultural Land Resource System." Co-author-presenter with G. Kila & C. Oliveira.

2003 (Invited) Center for Intl. Forestry Research Forests, Livelihoods & Forests & Health Workshop (Bogor, Indonesia). "Eco-Health Research Priorities: Observations from Kalimantan."

WILSON OKAMOTO CORPORATION
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10349-01 ref (60)
March 6, 2020

Ms. Lisa Gollin, PhD
lxgollin@hawaii.edu

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - November 19, 2018; 11:46 a.m.

Dear Dr. Gollin:

Thank you for your November 19, 2018 11:46 a.m. comment message regarding the County of Hawai'i Department of Environmental Management (DEM) Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA Preface states: The DEM has determined that the requirements of Hawaii Revised Statutes, Chapter 343, can be fulfilled by preparing an EA with FONSI. A Final Environmental Assessment (EA) will be issued for this project. As such, a cultural impact assessment will not be included.

The Draft EA Summary states: No significant environmental impacts are anticipated from construction and use of the collection system and the wastewater treatment and disposal facility.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

10249-01
12/5/18

John Sakaguchi

cc: RC COH EPA ERG

From: Fujio, Mary <Mary.Fujio@hawaiicounty.gov>
Sent: Monday, December 3, 2018 8:19 AM
To: Kucharski, William; Beck, Dora; eplan1@aol.com; Michelle Sorensen
Subject: FW: Pahala Sewer Project comments (from Tanya Ibarra)
Attachments: County of Pahala Sewer Project.pdf

Received at COHDEM.

From: Tanya Ibarra [mailto:tibarra2000@gmail.com]
Sent: Saturday, December 01, 2018 9:35 PM
To: cohdem <cohdem@hawaiicounty.gov>
Subject: Pahala Sewer Project comments

Please review the attached comments regarding the Pahala Sewer Project.

Dear Mayor Harry Kim,

I am writing regarding the Pāhala Community Large Capacity Cesspool Replacement Project.
I have read the Draft Environmental Assessment for the Pahala Large Capacity Cesspool Replacement Project and have some concerns regarding the proposal and it's details.

COMMUNITY INPUT ON THE PROJECT: According to the Draft, *Section 2.1.4 History of Wastewater Management in Pahala* the document shows that the County held a community meeting to present sewer system replacement alternatives as well as a voting system in which the Pahala community chose the preferred sewer alternative resulting in 87% of the returned ballots in favor of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County.

MY CONCERN: The entire Pahala community was NOT included in the determination of whether or not a sewer system for the entire community was wanted.
According to the Communication document (COM 0293.004 2004-2006), the ballots were only sent to homeowners who were connected to the Large Capacity Cesspool (LCC) provided by C. Brewer. In the communication, it includes a question and answer section, in which one of the questions (shown below) specifically shows that if a homeowner needs to connect, C. Brewer has provided money to the County to remain in escrow to pay for the connection of these homes to the sewer lines.

Question #5 – Alternative 1:
If Alternative 1 is selected, will the residents be required to connect to the new system?

Answer #5:
Yes, once a county system is installed in front or near your home, you will need to connect. Please be aware however, that the cost for the service laterals that connect to the County sewer lines will be funded by C. Brewer and Company, Limited. The homeowner will not need to pay for this cost.

The current proposal is expanding the system to include homeowners who are not in violation to the Federal law against the use of Large Capacity Cesspools (LCC). This seems like a waste of time and resources which could be directed to more important needs in our community.
It is obvious that the original proposal in 2004 was intended only for those homeowners who were on the LCC system. Since the inception of this project, the costs have skyrocketed to far beyond the $1.6 million which was outlined originally in the ballot system (COM 0293.004 2004-2006). The County should simply work with the original proposal to give those homeowners on the LCC the sewer system they requested. To include the entire community of Pāhala is an unnecessary burden to the County and to the homeowners who are required to hook into the line at the cost of $20,000 each.

REASON FOR THE PROJECT: According to the proposal, the Federal government issued a mandate that all Large Capacity Cesspools (LCC) be shut down by April 5, 2005. The county is concerned with fines by the Federal government because of the LCC in Pahala and other districts around the island.

MY CONCERN: If this is truly a means for Hawaii County to avoid fines from the federal government for the LCC violations, then that is what the focus of this proposal should be about. Expanding the project is not necessary and would cost more and take more time for the county to avoid these fines. This again is costing more for the county and for hardworking community members of Pahala who do not have the means to pay the outrageous costs of connecting to this unnecessary line simply because it runs in front of their homes.

WATER LINE/SEWER LINE PLACEMENT: I am concerned with the placement of the sewer lines near the water lines of Pahala.

MY CONCERN: Is there some kind of spec sheet that shows how far away the sewer line will be to the water line?

ERRORS IN THE PROPOSAL: One section of the Draft Environmental Assessment (Pahala LCC Replacement Project) September 2018 (*Section 2-1 Pahala Community*) states that Pahala is the largest and most populated town in Ka'u, however, that is not correct. In fact, it is a well-known fact that Ocean View is three times more populated and is in fact the largest subdivision in the United States.

2 PROPOSED PROJECT DESCRIPTION

2.1 Background

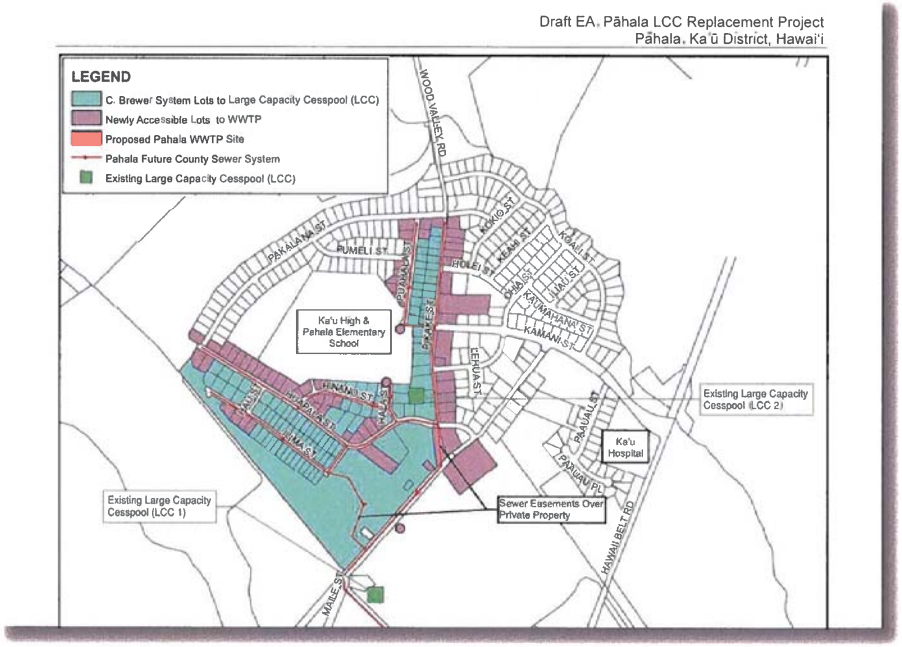
2.1.1 Pāhala Community

The community of Pāhala is located about 52 miles southwest of Hilo, in the Ka'ū District, Island of Hawai'i. Pāhala is located west (mauka) of Māmalahoa Highway (State Route 11) about 3.8 miles from the shoreline. Most of the community lies between 980 feet above mean sea level (msl) on the western end and approximately 800 feet above msl on the eastern end. Figure 2.1 shows the location of Pāhala.

Even though Ka'ū was one of the originally settled areas in the Hawaiian Islands, it remains a vast remote area. Only a fraction of a percent has been developed with residential properties, and the remainder is largely used for agricultural purposes or is undeveloped. The District of Ka'ū is situated at the southern tip of the island and extends across the southern and southeastern flanks of Mauna Loa. The Ka'ū District covers about 922 square miles (approximately 590,000 acres), with over 80 miles of virtually undeveloped coastline. Nearly two-thirds of its total land area is in the Conservation district. The Ka'ū district includes several communities of which the Pāhala community is the largest, with a population of approximately 1,405 persons in 2016, the most recent estimate. The distance to the communities of Hilo and Kailua-Kona means that the Ka'ū District is relatively isolated from the major infrastructure systems found in these communities, including wastewater treatment and disposal facilities.

MY CONCERN: If the proposal was made with the idea that Pahala is the largest populated town in Ka'u, it is erroneous. The population of residents who are actually hooked up to the LCC in Pahala is in fact only a fraction of the entire community of Pahala.

PLACEMENT OF THE FIRST PHASE OF THE SEWER PROJECT:



MY CONCERN: According to documents showing where the new line will be placed, there are some homes which will have the sewer line running near their homes, but are not part of the original C. Brewer LCC line. The homes across the street and connecting are not part of the LCC line either, so it is perplexing as to why this initial phase of the project is including lines in areas that are not necessary.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (61)
March 6, 2020

Ms. Tanya Ibarara
tibarara2000@gmail.com

Subject: Draft Environmental Assessment for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment - December 3, 2018; 8:19: a.m.

Dear Ms. Ibarra:

Thank you for your December 3, 2018 8:19 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

COMMUNITY INPUT ON THE PROJECT

On April 25, 2010, a community meeting sponsored by Councilman Guy Enriques was held at the Pāhala Community Center to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meeting, an informational handout prepared by the County's Wastewater Division provided a brief history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those property owners connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4, 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handout indicated that Mayor Kim's office advised the property owners the County would move forward with new systems for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handout stated public meetings were held in both Nāʻālehu and Pāhala in November 2006 to discuss the wastewater system alternatives. The handout included that adequate land for the treatment and disposal system had not been identified in Pāhala. The handout also stated that all properties accessible to the new sewer system would be required to connect in accordance with Hawaii County Code Chapter 21.

The Draft EA Section 2.9 discusses the relationship between the current project and the 2007 Final EA for the Naalehu-Pāhala Large Capacity Cesspool (LCC) Conversion project. As stated in Section 2.9:

> "After the issuance of the Final EA and Negative Declaration/FONSI in 2007, the County conducted additional study and evaluation of the proposed LCC conversion project. The

> County eventually concluded that the LCC conversion project described in the 2007 Final EA would not meet the need to provide a collection system and a treatment and disposal facility, close the LCCs, and provide for the future needs of the Pāhala community. This determination was based on several factors…"

REASON FOR THE PROJECT

The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala LCCs. The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system. The Draft EA Section 2.3.2 states the new collection system would be subject to Hawaiʻi County Code (HCC) Chapter 21, Sewers. Specifically, Article 2 (Public Sewers), Section 21-5, states the following:

> *"(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice."*

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 21,

2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Figure 2.2 shows the collection system on the various streets within the community. The Draft EA Section 2.2 states the Pāhala Large Capacity Cesspool Replacement project is to provide infrastructure necessary to enable the County to comply with the Safe Drinking Water Act and Administrative Order on Consent between the County and the Environmental Protection Agency with respect to closure of the Pāhala large capacity cesspools.

The extent of the collection system is to ensure the parcels connected to the former C. Brewer system will have access to the treatment and disposal facility, so the large capacity cesspools can be closed.

The Draft EA Section 6.2.2 discusses the Kaʻū Community Development Plan (CDP): "Section 5 of the CDP prioritizes improvements in infrastructure, facilities, and services, including Section 5.8 which is applicable to … Environmental management facilities, including expanded sewer lines, …". Policy 120 is to "Extend the primary wastewater collection lines in Pāhala and Nāʻālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems."

The collection system will be consistent with Policy 120 as the improvements for the Pāhala LCC Replacement project have been designed not to preclude accommodating the Pāhala community. Similarly, the treatment and disposal facility has been designed not to preclude accommodating the wastewater flows from the collection system from the Pāhala community.

It is conventional to extend a utility between street intersections to minimize the number of manholes required. As stated in the Draft EA, the collection system is routed within the County right-of-way for ease of access for construction and maintenance.

WATER LINE/SEWER LINE PLACEMENT

On April 5, 2018, the County of Hawaiʻi Department of Water Supply (DWS) provided the following (See the Draft EA Appendix A):

> "The Department requests that the construction plans show, and the proposed sewer lines be installed with, the proper horizontal and vertical clearances from our existing water system facilities and concrete jacketing at waterline crossings, where necessary, as recommended by the Department's Water System Standards.
>
> In addition, backflow prevention devices must be installed where there are connections to our water system at wastewater processing and treatment facilities".

The detailed design will be informed by and the construction documents will reference the DWS Water System Standards.

The above information will be included in Section 2.3.2 of the final EA.

ERRORS IN THE PROPOSAL

Neither the geographical size nor population of Pahala affect the Purpose and Need for Action as outlined in the Draft EA Section 2.2 The purpose is to close the County-operated LCCs Section 2.1.1 will be revised to state: "The Kaʻū district includes several communities, including the town of Pāhala. Pāhala had a population of approximately 1,341 persons in 2016."

PLACEMENT OF THE FIRST PHASE OF THE SEWER PROJECT

Please refer to the above response under heading REASON FOR THE PROJECT.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
12/11/18
CC BC COH
EPA EBG

RECEIVED
DEC 10 2018
WILSON OKAMOTO CORPORATION

December 4, 2018

To: County of Hawaii
Environmental Protection Agency

From: Dorothy Kalua
P. O. Box 626
Pahala, Hawaii 96777

Re: Sewage and Wastewater Treatment Site

My name is Dorothy Kalua and I Live on Maile Street in Pahala. I would like to make known my opposition to the chosen site on the corner of Maile Street and Mamalahoa Highway. With all the available land in Pahala I feel the area below Mamalahoa Highway would be a better option. There is a concern of flooding which could cause road closure to Mamalahoa Highway. I understand our facility is similar to Keaukaha's and have spoken to residents in that area about the smell. Our Kupuna in Pahala suspect possible burial site near or on the land chosen.

Again, I express my concern and opposition to the chosen site.

Mahalo!

Dorothy Kalua

Dorothy Kalua

96-3179 Maile St
Pahala Hi 96777

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (68)
March 6, 2020

Ms Dorothy Kalua
P.O. Box 626
Pāhala Hawai‘i 96777

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment - December 4, 2018

Dear Ms. Kalua:

Thank you for your December 4, 2018 comment letter regarding the regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool (LCC) Replacement project. Our responses follow

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the

subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai‘i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

The County is aware of two existing culverts that allow stormwater to flow across the Māmalahoa Highway in the vicinity of the project.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai‘i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai‘i Department of Public Works confirmed that the proposed treatment and disposal Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows drain through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai‘i Department of Transportation (DOT) Hawai‘i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai‘i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the Department of Public Works "Storm Drainage Standards".

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project site "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system.

The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be equipped with high-density polyethylene liners to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

The former Hilo Wastewater Treatment Plant (WWTP) at Keaukaha is not currently in use as a County WWTP, nor was it similar to the wastewater treatment and disposal facilities proposed for this project. Facilities at TMK 2-1-011:004 are currently owned by the State of Hawai'i, University of Hawai'i, as the Pacific Aquaculture Coastal Resource Center.

The Draft EA Section 3.14.2 states:

> "Wastewater treatment plants can be a source of nuisance odors to the surrounding community if not properly designed or operated. Typically, nuisance odors are most commonly associated with anaerobic (without oxygen) conditions and with processing of residual solids. Incoming raw sewage flows to the proposed wastewater treatment and disposal facility would first be routed to the headworks, which is the facility where the solids are removed from the flows.
>
> To mitigate potential nuisance odors, the headworks would be equipped with an odor control system with a GAC scrubber to remove odor. A package GAC scrubber passes the odorous air through a bed of activated carbon, which adsorbs the odorous constituents within the pore spaces of the carbon. The County currently operates GAC scrubbers at other facilities, and it has been proven to be an effective means of odor control both locally and nationwide. The treatment lagoons would be equipped with mechanical aerators capable of maintaining sufficiently aerobic (with oxygen) conditions within the water column, which would prevent nuisance odor conditions from occurring. The disposal groves would be irrigated with fully-treated and aerobic secondary effluent from the treatment process; irrigation with secondary effluent is not associated with development of nuisance odor conditions."

This information will be repeated in the Final EA Section 3.14.2.

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3 provides the Preliminary Site Plan for the new treatment and disposal facility, which shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

Between September 18, 2018 and January 10, 2019, a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were present. The AIS completed in March 2019 documents that a sealed lava tube is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-10
12/11/18
CC: BC COH
EPA ERG

PELE
DEFENSE FUND

Our Mission Statement
Pele Defense Fund is dedicated to the Preservation and Perpetuation of Native Hawaiian Traditional Rights, Customs, and Practices, and to the Protection of our Unique Island Environment for all of Hawai'i to enjoy Now and in the Future

P.O. Box 4969
Hilo, Hawai'i
96720

808.315.9996

e-mail:
peledefensefund
@gmail.com

December 10, 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
345 Kekuanao'a Street, Suite 41 · Hilo, Hawai'i 96720
Ph: (808) 961-8083 · Fax: (808) 961-8086
cohdem@co.hawaii.hi.us
http://www.hawaiicounty.gov/environmental-management/

Dear Mr. William Kucharski,

Please accept this letter for and behalf of the Pahala Community, Hawaii Island who are responding to the Draft Environmental Assessment/Anticipated Finding of No Significant Impact Notice (Joint NEPA/HEPA), Pahala Community Large Capacity Cesspool Replacement Project in Pa'au'au, Ka'u, Hawaii Island, Hawaii, Tax Map Key (TMK): (3) 9-6-002:018.

We are especially grateful that you have given us the opportunity to have the extended time to comment by Dec. 10, 2018. We are concerned about the proposed project action and the community is *opposing* the *site* chosen for development of Sewer Replacement Systems. The category's listed below will identify the various reasons the community feels the project should be moved. The community has agreed that relocating the proposed project action to site 9, makai of the hwy is ideal.

FLOODING

1. Large quantities of water during heavy rainfall will flow down towards the area of proposed site (TMK): (3) 9-6-002:018.
2. Community entrance and exits will be impacted by flooding and closures will impact emergency routes for safety.
3. Heavy debris will create hazardous and dangerous scenarios.
4. Heavy flooding will create excessive damage to lave tubes and burials.
5. Hospital and emergency facilities will be restricted with heavy flooding and access will be impacted.
6. Emergency first responders, fire and EMS vehicles and equipment will be isolated with closures and flooding.

SECTION 106

1. No subsurface testing was done on lava tubes and burials.
2. Historically lava tubes with burials were identified during other development projects in Pahala.

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PELE
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HOOK UPS

1. What were the agreements made between C. Brewer and Hawaii County during the transition of turnover?
2. Community concerns about the condemnation of property.
3. Why are some residents paying fees and others not? Should not discriminate.
4. Did C. Brewer give Hawaii County funding?
5. Should the County of Hawaii fund the whole project including hook ups?
6. What were the reasons Pahala Community was chosen to have the cesspool conversions done by 2021? The rest of the State has until 2050?
7. There is no data to prove Pahala community at status quo shows an impact in ground water contamination.
8. Will outside community waste be transported to this community?

NUISANCE

1. Smell of facility is a concern.
2. Visual, development of facility at site will be and eye soar.
3. The sewer will attract pests and the increase will be a problem.
4. Community does not want harmful airborne bacteria.

NATURAL DISASTERS

1. Hazard plan?
2. Continuous seismic activities recorded at USGS.
3. Flooding
4. Hurricanes
5. Fire
6. Spills from pump failure
7. Employee strikes (disputes)
8. Emergency power source for running facilities?
9. Water use or source. Is there a permanent water source for running the sewer systems?

The above concerns should be resolved by relocating the proposed facility across highway 11.

Thank you very much for the extension and the opportunity to have our concerns heard.

Mahalo a nui loa,

PELE

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P.O. Box 4969
Hilo, Hawai'i
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Pahala Community

Pele Defense Fund

Palikapu Dedman

President

Terri L. Napeahi

Secretary

P.O. Box 4969

Hilo, Hawaii 97620

peledefensefund@gmail.com

(808) 315-9996

Cc:

Russell Ruderman

Mayor Harry Kim

Councilwoman Maile David

Congresswoman Tulsi Gabbard

Wilson Okamoto Corporation

October 22, 2018

To: The County of Hawai'i, U.S. Environmental Protection Agency,

Brown & Caldwell, Wilson Okamoto Corporation

Re: Move this proposed site! Pāhala Large Capacity Cesspool (LCC) Replacement Project
EPA Grant XP-96942401

We the undersigned, are in opposition of the proposed site for the sewage and wastewater treatment plant located on the corner of Maile St. and Mamalahoa Highway. We feel that this proposed site will have a negative effect on the entire Pahala Community. The residents were not informed or consulted in the selection of this site by the County of Hawai'i, EPA, and their contractors. Concerns relating to this project are, health & safety, environmentally, financially, visually and historically. We propose that the site be relocated below the Mamalahoa Highway, further away from the community. We sign this petition because we care about the quality of life here, which we feel will be permanently and negatively impacted by the proposed site.

Name	Signature	Address	Email
Kayoko Munroe		P.O. Box 967 Pahala, HI	kayolua@gmail.com
Jade Cabreros		P.O. Box 1091 Pahala, HI	jadecabreros@gmail.com
Margie Tamayo		P.O. Box 914 Pahala HI	guican143@yahoo.com
Dorothy Kalua		P.O. Box 606 Pahala HI	
Loretta Lorenzo		P.O. Box 63 Pahala	
Mary Peralta		P.O. Box 492 Pahala	
Rosita Dungganan		P.O. Box 747 Pahala	
Rose Marie Peralta		P.O. Box 492 Pahala	
Kuuan Pascuell		P.O. Box 301 Pahala	
Emily Kahuloa		P.O. Box 394 Pahala	
Robert Darba		P.O. Box 465 Pahala	
Hi'ilei Kaaua		P.O. Box 533 Pahala	
Leilani Aldaya		P.O. Box 43 Pahala	
Joji Watanabe		P.O. Box 114 Pahala	
Doris Davis		P.O. Box 33, Pahala	
Rosita Valladares		P.O. Box 604 Pahala	
Rosaline Rosario		P.O. Box 606 Pahala	
Fely Villegas		P.O. Box 52 Pahala	
August Bello		" " 99 "	
Alfred Galiza		P.O. Box 614 Pahala	
Adela Galiza		" " "	

October 22, 2018

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Name	Signature	Address	Email
Sharon Ponce	Sharon Ponce	P.O. Box 356 Pahala HI	cbponce2@gmail.com
Guy Sesson		POBOX 231 pahala	
Vicki Paaluhi		PO Box 401 Pahala	
Calvin G. Ponce	Calvin G. Ponce	P.O. Box 356 Pahala	
Cy Lopez		P.O Box 484 Pahala	Cyprianlopez@yahoo.com
Kathy Ann		P.O. Box 356 Pahala	
Shai Lopez-Castaneda		P.O. Box 484 Pahala	Slcpahala@yahoo.com
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Jerod Andrade		P.O. BOX 2 PAHALA HI 96777	
Melissa Mariano		P.O BOX 2 Pahala HI 96777	
Maverick Mariano		P.O BOX 2 Pahala HI 96777	
Michael Andrade		P.O BOX 2 Pahala HI 96777	
Marcelina Andrade		P.O Box 2 Pahala HI 96777	
Sherlene Rosario		PO Box 888 Pahala Hi 96777	rakena_v@hotmail.com
Robyn Rosario		P. O Box 688 Pahala 96777	
		P.O Box 396 Pahala	
Mary Ibarra		P.O. Box 396 Pahala	

October 22, 2018

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Name	Signature	Address	Email
Charlene Andrade	Charlene Andrade	P.O. Box 421 Pahala	
Lena Davis-Natividad	Lena Davis Natividad	P.O Box 962	
Jordan Natividad		PO Box 116 Pahala	
Jr. Blanco		PO Box 417 Naalehu	
Joseph Acme		P.O. Box 334 Pahala	
Teresita Arce		PO. Box 116 Pahala	
Guadalupe Blanco		P.O Box 417 Naalehu	
John Moses		P.O. Box 687 Pahala	Keoni217@aol.com
Sherena K. Moses		P.O. Box 687 Pahala HI	Kanani.Kalanicio@aol.com
Dorothy Louis		P.O. Box 672 Pahala Hi	
Norman Kai		P.O Box 672 Pahala Hi	
Allen Fukunaga		P.O. Box 262 Pahala Hi	
Zenaida Aguinaldo		P.O. Box 235 Pahala HI	
Adriano Aguinaldo		P.O. Box 235 Pahala, HI	
Allan Blanco		PO Box 351 Pahala Hi	
Salur Blanco		Box 555 Pahala Hi 96777	
Michael Munnerlyn		Box 967 Pahala Hi 96777	
Mary Jane Ballio		Box 625 Pahala, HI 96777	
Rosie Young		P.O. Box 925 Pahala Hi, 96777	
Raymond Ballio		Box 622 Pahala Hi 96777	

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Name	Signature	Address	Email
Stephanie Kawamura		P.O. Box 62 Pahala	
James Yamaki	James Yamaki	PO Box 204 Pahala	
Jerry Kusumoki	Jerry Kusumoki	P.O. Box 37, Pahala	
Lorene Agustin	Lorene Agustin	P.O. Box 343 Pahala	
Jerry Villon	Jerry Villon	P.O Box 695 Pahala	
Kuuipo K. Dacalio	Kuuipo K. Dacalio	P.O. box 721 pahala	
DON F Dacalio	Don F Dacalio	P.O. Box 721 pahala	
Mariael Craig		PO Box 921 Pahala	
MARY A. Lester	Mary A. Lester	P.O. Box 222	
Michael Silva	Michael Silva	P.O Box 175 Pahala	
Jerry Vidal	JERRY VIDAL	P.O BOX 215 Pahala	
Diana Kamiko		PO Box 33 Pahala	
Alida Aderinto	Alida Aderinto	PO Box 38 HVNP	
Madelina Martinez		Box 384 pahala	
Patricia Schaefer	Patricia Schaefer	Pi Box 575 Pahala	
Corazon Barrios	CORAZON BARRIOS	P.O. Box 578 Pahala	
Jeffrey Gaer	Jeffrey Gaer	Pahala	
Jack Moses		PB 208 Pahala 96777	
Sandy David		Pahala Hi 96777	
Edward Martinez Sr.		PO Box 384 Pahala HI	
Trinidad Aderinto	Trinidad Aderinto	P.O. Box 944 Pahala	
Abigail Aderinto	Abigail Aderinto	Po Box 493 Pahala	

Print Name | Signature | Address | E-mail

BRENDAN DONOHOE | | PO Box 993 Hilo 96721

AYAME TAKAHARA | Ayame Takahara | P.O. Box 716 Pahala

Abigail Aderinto

October 22, 2018

To: The County of Hawai'i, U.S. Environmental Protection Agency,

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Name	Signature	Address	Email
ARTHUR H. KALEOHANO JR.			
Sora Espaniola		P.O Box 826 Pahala HI 96777	soraespaniola@mail.com
Shirley Inocencio		Box 995 Pahala	
Evelyn Asistin		" " "	
Tommie-Jean George		P.O.Box 693 Pahala, HI 96777	
Carlton P. George		"	
ARTHUR KALEOHANO		P.O. Box 131	Pahala
Jan Kaleohano		P.O. Box 131	Pahala
Rewa Goshimura		P.O. Box 776	PAHALA
Yisako Yoshimura		P.O Box 776	PAHALA
Jan Sweetin		PO Box 792	Pahala janandclint@msn.com
Clint Sweetin		Box 792, Pahala	janandclint@msn.com
Beatrice Kaiheana		Box 152 Pahala	NA

October 22, 2018

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Name	Signature	Address	Email
LITA EUGENIO		PAHALA HI-96777	
Shawn IBARRA		PAHALA HI-96777	
Tanya Ibarra		Pahala HI 96777	
Malie Ibarra		Pahala, HI 96777	

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Name	Signature	Address	Email
Stanley Ballo	Stanley Ballo	P.O. Box 922 Pahala	
Carla Andrade	Carla Andrade	P.O. Box 298 Pahala	
Clemant Andrade	Clement Andrade	P.O. Box 298 Pahala	
Clyde Silva	Clyde Silva	P.O. Box 428 Pahala	
Michelle Andrade	Michelle Andrade	P.O. Box 781 Pahala	
Karelle Kaner	[illegible]	PO Box 584 Pahala	
Clifford Kaner Jr.	Clifford Kaner Jr.	Po box 584 Pahala	

October 22, 2018

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Name	Signature	Address	Email
Pemell Hanoa	[signature]	P.O. BOX 488 Pahala	Poelo88@aol.com
Sophia Hanoa	[signature]	P.O. BOX 488 Pahala	Ernapreedom2662@aol.com
HAWK HANOA	[signature]	P.O. BOX 488 PAHALA 96777	
EDWARD ANDRADE II	[signature]	P.O. BOX 514 PAHALA 96777	
Gwen Sorensen	[signature]	Box 27 Pahala 96777	gwendolyn_sorensen@hotmail.com
Debbie Wong Yuen	[signature]	PO Box 29, Pahala 96777	dwong-yuen@hawaiiantel.net
Walter Wong Yuen	[signature]	P.O. Box 29 Pahala 96777	
Patrick Lowe	[signature]	P.O Box 702 " "	
Paris Marques	[signature]	96342 Pahala Hi	
Lenora Lorenzo	[signature]	P.O. Box 779	
Kehau Ke	[signature]	P.O BOX 242 Pahala	
Kai Kalani	[signature]	P.O BOX 242 Pahala	

October 22, 2018

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Name	Signature	Address	Email
Elizabeth Poliko	Elizabeth Poliko	P.O Box 188 Pahala, HI 96777	epoliko@hawaiiantel.net
ALVIN KAILIAWA	Alvin Kailiawa	P.O. BOX 159 96777	
Tina Tuttle	Tina Tuttle	P.O. BOX 1277 Naalehu 96772	
Eleanora Lewis	Eleanora Lewis	P.O Box 398 Pahala Hi 96777	
[illegible]	[illegible]	[illegible]	[illegible]
Jerome Warren	Jerome Warren	95-1202 Milo Rd Naalehu HI 96772	
Jadelyn Keapoua	Jadelyn Keapoua	PO Box 1437/96-1209 Hinano	Pahala, HI

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (67; 69;70)
March 6, 2020

Ms. Terri L. Napeahi, Secretary
Pele Defense Fund
P.O. Box 4969
Hilo, Hawai'i 96720

Subject: Draft Environmental Assessment for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'ū, Hawai'i
Response to Comment- December 10, 2018

Dear Ms. Napeahi:

Thank you for your hand delivered December 10, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. This responds to duplicate letters to Mayor Kim and the Department of Environmental Management.

Our responses follow:

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai'i Department of Transportation. Site 9 would require additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

Flooding

1. The Draft EA Section 3.9.1 (a) states:

   "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.

   According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.

   On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

   The relevant FIRM panel is reproduced in Appendix B as figure 4-13.

   This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a) states:

"The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows drain through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pāhala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated from mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC) Chapter 27 Floodplain Management Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event as shown in the department of public works "Storm Drainage Standards".

Adherence to HCC Chapter 27 Section 20 (f) will ensure the treatment and disposal facility shall not alter the general drainage pattern above or below the development. Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The facilities related to the wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process for any berms intended to act as secondary containment. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA.

2. See 1 above. Based on this analysis, the project will not contribute to an increase in road closures due to flooding.

3. See 1 above. As a result, heavy debris generated from the proposed project will be designed to be retained onsite.

4. The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube

opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019, a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with SHPD.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

Based on information in 1 and above, excessive damage to lava tubes and burials will not result from construction of the collection system or construction of the treatment and disposal facility at the proposed project Site 7.

This information will be included in the final EA.

5. The Draft EA Figure 2.3 shows the intersection of Maile Street and Māmalahoa Highway lies at about 580 feet above mean sea level (MSL). The Draft EA Figure 2.2 shows the Pāʻauʻau Gulch crosses under Māmalahoa Highway near the hospital about 0.88 miles north of that intersection and lies at approximately 780 feet MSL or about 200 feet higher in elevation than the culvert at the Maile Street and Māmalahoa Highway intersection. Due to this distance and the elevation difference, surface flows at Site 7 would not affect the gulch. Similarly, the Kaimani Street and Māmalahoa Highway intersection lies about 0.84 miles

north of the proposed facility site and at about 780 feet MSL. Surface flows at the facility would also not affect that intersection. Figures 2.2 and 2.3 will be repeated in the Final EA.

Based on this information and 1 above, development of the treatment and disposal facility is not anticipated to create restrictions related to access to hospital and emergency facilities.

6. See 1 and 5 above. In accordance with Hawaii Fire Department requirements, Fire Department access and water supply to the proposed Site 7 will be designed to comply with Chapter 18 of NFPA 2006 Uniform Fire Code as amended by Hawaii County.

Section 106

1. See 4 above in **Flooding** section. Geophysical and geotechnical subsurface testing will be completed for the Pāhala Large Capacity Cesspool Replacement Project.

2. See 4 above in **Flooding** section.

Hook Ups

1. The Draft EA Section 2.1.4 states:

   "Around 2006, C. Brewer requested the County construct and maintain a new and improved community sewer system. A County Council Resolution approved the C. Brewer request. In anticipation of C. Brewer's dissolution, C. Brewer proposed, and the County agreed in 2007, to enter into a formal agreement to not only construct and maintain a new and improved community sewer system but to assume ownership of the existing system including the LCC's by April 30, 2010."

   The agreements are not pertinent to the content requirements of the Pāhala Large Capacity Cesspool Replacement Project Draft EA.

2. The Draft EA Section 2.3 states, the County would acquire, or otherwise obtain the right to develop and use, a portion of the 42.5-acre Site 7, then construct a new secondary wastewater treatment and disposal facility within a portion of the parcel. The Final EA will note, the County is working with the current landowner, BP Bishop Estate Trustees (Kamehameha Schools), to subdivide the 42.5-acre parcel (Tax Map Key (TMK): 9-6-002:018) to acquire the property by means of the method they prefer. Sites 7, 8 and 9 would all involve a similar property acquisition process, as all are currently owned by the same entity. Additional property acquisition is not anticipated for the Preferred Action beyond that outlined in Section 2.3.

3. The County's intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources.

   In order to meet the intent as stated in the 2017 AOC, the County has committed to perform the following actions for the Pāhala Large Capacity Cesspool Replacement project:

   i. Construct a secondary wastewater treatment facility;
   ii. Replace the wastewater collection system serving Pāhala Community; and
   iii. Close the Pāhala community cesspools.

   Completion of the above actions includes connecting those properties currently served by the LCCs to the proposed new wastewater collection, treatment and disposal system. Once the actual costs are determined, County Council action is still required to approve the expenditures.

   The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the County-operated Pāhala LCCs. The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system. The Draft EA Section 2.3.2 states the new collection system would be subject to the County of Hawai'i Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

   "*(a)Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice*."

   Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the

new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

4. This is not a comment pertinent to the content requirement of the Draft EA.

5. See 3 above.

6. The Draft EA Section 2.1.3 states:

   "In 1999, EPA promulgated regulations under the Safe Drinking Water Act's (SDWA) Underground Injection Control (UIC) Program which prohibited the construction of new LCCs as of April 2000 and required the closure of all existing LCCs by April 5, 2005 (40 CFR § 144.88). Under federal regulations, an LCC is a cesspool which serves multiple dwellings, or for non-residential facilities has the capacity to serve 20 or more persons per day. Cesspools can release disease-causing pathogens and other pollutants (e.g., nitrates) into groundwater aquifers, streams, and eventually the ocean, thus leading to public health and environmental concerns."

   In June 2017, EPA and the County entered into an Administrative Order on Consent (AOC) to close the County-operated LCCs serving the Pāhala Community by June 2021."

   40 C.F.R. § 144.88 applies to all existing LCCs across the nation. Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently using cesspools for sewage disposal.

7. No groundwater quality data is available in the vicinity of the existing LCCs. The Draft EA Section 2.2 states:

   "The purpose of the actions considered in this Environmental Assessment (EA) is to provide the infrastructure necessary to enable the County to comply with the SDWA and fulfill the compliance provisions of the AOC between EPA and the County with respect to closure of the Pāhala LCCs by June 2021.

   The need for action is driven by the public health and environmental concerns associated with LCCs, as described in Section 2.1.3." (See 6 above).

8. No.

Nuisance

1. The Draft EA Section 3.14.2 states:

   "Wastewater treatment plants can be a source of nuisance odors to the surrounding community if not properly designed or operated. Typically, nuisance odors are most commonly associated with anaerobic (without oxygen) conditions and with processing of residual solids. Incoming raw sewage flows to the proposed wastewater treatment and disposal facility would first be routed to the headworks, which is the facility where the solids are removed from the flows.

   To mitigate potential nuisance odors, the headworks would be equipped with an odor control system with a granulated activated carbon (GAC) scrubber to remove odors. A GAC scrubber passes the odorous air through a bed of activated carbon, which adsorbs the odorous constituents within the pore spaces of the carbon. The County currently operates GAC scrubbers at other facilities, and it has been proven to be an effective means of odor control both locally and nationwide. The treatment lagoons would be equipped with mechanical aerators capable of maintaining sufficiently aerobic (with oxygen) conditions within the water column, which would prevent nuisance odor conditions from occurring. The disposal groves would be irrigated with fully-treated and aerobic secondary effluent from the treatment process; irrigation with secondary effluent is not associated with development of nuisance odor conditions."

   This information will be repeated in the Final EA Section 3.14.2.

2. The proposed site plan is included in the Draft EA as Figure 2.3. As noted in Section 2.3.1, "disposal of the treated and disinfected effluent would be accomplished through land treatment in four groves of native, water-tolerant trees occupying a total area of approximately 8.0 acres." This 8.0 acre planted area, combined with the sloping site topography and existing Cook pine trees (*Araucaria columnaris*) on Maile Street, will provide a visual buffer from both the Māmalahoa Highway and Maile Street. As outlined in Section 3.19.2 of the Draft EA, the Proposed Action is not expected to adversely affect the views or viewsheds identified in the County General Plan. The wastewater collection system would be installed below the streets and therefore would not impact views. Above grade structures may include the operations building, headworks and UV cover structures, fuel storage tank, and low berms around the groves. The existing pine trees along Maile Street, most of which would remain with no changes, would continue to obstruct the viewplanes

from Maile Street. The facility site would be adjacent (mauka) to, and visible from, Māmalahoa Highway (State Route 11); however, impacts to the viewplane would be mitigated by the planted trees in the basins and by the rise in elevation between the highway and the facility.

The Draft EA Section 2.3.1 states the driveway access to the wastewater treatment and disposal facility will be located west (mauka) of the Maile Street and Māmalahoa Highway intersection. Appropriate signs identifying the facility will be posted at the driveway access.

This information will be repeated in the Final EA.

3. The County's intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry-standard wastewater collection system. The new sewer will replace the old, and there will be less likelihood of pests attracted to the modern, intact system.

4. The aerated lagoon plant design will not result in the migration of aerosols outside of the site boundaries. In addition, disinfection processes selectively kill pathogens or render them incapable of reproduction or harm to humans. As outlined in the Draft EA Appendix B Section 3.2, continuous disinfection of the treated effluent will be provided to protect human health and the environment. The land application groves will incorporate a distribution system at the ground surface which will not produce aerosols (Appendix B, section 4.5.1).

Natural Disasters

1. The County will develop a facility management plan in accordance with applicable rules and regulations.

2. Seismic loading, including earthquake and soil loads, will be taken into account during detailed design. The Draft EA Section 3.4.2 states:

"Hawai'i County Code Chapter 5 (Building), Section 5.3 indicates the "International Building Code, 2006 Edition" (IBC) – copyrighted and published in 2006 by the International Code Council, Incorporated – is adopted by the County. Chapter 5 is the applicable code for the construction of buildings, structures, and facilities in the County. The purpose of the seismic provisions in the IBC is primarily to safeguard against major structural failures and loss of life; limiting damage or maintaining functions is not a primary purpose. At a minimum, structures are to be designed and constructed to resist the effects of ground motions from seismic events. The seismic hazard characteristics described in the IBC are based on the seismic zone and proximity of the site to active seismic sources.

The wastewater treatment and disposal facility would be designed and constructed to meet the requirements of the 2006 IBC and Hawai'i County Code Chapter 5 and would comply with seismic loadings established for the County of Hawai'i. This would minimize the potential for an uncontrolled release of untreated or partially treated sanitary wastewater, emergency generator diesel fuel, or disinfection chemicals from the facility during a seismic event."

3. See 1 in **Flooding** above.

4. Hazards related to hurricanes, such as wind, rain, and flood loads, will be taken into account during detailed design. Applicable regulations and standards, including IBC 2006, will be adhered to.

5. The Draft EA Section 3.22.2 states:

"The proposed wastewater treatment and disposal facility would require potable water and fire protection lines from the end of the existing DWS system to the preferred location of the headworks [and] operations building"

All alternatives would be designed according to NFPA 820 "Standard for Fire Protection in Wastewater Treatment and Collection Facilities." In accordance with Hawaii Fire Department requirements, Fire Department access and water supply to the proposed Site 7 will be designed to comply with Chapter 18 of NFPA 2006 Uniform Fire Code as amended by Hawaii County.

This information will be included in the Final EA Section 3.22.2.

6. The Draft EA, Appendix B, Section 4 describes the facility, and contains preliminary design information, including redundant equipment and processes. The Draft EA, Section 3.24.2 states: "A land-line and/or cellular telephone telemetry system would be used to connect the wastewater treatment and disposal facility to DEM and facilitate communication with staff." As outlined in the Draft EA, Appendix B, Section 4.6.6, this system will have an auto-dialer to inform operators of alarm conditions. In addition, the treatment processes will be appropriately designed to have capacity to accommodate upset conditions, including pump and other equipment failures and operational procedures in place to address mechanical and electrical outages. "A standby power system would be provided by a diesel generator and aboveground fuel tank with capacity to support three consecutive days of operation. An electrical service panel would be equipped with a manual transfer switch and generator receptacle. This would provide a connection to a trailer-mounted generator, in the event of [standby] generator failure…."

7. The proposed facility will be managed in accordance with County of Hawaii policies and procedures in the event of a labor disruption.

8. See 6 above.

9. Operation of the sewer system will not require a water source external to the proposed treatment and disposal facility. As stated in the Draft EA Section 2.3.1, "A 25-foot-wide by 1,500-foot-long easement located along the northern edge of the parc el would be used to provide access to utilities from Maile Street to the treatment and disposal facility. The easement would contain the incoming sewer line from the collection system, potable water line…"

   Figure 2.3 shows the potential location of a fire hydrant. The Draft EA Section 3.22.2 states: "The proposed wastewater treatment and disposal facility would require potable water and fire protection lines from the end of the existing DWS system to the preferred location of the headworks [and] operations building." Further: "As required by DWS, construction plans would show the estimated maximum daily water usage calculations prepared by a professional engineer licensed in the State of Hawai'i. After review of the calculations, DWS would determine if enough water is available and a water commitment could be issued."

   The above information will be repeated in the Final EA.

   Applicable portions of the above will be repeated or included in the Final EA.

The signed petition will be included in the Final EA. Please refer to the response to the 10/25/18 comment letter submitted by the Pele Defense Fund for additional information.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC

P. Goodwin, ERG

#55
10349-01
12/17/18
cc: BC COH
EPA ERB

Earl Matsukawa

From: ngaire gilmour <ngaire_@hotmail.com>
Sent: Monday, December 10, 2018 5:01 PM
To: Public Comment
Subject: Community Comments
Attachments: Large Capacity Cesspool EA 12.8.18.odt

Please find attached

Ngaire Gilmour,
PO Box 843,
96-3190 Pakalana St.,
Pahala, HI 96777
ngaire_@hotmail.com

December 10, 2018

Wilson Okamoto Corp.,
1907 South Beretania St, Suite 400,
Honolulu, HI 96826

Attention: Mr. Earl Matsukawa
Subject: Draft EA: Public Comments Re: Pahala Community Large Capacity Cesspool (LCC) Replacement Project

1. The consideration of the use of alternative energy sources (wind, solar, methane) would put the project further down the road in attempting to decrease emissions. To go into this project with the idea of "hooking up to HELCO" and relying on diesel generators for emergency is not looking to the future. Please look beyond the 'grid' for energy.

2. The suggestion was made at the meeting on 10/10/18 to look at the possibility of moving the project across the highway to site 9, using the current tunnel that runs under the highway that was installed by the sugar industry.
   a) Members of the community have concerns about the use of the site 7 location, based on historical information.
      - Please speak to the elders.

3. A great concern for me is regarding 'newly accessible lots' for the near future as well as more long term.
   a) Homes on gang cesspools (LCC) will be grandfathered onto the new sewage system, as they should be, but the County will extend the system beyond the LCC's and beyond what is required by the Federal Government at this time.
      - This will require 'newly accessible lots' to join the new sewage system at the lot owner's expense` now and in the future.
        - EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, serves to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from federal actions and policies on minority and low income.
          - To quote the EA "Sensitive populations, such as low-income families, minorities, and children, are present within the Pahala area. Areas within the community have sensitive populations with higher minority and low-income populations than the state averages."
   b) The County and/or State need to find an alternate source of funding for all lots within their planned project.

I fully support a project that will benefit the environment, the community, and the County and State of Hawaii, as this will. My concern lies in the impact on historically sensitive land, with no plan for the use of alternative energy sources, and the affect on my community of shackling the residents with the cost of mandatory connection. This would not be serving anyone in the long run.

Sincerely submitted,
Ngaire Gilmour

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (73)
March 6, 2020

Ms. Ngaire Gilmour
P.O. Box 843
96-3190 Pakalana St.
Pāhala, Hawai‘i 96777

ngaire.joy@gmail.com

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘ū, Hawai‘i
Response to Comment - December 10, 2018 5:01 p.m.

Dear Ms. Gilmour:

Thank you for your December 10, 2018 5:01 p.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

1.
As outlined in the Draft EA, Section 2.3.1, the Proposed Alternative does not include utilizing alternative energy systems such as photovoltaic solar or wind as a total replacement for connection to the HELCO grid due to:

- the need for consistent power supply;
- up front capital cost;
- insufficient space on the 14.9-acre proposed site to accommodate alternative energy systems;
- the objective to minimize the amount of land area removed from agricultural production; and
- EPA-enforced project deadlines.

Emergency backup power is required whether alternative or traditional energy systems are utilized. Partial augmentation of traditional power utilizing photovoltaic solar panel arrays on the headworks and operations building rooftops, however, is feasible and will be further analyzed during the detailed design phase after loads and demand patterns are better understood. Additional alternative energy systems can be added in the future if prioritized and funded by County Council, and the proposed electrical systems will be designed to accept or be adaptable to additional alternative energy input.

Methane gas is generated at wastewater treatment plants using a process called anaerobic digestion. The proposed wastewater treatment plant (WWTP) is too small for anaerobic digestion to be economical. The dry weather design flow to the Pahala WWTP is 190,000 gallons per day, and anaerobic digestion is only economically attractive for WWTPs that treat at least 5 to 10 million gallons per day. In addition, the anaerobic digestion process requires primary clarifiers as part of the liquid treatment process, but primary clarifiers tend to be odorous in tropical climates, due to the relatively high wastewater temperatures. The proposed alternative relies on natural treatment systems that require relatively low energy input. Additional detail regarding the preliminary analysis of alternative energy options can be found in the Final EA, Appendix B.

This information will be included in the Final EA

2.
The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

The Draft EA Section 2.5 describes Site 9, which is south (makai) of the Preferred Alternative Site 7. As outlined in Appendix B Section 8, Site 9 earned a lower ranking than Site 7 for the following criteria: presence of and/or proximity to archaeological/cultural sites, existing vehicle access, power and potable water availability, and distance from the area of the wastewater collection system. Site 7 had a lower ranking than Site 9 in one category: topography. With the distance between the two sites less than 300 feet, they were ranked equally for the criteria of proximity of treatment units to existing occupied buildings.

The Draft EA Sections 2.5 and 2.7 provide information as to the issues related to the use of Site 9. An unnamed stream near the upper portion of the parcel could affect the selected configuration of the wastewater treatment facility and the land application groves. Potentially, to maximize energy efficiency by taking advantage of gravity flow, the headworks, lagoons and the subsurface constructed wetlands could be sited in the upper portion of the site, or the area closest to the highway. In addition, since the site is located across Māmalahoa Highway from the Pāhala community, it would require construction of piping and other utilities within the highway ROW and approval by the State of Hawai‘i Department of Transportation. Site 9 would require

additional access roads to facilitate both construction and operation of the treatment and disposal facility and a slightly longer transmission line given its increased distance from the existing LCCs.

This information will be included in the Final EA.

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3 provides the Preliminary Site Plan for the new treatment and disposal facility, which shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were present on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the Final EA.

The Draft EA Section 3.15 provides information on the archaeological and cultural resources related to the Pāhala Large Capacity Cesspool Replacement project. The Draft EA Section 3.15

states, on March 29, 2018, consultation was initiated for the project under the National Historic Preservation Act. The Draft EA Section 10 provides a list a list of the consulted parties. The Final EA Section 3.15 will include that the list of Native Hawaiian Organizations (NHO) was generated by the EPA from the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization (NHO) Notification List for NHPA Section 106 and HRS Chapter 6E compliance. Letters were sent to 14 NHOs during the pre-assessment consultation. No responses were received from these organizations.

The HRS Chapter 6E determination and Section 106 review packet were submitted to SHPD with a draft archaeological inventory survey (AIS) on March 13, 2019. SHPD response is pending. The Draft EA Section 3.15.2 states that prior to finalization of this EA and initiation of the Proposed Action, the Environmental Protection Agency (EPA) and the County of Hawai‘i will conclude consultation with SHPD in accordance with Section 106 of the NHPA and will incorporate additional impact avoidance and minimization measures as necessary to result in a finding of no adverse effects to historic properties.

The Final EA Section 7 will be include that on September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers. The public notice was to advertise the October 10, 2018, public information meeting conducted by the County in the Pāhala at the Ka‘ū Gym Multi-Purpose Conference Room to discuss the availability of the Draft EA and process for submitting comments. The notice stated that the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006),involving consultation with Native Hawaiian Organizations and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and cultural religious attachment to the proposed project area. Eight persons placed their names on a sign in sheet at the October 10, 2018 public meeting to contribute during the second part of the meeting dedicated to the Section 106 consultation. No comments or information were forthcoming during the Section 106 portion of the meeting.

3. a) and b)
The Draft EA Section 2.2 describes the purpose of the Pāhala Large Capacity Cesspool Replacement project is to close the Pāhala large capacity cesspools (LCC). The County’s intent, as stated in the June 22, 2017 US Environmental Protection Agency Region 9 Administrative Order on Consent is to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility, a basic service to the Pāhala community, to eliminate underground injection from LCCs it operates to help protect underground drinking water sources.

The Draft EA Section 2.3.2 discusses the construction of a new sewer collection system in the Pāhala community to replace the existing system of substandard gravity lines that currently conveys sewage to the two LCCs. As described in Section 6.2.1, the current collection system includes facilities located in the backyards of many parcels. Where easements for the existing

collection system aren't accessible, the County must obtain permission from individual landowners to enter them, through private property, to inspect, maintain, repair or replace existing sewer facilities: all activities essential to an efficient, functioning system. As a result, the proposed new collection system would consist of a total of approximately 12,150 linear feet (LF) (2.3 miles) of corrosion-resistant polyvinyl chloride (PVC) piping located almost entirely within the right of way (ROW) of eight public streets.

The extent of the collection system is to ensure the parcels connected to the former C. Brewer system will have access to the treatment and disposal facility so the large capacity cesspools can be closed. It is conventional to extend the utility to the nearest intersection to minimize the number of manholes.

The Draft EA, Section 2.3.2, states the new collection system would be subject to the Hawai'i County Code (HCC) Chapter 21, Sewers, specifically, Article 2 (Public Sewers), Section 21-5, which states the following:

"*(a) Owners of all dwellings, buildings, or properties used for human occupancy, employment, recreation, or other purposes, which are accessible to a sewer are required at their expense to connect directly with the public sewer within 180 days after date of official notice."*

All accessible properties will be required to connect to the new wastewater collection system in accordance with Hawaii County Code, Chapter 21, Article 2, Section 21-5. However, the County entered into an agreement with C. Brewer (in April 2007) to eliminate LCCs from the existing community sewer systems and connect properties discharging to them to new County collection, treatment and disposal systems. Once the actual costs are determined, County Council action is still required to approve the expenditures.

Each adjacent lot will be provided with a lateral connection to the sewer main as required by HCC and standards. Under the Preferred Alternative, the design of the new collection system would extend between street intersections and include sewer service stub-outs (the lateral connection to the sewer main) to the lot lines of adjacent properties, including the newly accessible, to accommodate their eventual connection. Accordingly, to close the existing LCCs, there will be additional properties in Pāhala that would be required to connect to the new wastewater collection system, at their expense, after it becomes operational. Such properties are near the existing service area but are presently connected to individual wastewater systems. To conform to the stated section of HCC, the respective, newly accessible property owners would be responsible for the design, permitting and completion of sewer service connections between the County stub-outs and improvements for stated uses on their property, as well as for the proper closure of their individual wastewater systems. The Draft EA Figure 2.6 shows the area of the community serviced by the current and proposed collection systems.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA. Although not required by Hawaii Administrative Rules (HAR) Title 11, Chapter 200, DEM voluntarily convened two additional public meetings on October 9, 2018 and March 21, 2019 to gain further input from newly accessible property owners and present funding options for them to pursue.

The Draft EA Section 7 will be revised to add that the County held additional meetings in Pāhala including one to provide information on financing sources available to owners of parcels which would become accessible to the County collection system. The purpose of the March 21, 2019 meeting was to fulfill a County commitment made in October, 2018 to research financing options available to the newly accessible residents of the Pahala Community. At the meeting, DEM provided the preliminary results of the County investigation into funding sources and options available to newly accessible property owners once the new treatment and disposal facility and wastewater collection system have been designed, permitted and constructed.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawaii Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawaii Legislature, Senate Bill 221 SD1, which could amend Hawaii Revised Statutes (HRS) Chapter §342D to establish a low interest loan program to offer financial assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

Closure of individual cesspools is mandated by legislation at the State level. In 2017, Act 125 was enacted by the Hawai'i State legislature requiring all cesspools, not exempted by the Department of Health, be upgraded or converted to septic systems, or aerobic treatment unit systems, or connected to sewage systems by January 1, 2050. Though closure of individual wastewater systems by the County is not part of the Proposed Action, this legislation will affect all parcels in Pāhala currently utilizing cesspools for sewage disposal.

The Draft EA Section 6.2.2 discusses the Ka'ū Community Development Plan (CDP): "Section 5 of the CDP prioritizes improvements in infrastructure, facilities, and services, including Section 5.8 which applicable to … Environmental management facilities, including expanded

sewer lines, …". Policy 120 is to "Extend the primary wastewater collection lines in Pāhala and Nāʻālehu so that infill development projects can connect wastewater systems built for new subdivisions to the County systems."

The collection system will be consistent with Policy 120 as the improvements for the Pāhala (LCC) Replacement project have been designed not to preclude accommodating the Pāhala community. Similarly, the treatment and disposal facility has been designed not to preclude accommodating the wastewater flows from the collection system from the Pāhala community.

This information will be included in the Final EA.

The Draft EA Section 3.16 provides information on the socioeconomic characteristics of the Pāhala community.

The Draft EA Section 5.7 Environmental Justice Executive Order 12898 will be revised as follows

Executive Order 12898, Environmental Justice (full title Federal Actions to Address Environmental Justice to Minority and Low Income Populations), was signed on February 11, 1994. The intent of Executive Order 12898 is to avoid disproportionately high adverse human health or environmental effects of projects on minority and low income populations. Executive Order 12898 also requires federal agencies ensure that minority and low-income communities have adequate access to public information related to health and the environment.

The 2017 American Community Survey (ACS) (5-Year Estimates) is the most recent information related to socioeconomic conditions in the state and County. The 2017 ACS includes Hawaiʻi Geographic Area Profiles – Census Designated Places: Neighbor Islands. The ACS noted it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

For purposes of this assessment, and to correspond with the available ACS demographic characteristic data, "low income" is defined as having a household income of less than $24,999; "minority" is defined as any race population other than White; and "children" is defined as the "Under 5 to 19" age category. Pāhala has more households in the "less than $24,999" income bracket (33.7 percent) than the County as a whole (26.3 percent).

Overall, Pāhala is characterized by a racial composition that includes a greater proportion of minorities (92.1 percent non-White) than the County at large (66.8 percent non-White). The racial distribution includes a much lower proportion of White residents, a much higher proportion of Filipino residents, and lower populations of other minority groups, including

Native Hawaiians when compared to the County. There are also more residents of two or more races in Pāhala than in the County.

Pāhala has a similar age distribution to Hawaiʻi County, although Pāhala has a higher proportion of individuals in the "Under 5 to 19" age category (28.5 percent) compared to the County as a whole (24.4 percent).

Based on the above, Pāhala has a higher proportion of low-income, minority, and children residents as compared to the County as a whole. However, the Proposed Action will not result in disproportionately high and adverse human health or environmental effects on these sensitive populations. The design and location of the proposed wastewater treatment and disposal facility will minimize odor and air quality impacts. Construction of the wastewater collection system will result in intermittent and unavoidable noise from construction vehicles and equipment within the Pāhala community, including noise associated with the removal of bedrock. However, construction activities within the community will comply with provisions of HAR 11-46 (Community Noise Control). This includes obtaining a noise permit for any activities that will generate noise exceeding the permissible sound levels specified in HAR 11-46. The permit will limit excessive noise sources to daytime hours; will require the use of best available control technology to control noise levels from excessive noise sources; and will require the applicant to notify affected members of the public in advance of any planned nighttime construction activity (which must not exceed the permissible sound levels). Overall, the Proposed Action is expected to result in positive human health and environmental effects to Pāhala residents by providing a cleaner and longer-lasting wastewater treatment system.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

(10349-01) #56
12/17/18 EA 44

Earl Matsukawa

CC RC COH P.3&4
EPA ERG

From: WKF <foxw001@hawaii.rr.com>
Sent: Monday, December 10, 2018 5:34 PM
To: Public Comment
Subject: Draft Environmental Assessment for the Pahala Large Capacity Cesspool (LCC) Replacement Project

Aloha,

I am submitting these comments in response to the draft environmental assessment published in the September 23, 2018 Environmental Notice.

According to Section 3.15, Archaeological and Cultural Resources, the existing conditions for Preferred Alternative (Site 7) mention evidence from plantation-era documents of an opening of a lava tube containing human remains which once existed in the southeastern corner of the parcel. It is my understanding that the County completed an archeological inventory survey (AIS) of the preferred location in September 2018. However, I am not sure if the survey included this southeastern corner as the footprint of the facility does not seem to extend into this portion of the parcel. The County should use its best efforts to identify the location of this burial cave. If necessary, the limits of the inventory survey should be expanded to include this southeastern corner. The objective is to locate the burial cave so that the physical and spiritual integrity of the cave and the *iwi kupuna* can be protected. By identifying the location, consultation with descendants, SHPD, and the Hawaii Island Burial Council can be completed to determine appropriate physical buffers for the facility. Furthermore, out of respect for Hawaiian cultural values, it is imperative that that the burial cave not be subject to any waste water disposal whether it is treated or untreated, intentional or unintentional. Confirmation that the burial cave is located at a higher elevation than the proposed facility may be sufficient.

I appreciate your consideration of these comments. Please feel free to contact me with any questions or concerns.

Thank you,

Keoni Fox
48-472 Kamehameha Hwy
Kaneohe, HI 96744
(808) 351-6279 mobile
foxw001@hawaii.rr.com

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10349-01 ref (74)
March 6, 2020

Mr. Keoni Fox
48-472 Kamehameha Highway
Kaneohe, Hawai‘i 96744

Subject: Draft Environmental Assessment for the
Pāhala Large Capacity Cesspool Replacement Project
District of, Ka‘ū, Hawai‘i
Response to Comment - December 10, 2018; 5:34 p.m.

Dear Mr. Fox:

Thank you for your December 10, 2018 5:34 p.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA Section 3.15 references a November 2016 archaeological field inspection report that states, while the historical ground modifications have likely limited the archaeological potential of the site, the discovery of both pre- and post-contact surface artifacts within the 42.5-acre parcel (which includes Site 7), as well as evidence from plantation-era documents that the opening of a lava tube containing human remains once existed in the southeastern corner of the parcel, indicate that further archaeological studies may be necessary. The Final EA will clarify that the report also stated it would be advisable to limit the development footprint to exclude the southeastern corner of the 42.5-acre parcel. This area, which is presently not used as a macadamia nut orchard, but forms part of the macadamia nut processing plant complex, is the location of a known (but sealed) lava tube opening that local informants have indicated is linked to tubes that possess traditional human burials. Further, by excluding this section of the parcel, it will be possible to avoid at least one known historic property. The Draft EA Figure 2.3, which provides the Preliminary Site Plan for the new treatment and disposal facility, shows the 14.9-acre project site has been developed to exclude the area in the southeastern corner identified as the location of the sealed lava tube opening.

Between September 18, 2018 and January 10, 2019 a team of qualified archaeologists conducted a pedestrian survey of the proposed project site and completed subsurface trenching to determine the presence of archaeological resources. The work was undertaken in accordance with the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) requirements, with the archaeological inventory survey (AIS) approach accepted by SHPD in their August 20, 2018 letter. The results of the survey and subsurface trenching showed no burials or lava tube openings were identified on-site. The AIS submitted to SHPD in March 2019 documents that a sealed lava tube opening is located east of the proposed wastewater

treatment and disposal facility project site, outside the proposed property boundary, and outside of the area of potential effect considered in consultation with the SHPD.

The complete document is available for download from the County's website at: http://records.co.hawaii.hi.us/weblink/1/edoc/100962/Draft%20Archeological%20Inventory%20Survey%20-%20Pahala%20WWTP%20and%20Sewer%20System.pdf

A geophysical survey of the proposed project area will be performed during detailed design with the specific intent to locate subsurface voids (such as lava tubes) present beneath the site that may impact design and construction of the new wastewater treatment, disposal and collection systems.

This information will be included in the Final EA.

The Draft EA Section 2.3.1 states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. Thus, untreated wastewater will not enter the ground beneath the WWTP. In addition, the preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane.

The Draft EA Summary shows the Hawai'i Island Burial Council was consulted as part of the Draft EA preparation process. The Draft EA Section 3.15 states, on March 29, 2018, consultation was initiated for the project under the National Historic Preservation Act. The Draft EA Section 10 provides a list of the consulted parties. The Final EA Section 3.15 include that the list of Native Hawaiian Organizations (NHO) was generated by the EPA from the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization (NHO) Notification List for HRS Chapter 6E and NHPA Section 106 compliance. Letters were sent to 14 NHOs during the pre-assessment consultation. No responses were received from these organizations.

The HRS Chapter 6E determination and Section 106 review packet were submitted to SHPD with a draft AIS on March 13, 2019. SHPD response is pending. The Draft EA Section 3.15.2, states thatprior to finalization of this EA and initiation of the Proposed Action, EPA and the County of Hawai'i will conclude consultation with SHPD in accordance with Section 106 of the NHPA and will incorporate additional impact avoidance and minimization measures as necessary to result in a finding of no adverse effects to historic properties.

The Final EA Section 7 will include that on September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers. The public notice was to

advertise the October 10, 2018 public information meeting conducted by the County in Pāhala at the Ka'ū Gym Multi-Purpose Conference Room to discuss the availability of the Draft EA process for submitting comments. The notice stated that the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006) involving consultation with Native Hawaiian Organizations and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and cultural religious attachment to the proposed project area. Eight persons placed their names on a sign in sheet at the beginning of the October 10, 2018 meeting to contribute during the second part of the meeting dedicated to the Section 106 consultation. No comments or information were forthcoming during the Section 106 portion of the meeting.

The above will be repeated or included in the Final EA as applicable.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

10349-01
12/27/18
cc: BC COH
EPA ERG

B. Noelani Hong, Ph.D., OTR/L
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RECEIVED
2018 NOV 5 PM 2:31
OFFICE OF THE MAYOR
COUNTY OF HAWAII

October 28, 2018

Mayor Harry Kim
Hawaii County Bldg.
25 Aupuni St.
Hilo, HI 96720

Dear Mayor Kim:

Again, and again, mahalo nui for all your untiring, unceasing work for us, the people of Hawai'i.

Since I'm not at home at the moment, I would like to request your support for reconsidering the type and location of the Pahala sewer treatment plant. With the longtime history of flooding from rain, storms, and hurricanes from the slopes of Mauna Loa down through Wood Valley, Pahala, and Ka'u, the open sewer reservoir would flood, overflowing it, the toxins (in air) and water, bacteria, and chemicals overground, over highway 11 and to all the lower lying areas and into the ocean and land conservation, preservation areas of Ka'u. Prior floods are testament to this; with the roads and bridges in that area breaking and cracking. There must be a better plan to protect the safety and health of the communities and families who live in that area. Pahala has endured so must negative impact from a variety of issues over many years, as you are well aware.

Please kokua. I sent an email to the EA consultant to that project and did not receive a response. I also contacted Dr. Josh Green, and he responded, saying that he would try to help. He is aware of this problem.

With kind regards and aloha,

Noelani

Noelani Hong

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10349-01 ref (76)
March 6, 2020

Dr. B Noelani Hong, PhD, OTR/L
P.O. Box 64
Volcano, Hawai'i 96785

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'ū, Hawai'i
Response to Comment - October 28, 2018

Dear Dr. Hong:

Thank you for your October 28, 2018 comment letter regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2- percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawai'i Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the County of Hawai'i Department of Public Works confirmed that the proposed treatment and disposal project site is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows drain through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawai'i Department of Transportation (DOT) Hawai'i District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated at that location by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flows back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed wastewater treatment and disposal facilities will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system will meet the requirements of Hawai'i County Code (HCC), Chapter 27 **Floodplain Management**, Section 20, **Standards for subdivisions and other developments** (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the

expected [design] storm event as shown in the department of public works "Storm Drainage Standards".

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project site "shall not alter the general drainage pattern above or below the development". Thus, for the HCC design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage report will be prepared during the design process to evaluate the improvements that are necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1 states the aerated lagoons will be lined with to prevent water seepage through the bottom and sides of the lagoons. The Draft EA, Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process for any berms intended to act as secondary containment. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

Treatment process options are discussed in Section 2.8.2 of the DEA. In summary, any "type" of wastewater treatment process (such as e.g., aerated lagoons, activated sludge "mechanical" treatment plants, etc.) must incorporate both peak flows from the collection system and precipitation that falls on the exposed process components into the design. The proposed aerated lagoon system is a "flow through" process, not a storage reservoir. Wastewater from the community (including peak wet weather flows) will move through the lagoon system to the disposal system and will not be stored in the lagoons. The proposed aerated lagoon system will be lined and designed to have adequate freeboard to contain the required storm event and not overflow offsite. Further:

- stormwater flows generated outside of the treatment and disposal facility will be directed around the site;
- an onsite stormwater collection and management system will contain runoff generated at the facility; and
- the proposed land application groves will be designed to completely contain both peak effluent flows and precipitation from a design storm event.

Because the above measures would be incorporated no matter what "type" of treatment process is chosen, flooding was not a criterion specifically evaluated as part of the treatment process selection.

This information will be included in the Final EA.

The Draft EA Section 2.7 describes the site selection process, including the factors and their relative weights used to evaluate the various sites. Further, Section 2.7 describes the twenty-one criteria within four general categories (environmental, social and cultural; location and site; land use and availability; and collection system and service area) that were established and defined for the analysis. The Draft EA Appendix B, Section 8, provides additional information regarding the site selection process. As a result of this process, the County identified three sites (Sites 7, 8, and 9) as reasonable alternatives for construction of the wastewater treatment and disposal facility under the Proposed Action. The final scores for Sites 7, 8, and 9 were 4.33, 4.06, and 4.10 respectively, out of a total possible score of 5. None of the three sites were located in Special Flood Hazard Areas as designated on the FIRM map in Appendix B. Based on this analysis, Site 7 was selected as the Preferred Alternative. The site is easily accessible, has good soils for a land application system, and is close to the existing LCCs.

This information will be included in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#1

Earl Matsukawa

woc10-18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 8:57 AM
To: Public Comment
Cc: Sandy Shore; kaena.horowitz@hawaiicounty.gov; Bhat Simi (ENRD)
Subject: Fw: FW: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pāhala Community Outreach Plan and Naalehu Community Outreach Plan [#123]
Attachments: 08-21-18 S. Demourelle Acknow-to-Requester-Rev-5.14 (1).pdf; 20180831125856647.pdf

Comment # 1

The County of Hawaii Department of Environmental Management ("COHDEM") is currently in a second violation of the HEPA (HRS 343 et seq.) and UIPA statutes [first suit is Hi. Third Cir. 18-1-00206 - Nakamura) requiring the disclosure of the August 15, 2018 requested environmental assessment record[s] as no written notice has been provided, nor the record[s] requested provided to date (September 24, 2018).

This de facto denial will require another UIPA lawsuit, apparently.

Comment #2

On May 30, 2018, the EPA transferred grant funding [XP-96942401-7] first awarded September 20, 2005 to the "design and construction of wastewater improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii" called the "Kau Cesspool Replacement Project" to provide Federal funds "will be allocated only to the 'Construction - Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan."

You evaded Hawaii County Land Use Commission scrutiny of this Pahala project by claiming it was "only" 14.9 acres per your ERG-EPA-B&C-Wilson Okamoto (hereafter called "the Contractors)May meeting minutes, which stated LUC overview at 15 acres [the under 15 acres claim will be challenged by measurement of the actual footprint you present].

Similarly, are you trying to evade the NEPA requirement of considering the cumulative impacts of the two new-build secondary sewage treatment plants, at rapidly expanding costs in a limited County economy that is losing its property tax base to lava and hurricanes, when the two expensive plants are 11 miles apart and only serve 109 and 163 households on LCCs?

Comment #3

Because you (EPA-COHDEM-Contractors) are conspiring to avoid NEPA/HEPA statutes to consider the Environmental Species Act Sec 7 (initiated by EPA for the Pahala Project under NEPA crosscutting statutes by letter to Fish and Wildlife dated June 7, 2018) for the Naalehu Project by only producing the environmental assessments, today I am filing the Notice that I am receiving concrete injuries by this illegal act and will be filing a citizen suit in 60 days.

Comment #4

I am having to go to the Naalehu Library today to review the DEA because it will not download on my computer. Although I have requested Consulting Party status at both the County and Federal level, no document has been provided to me upon my request.

/s Sandra Demoruelle
SANDRA DEMORUELLE

----- Forwarded Message -----
From: Shore, Sandy <Sandy.Shore@hawaiicounty.gov>
To: request+65ce2upva9@foi.uipa.org <request+65ce2upva9@foi.uipa.org>; Naalehu Theatre <naalehutheatre@yahoo.com>
Cc: cohdem <cohdem@hawaiicounty.gov>
Sent: Friday, August 31, 2018 12:38:27 PM HST
Subject: FW: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pāhala Community Outreach Plan and Naalehu Community Outreach Plan [#123]

Requestor Sandra Demorulle,

Pursuant to the attached Acknowledgement to Requester dated August 21, 2018 and, of which you acknowledged on August 21, 2018: Pursuant to and in accordance with section 2-71-13, Hawai'i Administrative Rules ("HAR") extenuating circumstances exists. Due to these extenuating circumstances, DEM shall send you written notice as required by section 2-71-17, HAR within a reasonable time not to exceed twenty business days following DEM received your requests (August 15, 2018 - 11:01 AM, 11:10 AM, 11:30 AM & 3:05 PM).

Furthermore and in response to your email below. Clarification regarding the information that you are requesting was provided to you on July 31, 2018 (contracts c.006231 & c.007030) and on August 6, 2018 (contracts c.006265 & c.006765); whereby the General Terms and Conditions referenced and attached to the provided contracts note under Section 5, Subsection 5.5: Subcontracting or Assignment of Contract (see attached). The Director provided his consent when he signed the contracts.

Thank you.

Sandy C. Shore

Contracts Clerk

County of Hawai'i

Department of Environmental Management

345 Kekūanāo'a St., Ste 41

Hilo, HI 96720

808-961-8421 ~ Telephone

808-961-8086 ~ Facsimile

www.hawaiizerowaste.org

Confidentiality Statement

This email message and any accompanying attachments may contain information that is confidential and subject to legal privilege. If you are not the intended recipient, do not read, use, disseminate, distribute or copy this message or attachment.

-----Original Message-----

From: Sandra Demoruelle [mailto:request+65ce2upva9@foi.uipa.org]

Sent: Friday, August 31, 2018 8:59 AM

To: cohdem <cohdem@hawaiicounty.gov>

Subject: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pahala Community Outreach Plan and Naalehu Community Outreach Plan [#123]

Aloha,

My UIPA request "Request for Consultant approved Pahala Community Outreach Plan and Naalehu Community Outreach Plan" (08/14/2018) was not answered in the time defined by HAR 2-71-13.

Please update me on the status of my request as soon as possible.

If you do not promptly provide these reports, I will sue you for them.

Mahalo,

--
This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

ACKNOWLEDGMENT TO REQUESTER

To: Sandra Demoruelle request+ptyvgvbfs9@foi.uipa.org, Sandra Demoruelle request+2drgvz845p@foi.uipa.org, Sandra Demoruelle request+v4bbgu4vds@foi.uipa.org, Sandra Demoruelle [mailto:request+w6wcvaxav2@foi.uipa.org]

FROM: COH ENVIRONMENTAL MANAGEMENT, SANDY C. SHORE, 961-8421, SANDY.SHORE@HAWAIICOUNTY.GOV
(Agency and name & telephone number of contact person at agency)

DATE REQUEST RECEIVED: August 15, 2018 – 11:01 am, 11:10 am, 11:30 am & 3:05 pm

DATE OF ACKNOWLEDGEMENT: AUGUST 21, 2018

GOVERNMENT RECORDS YOU REQUESTED: (attach copy of request or provide brief description below)

1. See attached
2.
3.
4.

This acknowledgment is provided in accordance with section 2-71-13, Hawaii Administrative Rules ("HAR"), because the following extenuating circumstance(s) exist:

☐ Agency must consult with another person to determine whether the record is exempt from disclosure under chapter 92F, HRS.
☐ Request requires extensive agency efforts to search, review, or segregate the records, or otherwise prepare the records for inspection or copying.
☒ Agency requires additional time to respond to the request in order to avoid an unreasonable interference with its other statutory duties and functions.
☐ A natural disaster or other situation beyond the agency's control prevents the agency from sending a notice or responding to the request within ten business days.

Due to these extenuating circumstances, the agency will send you the written notice required by section 2-71-14, HAR, within a reasonable time not to exceed twenty business days following the date when the agency received your request. Among other things, this notice will inform you whether the agency intends (1) to disclose the record; (2) to deny access to all or part of the information in the requested record, identifying the portions that will not be disclosed and justifying the nondisclosure; or (3) that the agency is unable to disclose the record for the reasons given. The notice will also include the agency's good faith estimate of all fees that will be charged to the requester under section 2-71-19, HAR and the amount of prepayment required by the agency, if any.

If the agency is providing access to records, the agency will then:

(1) Disclose the requested records within five business days after providing notice or, when applicable, after receiving a prepayment as provided for under section 2-71-19, HAR;

or

(2) Disclose the requested records in increments because the requested records are voluminous. See HAR § 2-71-15. Each increment will be disclosed within twenty business days after either (A) the prior incremental disclosure (if one prepayment of fees is required and received) or (B) receipt of each

incremental prepayment required.

For questions about this acknowledgment, please contact the person named above. Questions regarding compliance with the UIPA may be directed to the Office of Information Practices at 808-586-1400 or oip@hawaii.gov.

OIP3 (rev. 5/8/2014)

5.4 MEDIATION: At the option of, and in the sole discretion of the Director, any dispute, controversy or claim arising out of or in connection with the interpretation or performance of any term or condition of this Agreement or any breach or alleged breach of this Agreement, shall be submitted to and resolved by non-binding mediation by a neutral and independent mediator, who shall be selected by the parties by mutual agreement, or if the parties are unable to agree upon the selection of a mediator, then in accordance with the commercial arbitration rules of the American Arbitration Association. The mediation shall take place in the County of Hawaii, State of Hawaii. The cost of the mediator and other mediation costs shall be borne equally by the parties. The mediation process and the outcome of the mediation shall remain confidential to the maximum extent permissible by law. Notwithstanding the foregoing terms, the parties shall make every reasonable effort to resolve disputes, controversies or claims between themselves in a cooperative fashion prior to submitting a dispute to mediation.

5.5 SUBCONTRACTING OR ASSIGNMENT OF CONTRACT: The CONSULTANT shall not subcontract or assign all or any part of the services under the contract without the prior written consent of the DIRECTOR. Any consent by the COUNTY to subcontract, assign or otherwise dispose of any portion of the contract shall not be construed to relieve the CONSULTANT of any responsibility for the performance of the contract.

5.6 STANDARDS: All work related to wastewater projects shall be performed in conformance with the Design Standards of the Department of Wastewater Management, City and County of Honolulu. Where there are no established Standards, the CONSULTANT shall submit the proposed Standard(s) for approval.

5.7 OWNERSHIP OF DOCUMENTS: Upon completion, the CONSULTANT agrees to relinquish and furnish to the COUNTY all original tracings of any and all plans and stencils which hereafter shall become the property of the COUNTY.

SECTION 6 - SERVICES TO BE PERFORMED BY THE COUNTY

6.1 COOPERATION BY THE COUNTY: The COUNTY shall, without cost to the CONSULTANT, through the DIRECTOR, cooperate fully with the CONSULTANT and will promptly place at the disposal of the CONSULTANT all available pertinent information which the COUNTY may have in its possession. The County will certify to the accuracy of certain information in writing whenever it is possible to do so. The COUNTY does not represent that other information not certified as accurate is so and takes no responsibility therefore, and the CONSULTANT shall rely on such information at his own risk.

SECTION 7 - COMPENSATION

7.1 COMPENSATION: The CONSULTANT shall be paid the amount stated in the written agreement, less any reduction in compensation and plus any increase in compensation pursuant to subsection 7.4 as full compensation for the performance of the services under the contract.

7.2 ABANDONMENT OF THE PROJECT; DEATH OR DISABILITY OF CONSULTANT: In the event the COUNTY terminates the contract because it wishes to abandon, defer, restudy or revise the project, or in the event the CONSULTANT, in the case of an individual, dies or become physically or mentally disabled, the CONSULTANT or his estate shall be compensated in the same proportion of the compensation under the contract as the services performed bear to the services to be performed under the contract.

7.3 PROGRESS PAYMENTS: Prior to any progress payment authorization, the CONSULTANT shall submit and the COUNTY shall approve a detailed schedule of values corresponding to the specific services to be performed. As long as the services of the CONSULTANT are being performed in a manner satisfactory to the COUNTY, the COUNTY shall pay the CONSULTANT monthly partial payments in amounts proportionate to the value of the services performed by the CONSULTANT as indicated in the schedule of values.

7.4 REDUCTION OR INCREASE IN COMPENSATION: The compensation of the CONSULTANT shall be reduced whenever modification of the contract pursuant to subsection 4.1 reduces the services to be performed by the CONSULTANT.

The compensation of the CONSULTANT shall be increased to reimburse him for increased costs to perform the services under contract if performance of the services was delayed for more than six months by an act or omission of the COUNTY. No such reimbursement, however, shall be made unless he files a written application therefore with the DIRECTOR within thirty (30) calendar days after termination of the delay. In addition, the compensation of the CONSULTANT shall be increased whenever modification of the contract pursuant to subsection 4.1 requires the CONSULTANT to perform services not required under the contract. For each such modification and each modification reducing the services to be performed by the CONSULTANT, the compensation of the

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10349-01 ref (1)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 24, 2018 8:57 a.m.

Dear Ms. Demoruelle:

Thank you for your September 24, 2018 8:57 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

#1. This is not a comment pertinent to the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

#2. The proposed Pāhala wastewater treatment plant (WWTP) 14.9-acre project site has been developed to provide the necessary land area for the facilities needed to treat the incoming flows and to dispose the treated effluent from the treatment processes. The proposed project site minimizes the use of the adjacent lands which contain a commercial macadamia orchard. A larger project site is not required. The special permit requirement applies to the proposed WWTP parcel only, not to the proposed utility easement. The County will apply for the required special permit through the Planning Commission.

Chapter 4 of the Draft EA discusses cumulative impacts, including the scope of the analysis.

#3 The June 7, 2018 letter is a designation letter from the US Environmental Protection (EPA) to the US Fish and Wildlife Services (FWS) to meet the requirements of 50 C.F.R. §402.28 for the Pāhala project. As stated in Section 3.12.2 of the Draft EA, prior to finalization of the EA, the EPA and County of Hawaiʻi will conclude consultation with the FWS. The Final EA will include the final consultation letter from FWS.

#4 On, November 7, 2018, the eleven copies of the Draft EA were hand delivered by the County of Hawaiʻi to the Pāhala Public Library and a similar number of copies to the Naalehu Public Library. The County of Hawaiʻi transmittal requested the library make the copies available for checkout. This information will be included Final EA, Section 7.

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#2

Earl Matsukawa

woc 10-18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 10:26 AM
To: Earl Matsukawa; Public Comment; clekven@brwncald.com
Cc: Kate Rao; TESSA BERMAN; David Albright; dora.beck@hawaiicounty.gov; kaena.horowitz@hawaiicounty.gov
Subject: Attached: Sandra Demoruelle Comment #5 PAHALA DEA/AFNSI and hard time opening on my computer so please send my Pahala DEA copy!
Attachments: PAHALA DEA_Comment_5_EIS_REQUIRED.docx; Daniel_April_12_2018_IMG_20180412_180142.jpg

Aloha Wilson Okamoto and Friends,

I hope the DEA is at the libraries because I will be upset if not, since I am eagerly awaiting the explanation of how this is not in violation of so very many laws.

Sincerely, Sandra Demoruelle, PO Box 588, Naalehu HI 96772

----- Forwarded Message -----
From: Naalehu Theatre <naalehutheatre@yahoo.com>
To: HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov>
Sent: Monday, September 24, 2018 10:18:25 AM HST
Subject: Re: RE: The September 23, 2018 Issue of The Environmental Notice is available (with corrected link in photo) PAHALA DEA/AFNSI

Its my computer. I am an analog person anyway, so will go to the Naalehu Library shortly to review it in print hard copy.

Thanks for your assistance with my problem! Sandra Demoruelle

On Monday, September 24, 2018 09:59:05 AM HST, HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov> wrote:

Sorry to hear of your difficulties with downloading the Draft EA file. It's not particularly large (~54MB), and downloads quickly onto our computers from where it is located on the server.

Perhaps this direct link will download easier to your computer:

http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-23-HA-DEA-Pahala-Community-Large-Capacity-Cesspool-Replacement.pdf

Sincerely,

Tom Eisen, Planner

Office of Environmental Quality Control

State of Hawai'i

(808) 586-4185

NOTE: OEQC's primary role is to facilitate Hawai'i's environmental review process by providing relevant advice to agencies, applicants, consultants and the public. OEQC is not authorized to make determinations on Environmental Assessments, Environmental Impact Statements or exemptions. Pursuant to Chapter 343, Hawai'i Revised Statutes, all such determinations are made by appropriate State or county agencies, county Mayors or the Governor.

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 9:38 AM
To: HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov>
Subject: Re: The September 23, 2018 Issue of The Environmental Notice is available (with corrected link in photo) PAHALA DEA/AFNSI

Aloha,

I am having trouble - even after waiting half an hour - downloading the EPA/COH Pahala DEA/AFNSI.

Is it me or is it just such a large file that it takes longer than that to download?

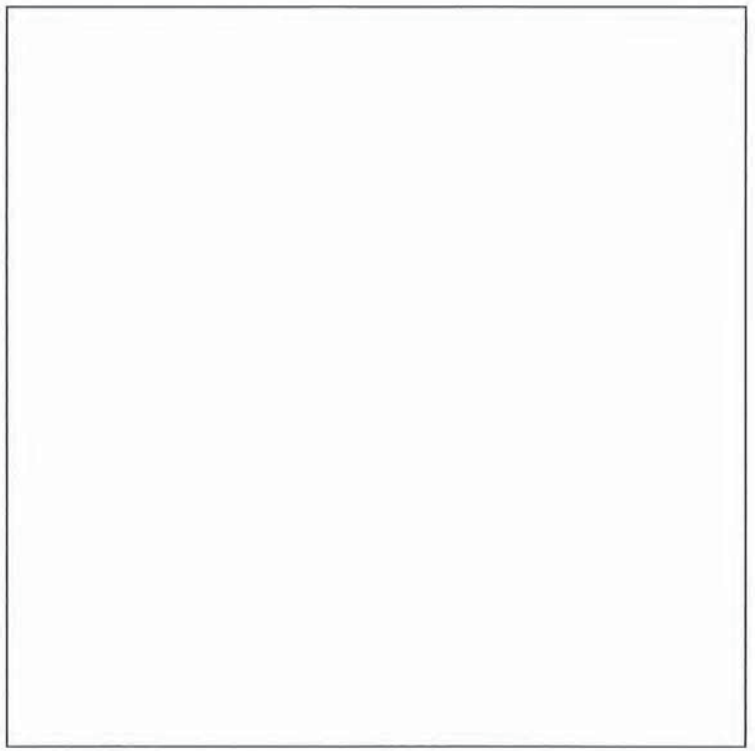
I have not had any trouble downloading another bulky archived FEA/FONSI for this self-same project dated August 23, 2007, which, oddly, has been neither Supplemented nor Withdrawn.

Thank you for your help. Sincerely, Sandra Demoruelle

On Sunday, September 23, 2018 10:29:12 AM HST, State Office of Environmental Quality Control <oeqchawaii@doh.hawaii.gov> wrote:

Aloha,

The September 23, 2018 issue of *The Environmental Notice* is now available online for your review. This email includes the correct link from the photo to the current issue of *The Environmental Notice*.



Regards,

Office of Environmental Quality Control
(808) 586-4185
http://health.hawaii.gov/oegc/

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Thank you for subscribing to The Environmental Notice.

Our mailing address is:

Office of Environmental Quality Control

235 S. Beretania St., Suite 702

Honolulu, Hi 96813

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PAHALA DEA/AFNSI SANDRA DEMORUELLE COMMENT #5

New build wastewater treatment plants ("WWTPs") in the State of Hawaii are not approved at the Environmental Assessment ("EA") level, so the fact that this is published as a DEA/AFNSI for a full-sized, new build construction of a four lagoon secondary sewage treatment facility to close 109 households' LCCs on 15 acres of land, with a twin facility to be built 11 miles away, and in violation of NEPA/crosscutting environmental review requirements of the cumulative impacts, means I will be forced to sue if the COH/EPA fails to decide to do the EISs for the cumulative impacts of the twin projects, as was done on the following WWTP projects in Hawaii:

HAWAII WWTPs HEPA EIS:

1996 Waialua –Haleiwa WWTP

1998 Waimanalo WWTP

2009 Koloa-Poipu WWTP

2010 Waiale Water Treatment Facility

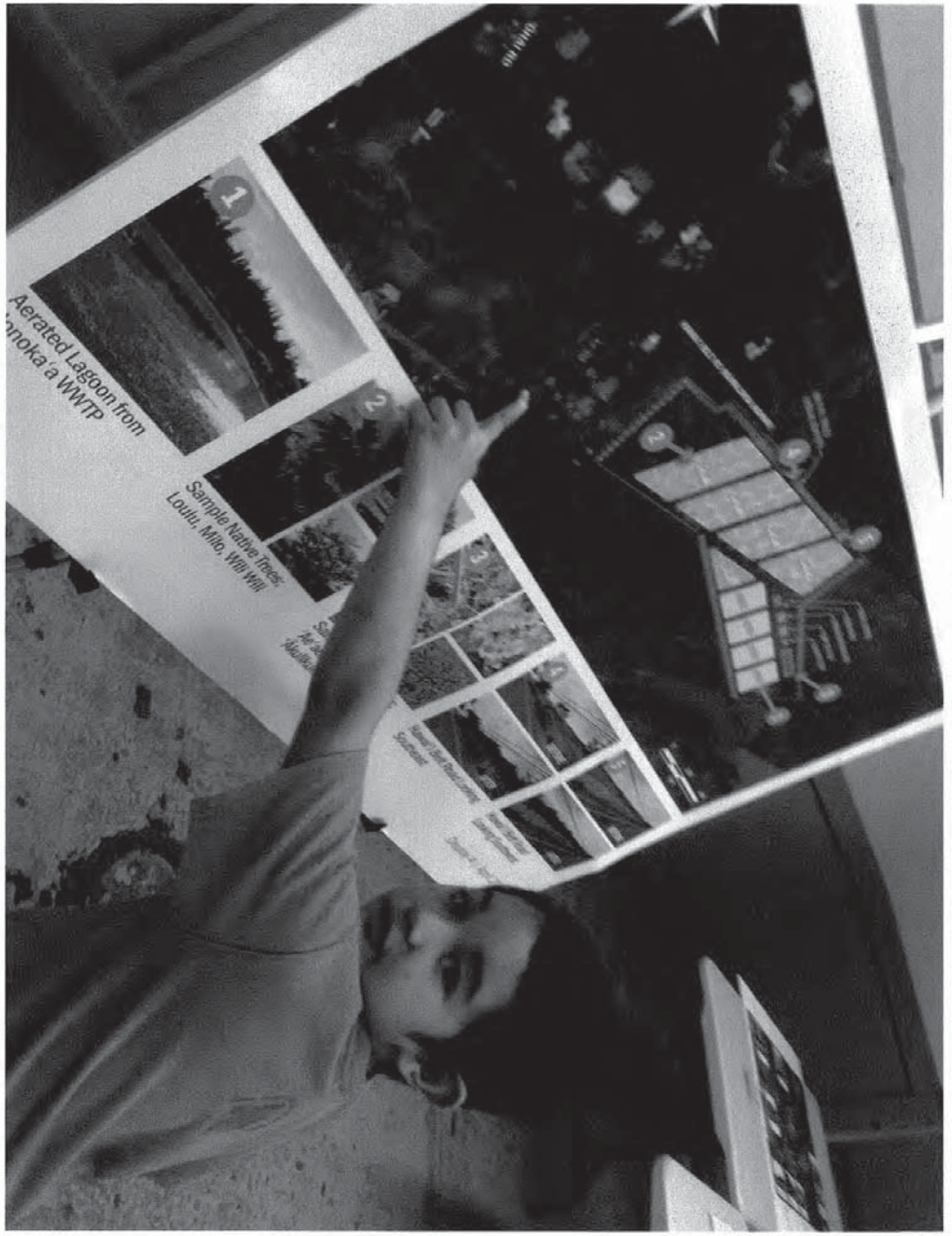
2011 Kaneohe-Kailua Treatment Facility

2017 Honouliuli WWTP Secondary Treatment

3/23/2017 Kealakehe WWTP R1

The FEA/FONSI 4/8/2015 Lono Kona Sewer Improvement District (DEA/AFNSI 1/8/2015) was because, like the original Naalehu/Pahala LCC conversion projects, no installation of a new-build secondary sewage treatment plant was required. The same was true for the FEA 8/18/2009 of the Honokaa Modification of **Existing WWTP.**

In fact, the COH/EPA/Contractors should fully explain why two new-build secondary sewage plants 11 miles apart in remote, rural Kau would not require a EISPN Act 172-12 (Direct to EIS) Notice instead of a DEA/AFNSI that is avoiding the cumulative impacts of the twin projects.



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10349-01 ref (2)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 24, 2018 10:26 a.m.

Dear Ms. Demoruelle:

Thank you for your September 24, 2018 10:26 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

On, November 7, 2018, the County of Hawaiʻi hand delivered eleven copies of the Draft EA to the Pāhala Public Library and a similar number of copies to the Naalehu Public Library. The County of Hawaiʻi transmittal requested the library make the copies available for checkout. This information will be included in the Final EA Section 7.

Hawaii Revised Statutes (HRS) Chapter 343 Section 5 (a)(9)(A), states as follows: "(a) Except as otherwise provided, an environmental assessment (emphasis added) shall be required for actions that: ... (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…". HAR Title 11, Chapter 200, which implements HRS Chapter 343, however, differentiates between "agency actions" that utilize state or county lands or funds and "applicant actions" for which an applicant must seek agency approval. Since the proposed action will utilize county lands and funds, it is an "agency action" requiring compliance with HRS Chapter 343 and HAR Title 11, Chapter 200, pursuant to which an environmental assessment is being prepared and processed.

Comment #5 - HRS 343-5 **Applicability and requirements** states under (c) (4) "A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…" The criteria by which the proposing agency makes the significance determination is provided in Hawaii Administrative Rules (HAR) Title 11 Section 200-12 (a) and (b) which states: "(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall

consider every phase of a proposed action, the expected consequences… and the…effects of the action."

HAR Title 11-200-10 **Contents of an environmental assessment** includes "(9) Findings and reasons supporting the agency determination or anticipated determination…". The Draft EA provides this in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an EIS.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#3

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 11:15 AM
To: David Albright; R9FOIA
Cc: Earl Matsukawa; Public Comment
Subject: Wrong address

woc 10-18-2018

Aloha,

Today I received the Notice for the Pahala DEA, which had been delayed because it had the wrong address.

It was addressed to me at PO Box 558, and my PO Box is 588.

To prevent future delays which cause me to complain bitterly, please ensure EPA uses my correct address for mailed correspondence.

Thank you, Sandra Demoruelle

--
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10349-01 ref (3)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 24, 2018 11:15 a.m.

Dear Ms. Demoruelle:

Thank you for your September 24, 2018 11:15 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Comment #1 - This is not a comment pertinent to the content requirements of the Draft (EA) for the Pāhala Large Capacity Cesspool Replacement project.

Your mailing address will be corrected.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#4

Earl Matsukawa

woc 10-18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 1:21 PM
To: Kate Rao; Bhat Simi (ENRD); TESSA BERMAN; Public Comment; Earl Matsukawa; David Albright; clekven@brwncald.com; eplan1@aol.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com
Cc: kaena.horowitz@hawaiicounty.gov; dora.beck@hawaiicounty.gov
Subject: NOTICE OF CITIZEN SUIT FOR VIOLATION OF ESA (Notice attached)
Attachments: Zinke_ESA_SUIT_NOTICE_9_24_2018.docx; NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT.docx; Daniel_April_12_2018_IMG_20180412_180142.jpg; Consulting_party_EPA_2018.docx

This was sent out today.

Best, Sandra Demoruelle

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SANDRA L. DEMORUELLE
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

September 24, 2018

The Honorable Ryan Zinke
Secretary, Department of Interior
1849 C Street NW
Washington DC 20240
Fax: 703/358-1930

RE: NOTICE OF IMPENDING CITIZEN SUIT UNDER ESA 16 USC 1540(g)(1)(A) and (2)(A)(i)

Dear Secretary,

Attached is my Notice of impending citizen suit. Thank you for your attention to my grave concerns which are causing me concrete injuries.

Sincerely,

/s Sandra Demoruelle
SANDRA DEMORUELLE

NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT, 16 U.S.C. 1540 (g)(1)(A) and (2)(A)(i)

PERSON GIVING NOTICE:

Sandra Demoruelle,

Physical address: 94-1513 Kaalualu Road, Naalehu HI 96772

Mailing address: PO Box 588, Naalehu HI 96772-0588

Telephone: 1-808-929-9244

Email: naalehutheatre@yahoo.com

NOTICE:

Location: Naalehu and Pahala, District of Kau, County of Hawaii, State of Hawaii, U.S.A.

Date of commencement of ongoing ESA Sec. 7 consultation violation:

Date: **September 20, 2005** per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-0 for project period 06/01/2005 – 12/31/2007.

COH Project Manager: Dora Beck

EPA Project Officer: Laura Bose (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 5, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

> *The recipient [County of Hawaii] agrees not to bill or request reimbursement from EPA for any costs associated with the design or construction of the project [Kau Cesspool Replacement Project for Naalehu and Pahala in Kau] funded by this grant ...* ***until EPA has complied with the National Environmental Policy Act and other environmental cross-cutters (see 40 CFR 6.300 et seq) applicable to this project. (Id. Section P1.)***

Current Date: 05/30/2018 per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-7 for project period 06/01/2005 – 10/30/2020.

COH Project Manager: Dora Beck

EPA Project Officer: Kate Rao (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 7, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

Dates of violation: Ongoing during period of Grant Condition P1. from date of award 09/20/2005 through current Grant Period commencing 05/30/2018

EPA DISCRETIONARY ACTION IN VIOLATION OF ESA:

1) EPA FAILED TO TAKE EARLY HARD LOOK AT THE KAU PROJECTS AS REQUIRED BY NEPA AND CONSEQUENTLY FAILED TO COMPLY WITH ESA

In the original EPA-COH Grant Agreement Section P1 dated Sept. 20, 2005 (XP-96942401-0), EPA was first required to comply with NEPA "and other environmental cross-cutters" – including the ESA. Seven Grant Agreement revisions have resulted in splitting the original Naalehu and Pahala Projects, both requiring the EPA NEPA/cross-cutters ESA environmental review procedures, into two separate EPA WWTP Work Plans, only one of which will require ESA Section 7 consultation process. In the response to EPA from FWS, the need for a Naalehu ESA process, like what was occurring for Pahala, was expressed.

NEPA requires Federal agencies, including the EPA, to prepare a "detailed statement" prior to approving any "major federal action significantly affecting the quality of the human environment. 42 CFR 4332(2)(c). "The requirement to prepare an environmental impact statement creates a democratic decisionmaking process that assures that agency decisionmakers and the public review and carefully consider detailed information about environmental impacts before any decision is made. Agencies must '[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.'" 40 CFR 1500.2(d) as cited in *Dine CARE v. BIA, Complaint,* Case3:16 cv-08077-SPL Doc. 1 Page 19.

2) EPA HAS SEPARATED THE KAU LCC CLOSURE GRANT XP-96942401[As Amended 0 through 7] INTO TWO SEPARATE PROJECTS AND REFUSED TO FOLLOW NEPA/ESA PROCEDURES THAT EPA FOLLOWED FOR THE PAHALA PROJECT DEA AS FOR THE NAALEHU WWTP WORK PLAN

No NEPA environmental review procedures have been followed since the original project – the LCC conversion to septic for all of the illegal Kau LCCs – provided Notice of the FEA/FONSI in August 23, 2007 issue of *TEN*. The original 2007 FEA/FONSI for both the Pahala and Naalehu LCC closures has never had a Supplemental Notice published to account for the obvious changes to the original Kau Cesspool Project.

Further since this Naalehu/Pahala 2007 FEA/FONSI never been Supplemented or Withdrawn as Noticed in *TEN*, it is inappropriate to publish the *TEN* Pahala DEA/AFNSI Notice on September 23, 2018 as part of the NEPA/HEPA requisite procedural review.

"To make an informed decision about how or whether to proceed with the proposed projects and to comply with NEPA, an agency must identify their potential combined environmental impacts and make that information available to the public." *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

Therefore, I contend herein that the COHDEM proposed Naalehu WWS EA and the proposed Pahala WWS EIS/EID are legally inadequate because, being two separate studies and documents prepared at different points in time, fail to consider the aggregated and cumulative effects of the connected actions of the proposed wastewater sewage treatment projects on the human environment in the isolated and sparsely populated District of Ka'u.

CEQ regulations implementing NEPA "require that an agency consider 'connected actions' and 'cumulative actions' within a single *EA* or *EIS*." *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1118 (9th Cir. 2000) (emphasis added) (citing 40 CFR 1508.25). Further, under 1508.25, two or more agency actions must be discussed in the same impact statement when they are "connected' or "cumulative" action. 40 CFR 1508.25(a)(1),(2) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

A cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions .... Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR 1508.7.

For "connected" and "cumulative" actions, the agency is told it "should" analyze them in a single impact statement, which the 9th Circuit interpreted as a mandatory requirement. *See Eagle Island Institute v. USFS*, 351 F.3d 1291 (9th Cir. 2003) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

3) EPA HAS PUBLISHED NOTICE OF AVAILABILITY OF THE PAHALA DEA PUBLIC COMMENT PERIOD WITHOUT CONSIDERING THE CUMULATIVE EFFECTS OF THE AOC TWIN WWTP WORK PLANS WHICH SPECIFY BUILDING TWO SECONDARY SEWAGE TREATMENT PLANTS JUST 11 MILES APART IN REMOTE, RURAL KAU BEFORE APRIL 17, 2022

Despite Kate Rao approving EPA SAAP funding for the original Ka'u LCC to LCSS conversion projects, she has permitted the Naalehu Work Plan to be implemented in violation of NEPA, and failed to enact ESA Section 7 consultation with FWS, as she did with Pahala, designating ERG to do this ESA in the June 7, 2018 letter. By allowing avoidance of consideration of cumulative impacts and avoiding NEPA and ESA statutes, Ms. Rao has allowed the separation of the two Ka'u new-build WWTPs with no aggregation of impacts on the numerous affected endangered plants and wildlife and apparently intentionally avoiding any NEPA cumulative impact analysis. ("[T]he district court properly determined that the Forest Service violated the ESA when it decided not to reinitiate consultation after the FWS revised its critical habitat designation..." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015)).

In *Cottonwood*, the Forest Service contended that "[t]he EA or EIS on each action ... will document the cumulative impacts of that action and all previous actions." The Court believed "that consideration of cumulative impacts after the road has already been approved is insufficient to fulfill the mandate of NEPA. A central purpose of the EIS is to force the consideration of environmental impacts in the decisionmaking process. *See, e.g., Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975); *Lathan v. Brinegar*, 506 F.2d 677,693 (9th Cir. 1974) (*en banc)*;

Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971). That purpose requires that the NEPA process be integrated with agency planning 'at the earliest possible time,' 40 C.F.R. 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step is already taken." *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985).

Because the EPA has taken specific steps to change the EPA-COH Grant Assistance Amendments for XP-96942401, as demonstrated by the May 30, 2018 amendment #7, which result in effectively evading the same NEPA/ESA procedures on the Naalehu WWTP Project by simply moving the EPA statutory obligations 11 miles away to the twin Pahala WWTP Project, I hereby give Notice of a pending citizen suit under the ESA.

Herein I object to the EPA failure to implement the ESA Sec. 7 consultation for Naalehu as Kate Rao did for Pahala and request that before there is any decisions on either Project, that the EPA-COH be required to provide the same ESA Section 7 consultation and issuance of a Biological Opinion covering the cumulative actions that will "jeopardize the continued existence" of multiple Hawaiian endangered creatures and plants for both the Pahala and the Naalehu WWTP Projects.

I declare under penalty of perjury that the forgoing is true and correct.

Dated: September 24, 2018 at Naalehu, Hawaii

s/Sandra Demoruelle

SANDRA DEMORUELLE

SANDRA L. DEMORUELLE
94-1513 Kaalualu Road
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

September 21, 2018

Kate Rao
EPA Project Officer
75 Hawthorne Street, WTR-3-2
San Francisco, CA 94105

Dora Beck
Project Manager
Wastewater Division Chief
County of Hawaii Department of Environmental Management
25 Aupuni Street
Hilo, Hawaii 96720

Re: Request for Consulting Party Status
Kau District Cesspool Replacement Project
Assistance ID Number (now FAIN): XP 96942401-7

Dear Ms. Rao

I am a homeowner and 38 year resident of Naalehu in the historic district of Ka'u. I raised two children here who graduated from Naalehu Elementary School (NES) and, currently, my 7 year old great-grandson attends first grade there. I serve as the Parent Representative on the NES School Community Council.

The Naalehu Elementary School is listed on the National Register of Historic Places so I have an active interest in the Naalehu Work Plan receiving NHPA Section 106 consultation, as is being done for the Pahala Work Plan.

Therefore, under 36 CFR 800.2(c)(5), I request Consulting Party Status for the Kau District Cesspool Replacement Project, EPA Assistance ID Number (now FAIN) XP 96942401-7.

The EPA and County are making an irrevocable commitment of resources to place two full-sized, new-build secondary wastewater treatment plants to service about 300 homes in remote, rural Ka'u. This is a commitment of resources our community holds sacred – as Nohea Kaawa testified, her family says that "sacred is anything that cannot be replaced." (*County Council* testimony on Res. 650-18).

To demonstrate my interest in this EPA undertaking, I would point to my attentive participation through testimony to relevant County authorities:

County of Hawaii Council

May 9, 2018 REGARDING BILL142: LONO KONA SEWAGE PROJECT BONDS (3 Pages).

May 22, 2018 [Special Budget Hearing] REGARDING BULL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.

June 6, 2018 [Special Budget Hearing] REGARDING BULL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.

County of Hawaii Council Finance Committee

August 7, 2018 [REGARDING FAILURE TO PLACE KA'U COMMUNITY REQUEST FOR AUDIT OF LCC CLOSURE PROJECTS FROM NOVEMBER 5, 2004 TO PRESENT].

August 21, 2018 REGARDING RES. 654-18: GRANT FOR FORMER NAALEHU SEWAGE TREATMENT SITE.

County of Hawaii Environmental Management Commission

April 25, 2018 "Lots of Pork, Little Sewage at the Two Ka'u Sewage Plants" (2 Pages).

May 23, 2018 Provided Commissioners with copies of 1) the Naalehu WWTP CWSRF Funding Form showing 33 points making it Priority #1; 2) the DEM CIP Budget changes 2005 to 2019; 3) AOC, Naalehu Work Plan Attachment B, and EPA Reponse to community comments; 4) Demoruelle v. EPA et al., CV 18-00172 JMS-RSC Complaint; 5) *Ka'u Calendar* dated May 2018 article; 6) County records demonstrating Souza family ownership of Naalehu property since 1968.

June 27, 2018 Complaining of the lack of environmental review and the Naalehu EA is still Step #8 – to be done AFTER the COHDEM has decided on the treatment plant site, and the COHDEM has not been transparent and has withheld requests for the two Ka'u DEAs, PERs and ESA Phase I.

July 27, 2018 RE: ITEM (1) DIRECTOR'S INFORMATIONAL UPDATE – *Status of the proposed Naalehu WWTP (*(Provided Commissioners with copies of the COHDEM Extension Compliance Request letter dated June 14, 2018 to EPA; article about Ka'u Royal Hawaiian Coffee and Tea LP and its land manager, John Cross.

July 27, 2018 RE: ITEM 5.A. Policy on commenting on environmental review.

Therefore, I am formally requesting "consulting party" status under NEPA, HEPA, and all cross-cutting statutes including ESA and NHPA, and to be consulted and informed of all EPA and COH historic property identification and determination of effect for the Naalehu Work Plan project, and for the remaining environmental review actions and decisions on mitigation measures for the Pahala Work Plan project.

Sincerely,

/s Sandra Demoruelle
SANDRA DEMORUELLE

Cc: Wilson Okamoto, Brown and Caldwell

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (4)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'u, Hawai'i
Response to Comment – September 24, 2018 1:21 p.m.

Dear Ms. Demoruelle:

Thank you for your September 24, 2018 1:21 p.m. comment message regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Chang
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#5

Earl Matsukawa

From:	Naalehu Theatre <naalehutheatre@yahoo.com> woc 10-18-2018
Sent:	Tuesday, September 25, 2018 8:32 AM
To:	Public Comment; Earl Matsukawa
Cc:	Kate Rao; Dora Beck; clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com
Subject:	Sandra Demoruelle Comment #6 attached - Facility too large for actual effluent flow
Attachments:	PAHALA DEA_Comment_6_EH_Quote_too_large_plant.docx

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PAHALA DEA/AFNSI SANDRA DEMORUELLE COMMENT #6

COMMENT #6 – The Pahala WWTP is built to handle 380,000 gal/day while actual flow reported for a larger population base in 2007 FEA was 80,000 g/d so the facility design is too large.

To paraphrase Pat Tummons in her ***Environment Hawaii*** environmental newsletter (Vol. 1, No. 5 Nov. 1990): (*EH* **quoted material in bold type)**

Lots of Pork, Little Sewage at the Two Ka'u Sewage Plants

"Serious problems exist" according to the results of "talk-story" meetings held by County of Hawaii Department of Environmental Management contractor Brown and Caldwell. B&C held meetings April 10th – 12th in Naalehu as Task 3.2 of the *Naalehu Community Large Capacity Cesspool (LCC) Replacement Project*.

The COHDEM plans to locate a full-size Wastewater Treatment Plant, featuring four open sewage lagoons, on property next to the Naalehu Elementary School.

To demonstrate how serious the COHDEM is to put this sewage plant next to a school, last November, the County started condemning private property and acquire a family-owned ranch by June 2018.

The problems identified by the community **can be placed generally in two categories: cost of the new facility and capacity (the planned sewage plant outstrips any demand likely to develop** in Naalehu **for the life of the new facilities).**

The Clean Wallet Act

If all the County had wanted was compliance with clean-water requirements, and with the least distress to the taxpayer and payer of sewage-system user fees, it probably would have explored alternative means of sewage treatment -- methods, such as constructed wetlands, that generally are less capital – and labor – intensive than traditional treatment plants. At the very least, it would have brought the planned treatment plant's size more in line with realistic demand projections and would have developed a timetable for construction to minimize the Naalehu LCC problem.

Once again, as with the Hilo sewage plant in 1989, **none of these courses was pursued. When citizens suggested alternative treatment methods, the letters and accompanying information were** ignored in the *EPA's RESPONSES TO PUBLIC COMMENTS* on the AOC Attachment B. **No record of any further discussion of this proposal** will be provided upon request of Naalehu resident Sandra Demoruelle without EPA requiring a payment of $1232 in FOIA fees.

The *Environment Hawaii* article goes on to explain the problems of a sewage plant that is too large for the amount of wastewater requiring treatment:

The problem of too large a size plant is "**underutilization (plants do not function well if routinely operated at a fraction of their capacity**..." Underutilized sewage plants can become a "**negative removal efficiency" – meaning "what the plant pumped out was more contaminated that what went in**."

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INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (5)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 25, 2018 8:32 a.m.

Dear Ms. Demoruelle:

Thank you for your September 25, 2018 8:32 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

Comment #6 - The Draft EA Section 2.3.1 states that wastewater flow projections were developed for the treatment and disposal facility using the City and County of Honolulu wastewater standards, most recently updated in 2017. Based on these standards, the Pāhala treatment and disposal facility would be designed to provide an average dry weather flow capacity of 190,000 gallons per day (gpd), which would be sufficient capacity to close the two LCCs. The Draft EA Appendix B contains additional detail on the flow projections. The corresponding peak day wet weather flow is 650,000 gpd. This information will be repeated in the Final EA.

Future sewer main extensions and subdivisions will be accommodated, as capacity allows, on a first come, first served basis. The Draft EA, Appendix B, states the wastewater treatment plant (WWTP) design will be expandable not to preclude treating future average dry weather flows up to 360,000 gpd (with a corresponding peak day wet weather flow of 1,260,000 gpd) to meet the future needs of the community, in accordance with the requirements established in the Kaʻu Community Development Plan Policy 120. The Draft EA, Appendix B states the proposed WWTP will accommodate modification within the proposed 14.9-acre site for the future expansion of the service area.

Hawaii Administrative Rules (HAR) Title 11-62 requires wastewater treatment works to be designed in accordance with county standards. If a county does not have design standards, then the design standards for the City and County of Honolulu shall be used. The County of Hawaiʻi does not have design standards; therefore, the City and County of Honolulu standards are applicable to the Pahala WWTP. Application of the standards resulted in the flow capacities presented in the Draft EA Section 2.3.1. Additional detail is provided in the Draft EA Appendix B

Section 5.6.1. It should be noted that wastewater flows from a community are highly variable, and peak flow rates from small community wastewater collection systems are typically three to five times higher than the average flow rates. The City and County of Honolulu standards take this variability into account, and application of the standards results in conservatively-designed facilities that are protective of human health and the environment in anticipated operational conditions. This information will be included in the Final EA.

The Naalehu and Hilo projects are not the subject of the Pāhala Large Capacity Cesspool Replacement Draft EA.

The proposed treatment system for the Pāhala WWTP includes aerated lagoons that are more-energy efficient than conventional activated sludge wastewater treatment processes. The aerated lagoon process is less sensitive to underloading conditions than conventional activated sludge wastewater treatment processes and will provide excellent treatment performance during low flow conditions. The "negative removal efficiency" effect is not applicable to the aerated lagoon technology. The proposed WWTP does include a constructed wetland treatment system and the proposed land treatment tree groves provide an energy-efficient "natural" technology that will use sunlight, vegetation, and soil properties to achieve the desired results.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#6

Earl Matsukawa

woc 10-18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Tuesday, September 25, 2018 9:39 AM
To: Public Comment; Earl Matsukawa
Cc: Kate Rao; Dora Beck; clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com
Subject: Re: Sandra Demoruelle Comment #7 - LUC Rule 205-6 (d) Special Permit requires state LUC approval over 15 ac. OR FOR LANDS DESIGNATED IMP. AG. LAND

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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10349-01 ref (6)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 25, 2018 9:39 a.m.

Dear Ms. Demoruelle:

Thank you for your September 25, 2018 9:39 a.m. message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The Draft EA Section 2.3.1 states the County would acquire or obtain the right to develop and use a 14.9-acre area for construction of a new secondary treatment and disposal facility. The Draft EA Section 2.10.3 states according to Chapter 205, Hawaii Revised Statutes (HRS), §205-4.5 (a) within the Agricultural District on lands with Land Study Bureau master productivity rating class A or B shall be restricted to the following permitted uses: (7) public, private and quasi-public utility lines. Thus, the 1,500-foot by 25-foot utility easement is a permitted use. The 14.9-acre area is the appropriate project size as it provides sufficient area to meet the current and future needs of the community that the WWTP will serve, while minimizing the impact to the adjacent macadamia nut farm. Further, as stated in the Draft EA Section 2.10.3, the County of Hawaiʻi Department of Environmental Management will submit a Special Permit application to the County of Hawaiʻi Planning Commission. This information will be repeated in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#7

Earl Matsukawa

woc oct18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Tuesday, September 25, 2018 12:28 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Rep. Richard Creagan
Subject: Re: Sandra Demoruelle Comment #8 - Inadequacy of Responsible Official outreach to the local Hawaiian community

The EPA Responsible Official failed to reach out to local Hawaiian organizations, choosing to poll instead the non-responsive Oahu organizations.

Suggested affected Hawaiian organizations would include:

O Ka'u Kakou
Aha Moku Council
Kau Agro-Forestry
Big Island Community Coalition
Hawaiian Civic Club of Ka'u (President Blossom DeSilva)
Ho'omalu Ka'u
Hui Malama Ola Na Oiwi
Hula Halau O'Leionalani (Kumu hula Debbie Ryder)
Ka Ohana O Honuapo
Ka'u Multicultural Society
Ka'u Preservation
Life of the Land
Malama I Ka Nani

Other affected community organizations would include:

Pacific Quest
[Naalehu & Pahala] Boys and Girls Club
Conservation Council for Hawaii
Cooper Center Council
Discovery Harbour Community Assn.
Friends of the Hawaii Volcanoes National Park
Friends of Kahuku Park
Friends of the Ka'u Libraries
Hawaii Farmers Union United
Hawaiian Ranchos Community Assn.
Ka'u 4-H
Ka'u Agricultural Water Cooperative
Ka'u Chamber of Commerce
Ka'u Coffee Growers Assn.
Ka'u Farm Bureau
Ka'u Food Pantry
Ka'u High School Alumni

Ka'u ILWU Pensioners Club
Ka'u hospital Charitable Foundation
Ka'u Preservation
Ka'u Roping and Riding Assn.
Ka'u Rural Health Community Assn.
Ka'u Scenic Byways Committee
Ka'u Soil and Water Conservation District
Ocean View Community Assn.
Ocean View Community Development Corporation
Pahala Filipino Assn.
Pahala Karate Dojo
Sierra Club - Moku Loa Group
The Nature Conservancy
Tutu and Me Traveling Preschool
Volcano Community Assn.
Volcano Rotary Club

s/ Sandra Demoruelle Dated September 25, 2018 in Naalehu Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

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/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

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10349-01 ref (7)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 25, 2018 12:28 p.m.

Dear Ms. Demoruelle:

Thank you for your September 25, 2018 12:28 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

On March 8, 2018, the US Environmental Protection Agency (EPA) notified various Native Hawaiian Organizations (NHOs) that the County of Hawaiʻi Department of Environmental Management (DEM) had been authorized to act in EPA's behalf when initiating consultation under 54 U.S.C §300101 and 36 CFR §800.2(e)4 for the Pāhala Large Capacity Cesspool Replacement project. The NHOs to be notified were selected from those listed by the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization (NHO) Notification List, Updated December 14, 2017. On March 29, 2018, the DEM notified those on the list about the proposed Pāhala project and welcomed their comments under 54 U.S.C. §32706 also called Section 106 of the National Historic Preservation Act (NHPA). Further, the DEM letter requested the addressed organization, if acquainted with persons or organizations knowledgeable about the proposed project area, or any descendants with ancestral lineal or cultural ties or cultural knowledge or concerns, or religious attachment to the proposed project area, provide their names and contact information.

Notice of availability of the Draft EA was published on September 23, 2018. Subsequently on September 26, 2018, a public notice was published in the *Hawaii Tribune Herald*, *West Hawaii Today* newspapers, and the online *Kaʻū News Brief*. The public notice was to advertise the October 10, 2018 public information meeting conducted be the County in Pāhala to discuss the availability of the Draft EA and process for submitting comments. The notice stated that the second part of the meeting would address Section 106 of the NHPA involving consultation with NHOs and Native Hawaiian descendants with ancestral lineal or cultural ties or cultural knowledge or concerns, or religious attachment to the proposed project area. During the October 10th meeting attendees were invited to provide information about the proposed project area.

Subsequently, notice of availability of the Draft EA was republished on November 8, 2018 and the comment period ended on December 10, 2018.

Based on the above, the EPA and the DEM have provided the necessary notifications and the opportunities for comment to NHOs and Native Hawaiian descendants with ancestral lineal or cultural ties or cultural knowledge or concerns, or religious attachment to the project area.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#8

Earl Matsukawa

woc oct18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Tuesday, September 25, 2018 12:39 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan
Subject: Re: Sandra Demoruelle Comment #9 - Hawaii County Council Distrct 6 member's name is Maile Medeiros David [not Maile Medeiro]

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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10349-01 ref (8)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 25, 2018 12:39 p.m.

Dear Ms. Demoruelle:

Thank you for your September 25, 2018 12:39 p.m. message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The councilmember's name will be corrected in the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#9

Earl Matsukawa

woc oct18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, September 28, 2018 9:54 AM
To: eplan1@aol.com; TESSA BERMAN; Earl Matsukawa; Public Comment; clekven@brwncald.com; Bhat Simi (ENRD); Kate Rao; Dora Beck; kaena.horowitz@hawaiicounty.gov
Subject: Meeting in Pahala for DEA - on Oct. 10, 2018 - written comments only for a 90% ESL community per your DEA?

Equity would allow for oral comments at the Oct 10 meeting.

Either written comments are required at all meetings r/t the DEA or not. Cite your statutory authority, please.

Best, Sandra Demoruelle

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10349-01 ref (9)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 28, 2018 9:54 a.m.

Dear Ms. Demoruelle:

Thank you for your September 28, 2018 9:54 a.m. message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Hawaii Administrative Rules (HAR) Title 11 Chapter 200 has no requirement for conducting a public meeting in conjunction with preparing an environmental assessment. The October 10, 2018 meeting was voluntarily sponsored by the County of Hawaiʻi Department of Environmental Management (DEM) to encourage public participation in the environmental review process.

HAR 11-200-9.1(b) states that the "period for public review and for submitting written comments for both agency actions and applicant actions shall begin… Written comments to the proposing agency…shall be received or postmarked…" (emphasis added).

There is no provision for receiving oral comments in HAR 11-200. However, during the October 10, 2018 public meeting, the facilitator offered assistance by persons available at the meeting to put any oral comments attendees might wish to offer into writing.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

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cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#10

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com> woc oct18-2018
Sent: Friday, September 28, 2018 11:52 AM
To: eplan1@aol.com; TESSA BERMAN; Earl Matsukawa; Public Comment; clekven@brwncald.com; Bhat Simi (ENRD); Kate Rao; Dora Beck; kaena.horowitz@hawaiicounty.gov
Subject: Re: Meeting in Pahala for DEA - on Oct. 10, 2018 - written comments only for a 90% LEP community per your DEA?

Sorry I used the educational term "ESL" - the correct regulatory requirement is Title VI - LEP, Public Participation and Affirmative Compliance Obligation: EPA 21.3.1 "you are required by Title VI of the Civil Rights Act to provide meaningful access to LEP individuals..." Having given Berna, B&C and W-O adequate notice herein, I will be present to observe that such LEP access is adequately provided at all EPA/COH DEA meetings, and I will need to report any violation to OCR- San Francisco.

In any case, except to exclude many meaningful comments, why wouldn't you take ORAL comments at the only DEA community meeting? Anyone who wanted to provide WRITTEN comments, such as myself, will do so. I do not need to go to a public meeting to hear written comments from extremely limited English language persons, LEP, as found in Pahala.

If any one of you cared at all, you would HEAR the various languages of LEP plantation workers most frequently spoken instead of English, as I do at the bank or post office.

But since none of you care about me, or Naalehu or Pahala, I will just keep on suing and suing and letting OCR know what you do to us at your DEA meetings.

Best, Sandra Demoruelle

PS: Lest you even think your "congressional appropriation" designation for the grant "protects" you from any statutory requirements - they have a policy covering that pork-barrel practice for evading NEPA/cross-cutters: EO 13457, the aptly named **Protecting American Taxpayers from Government Spending on Wasteful Earmarks.**

On Friday, September 28, 2018 09:54:04 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Equity would allow for oral comments at the Oct 10 meeting.

Either written comments are required at all meetings r/t the DEA or not. Cite your statutory authority, please.

Best, Sandra Demoruelle

--
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10349-01 ref (10)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 28, 2018 11:52 a.m.

Dear Ms. Demoruelle:

Thank you for your September 28, 2018 11:52 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Please refer to Appendix E for additional information regarding this issue.

Hawaii Administrative Rules (HAR) Title 11 Chapter 200 has no requirement for conducting a public meeting in conjunction with preparing an environmental assessment. The October 10, 2018 meeting was voluntarily sponsored by the County of Hawaiʻi Department of Environmental Management (DEM) to encourage public participation in the environmental review process.

There is no provision for receiving oral comments in HAR 11-200. However, during the October 10, 2018 public meeting, the facilitator offered assistance by persons available at the meeting to put any oral comments attendees might wish to offer into writing.

HAR 11-200-9.1(b) states that the "period for public review and for submitting written comments for both agency actions and applicant actions shall begin… Written comments to the proposing agency…shall be received or postmarked… (emphasis added).

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#11

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, September 28, 2018 1:21 PM
To: eplan1@aol.com; TESSA BERMAN; Earl Matsukawa; Public Comment; clekven@brwncald.com; Bhat Simi (ENRD); Kate Rao; Dora Beck; kaena.horowitz@hawaiicounty.gov
Cc: Maile David; Linda Morgan; David Albright; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Bob Martin; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Rep. Richard Creagan; Nancy Cook Lauer; Shannon Rudolph; senruderman@capitol.hawaii.gov; mail@environment-hawaii.org; Office of U.S. Senator Brian Schatz; U.S. Senator Mazie Hirono; Joe Kamelamela; William Kucharski; Cohdem; mpoffice@earthjustice.org; Congresswoman Tulsi Gabbard; Charles Tuttle; Brenda Ford
Subject: Re: Meeting in Pahala for DEA - on Oct. 10, 2018 - will police be there to arrest us?

Are you planning to have police present to arrest us for speaking on this tremendously controversial "municipal" sewage treatment plant?

Please answer or I will take it as a firm yes!

Sincerely, Sandra Demoruelle

On Friday, September 28, 2018 11:51:51 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Sorry I used the educational term "ESL" - the correct regulatory requirement is Title VI - LEP, Public Participation and Affirmative Compliance Obligation: EPA 21.3.1 "you are required by Title VI of the Civil Rights Act to provide meaningful access to LEP individuals..." Having given Berna, B&C and W-O adequate notice herein, I will be present to observe that such LEP access is adequately provided at all EPA/COH DEA meetings, and I will need to report any violation to OCR- San Francisco.

In any case, except to exclude many meaningful comments, why wouldn't you take ORAL comments at the only DEA community meeting? Anyone who wanted to provide WRITTEN comments, such as myself, will do so. I do not need to go to a public meeting to hear written comments from extremely limited English language persons, LEP, as found in Pahala.

If any one of you cared at all, you would HEAR the various languages of LEP plantation workers most frequently spoken instead of English, as I do at the bank or post office.

But since none of you care about me, or Naalehu or Pahala, I will just keep on suing and suing and letting OCR know what you do to us at your DEA meetings.

Best, Sandra Demoruelle

PS: Lest you even think your "congressional appropriation" designation for the grant "protects" you from any statutory requirements - they have a policy covering that pork-barrel practice for evading

NEPA/cross-cutters: EO 13457, the aptly named **Protecting American Taxpayers from Government Spending on Wasteful Earmarks.**

On Friday, September 28, 2018 09:54:04 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Equity would allow for oral comments at the Oct 10 meeting.

Either written comments are required at all meetings r/t the DEA or not. Cite your statutory authority, please.

Best, Sandra Demoruelle

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10349-01 ref (11)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 28, 2018 1:21 p.m.

Dear Ms. Demoruelle:

Thank you for your September 28, 2018 1:21 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Community Large Capacity Cesspool Replacement project. Our responses follow:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Formal police presence was not requested for the October 10, 2018 community information meeting.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#12

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, September 28, 2018 1:43 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan
Subject: Re: Sandra Demoruelle Comment #10 - Pahala DEA fails to consider debt financing of the County share of the whole Pahala sewage line/municipal sewage treatment plant costs

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

--
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10349-01 ref (12)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 28, 2018 1:43 p.m.

Dear Ms. Demoruelle:

Thank you for your September 28, 2018 1:43 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

Hawaiʻi Administrative Rules (HAR) Title 11 Chapter 200-10 **Contents of an environmental assessment** does not include a requirement for evaluating the fiscal impacts of a project on a County's budget or ability to obtain funding.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#13

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Saturday, September 29, 2018 5:50 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck; Bhat Simi (ENRD); kaena.horowitz@hawaiicounty.gov; TESSA BERMAN; David Albright; Albanese, Michael (USAHI)
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; eplan1@aol.com; Joe Kamelamela; William Kucharski; Linda Morgan; Bob Martin; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; Shannon Rudolph; mail@environment-hawaii.org; Cohdem; mpoffice@earthjustice.org; senruderman@capitol.hawaii.gov; Congresswoman Tulsi Gabbard; Office of U.S. Senator Brian Schatz; Brenda Ford; U.S. Senator Mazie Hirono
Subject: Re: Sandra Demoruelle Pahala DEA Comment #11 - This is an illegal action as wastewater systems REQUIRE an EIS - see attached DOH EIS Guidelines
Attachments: COH_DOH_EIS_REQUIREMENTS_Page_1.jpeg; COH_DOH_EIS_REQUIREMENTS_Page_2.jpeg

See attached "Guidelines" and withdraw this illegal DEA immediately or face further litigation and my using this as evidence of illegal violation of HRS 343 in my Demoruelle v. Dora Beck lawsuit.

As the COH Contractors, you need to stop these activities where you are clearly violating HRS 343/HAR 11-200 and 11-201, causing all of us in Kau concrete injuries that will be redressed through continuing legal action.

I have the resources and, this coming week, I WILL obtain legal counsel to pursue the NIED suits against all you Contractors who are so flagrantly harming me and everyone else by stomping on the EIS requirement for TWO wastewater systems..

Best, Sandra Demoruelle

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

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Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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Environmental Impact Statement (EIS)
Hawaii Department of Health (DOH)
Office of Environmental Quality Control (OEQC)

Purpose: To propose the use of state or county lands, or lands within conservation districts, shoreline area, historic sites, or in the Waikiki Special District; to propose amendments to county general plans; or to propose a wastewater system, waste-to-energy facility, landfill, oil refinery, or power generating facility according to HRS Chapter 343-5. Activities proposing the importation of regulated plant feedstocks for biofuel may be subject to 343 review.

Approval Authority: Hawaii Revised Statutes (HRS) 343; Hawaii Administrative Rules (HAR) 11-200 and 11-201 (Environmental Council)

Potential Approval Prerequisites: Outreach with key regulatory agencies, stakeholders, and surrounding communities is strongly recommended early in the EA scoping phase. For private applicant actions, an Approving Agency must be established to determine the acceptability of the final EA.

Fees: None

For Permit Application, Guidelines, and Fees:

- OEQC website: http://health.hawaii.gov/oeqc/
- OEQC Online EA/EIS Library: http://oeqc.doh.hawaii.gov/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2fShared%20Documents%2fEA_and_EIS_Online_Library

Contact Information: OEQC (808) 586-4185

Estimated Time for Permit Approval Decision from Application Acceptance: See Checklist / Process

	Checklist / Process – Applicant Actions Only	Chronology
1.	Begin EIS Preparation Notice (EISPN) process, initiated by a determination letter from the approving agency stating the project has potential for significant environmental impacts. See "Special Conditions" for guidance on EISPN contents (or initiated after an agency determines that the proposed action is significant after the DEA public comment period).	
2.	Agency/Applicant consults community and experts.	
3.	Draft EIS Preparation Notice should be reviewed by approving agency.	
4.	EIS Preparation Notice and agency determination letter submitted to OEQC with the OEQC Publication Form. OEQC publishes notice of EIS Preparation Notice	
5.	Public review and comment period.	30 days
6.	Agency/Applicant review comments.	
7.	Begin Draft EIS process. The Draft EIS shall contain all information listed in HAR 11-200-17.	
8.	Applicant performs required studies and answers any comments.	
9.	Draft EIS should be provided to the Approving Agency for review prior to submittal to OEQC.	
10.	Draft EIS, interested party EIS Distribution List, and OEQC Publication Form are concurrently submitted to: (1) Approving Agency; and, (2) OEQC. OEQC publishes notice of Draft EIS.	
11.	Public review and comment period.	45 days
12.	Agency/Applicant review comments.	
13.	Begin Final EIS process by drafting the Final EIS. The Final EIS shall contain all information listed in HAR 11-200-18.	
14.	Draft Final EIS should be provided to Accepting Agency for preliminary review prior to submittal of Final EIS.	
15.	Approving Agency receives Final EIS w/ final Distribution List and OEQC Publication Form for processing (compliance/non-compliance determination) within 30 days unless an extension is requested.	30 days
16.	Accepting Authority accepts or rejects Final EIS based on determination of compliance or non-compliance with HRS 343.	
17.	Approving Agency submits Final EIS, interested party EIS Distribution List, and OEQC Publication Form to OEQC. OEQC publishes notice of acceptance or non-acceptance of Final EIS.	
18.	Appeal period to challenge acceptance or non-acceptance of Final EIS.	60 days
	Estimated Time for Completing the Permit Process	**6-18+ months**

Estimated Time: Varies depending on the timelines involved in the EIS determination and other activities (attached reports, public input and response, agency review, etc.).

Special Conditions / Requirements for Renewable Energy Projects:

- For projects going straight to an EIS under Act 172 (2012), no environmental assessment is required, but sufficient information must be provided in the EIS Preparation Notice to support thorough project review and identification of all interested parties for consultation.
- EA/EIS must contain information specific to the proposed action. If using templates or other EAs/EISs as a base, components should be inserted into the instant EIS only if relevant and specific to the impacts of the instant action being proposed.
- State and/or County permits required for a biofuel/biomass facility or waste-to-energy facility can determine whether or not the project is a "waste-to-energy facility" or "oil refinery" under HRS 343-5(a). Projects should be classified and named consistently by various agencies throughout the various permitting processes. Review the definition of "power-generating facility" to see if your project fits this definition and triggers HRS 343 review.
- Project proponents should work closely with the approving agency throughout the EA/EIS process to facilitate document review, processing, and publication.
- If a proposed project is subject to both the federal National Environmental Policy Act (NEPA) and HRS 343, the project proponent and agencies shall reduce duplication of requirements to the fullest extent possible as described in HAR 11-200-25.
- "Voluntary" environmental review documents developed for projects that do not trigger HRS 343 will not be published or processed as prescribed under HRS 343, but can add value to the environmental review/permitting process. Non-343 review documents should be clearly identified as such, and not labeled as an Environmental Impact Statement or Environmental Assessment (e.g., "Environmental Review Document," Environmental Report").
- Exemptions from HRS 343 that are issued by an agency should be provided to OEQC for publication.

July 2014 Permit Briefs are for guidance only. Confirm procedures with the appropriate agency

HAWAII STATE Energy Office

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref 13)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – September 29, 2018 5:50 p.m.

Dear Ms. Demoruelle:

Thank you for your September 29, 2018 5:50 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

On September 12, 2018, the Draft EA for the Pāhala Large Capacity Cesspool Replacement project was filed with the State of Hawaii Department of Health Office of Environmental Quality Control (OEQC) under the filing dates schedule established by OEQC.

You have referenced an EIS-specific checklist. The most up-to-date guidance available for the EA process is available for download at:
http://oeqc2.doh.hawaii.gov/OEQC_Guidance/Forms/AllItems.aspx

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#14

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, October 1, 2018 10:29 AM
To: Public Comment; Earl Matsukawa; John Sakaguchi; clekven@brwncald.com; eplan1@aol.com; Kate Rao; iconstantinescu@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com
Subject: Fw: AOC Section IX - "Compliance with this Consent Order shall not be a defense to any actions commenced pursuant to such applicable laws [HRS 343], ...nor does it constitute a release!"
Attachments: Image (2).jpg

The preliminary injunction is required because you have all acted illegally against the citizens of Hawaii in violating all the environmental statutes and regulations including the ESA, causing us concrete harm. None of you should ever be paid for the wanton ignorance that you have all brought to this project that has caused us all so much trauma and pain.

Sincerely, Sandra Demoruelle

----- Forwarded Message -----
From: Naalehu Theatre <naalehutheatre@yahoo.com>
To: kaena.horowitz@hawaiicounty.gov <kaena.horowitz@hawaiicounty.gov>
Cc: Joe Kamelamela <joe.kamelamela@hawaiicounty.gov>; Bhat Simi (ENRD) <simi.bhat@usdoj.gov>; TESSA BERMAN <berman.tessa@epa.gov>; Dora Beck <dora.beck@hawaiicounty.gov>
Sent: Monday, October 1, 2018 10:22:49 AM HST
Subject: AOC Section IX - "Compliance with this Consent Order shall not be a defense to any actions commenced pursuant to such applicable laws [HRS 343], ...nor does it constitute a release!"

Aloha,

In spite of Ex. A Section IX, your MTD relied on the AOC for its reason that an EA/EIS was not 13 years overdue under HEPA. I find it hard to find any reason to rely on the AOC since it had approved the earlier purchase of property with no EA/EIS, said to be in violation of the same HRS 343.

You said that "nothing in HRS 343 compels Defendants to do otherwise..." than fail to produce the EA referred to in several public documents.

Since both statements for avoiding publication under HRS 343 and production of the requested record under UIPA are untrue, do you want to change your MTD to an answer to my Complaint?

Otherwise, Plaintiff's Opposition will scorch you, filed last minute so you will be stressed to timely reply, and will point to the validity of my prelim. inj.

Best, Sandra Demoruelle

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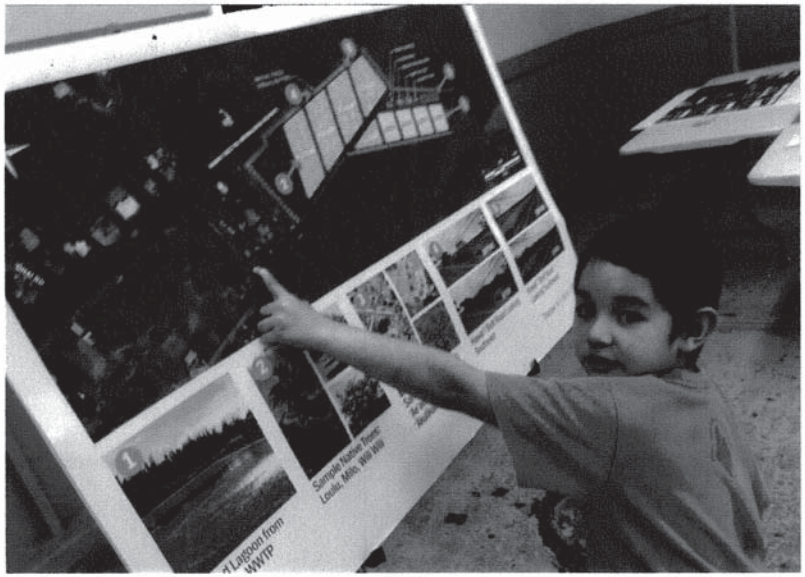
ATTACHMENT A



Six year-old Daniel McDowell points to his Naalehu Elementary School kindergarten classroom beside the four open sewage lagoons proposed by the County of Hawaii at the April 12, 2018, Brown and Caldwell "talkstory" meeting – the sole opportunity for "public participation."

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref 14)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 1, 2018 10:29 a.m.

Dear Ms. Demoruelle:

Thank you for your October 1, 2018 10:29 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#15

Earl Matsukawa

From:	Naalehu Theatre <naalehutheatre@yahoo.com> oct 19-2018
Sent:	Monday, October 1, 2018 10:41 AM
To:	Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc:	clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; Bhat Simi (ENRD); TESSA BERMAN; eplan1@aol.com; kaena.horowitz@hawaiicounty.gov; Joe Kamelamela
Subject:	Re: Sandra Demoruelle Comment #11 - In TEN Notice [9/23/18], HRS Trigger did not state it was 5(a)(9) - a "proposed wastewater system" which triggers an EIS
Attachments:	Image (2).jpg

All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

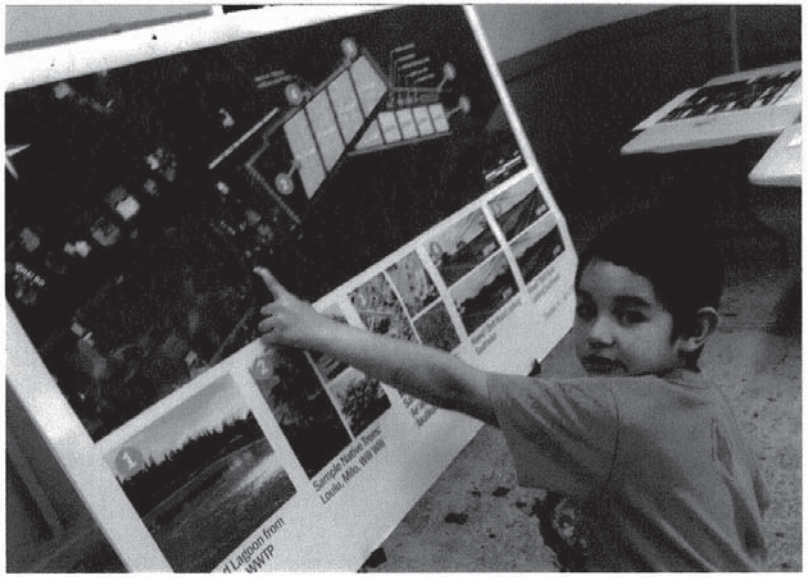
Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

--
This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

ATTACHMENT A



Six year-old Daniel McDowell points to his Naalehu Elementary School kindergarten classroom beside the four open sewage lagoons proposed by the County of Hawaii at the April 12, 2018, Brown and Caldwell "talkstory" meeting – the sole opportunity for "public participation."

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (15)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 1, 2018 10:41 a.m.

Dear Ms. Demoruelle:

Thank you for your October 1, 2018 10:41 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Hawaii Revised Statutes (HRS) Chapter 343 Section 5 (a)(9)(A), states as follows: "(a) Except as otherwise provided, an environmental assessment (emphasis added) shall be required for actions that: ... (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…". Hawaii Administrative Rules (HAR) Title 11, Chapter 200, which implements HRS Chapter 343, however, differentiates between "agency actions" that utilize state or county lands or funds and "applicant actions" for which an applicant must seek agency approval. Since the proposed action will utilize county lands and funds, it is an "agency action" requiring compliance with HRS Chapter 343 and HAR Title 11, Chapter 200, pursuant to which an environmental assessment is being prepared and processed.

HRS 343-5 **Applicability and requirements** states under item (c) (4) "A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…" The criteria by which the proposing agency makes the significance determination is provided in HAR 11- 200-12 (a) and (b) which states: "(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences,… and the…effects of the action."

HAR 11-200-10 **Contents of an environmental assessment** includes "(9) Findings and reasons supporting the agency determination or anticipated determination…" The Draft EA provides this

information in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an EIS.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#16

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Wednesday, October 3, 2018 8:17 AM
To: eplan1@aol.com; Kate Rao; Dora Beck
Cc: Bhat Simi (ENRD); TESSA BERMAN; clekven@brwncald.com; Earl Matsukawa; kaena.horowitz@hawaiicounty.gov; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Public Comment; Rep. Richard Creagan; Maile David; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; David Albright; Linda Morgan; Bob Martin; Shannon Rudolph
Subject: Fw: Rules Update 2018-10-02 - Availability of All Written and Oral Testimony
Attachments: EPA_Opposition_MTD_September_28_2018.doc

Please note that the State Office of Environmental Quality Control took **BOTH WRITTEN AND ORAL COMMENTS** on their rulemaking.

There is no reason for COH Sub-Contractor Berna Senelley to state that at the October 10th Pahala Wastewater System DEA meeting: "no one will be allowed to speak. Its an EPA rule." It makes us fearful of retribution if we try to speak up. Will there be Hawaii Police to stop us from speaking?

Surely, someone at the Pahala DEA meeting can take oral comments and make a transcription, as OEQC has done, thus allowing us Freedom of Speech Rights to speak our minds?

Actually, no DEA meeting should take place because the twin projects, less than 11 miles apart, should be considered together and trigger a HEPA 343 Sec5(a)(9) *wastewater system* single EIS and EISPN notice in *TEN.*

These projects deserve a scoping meeting for the EIS, not the two separate DEAs meetings - see my attached pleading for my legal arguments "why."

Best, Sandra Demoruelle

----- Forwarded Message -----
From: State Office of Environmental Quality Control <oeqchawaii@doh.hawaii.gov>
To: "naalehutheatre@yahoo.com" <naalehutheatre@yahoo.com>
Sent: Tuesday, October 2, 2018 05:00:02 PM HST
Subject: Rules Update 2018-10-02 - Availability of All Written and Oral Testimony

View this email in your browser

EIS Rules Update - Draft 1.0 Public Hearings Written and Oral Comments Available

Aloha, the complete compilation of written and oral comments is now available for review.

Click on the link to access the PDF of written and oral comments from the OEQC SharePoint site:
http://oeqc2.doh.hawaii.gov/Laws/v1.0-Proposed-HAR-11-200.1-All-Comments-2018-10-02.pdf

This file supersedes the previous PDF of written comments released in June 2018.

The Environmental Council Permitted Interaction Group is finalizing its report of recommendations to the Council on responding to the comments and anticipates submitting the report to the Council in late October 2018.

Click here to go to the rules update webpage. The webpage is still being updated to incorporate the most current timeline and information. The OEQC will send another email notification once the website has been updated.

For background on the proposed rules, click on the links below to access PDFs of the rules package:

- Hearing Notice of the now completed public hearings
- Version 1.0 Proposed HAR 11-200.1 Rules Standard Format
  (or go to CiviComment to see the online comments)
- Version 1.0 Proposed HAR 11-200.1 Rules Ramseyer Format
- Version 1.0 Proposed HAR 11-200.1 Rules Ramseyer Unofficial Format
- Version 1.0 Proposed HAR 11-200.1 Rules Rationale

Mahalo,

Office of Environmental Quality Control
(808) 586-4185

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Our mailing address is:
Office of Environmental Quality Control
235 S. Beretania St.
Suite 702
Honolulu, Hi 96813

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Sandra Lee Demoruelle
PO Box 588
Naalehu HI 96772-0588
Ph. 808-929-9244
Email: naalehutheatre@yahoo.com

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAII

CASE NO. CV 18-00172 JMS-KSC

SANDRA LEE DEMORUELLE, *Pro Se* **PLAINTIFF** **v.** **ANDREW WHEELER,** et al. **DEFENDANTS**	**PLAINTIFF'S MEMORANDUM OF POINTS OF LAW AND AUTHORITIES IN OPPOSITION TO DEFENDANTS' MOTION TO DISMISS; CERTIFICATE OF SERVICE** **Hearing Date: Oct. 29, 2018** **Time: 10:00 a.m.** **Judge: Hon. J. Michael Seabright**

PLAINTIFF'S MEMORANDUM OF POINTS OF LAW AND AUTHORITIES IN

OPPOSITION TO DEFENDANTS' MOTION TO DISMISS

I. INTRODUCTION

Plaintiff Sandra Lee Demoruelle, *Pro Se,* respectfully submits her Opposition to Defendants' Motion to Dismiss. The Plaintiff claims that the two County of Hawaii Department of Environmental Management ("COHDEM") Ka'u wastewater treatment plants ("WWTPs") Project Work Plans are proceeding in violation of National Environmental Policy Act ("NEPA") 42 USC Sec. 4321 *et seq.* because in failing to follow statutory and regulatory procedure for public participation, no environmental impact statement has been considered or prepared and submitted for publication as required by the NEPA and Hawaii environmental review statutes

("HEPA"), Hawaii Revised Statutes ("HRS") 343 *et seq.* Plaintiff challenges the decision by Kate Rao, the EPA Responsible Official under 40 CFR 6.200, determining that only the Pahala Large Capacity Cesspool ("LCC") Closure Project, Def. Ex. 1-A and Ex. 6, would be subject to NEPA environmental review procedures and "other environmental cross-cutters (see 40 CFR 6.300 et seq.) applicable to this project." Ex.5 [Grant Agreement P1.].

According to the Defendants' Exhibit 5, which is not authenticated by any affidavit [FRCP Rule 12(d) Presenting Matters Outside the Pleadings], purported to be the original EPA-County of Hawaii Grant Agreement XP-96942401 dated September 20, 2005, Section P1 requires that, ever since 2005, the EPA must comply with NEPA "and other environmental crosscutters" for the "Kau Cesspool Replacement Project" for the "design and construction of wastewater system improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii." Dkt. No. 25-11.

As stated in the original Grant Agreement [Def. Ex. 5], the EPA-assisted project "involves replacement of sewer lines …, installation of community septic tank systems and elimination of 5 large capacity cesspools." The Naalehu and Pahala LCCs, being geographically located 11 miles apart in the remote, sparsely populated District of Kau, were initially treated as a single project with EPA having the sole responsibility to comply with NEPA/cross-cutting statutes and regulations since 2005.

After Plaintiff filed her Complaint on May 14, 2018, on May 30, 2018, Defendants and County of Hawaii Department of Environmental Management ("COHDEM") entered into an "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations, "only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Work Plan and causing the Plaintiff concrete injuries. The Plaintiff claims that the EPA Defendants are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* because no environmental impact

statement for the Naalehu and Pahala LCC Closure Project has been prepared and submitted as required by NEPA and Hawaii environmental review statutes ("HEPA"), HRS 343 *et seq.* Defendant, Kate Rao, EPA's Responsible Official, has failed her duty to provide environmental review (40 CFR 6.200) of the cumulative effects of two new-build municipal secondary wastewater treatment plants planned to service under 170 households at each site (40 CFR 1508.25 (2)), projects which further have the geographic and common timing that require EPA "to treat them in a single impact statement." 40 CFR 1508.25 (3).

The Plaintiff also alleges that the Defendants failed to comply with the procedural requirements of 40 CFR Part 25 – PUBLIC PARTICIPATION IN PROGRAMS UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT, THE SAFE DRINKING WATER ACT, AND THE CLEAN WATER ACT for public participation in activities under the Clean Water Act (Pub. L. 95-217). Plaintiff argues that "by failing to prepare an [EA/EIS] the defendants eliminated the public's right to participate." *City of South Pasadena V. Slater*, 56 F.Supp.2d 1106 (C.D.Cal. 1999). "When substantive judgments are committed to the very broad discretion of an administrative agency, procedural safeguards that assure public access to the decisionmaker should be vigorously enforced." *Western Oil & Gas v. EPA*, 633 F.2d 803, 813 (9th Cir.1980).

Further, lacking an EIS, there is no "sound basis" for all the past and current COHDEM studies – and ongoing studies without an EIS to "provide a sound basis for investigation…" *Sierra Club v. Froehlke*, 630 F. Supp. 1215,1227 (S.D.Tex. 1986).

II. ARGUMENT

A. Defendants' Failure to State a Claim FRCP 12(b)(6) Allegation

Plaintiff seeks declaratory and injunctive relief to protect Plaintiff's interests at law, especially her interests that the EPA comply with the NEPA and EPA regulatory requirements for public participation in identifying alternatives to the recommended projects (40 CFR 1501.7). The Plaintiff seeks this relief by requiring EPA to comply with NEPA statutes and other public participation requirements, treating the two remaining Ka'u LCC closures as one project and completing the NEPA Section 102 Environmental Impact Statement as a single document for both the Pahala and Naalehu Work Plans before any further wastewater planning; design; engineering, biologic and/or archaeological studies; or construction is done at any proposed site in either Naalehu or Pahala.

B. Defendants' Lack of Jurisdiction FRCP 12(b)(1) or (2) Allegation

The Defendants suggest that adjudication of the procedural challenge at this point is improper because a future site-specific EA/EIS might eliminate the concrete injury the Plaintiff has endured because of COHDEM procedural NEPA violations and render this adjudication unnecessary. ("[Defendant] suggests adjudication of [the] challenge at this point is improper because future project-specific consultations might result in mitigation or elimination of any potential harm to [Plaintiff], thus rendering adjudication unnecessary. We conclude, however, that [Plaintiff's] lawsuit is ripe for adjudication." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015).

A procedural dispute, such as the case in question, is ripe "at the time the [procedural] failure takes place." When a party suffers a procedural injury, it "may complain of that failure at the time the failure takes place, for the claim can never get riper." *See Ohio Forestry Association v. Sierra Club et al.*, 523 U.S. 726, 737 (1998); *see also* "The imminence of project-specific implementation 'is irrelevant to the ripeness of an action raising a procedural injury.'" *Citizens for Better Forestry v. USDA*, 341 F.3d 961, 977 (9th Cir. 2003) as cited in *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015). "This dispute needs no additional factual development because the procedural injury has already occurred." *Id.*

1. *NEPA Standard of Review*

"NEPA is essentially a procedural statute (*Daly v. Volpe*, 514 F.2d 1106 (9th Cir. 1975)) and we have recognized that careful compliance with its provisions is necessary to fulfill the statute's fundamental goals..." *Alpine Lakes Protection Society v. Schlapfer*, 518 F.2d 1089 (9th Cir. 1975) (*See Kleppe v. Sierra Club*, 427 U.S. 390, 409-410 (1976) (The court's role is to ensure that the agency has taken a "hard look" at environmental consequences.)

It is unusual for cases in this century to find that agencies have fully avoided NEPA procedures for thirteen years (September 20, 2005 to present), so the Court needs to look back to the original 1971 *Calvert Cliffs' Coordinating Committee* for guidance:

> The NEPA statute establishes a "strict standard of compliance" mandating "a particular sort of careful and informed decisionmaking process and creates judicially enforceable duties. ... [I]f the [agency] decision was reached procedurally without individualized consideration and balancing

of environmental factors – conducted fully and in good faith –it is the responsibility of the courts to reverse." The Court said environmental issues must be considered at every important stage in the decisionmaking process, i.e., at every stage where an overall balancing of environmental and non-environmental factors is appropriate and where alterations might be made in the proposed action to minimize environmental costs. "NEPA, first of all, makes environmental protection a part of the mandate of every federal agency and department."

"[Every federal agency] is not only permitted but compelled to take environmental values into account. Perhaps the greatest importance of NEPA is to require the Atomic Energy Commission and other agencies to *consider* environmental issues just as they consider other matters within their mandates." at 1112

The court must determine whether "the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values."

"To ensure that the balancing analysis is carried out and given full effect, Section 102(2)(c) requires that responsible officials of all agencies prepare a 'detailed statement' covering the impact of particular actions on the environment, the environmental costs which might be avoided, and alternative measures which might alter the cost-benefit equation. The apparent purpose of the 'detailed statement' is to aid in the agencies' own decision making process and to advise other interested agencies and the public of the environmental consequences of planned federal action. Beyond the 'detailed statement,' Section 102(2)(D) [now 102(2)(E)] requires all agencies specifically to 'study courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.' This requirement, like the 'detailed statement' requirement, seeks to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.

Thus the Section 102 duties are not inherently flexible. They must be complied with to the fullest extent, unless there is a clear conflict of *statutory* authority. Considerations of administrative difficulty, delay or economic cost will not suffice to strip the section of its fundamental importance.

We conclude, then, that Section 102 of NEPA mandates a particular sort of careful and informed decisionmaking process and creates judicially

enforceable duties. The reviewing courts probably cannot reverse a substantive decision on its merits, under Section 101, unless it be shown that the balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values. But if the decision was reached procedurally without individualized consideration and balancing of environmental factors – conducted fully and in good faith – it is the responsibility of the courts to reverse.

The question here is whether the Commission is correct in thinking that its NEPA responsibilities may 'be carried out *in toto* outside the hearing process' – whether it is enough that environmental data and evaluations merely 'accompany' an application through the review process, but receive no consideration whatever from the hearing board.

We believe that the Commission's crabbed interpretation of NEPA makes a mockery of the Act. What possible purpose could there be in Section 102(2)(c) requirement (that the 'detailed statement' accompany proposals through agency review processes) if 'accompany' means no more than physical proximity – mandating no more than the physical act of passing certain folders and papers, unopened, to reviewing officials along with certain folders and papers? What possible purpose could there be in requiring the 'detailed statement' to be before hearing boards, if the boards are free to ignore entirely the contents of the statement? NEPA was meant to do more than regulate the flow of papers in the federal bureaucracy. The word 'accompany' in Section 102(2)(c) must not be read so narrowly as to make the Act ludicrous. It must, rather, be read to indicate a congressional intent that environmental factors, as compiled in the 'detailed statement,' be *considered* through agency review processes. *Calvert Cliffs' Coordinating Committee v. AEC*, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971)

"[A]n EIS is in compliance with NEPA when its form, content, and preparation substantially (1) provide decision-makers with an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project in light of its environmental consequences, and (2) make available to the public, information of the proposed project's environmental impact and encourage public participation in the development of that information." *Trout Unlimited v. Morton*, 509 F.2d 1276,1283 (9th Cir. 1974).

> It is important that draft environmental statements be prepared and circulated for comment and furnished to the Council as early as possible in the agency review process in order to permit agency decisionmakers and outside reviewers to give meaningful consideration to the environmental issues involved. In particular, agencies should keep in mind that such statements are to serve as the means of assessing the environmental impact of proposed agency actions, rather than as a justification for decisions already made. This means that draft statements on administrative actions should be prepared and circulated for comment prior to the first significant point of decision in the agency review process. *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982).

The EPA refused to disclose the Proposed Action – the actual Work Plan for the Naalehu WWTP – prior to ALL opportunity for public to comment had passed. ("By refusing to disclose its Proposed Action until after all opportunity for comment has passed, an agency insulates its decision-making process from public scrutiny. Such a result renders NEPA's procedures meaningless.") *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982). Therefore, without sufficient information to permit "meaningful consideration" of the Naalehu Work Project under EPA review for AOC compliance, the Ka'u community and the general public could not participate through intelligent comments before the June 2016 deadline.

This lack of specific EIS information on the Proposed Action made all the Naalehu Work Plan comments irrelevant and EPA responses dismissed all the critical comments without any consideration of the dire warnings of environmental harm. ("[T]he gravamen of their claim is that there was insufficient information to adequately participate in the comment process." *Idaho ex rel. Kempthorne v. US Forest Service*, 142 F. Supp.2d 1248, 1260 (D. Idaho 2001)). The AOC Work Plans the EPA provided for comments in May 2016 failed to

provide the public with a meaningful opportunity to comment on the COHDEM WWTP Proposed Actions.

But EPA's responsibility to respond to the Naalehu comments is shaped by the extreme degree of the human environmental effects of the siting of the Proposed Action – a secondary WWTP –adjoining a rural elementary school as described in the AOC Naalehu Work Plan and its compulsory compliance "Milestones." ("The scope of an agency's responsibility to respond to comments is shaped by the degree that the comments bear 'on the environmental effects of the proposed action.' 40 CFR 1500.10(a)(1977) as cited in *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982)).

EPA failed to require that relevant COHDEM WWTP Projects environmental documents, comments, and responses accompany the proposed projects through existing EPA review processes so that the EPA officials could use the statement in making decisions. 40 CFR 1505.1(d). (*See also* 40 CFR 25.11(b)(2) [At minimum the assisted agency work plan shall include:] "A proposed schedule for public participation activities to impact major decisions, including consultation points where responsiveness summaries will be.")

By failing to ensure COHDEM followed even the minimal schedule of "talkstory" community meetings, the EPA "denied the public that very opportunity to participate in the decisionmaking process which is among the very purposes of the [NEPA] Act itself." *Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981).

2. *Rationalize and Justify Decisions*

By waiting thirteen years to even begin preparation of any environmental review documents, the agencies are merely rationalizing and justifying their decisions which are made without consideration of the environmental effects. EPA has shown that it failed to grasp the fact that environmental review laws are "procedural" by allowing COHDEM Director Kucharski to determine that an EA cannot even be started for the pre-determined wastewater treatment projects until the County has done site-specific environmental studies, which is after the fact rationalization. Word-for-word, Director Kucharski said: "*In an EA you come up with a preferred alternative, and that preferred alternative is what all of the environmental studies and impacts are centered around. And you have to go through a* ***justification*** *as to how you got to that preferred site. And that is the process.*" Director Kucharski statement at COH Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], page 26.

C. Defendants' Lack of Plaintiff's Standing Allegation

To establish Article III standing, "a plaintiff must show (1) it has suffered an 'injury in fact' that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Friends of the Earth v. Laidlaw Environmental Services (TOC), Inc.*, 528 U.S. 167, 180-81 (2000).

The Plaintiff's declaration sufficiently establishes "a geographic nexus between the individual asserting the claim and the location suffering an environmental impact." *Western Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 485 (9th Cir. 2011) (internal quotation marks omitted); *see also Wilderness Society, Inc. v. Rey*, 622 F.3d 1251, 1256 (9th Cir. 2010). In the present case, the Naalehu ESA Phase I names the Naalehu Elementary School as the western boundary of the WWTP facility. As Plaintiff's great-grandson's first grade classroom is currently within 100 feet of the Naalehu WWTP boundary with the school, the geographic nexus between the individual and the location of the Proposed Action is clearly established.

Where a procedural violation is at issue, "a litigant need only demonstrate that he has a procedural right that, if exercised, could protect his concrete interests and that those interests fall within the zone of interests protected by the statute at issue." *NRDC v. Jewell*, 749 F.3d 776, 783 (9th Cir.2014) (internal alterations and quotations omitted). "Thus, where a procedural violation is at issue, a plaintiff need not 'meet [] all normal standards for redressability and immediacy.'" *Lujan v. Defenders of Wildlife*, U.S. 555, 572 n. 7 (1992) as cited in *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015). (A plaintiff that sues a federal agency must also demonstrate that: (1) its complaint "relate[s] to 'agency action,' which is defined to include 'failure to act'"; and (2) it "suffered either 'legal wrong' or an injury falling within the 'zone of interests' sought to be protected by the statute on which [its] complaint is based." "We have explained that injury to aesthetic, recreational, or scientific

interests may constitute 'concrete injury,' but we have stressed that 'plaintiffs can only suffer a concrete injury if the Forest Service … [is] undertaking or threatening to undertake activities that cause or threaten harm to the plaintiffs' protected interests.'") *Center for Biological Diversity v. Lueckel*, 417 F.3d 532, 536,537 (6th Cir. 2005).

III. CONCLUSION

For the reasons stated above, this Court should deny the Defendants' motion for dismissal. The Defendants have threatened the Naalehu community with a horrendous sewage project adjoining the elementary school, and even taken action to condemn the property.

Every day causes more injury to the Plaintiff and her affected community.

The COHDEM has a commitment to completing 90% of the projects' tasks before the end of December, making it almost impossible to undo the effects of these ill-conceived projects. And if the Work Plan pre-determines the future, how much more of a concrete injury is carrying out the Project Work Schedule, in compliance with the AOC? How very true that it **"is now or it is never."** *Idaho Conservation League v. Mumma*, 956 F.2d 1508 at 1516 (9th Cir. 1992).

Here, the violation of NEPA and the failure to provide any EIS and incorporate the essential function of public participation has had more traumatic effects, and critically immediate impact, than generally occurs from the injury of violating NEPA statutes.

To this very day, the EPA has not required the COHDEM to follow the NEPA procedural statutes which require an EIS be developed early and accompany the COHDEM and EPA decision-making. Lacking any environmental review process, COHDEM had no opportunity for any community input for guidance, resulting in the unacceptable proposal that placed a full-sized, newly built secondary sewage treatment plant with four open sewage lagoons right beside

an elementary school, an unexamined action that COHDEM thought was such an optimal decision that they had begun condemnation in violation of their own County regulations.

Ironically, the County has not even complied with the extended time for public participation in their Project Schedules that EPA agreed to in June 2018. The Naalehu Work Plan promised EPA the "Second Round Outreach B&C and County" was to have "Finished" by 8/4/18, with a "Final Round Outreach" 12/23 to 12/27/18. No "outreach" occurred on 8/4/2018.[1]

If the EPA is not enjoined, as Plaintiff has requested of this Court, to provide NEPA procedural environmental review of the two Ka'u WWTP Projects, the EPA will continue to act unchecked with no transparency for citizens. The Court is requested to dismiss the Defendants' motion and allow this case to move forward.

Dated: October 2, 2018 at Naalehu, Hawaii.

Plaintiff:

/Sandra Lee Demoruelle

SANDRA LEE DEMORUELLE, *Pro Se*

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[1] 40 CFR 25.11(b)(2) [At minimum the assisted agency work plan shall include:] "A proposed schedule for public participation activities to impact major decisions, including consultation points where responsiveness summaries will be prepared."

CV18-00172 JMS-KSC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT, on this date and by the method of service noted below, a true and correct copy of the Plaintiff's Opposition and Memorandum of Opposition was served on the following at their last known address:
Served via U.S. Mail

Andrew Wheeler
U.S. EPA Acting Administrator
1200 Pennsylvania Ave, NW, Washington DC 20460

Michael Stoker
U.S. EPA Region 9 Administrator
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Kathleen H. Johnson
Director, Enforcement Division
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Kate Rao
LCC Project Coordinator
Drinking Water Protection Section (WTR 3-2)
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Simi Baht
Trial Attorney
Environmental Defense Section, Environment and Natural Resources Division
U.S. Department of Justice
301 Howard St. Ste 1010, San Francisco, CA 94105

Kenji M. Price
United States Attorney, District of Hawaii
Michael Albanese
Assistant U.S. Attorney
Room 6-100, 300 Ala Moana Boulevard, Honolulu HI 96850

DATED: October 2, 2018 in Naalehu, Hawaii

/Sandra Lee Demoruelle

SANDRA LEE DEMORUELLE, *Pro Se*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (16)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 3, 2018 8:17 a.m.

Dear Ms. Demoruelle:

Thank you for your October 3, 2018 8:17 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The explanation given at the meeting pertained to Hawaii Administrative Rules (HAR) Title 11 Chapter 200-9.1 **Public review and response requirements for draft environmental assessments for anticipated negative declaration determination and addenda to draft environmental assessments**. HAR 11-200-9.1(b) states that the "period for public review and for submitting written comments for both agency actions and applicant actions shall begin… Written comments to the proposing agency…shall be received or postmarked… (emphasis added). While there is no provision for receiving oral comments in the rules, the facilitator offered assistance by persons available at the meeting to put any oral comments attendees might wish to offer into writing.

HAR 11-200 has no requirement for conducting a public meeting in conjunction with preparing an environmental assessment. The meeting was voluntarily sponsored by the County of Hawaii Department of Environmental Management (DEM) to encourage public participation in the environmental review process.

Hawaii Revised Statutes (HRS) Chapter 343 Section 5 (a)(9)(A), states as follows: "(a) Except as otherwise provided, an environmental assessment (emphasis added) shall be required for actions that: ... (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…". HAR Title 11, Chapter 200, which implements HRS Chapter 343, however, differentiates between "agency actions" that utilize state or county lands or funds and "applicant actions" for which an applicant must seek agency approval. Since the proposed action will utilize county lands and funds, it is an "agency action" requiring compliance with HRS Chapter

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343 and HAR Title 11, Chapter 200, pursuant to which an environmental assessment is being prepared and processed.

HRS 343-5 **Applicability and requirements** states under (c) (4) A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…" The criteria by which the proposing agency makes the significance determination is provided in Hawaii Administrative Rules (HAR) Title 11 Section 200-12 (a) and (b) which states:"(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences,… and the…effects of the action.

HAR 11-200-10 **Contents of an environmental assessment** includes "(9) Findings and reasons supporting the agency determination or anticipated determination…" The Draft EA provides this in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an EIS.

The reference to "twin projects less than 11 miles apart, should be considered together" apparently refers to the proposed wastewater treatment plant to serve the Naalehu community. HAR 11-200-7 **Multiple or phased applicant or agency actions** states that "A group of actions proposed by an agency or an applicant shall be treated as a single action when (1) The component actions are phases or increments of a larger total undertaking, (2) An individual project is a necessary precedent for a larger project; (3) An individual project represents a commitment to a larger project; or (4) The actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole." The wastewater projects at Pāhala and Naalehu are not phases or increments of a larger total undertaking, are not precedents or commitments for a larger project, nor are they identical. Hence, there is no requirement to consider them in a single environmental review document.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#17

Earl Matsukawa

From:	Naalehu Theatre <naalehutheatre@yahoo.com> woc oct19-2018
Sent:	Saturday, October 6, 2018 9:00 AM
To:	kaena.horowitz@hawaiicounty.gov; Dora Beck; William Kucharski
Cc:	Bhat Simi (ENRD); Albanese, Michael (USAHI); TESSA BERMAN; Kate Rao; clekven@brwncald.com; eplan1@aol.com; Earl Matsukawa; iconstantinescu@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Public Comment; John Sakaguchi
Subject:	Courtesy copy of Opposition to MTD
Attachments:	COH_Opposition_MTD_October_4_2019.doc; EPA_Opposition_MTD_September_28_2018.doc; 2018_EPA_EIS_Second_Amended_complaint - Final.docx; NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT.docx; COH_MOTIONPI_AUG_2018.docx

Aloha kakou,

Since the Third Cir.hearing will consider the Preliminary Injunction which would cancel all activity by Contractors since they have done such a bad job - and stop all payments for the upcoming week of DEA activities - you might want to consider a settlement at this point in time.

As well, y'all might want to consider the multi-million $$,$$$,$$$ on-going personal injury claim awaiting filing because you are continuing to torture me with the Pahala meetings!!!

Best, Sandra Demoruelle

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10349-01 ref (17)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘u, Hawai‘i
Response to Comment – October 6, 2018 9:00 a.m.

Dear Ms. Demoruelle:

Thank you for your October 6, 2018 9:00 a.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follows:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#18

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Wednesday, October 10, 2018 10:50 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; Bhat Simi (ENRD); TESSA BERMAN; eplan1@aol.com; kaena.horowitz@hawaiicounty.gov; Joe Kamelamela; Bob Martin; Albanese Michael (USAHI); David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph
Subject: Failure to provide copies of the Pahala DEA at the meeting!!!
Attachments: Talk story report_Bernadette_Senelly.txt

Dear Mr. Matsukawa,

The Pahala DEA meeting tonight was held without the aforementioned DEA volume present to consult.

It was like having a Bible study class without any Bibles!

Was I the only person in the room who has actually read the meager DEA offerings? I mean 21 blank pages and untold repetition makes about 50 real pages to read. But to read it, you have to have a real live volume of the DEA to read. None were present at the DEA meeting???!!!

But not to worry! You will have hundreds of pages of comments to add bulk to your FEA - which will have yet another law suit since you did not go direct to EIS like ALL HAWAII WWTPS DO. Name one project without an EIS?!!!

And you could very well lose your prelim inj. and no one will be paid for the meeting I so enjoyed tonight. But then, I didn't get paid, either.

Best, Sandra Demoruelle

On Monday, October 1, 2018 10:40:37 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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Sandra Lee Demoruelle
PO Box 588
Naalehu HI 96772-0588
Ph. 808-929-9244
Email: naalehutheatre@yahoo.com

Civil No. 18-1-00206
Environmental Court

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT
STATE OF HAWAII

SANDRA L. DEMORUELLE, *Pro Se* **PLAINTIFF** - **v.** - **DORA BECK, P.E.** et al. **DEFENDANTS**	**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFF'S OPPOSITION TO DEFENDANTS' MOTION TO DISMISS COMPLAINT; CERTIFICATE OF SERVICE** **Hearing Date: October 25, 2018** **Time: 8:30 a.m.** **Judge: Honorable Greg K. Nakamura**

MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFF'S OPPOSITION TO

DEFENDANTS' MOTION TO DISMISS COMPLAINT

Plaintiff *pro se,* Sandra L. Demoruelle, respectfully submits its opposition to Defendants' Motion to Dismiss the Complaint. The Plaintiff's Complaint not only meets but exceeds the standards governing the form of a complaint as required by the Hawaii Rules of Civil Procedure 8(a). Specifically, this Court has personal jurisdiction over the Defendants, and the Complaint sufficiently alleges causation and harm. Accordingly, Defendants' motion should be denied.

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I. INTRODUCTION

Plaintiff alleges that the County of Hawaii Department of Environmental Management ("COHDEM") through its officers, Dora Beck, P.E., Division Chief of the Wastewater Division and Director William A. Kucharski, has "[p]urposely or not"[1] failed to take an environmental "hard look"[2] at their proposals for building two municipal secondary sewage treatment plants, with one sited adjoining the Naalehu Elementary School, in the District of Ka'u, so, therefore, Plaintiff is entitled to judgment as a matter of law.

II. ARGUMENT

A. Standard of Review of COHDEM Decision not to Publish the Naalehu DEA

The Plaintiff, in Count 4, attempts to state that the Environmental Protection Agency ("EPA") and COHDEM conspired to evade National Environmental Policy Act ("NEPA") applicability to the Naalehu Administrative Order on Consent ("AOC") Work Plan by transferring the NEPA-triggering funding to the Pahala AOC Work Plan on May 30, 2018 after Plaintiff filed US District Court, District of Hawaii ("HID") CV 18-00172 JMS-RSC on May 10, 2018. The HID CV18-00172 JMS-RSC Def. Ex. 7 "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations, "only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Work Plan and causing the Plaintiff concrete

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[1] *Sierra Club v. Department of Transport (Superferry I)*, 167 P.3d 292, 335 (2007).
[2] *Id.* (citing *Price v. Obayashi Haw. Corp.*, 81 Haw. 171, 182 n. 12, 914 P.2d 1364, 1375 n. 12(1996)(citation omitted)).

injuries. The Plaintiff claims that the Defendants are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* and HEPA HRS 343 *et seq.* because no environmental impact statement for the Naalehu Large Capacity Cesspool ("LCC") Closure Project has been prepared and submitted as required by NEPA and Hawaii environmental review statutes.

Because the COHDEM environmental review decision for the Naalehu AOC Work Plan involved a threshold question of NEPA applicability, the "reasonableness" standard should apply to this agency decision. *Ka Makani o Kohala Ohana Inc. v. COH Water Supply*, 295 F.4d 955 (9th Cir. 2002); *Northcoast Environmental Center v. Glickman*, 136 F.3d 667 (9th Cir. 1998) (which held that the "reasonableness" standard should apply where the agency decision involved a threshold question of NEPA applicability); *see Kern v. USBLM*, 284 F.3d 1062, 1070 (9th Cir. 2002); *see also Price Rd. Neighborhood Association v. USDOT*, 113 F.3d 1505, 1508 (9th Cir. 1997) (recognizing that two standards govern the review of agency actions involving NEPA: the arbitrary and capricious standard for predominantly factual or technical disputes and the reasonableness standard for primarily legal disputes).

B. Defendants' Lack of Jurisdiction HRCP 12(b)(1) Allegation

The relief Plaintiff seeks is based "on HRS Sections 603-21.5 (1993) (general jurisdiction of the circuit courts) and 632-1 (1993) (declaratory judgments)." *Citizens for the Protection of the North Kohala Coastline et al. v. COH*, 91 Hawaii 94 (1999); 979 P.2d 1120.

1. The Naalehu Wastewater System EA "is not due yet"

In speaking of the COHDEM, its Director Kucharski stated that over the past fifteen years, his Department "have failed miserably in doing their duty to the environment and local

residents."[3] The duty owed the environment, the Ka'u community in general, and the Plaintiff individually, was to provide environmental review of the County wastewater infrastructure projects aimed at closing County-owned Large Capacity Cesspools in Pahala and Naalehu.

The reason the Defendants give for failure to provide the "Naalehu Environmental Assessment," ("EA") publicly referred to in the EPA Administrative Order on Consent (Def. Ex. A) Naalehu Work Plan dated April 21, 2017 (Def. Ex. C), and a County press release of June 2018 published in *The Ka'u Calendar*, is because [the Naalehu EA] "is not scheduled to be due until a future date." Def. Motion to Dismiss ("MTD") Page 2. Defendants further opine "nothing in HRS 343 compels Defendants to do otherwise…" Def. MTD Memorandum Page 4.

Plaintiff would argue against those conclusions: the AOC (Def. Ex. A Paragraph 64) itself states that "[c]ompliance with this Consent Order shall not be a defense to any actions commenced pursuant to applicable laws, regulations, or permits, nor does it constitute a release." If it were otherwise, the COHDEM original timelines requiring acquisition of the County's preferred sites in Naalehu and Pahala before any EA/EIS was completed would not have needed the revision approved in Def. Ex. B, said to be needed to accommodate the HRS 343, as cited to Director Kucharski on Page 1 Paragraph 2 of Ex. B.

If the AOC did not constitute a release for the purchase of the chosen site land prior to environmental review, the AOC cannot constitute a release from any other HRS 343 requirement, including denying the requirement for an "early hard look."

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[3] The full quote is: "The cesspools were to have been closed by 2005, and they have failed miserably in doing their duty to the environment and local residents." COH Environmental Management Committee Meeting Minutes, 4/25/18, Page 13.

Thus, Defendants have a misplaced reliance on the AOC timeline, as cited in the Motion to Dismiss Memorandum Page 3, to avoid HRS 343 procedural requirements for production of an early determination whether or not to do a HEPA EIS and notice/publication of an EA/EIS.

2. HEPA[4] Statutes require "Early" Environmental Review

The central question in this case is not whether the Pahala and Naalehu Wastewater Treatment Unit Administrative Order on Consent Work Plans are "actions" subject to the procedural environmental review provisions of HEPA and NEPA as Defendants have published the joint HEPA/NEPA Pahala Draft Environmental Assessment ("DEA") in *The Environmental Notice* (*"TEN"*) September 23, 2018, and state in Defendants' MTD that they "fully intend to produce the [HEPA-only] Naalehu EA …" at an unspecified point in time in the future. Indeed, as applies to all State and County agencies, COHDEM is compelled to follow HEPA statutes when, as in this case, "[a]n environmental assessment under HEPA is required if three conditions are satisfied: (1) the proposed activity is an 'action' under HRS 343-2 (2010); (2) the action proposes one or more of the nine categories of land uses or administrative acts enumerated in HRS 343-5(a) (2010);and (3) the action is not declared exempt pursuant to HRS 343-6(a)(2) (2010). *See Sierra Club v. Department of Transportation of the State of Hawaii*, 115 Hawaii 299, 306, 167 P.3d 292, 299 (2007) as cited in *Umberger et al. v. DLNR*, SCWC 13-002125 (2017), No. CAAP-13-002125, 382 P.3d 320 (2016).

"The commonality among the varied activities to which HEPA has been applied is their potential of producing 'environmental concerns' that HEPA intended to be 'given appropriate

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[4] Although "HRS chapter 343 is entitled 'Environmental Impact Statements,' the law has long been referred to, by the public and [appellate]court[s], as the Hawai'i Environmental Policy Act." *Sierra Club v. Department of Transportation of the State of Hawaii*, 115 Hawaii 299, 304, 167 P.3d 292, 297 (2007) as cited in *Umberger et al. v. DLNR*, SCWC 13-002125 (2017), No. CAAP-13-002125, 382 P.3d 320 (2016).

consideration in decision making along with economic and technical considerations.'" *Id. See Nuuanu Valley Association v. City and County of Honolulu*, 119 Hawaii 90, 103, 194 P.3d 531, 544 (2008) quoting HRS 343-1. These "environmental concerns" have not been identified for the Naalehu Work Plan (AOC Attachment B) which places a municipal sewage treatment plant (*see* HRS 343-5(a)(9A) for the "triggering" "action" of a "wastewater treatment unit") adjoining the Naalehu Elementary School with no environmental review procedures. (*See Complaint Attachment A* illustrating the proposed COHDEM "action" sited adjoining Naalehu School).

The proper time for production of the Naalehu DEA is the question presented by the instant facts: is the COHDEM in violation of HEPA by withholding the current Naalehu DEA, first described as "updated" in November 2013 per information on Page 2 of the AOC Attachment B Naalehu Work Plan, and which received community "concerns/objections" during 2013 and 2014? According to the COHDEM Naalehu Work Plan, the "revised draft EA" was to have "been issued for public review and comment" as soon as the "informational community outreach" was completed in April 2018.

The Supreme Court of Hawaii states:

> Requiring early environmental assessment of the [Naalehu] project comports with HRS 343-5(c)'s express mandate that environmental review be undertaken at the "earliest practicable time." This result also finds support in the spirit and intent of HEPA to "establish a system of environmental review which will ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations… [and] alert decision makers of significant environmental effects which may result from the implementation of certain actions. HRS 343-1 (1993).
>
> Consonant with these policies, both federal and state courts have recognized that environmental review must occur early enough to function practically as an input into the decision making process. In construing the National Environmental Policy Act (NEPA), for example, the United States Court of Appeals for the Ninth Circuit cautioned that "[a]n assessment must be 'prepared early enough so that it can serve practically

as an important contribution to the decision making process and will not be used to rationalize or justify decisions already made.'" *Save the Yaak Committee v. J.R. Block*, 840 F.2d 714, 718 (9th Cir. 1987) (quoting 40 CFR 1502.5 (1987)). It further stated that federal agencies are required to "integrate the NEPA process with other planning **at the earliest possible time** to insure that planning and decisions reflect environmental values...." *Id.* (emphasis added) (citing *Andrus v. Sierra Club*, 442 U.S. 347, 351, 99 S. Ct. 2335, 60 L.Ed.2d 943 (1979) (citations omitted), and *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)). According to the J.R. Block Court, "[t]he rationale behind this rule is that inflexibility may occur if delay in preparing an EIS is allowed: "After major investment of both time and money, it is likely that more environmental harm will be tolerated." *Id.* (quoting *Confederated Tribes and Bands of the Yakima Nation v. FERC*, 746 F.2d 466, 371-72 (9th Cir. 1984) (citation omitted). *See also Sierra Club v. Peterson*, 717 F.2d 1409,1414 (D.C.Cir.1983) ("the EIS is a decision-making tool intended to insure that ... environmental amenities and values may be given appropriate consideration in decisionmaking...." Therefore, the appropriate time for preparing an EIS is prior to a decision, when the decisionmaker retains a maximum range of options.") *Citizens for the Protection of the North Kohala Coastline et al. v. COH*, 91 Hawaii 94 (1999); 979 P.2d 1120, 1130, 1131.

The Defendant, COHDEM Director William Kucharski, on the other hand, failed to do an "early" EA or EIS on the Naalehu Project because he cannot decide on his preferred site. Director Kucharski prefers using the EA as a rationalization for his pre-chosen alternative. As he says: *"you have to go through a **justification** as to how you got to that preferred site. And that is the process."*

In addition, NEPA has similar procedural requirements to HEPA and concrete injuries result when agencies violate NEPA statutes. "To the extent that the [Work] [P]lan pre-determines the future, it represents a **concrete injury** that plaintiffs must, at some point, have standing to challenge. **That point is now or it is never.**" [emphasis added.] (*Idaho Conservation League v. Mumma*, 956 F.2d 1508 at 1516 (9th Cir. 1992)); and in *Ohio Forestry Association v. Sierra Club*, 523 U.S. 726 (1998) the Supreme Court stated: "Hence a person with standing who is injured by a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes place, for the claim can never get riper.")

3. Future Naalehu EA for purpose of COHDEM rationalization and justification

By waiting thirteen years to even begin preparation of the requisite "early" environmental review documents, the agencies are merely rationalizing and justifying their decisions which have been and are currently being made without any consideration of the environmental effects. EPA has shown that it failed to grasp the fact that environmental review laws are "procedural" by allowing COHDEM Director Kucharski to determine that an EA cannot even be started for the pre-determined wastewater treatment projects until the County has done site-specific environmental studies, which is after the fact rationalization. Word-for-word, Director Kucharski said: "*In an EA you come up with a preferred alternative, and that preferred alternative is what all of the environmental studies and impacts are centered around. And you have to go through a **justification** as to how you got to that preferred site. And that is the process."* Director Kucharski statement in the County of Hawaii Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], Page 26.

The Defendants suggest that adjudication of the Plaintiff's procedural challenge at this point is improper because a future site-specific EA/EIS might eliminate the concrete injury the Plaintiff has endured because of on-going COHDEM procedural HEPA violations and render this adjudication unnecessary. ("[Defendant] suggests adjudication of [the] challenge at this point is improper because future project-specific consultations might result in mitigation or elimination of any potential harm to [Plaintiff], thus rendering adjudication unnecessary. We conclude, however, that [Plaintiff's] lawsuit is ripe for adjudication." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015)).

A procedural dispute, such as the case in question, is ripe "at the time the [procedural] failure takes place." When a party suffers a procedural injury, it "may complain of that failure at the time the failure takes place, for the claim can never get riper." *See Ohio Forestry Association v. Sierra Club et al.*, 523 U.S. 726, 737 (1998); *see also* "The imminence of project-specific implementation 'is irrelevant to the ripeness of an action raising a procedural injury.'" *Citizens for Better Forestry v. USDA*, 341 F.3d 961, 977 (9th Cir. 2003) as cited in *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015). "This dispute needs no additional factual development because the procedural injury has already occurred." *Id.*

C. Defendants' Failure to State a Claim HRCP 12(b)(6) Allegation

Plaintiff's Complaint properly alleged causation and damages and Plaintiff seeks declaratory and injunctive relief to protect Plaintiff's interests at law, especially its interests that the COHDEM comply with the HEPA regulatory requirements, Hawaii Revised Statutes 343 *et seq.* Based on the COHDEM failure to provide public participation leading to failure to receive any public input into any environmental review of the proposed projects, Plaintiff seeks a declaratory judgment, injunctive relief, the award of costs of suit, and other such relief as this Court deems just and proper.

1. "Immunity from liability" from Disclosure under UIPA Defense

Under Uniform Information Practices Act HRS 92F *et seq.*, on May 3, 2018, Plaintiff requested, *inter alia*,[5] the COHDEM record of the Naalehu Draft Environmental Statement that

[5] The COHDEM denied in its entirety (although acknowledging the agency maintains the requested records) the Plaintiff's records request for the following 92F-12(6)[Results of environmental tests] which are records

Plaintiff read about in the AOC Attachment B, the Naalehu WWS Work Plan on Page 3, and again when it was publicly announced in a County press release printed in the local monthly newspaper, *The Ka'u Calendar,* June 2018. Plaintiff contends that this public discussion of the Naalehu DEA environmental review document waived any protection of privilege under HRS 92F-13(3) (*see OIP OP. Ltr. No. 91-22*, November 25, 1991).

The COHDEM provided a *Notice to Requestor* denying Plaintiff's requested environmental test records because they were exempted under HRS 92F-13(3) because these records were "Land acquisition information identifying or pertaining to real property under consideration for future public acquisition." Since the COHDEM has belatedly acknowledged (*see* Def. Ex. B) that they could not "acquire" their chosen municipal sewage treatment plant sites before they had completed a FEA or FEIS, the documents so labelled as subject to the "land acquisition" 92F-13(3) exemption claimed for the Naalehu DEA are actually environmental review records that must be made transparently available to inquiring public citizens, including the instant Plaintiff. (*See* HRS 343-3 (a) *Public records and notice* All statements, environmental assessments, and other documents prepared under this chapter shall be made available for inspection by the public during established office hours.)

Plaintiff alleges in Count 1 that the COHDEM are withholding the "Naalehu DEA" that was lawfully requested on May 3, 2018 and requests the Court decision on that factual allegation, not on the "liability" of the COHDEM staff for the act of withholding requested

maintained by COHDEM: Pahala Complete Phase I Environmental Site Assessment (ESA) and Preliminary Engineering Report (PER)and the Complete Phase I ESA for Naalehu LCC closure project, along with the Naalehu DEA. Under FOIA requests to EPA, Plaintiff received the other requested records, but EPA could not supply the Naalehu DEA, so aggrieved by the denial of access, Plaintiff has filed this instant suit under HRS 92F-15 for judicial enforcement to compel disclosure.

records as the Defendants plead they are "Immune From Liability For Non-Disclosure Of The Draft Of The Naalehu EA, Pursuant to HRS Sec. 92F-16." (Def. MTD Page 5, Section II. A.).

Plaintiff is seeking judicial enforcement (HRS 92F-15) within two years of the June 5, 2018, date when Plaintiff was aggrieved by Defendants' COHDEM denial of access to any of the requested government records that they admit they maintain within their agency, and Plaintiff is requesting the Court to compel disclosure of the Naalehu DEA.

2. Allegation of Failure to State Claim in Count # 4

The original EPA-County of Hawaii Grant Agreement XP-96942401 dated September 20, 2005, was for the singular "Kau Cesspool Replacement Project" for the "design and construction of wastewater system improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii."

As stated in the original Grant Agreement, the EPA-assisted project "involves replacement of sewer lines …, installation of community septic tank systems and elimination of 5 large capacity cesspools." The Naalehu and Pahala LCCs, being geographically located 11 miles apart in the remote, sparsely populated District of Kau, were initially treated as a single project with COHDEM having the sole responsibility to comply with HEPA statutes and HAR regulations since 2005.

After Plaintiff filed its US District Court, District of Hawaii ("HID") Complaint on May 14, 2018,[6] on May 30, 2018, Defendants and the EPA entered into an "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations, "only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Work Plan and causing the Plaintiff concrete injuries. The Plaintiff claims that the Defendants are proceeding in violation

[6] HID CV 18-00172 JMS-RSC with hearing scheduled for Def. MTD on November 29, 2018.

of NEPA 42 USC Sec. 4321 *et seq.* and HEPA 343 *et seq.* because no environmental impact statement for the Naalehu and Pahala LCC Closure Project has been prepared and submitted as required by NEPA and Hawaii environmental review statutes. Defendants have failed their duty to provide environmental assessment of whether the "wastewater treatment unit" may have a significant effect (HRS 343-2) and consider the cumulative effects of two new-build municipal secondary wastewater treatment plants planned to service under 170 households at each site, projects which further have the geographic and common timing that require EPA "to treat them in a single impact statement." 40 CFR 1508.25 (3).

Plaintiff argues that "by failing to prepare an [EA/EIS] the defendants eliminated the public's right to participate." *City of South Pasadena V. Slater*, 56 F.Supp.2d 1106 (C.D.Cal. 1999). "When substantive judgments are committed to the very broad discretion of an administrative agency, procedural safeguards that assure public access to the decisionmaker should be vigorously enforced." *Western Oil & Gas v. EPA*, 633 F.2d 803, 813 (9th Cir.1980).

By failing to file the Naalehu DEA Notice with the Office of Environmental Quality Control pursuant to HAR 11-200-11.1, "there was no date from which to measure the thirty day limitation prescribed by Sec. 343-7(b) and 343-7(b) was thus inapplicable…" *Unite Here! Local 5 v. City and County of Honolulu,* 123 H. 150, 231 P.3d 423 (2010). Violation of HRS 343 requirements to file public notice of the Naalehu DEA has thus deprived the Plaintiff and other members of the community from obtaining timely judicial review of the Defendants' procedural failures.

Further, lacking an EA/EIS, there is no "sound basis" for all the past and current COHDEM environmental test studies memorialized in the withheld Pahala Complete Phase I Environmental Site Assessment (ESA) and Preliminary Engineering Report and the Complete Phase I ESA for Naalehu LCC closure project – and ongoing studies without an EA/EIS to

"provide a sound basis for investigation…" *Sierra Club v. Froehlke,* 630 F. Supp. 1215, 1227 (S.D.Tex. 1986).

III. CONCLUSION

For the reasons stated above, this Court should deny the Defendants' motion for dismissal. Having failed their duty to follow HEPA statutes by not providing environmental review for thirteen years, now the Defendants have threatened the Naalehu community with a horrendous sewage project adjoining the elementary school, and even taken action to condemn the property.

Every day causes more injury to the Plaintiff and the affected Ka'u community.

The COHDEM has a commitment to completing 90% of the projects' tasks before the end of December, making it almost impossible to undo the effects of these ill-conceived projects. And if the Work Plan pre-determines the future, how much more of a concrete injury is carrying out the Project Work Schedule, in compliance with the AOC? How very true that it **"is now or it is never."** *Idaho Conservation League v. Mumma*, 956 F.2d 1508 at 1516 (9th Cir. 1992).

Here, the violation of HEPA and the failure to provide any EIS and incorporate the essential function of public participation has had more traumatic effects, and critically immediate impact, than generally occurs from the injury of violating HEPA statutes.

To this very day, the COHDEM has not followed the HEPA procedural statutes HRS 343 Sec. 5(a)(9) citing wastewater systems as "triggers" which require an EIS be developed early and accompany the project through the COHDEM and EPA decision-making processes. Lacking the legal environmental review process, COHDEM had no opportunity for any community input for guidance, resulting in the unacceptable proposal that placed a full-sized, new-build municipal

secondary sewage treatment plant with four open sewage lagoons right beside an elementary school, an unexamined action that COHDEM thought was such an optimal decision that they had begun land condemnation in violation of their own County regulations.

Ironically, the County has not even complied with the extended time for public participation in their Project Schedules that EPA agreed to in June 2018. The Naalehu Work Plan promised EPA the "Second Round Outreach B&C and County" was to have "Finished" by 8/4/18, with a "Final Round Outreach" 12/23 to 12/27/18. No "outreach" occurred on 8/4/2018 so the Defendants' allegation that the Plaintiff would have these "time[s] to meaningfully participate in commenting and opposing the development of this infrastructure project" was false, thereby adding to her on-going concrete injuries.

If the COHDEM is not enjoined, as Plaintiff has requested with a Preliminary Injunction to provide HEPA procedural environmental review of the twin wastewater systems, the County will continue to act unchecked with no transparency for citizens and no EA/EIS to guide agency decisions.

For the foregoing reasons and all the others discussed in Plaintiff's Complaint, the present Motion to Dismiss should be denied and this case be allowed to move forward with immediate consideration of Plaintiff's Motion for Preliminary Injunction.

Dated: October 4, 2018 at Naalehu, Hawaii.

Plaintiff:

SANDRA LEE DEMORUELLE, *Pro Se*

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT, on this date and by the method of service noted below, a true and correct copy of the Plaintiff's Opposition to Defendants' Motion to Dismiss were served on the following at their last known address:

Served via postage pre-paid U.S. Mail.

Dora Beck, P.E.
Division chief, Wastewater Division
County of Hawaii Department of Environmental Management
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William A. Kucharski
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Dated: October 4, 2018 at Naalehu, Hawaii

SANDRA LEE DEMORUELLE, *Pro Se*

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF HAWAII

CASE NO. CV 18-00172 JMS-KSC

SANDRA LEE DEMORUELLE, *Pro Se* **PLAINTIFF**	**PLAINTIFF'S MEMORANDUM OF POINTS OF LAW AND AUTHORITIES IN OPPOSITION TO DEFENDANTS' MOTION TO DISMISS; CERTIFICATE OF SERVICE**
v.	
ANDREW WHEELER, et al.	
DEFENDANTS	**Hearing Date: Oct. 29, 2018** **Time: 10:00 a.m.** **Judge: Hon. J. Michael Seabright**

PLAINTIFF'S MEMORANDUM OF POINTS OF LAW AND AUTHORITIES IN

OPPOSITION TO DEFENDANTS' MOTION TO DISMISS

I. INTRODUCTION

Plaintiff Sandra Lee Demoruelle, *Pro Se,* respectfully submits her Opposition to Defendants' Motion to Dismiss. The Plaintiff claims that the two County of Hawaii Department of Environmental Management ("COHDEM") Ka'u wastewater treatment plants ("WWTPs") Project Work Plans are proceeding in violation of National Environmental Policy Act ("NEPA") 42 USC Sec. 4321 *et seq.* because in failing to follow statutory and regulatory procedure for public participation, no environmental impact statement has been considered or prepared and submitted for publication as required by the NEPA and Hawaii environmental review statutes

("HEPA"), Hawaii Revised Statutes ("HRS") 343 *et seq.* Plaintiff challenges the decision by Kate Rao, the EPA Responsible Official under 40 CFR 6.200, determining that only the Pahala Large Capacity Cesspool ("LCC") Closure Project, Def. Ex. 1-A and Ex. 6, would be subject to NEPA environmental review procedures and "other environmental cross-cutters (see 40 CFR 6.300 et seq.) applicable to this project." Ex.5 [Grant Agreement P1.].

According to the Defendants' Exhibit 5, which is not authenticated by any affidavit [FRCP Rule 12(d) Presenting Matters Outside the Pleadings], purported to be the original EPA-County of Hawaii Grant Agreement XP-96942401 dated September 20, 2005, Section P1 requires that, ever since 2005, the EPA must comply with NEPA "and other environmental crosscutters" for the "Kau Cesspool Replacement Project" for the "design and construction of wastewater system improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii." Dkt. No. 25-11.

As stated in the original Grant Agreement [Def. Ex. 5], the EPA-assisted project "involves replacement of sewer lines …, installation of community septic tank systems and elimination of 5 large capacity cesspools." The Naalehu and Pahala LCCs, being geographically located 11 miles apart in the remote, sparsely populated District of Kau, were initially treated as a single project with EPA having the sole responsibility to comply with NEPA/cross-cutting statutes and regulations since 2005.

After Plaintiff filed her Complaint on May 14, 2018, on May 30, 2018, Defendants and County of Hawaii Department of Environmental Management ("COHDEM") entered into an "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations, "only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Work Plan and causing the Plaintiff concrete injuries. The Plaintiff claims that the EPA Defendants are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* because no environmental impact

statement for the Naalehu and Pahala LCC Closure Project has been prepared and submitted as required by NEPA and Hawaii environmental review statutes ("HEPA"), HRS 343 *et seq.* Defendant, Kate Rao, EPA's Responsible Official, has failed her duty to provide environmental review (40 CFR 6.200) of the cumulative effects of two new-build municipal secondary wastewater treatment plants planned to service under 170 households at each site (40 CFR 1508.25 (2)), projects which further have the geographic and common timing that require EPA "to treat them in a single impact statement." 40 CFR 1508.25 (3).

The Plaintiff also alleges that the Defendants failed to comply with the procedural requirements of 40 CFR Part 25 – PUBLIC PARTICIPATION IN PROGRAMS UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT, THE SAFE DRINKING WATER ACT, AND THE CLEAN WATER ACT for public participation in activities under the Clean Water Act (Pub. L. 95-217). Plaintiff argues that "by failing to prepare an [EA/EIS] the defendants eliminated the public's right to participate." *City of South Pasadena V. Slater*, 56 F.Supp.2d 1106 (C.D.Cal. 1999). "When substantive judgments are committed to the very broad discretion of an administrative agency, procedural safeguards that assure public access to the decisionmaker should be vigorously enforced." *Western Oil & Gas v. EPA*, 633 F.2d 803, 813 (9th Cir.1980).

Further, lacking an EIS, there is no "sound basis" for all the past and current COHDEM studies – and ongoing studies without an EIS to "provide a sound basis for investigation…" *Sierra Club v. Froehlke,* 630 F. Supp. 1215,1227 (S.D.Tex. 1986).

II. ARGUMENT

A. Defendants' Failure to State a Claim FRCP 12(b)(6) Allegation

Plaintiff seeks declaratory and injunctive relief to protect Plaintiff's interests at law, especially her interests that the EPA comply with the NEPA and EPA regulatory requirements for public participation in identifying alternatives to the recommended projects (40 CFR 1501.7). The Plaintiff seeks this relief by requiring EPA to comply with NEPA statutes and other public participation requirements, treating the two remaining Ka'u LCC closures as one project and completing the NEPA Section 102 Environmental Impact Statement as a single document for both the Pahala and Naalehu Work Plans before any further wastewater planning; design; engineering, biologic and/or archaeological studies; or construction is done at any proposed site in either Naalehu or Pahala.

B. Defendants' Lack of Jurisdiction FRCP 12(b)(1) or (2) Allegation

The Defendants suggest that adjudication of the procedural challenge at this point is improper because a future site-specific EA/EIS might eliminate the concrete injury the Plaintiff has endured because of COHDEM procedural NEPA violations and render this adjudication unnecessary. ("[Defendant] suggests adjudication of [the] challenge at this point is improper because future project-specific consultations might result in mitigation or elimination of any potential harm to [Plaintiff], thus rendering adjudication unnecessary. We conclude, however, that [Plaintiff's] lawsuit is ripe for adjudication." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015).

A procedural dispute, such as the case in question, is ripe "at the time the [procedural] failure takes place." When a party suffers a procedural injury, it "may complain of that failure at the time the failure takes place, for the claim can never get riper." *See Ohio Forestry Association v. Sierra Club et al.*, 523 U.S. 726, 737 (1998); *see also* "The imminence of project-specific implementation 'is irrelevant to the ripeness of an action raising a procedural injury.'" *Citizens for Better Forestry v. USDA*, 341 F.3d 961, 977 (9th Cir. 2003) as cited in *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015). "This dispute needs no additional factual development because the procedural injury has already occurred." *Id.*

1. *NEPA Standard of Review*

"NEPA is essentially a procedural statute (*Daly v. Volpe*, 514 F.2d 1106 (9th Cir. 1975)) and we have recognized that careful compliance with its provisions is necessary to fulfill the statute's fundamental goals…" *Alpine Lakes Protection Society v. Schlapfer*, 518 F.2d 1089 (9th Cir. 1975) (*See Kleppe v. Sierra Club*, 427 U.S. 390, 409-410 (1976) (The court's role is to ensure that the agency has taken a "hard look" at environmental consequences.)

It is unusual for cases in this century to find that agencies have fully avoided NEPA procedures for thirteen years (September 20, 2005 to present), so the Court needs to look back to the original 1971 *Calvert Cliffs' Coordinating Committee* for guidance:

> The NEPA statute establishes a "strict standard of compliance" mandating "a particular sort of careful and informed decisionmaking process and creates judicially enforceable duties. … [I]f the [agency] decision was reached procedurally without individualized consideration and balancing

of environmental factors – conducted fully and in good faith –it is the responsibility of the courts to reverse." The Court said environmental issues must be considered at every important stage in the decisionmaking process, i.e., at every stage where an overall balancing of environmental and non-environmental factors is appropriate and where alterations might be made in the proposed action to minimize environmental costs. "NEPA, first of all, makes environmental protection a part of the mandate of every federal agency and department."

"[Every federal agency] is not only permitted but compelled to take environmental values into account. Perhaps the greatest importance of NEPA is to require the Atomic Energy Commission and other agencies to *consider* environmental issues just as they consider other matters within their mandates." at 1112

The court must determine whether "the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values."

"To ensure that the balancing analysis is carried out and given full effect, Section 102(2)(c) requires that responsible officials of all agencies prepare a 'detailed statement' covering the impact of particular actions on the environment, the environmental costs which might be avoided, and alternative measures which might alter the cost-benefit equation. The apparent purpose of the 'detailed statement' is to aid in the agencies' own decision making process and to advise other interested agencies and the public of the environmental consequences of planned federal action. Beyond the 'detailed statement,' Section 102(2)(D) [now 102(2)(E)] requires all agencies specifically to 'study courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.' This requirement, like the 'detailed statement' requirement, seeks to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.

Thus the Section 102 duties are not inherently flexible. They must be complied with to the fullest extent, unless there is a clear conflict of *statutory* authority. Considerations of administrative difficulty, delay or economic cost will not suffice to strip the section of its fundamental importance.

We conclude, then, that Section 102 of NEPA mandates a particular sort of careful and informed decisionmaking process and creates judicially

enforceable duties. The reviewing courts probably cannot reverse a substantive decision on its merits, under Section 101, unless it be shown that the balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values. But if the decision was reached procedurally without individualized consideration and balancing of environmental factors – conducted fully and in good faith – it is the responsibility of the courts to reverse.

The question here is whether the Commission is correct in thinking that its NEPA responsibilities may 'be carried out *in toto* outside the hearing process' – whether it is enough that environmental data and evaluations merely 'accompany' an application through the review process, but receive no consideration whatever from the hearing board.

We believe that the Commission's crabbed interpretation of NEPA makes a mockery of the Act. What possible purpose could there be in Section 102(2)(c) requirement (that the 'detailed statement' accompany proposals through agency review processes) if 'accompany' means no more than physical proximity – mandating no more than the physical act of passing certain folders and papers, unopened, to reviewing officials along with certain folders and papers? What possible purpose could there be in requiring the 'detailed statement' to be before hearing boards, if the boards are free to ignore entirely the contents of the statement? NEPA was meant to do more than regulate the flow of papers in the federal bureaucracy. The word 'accompany' in Section 102(2)(c) must not be read so narrowly as to make the Act ludicrous. It must, rather, be read to indicate a congressional intent that environmental factors, as compiled in the 'detailed statement,' be *considered* through agency review processes. *Calvert Cliffs' Coordinating Committee v. AEC*, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971)

"[A]n EIS is in compliance with NEPA when its form, content, and preparation substantially (1) provide decision-makers with an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project in light of its environmental consequences, and (2) make available to the public, information of the proposed project's environmental impact and encourage public participation in the development of that information." *Trout Unlimited v. Morton*, 509 F.2d 1276,1283 (9th Cir. 1974).

> It is important that draft environmental statements be prepared and circulated for comment and furnished to the Council as early as possible in the agency review process in order to permit agency decisionmakers and outside reviewers to give meaningful consideration to the environmental issues involved. In particular, agencies should keep in mind that such statements are to serve as the means of assessing the environmental impact of proposed agency actions, rather than as a justification for decisions already made. This means that draft statements on administrative actions should be prepared and circulated for comment prior to the first significant point of decision in the agency review process. *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982).

The EPA refused to disclose the Proposed Action – the actual Work Plan for the Naalehu WWTP – prior to ALL opportunity for public to comment had passed. ("By refusing to disclose its Proposed Action until after all opportunity for comment has passed, an agency insulates its decision-making process from public scrutiny. Such a result renders NEPA's procedures meaningless.") *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982). Therefore, without sufficient information to permit "meaningful consideration" of the Naalehu Work Project under EPA review for AOC compliance, the Ka'u community and the general public could not participate through intelligent comments before the June 2016 deadline.

This lack of specific EIS information on the Proposed Action made all the Naalehu Work Plan comments irrelevant and EPA responses dismissed all the critical comments without any consideration of the dire warnings of environmental harm. ("[T]he gravamen of their claim is that there was insufficient information to adequately participate in the comment process." *Idaho ex rel. Kempthorne v. US Forest Service*, 142 F. Supp.2d 1248, 1260 (D. Idaho 2001)). The AOC Work Plans the EPA provided for comments in May 2016 failed to

provide the public with a meaningful opportunity to comment on the COHDEM WWTP Proposed Actions.

But EPA's responsibility to respond to the Naalehu comments is shaped by the extreme degree of the human environmental effects of the siting of the Proposed Action – a secondary WWTP –adjoining a rural elementary school as described in the AOC Naalehu Work Plan and its compulsory compliance "Milestones." ("The scope of an agency's responsibility to respond to comments is shaped by the degree that the comments bear 'on the environmental effects of the proposed action.' 40 CFR 1500.10(a)(1977) as cited in *State of California v. Block*, 690 F.2d 753 (9th Cir. 1982)).

EPA failed to require that relevant COHDEM WWTP Projects environmental documents, comments, and responses accompany the proposed projects through existing EPA review processes so that the EPA officials could use the statement in making decisions. 40 CFR 1505.1(d). (*See also* 40 CFR 25.11(b)(2) [At minimum the assisted agency work plan shall include:] "A proposed schedule for public participation activities to impact major decisions, including consultation points where responsiveness summaries will be.")

By failing to ensure COHDEM followed even the minimal schedule of "talkstory" community meetings, the EPA "denied the public that very opportunity to participate in the decisionmaking process which is among the very purposes of the [NEPA] Act itself." *Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981).

2. *Rationalize and Justify Decisions*

By waiting thirteen years to even begin preparation of any environmental review documents, the agencies are merely rationalizing and justifying their decisions which are made without consideration of the environmental effects. EPA has shown that it failed to grasp the fact that environmental review laws are "procedural" by allowing COHDEM Director Kucharski to determine that an EA cannot even be started for the pre-determined wastewater treatment projects until the County has done site-specific environmental studies, which is after the fact rationalization. Word-for-word, Director Kucharski said: "*In an EA you come up with a preferred alternative, and that preferred alternative is what all of the environmental studies and impacts are centered around. And you have to go through a* ***justification*** *as to how you got to that preferred site. And that is the process.*" Director Kucharski statement at COH Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], page 26.

C. Defendants' Lack of Plaintiff's Standing Allegation

To establish Article III standing, "a plaintiff must show (1) it has suffered an 'injury in fact' that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Friends of the Earth v. Laidlaw Environmental Services (TOC), Inc.*, 528 U.S. 167, 180-81 (2000).

The Plaintiff's declaration sufficiently establishes "a geographic nexus between the individual asserting the claim and the location suffering an environmental impact." *Western Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 485 (9th Cir. 2011) (internal quotation marks omitted); *see also Wilderness Society, Inc. v. Rey*, 622 F.3d 1251, 1256 (9th Cir. 2010). In the present case, the Naalehu ESA Phase I names the Naalehu Elementary School as the western boundary of the WWTP facility. As Plaintiff's great-grandson's first grade classroom is currently within 100 feet of the Naalehu WWTP boundary with the school, the geographic nexus between the individual and the location of the Proposed Action is clearly established.

Where a procedural violation is at issue, "a litigant need only demonstrate that he has a procedural right that, if exercised, could protect his concrete interests and that those interests fall within the zone of interests protected by the statute at issue." *NRDC v. Jewell*, 749 F.3d 776, 783 (9th Cir.2014) (internal alterations and quotations omitted). "Thus, where a procedural violation is at issue, a plaintiff need not 'meet [] all normal standards for redressability and immediacy.'" *Lujan v. Defenders of Wildlife*, U.S. 555, 572 n. 7 (1992) as cited in *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015). (A plaintiff that sues a federal agency must also demonstrate that: (1) its complaint "relate[s] to 'agency action,' which is defined to include 'failure to act'"; and (2) it "suffered either 'legal wrong' or an injury falling within the 'zone of interests' sought to be protected by the statute on which [its] complaint is based." "We have explained that injury to aesthetic, recreational, or scientific

interests may constitute 'concrete injury,' but we have stressed that 'plaintiffs can only suffer a concrete injury if the Forest Service … [is] undertaking or threatening to undertake activities that cause or threaten harm to the plaintiffs' protected interests.'") *Center for Biological Diversity v. Lueckel*, 417 F.3d 532, 536,537 (6th Cir. 2005).

III. CONCLUSION

For the reasons stated above, this Court should deny the Defendants' motion for dismissal. The Defendants have threatened the Naalehu community with a horrendous sewage project adjoining the elementary school, and even taken action to condemn the property.

Every day causes more injury to the Plaintiff and her affected community.

The COHDEM has a commitment to completing 90% of the projects' tasks before the end of December, making it almost impossible to undo the effects of these ill-conceived projects. And if the Work Plan pre-determines the future, how much more of a concrete injury is carrying out the Project Work Schedule, in compliance with the AOC? How very true that it **"is now or it is never."** *Idaho Conservation League v. Mumma*, 956 F.2d 1508 at 1516 (9th Cir. 1992).

Here, the violation of NEPA and the failure to provide any EIS and incorporate the essential function of public participation has had more traumatic effects, and critically immediate impact, than generally occurs from the injury of violating NEPA statutes.

To this very day, the EPA has not required the COHDEM to follow the NEPA procedural statutes which require an EIS be developed early and accompany the COHDEM and EPA decision-making. Lacking any environmental review process, COHDEM had no opportunity for any community input for guidance, resulting in the unacceptable proposal that placed a full-sized, newly built secondary sewage treatment plant with four open sewage lagoons right beside

an elementary school, an unexamined action that COHDEM thought was such an optimal decision that they had begun condemnation in violation of their own County regulations.

Ironically, the County has not even complied with the extended time for public participation in their Project Schedules that EPA agreed to in June 2018. The Naalehu Work Plan promised EPA the "Second Round Outreach B&C and County" was to have "Finished" by 8/4/18, with a "Final Round Outreach" 12/23 to 12/27/18. No "outreach" occurred on 8/4/2018.[1]

If the EPA is not enjoined, as Plaintiff has requested of this Court, to provide NEPA procedural environmental review of the two Ka'u WWTP Projects, the EPA will continue to act unchecked with no transparency for citizens. The Court is requested to dismiss the Defendants' motion and allow this case to move forward.

Dated: October 2, 2018 at Naalehu, Hawaii.

Plaintiff:

/Sandra Lee Demoruelle

SANDRA LEE DEMORUELLE, *Pro Se*

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[1] 40 CFR 25.11(b)(2) [At minimum the assisted agency work plan shall include:] "A proposed schedule for public participation activities to impact major decisions, including consultation points where responsiveness summaries will be prepared."

CV18-00172 JMS-KSC

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT, on this date and by the method of service noted below, a true and correct copy of the Plaintiff's Opposition and Memorandum of Opposition was served on the following at their last known address:
Served via U.S. Mail

Andrew Wheeler
U.S. EPA Acting Administrator
1200 Pennsylvania Ave, NW, Washington DC 20460

Michael Stoker
U.S. EPA Region 9 Administrator
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Kathleen H. Johnson
Director, Enforcement Division
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Kate Rao
LCC Project Coordinator
Drinking Water Protection Section (WTR 3-2)
U.S. EPA Region 9, 75 Hawthorne St., San Francisco CA 94105

Simi Baht
Trial Attorney
Environmental Defense Section, Environment and Natural Resources Division
U.S. Department of Justice
301 Howard St. Ste 1010, San Francisco, CA 94105

Kenji M. Price
United States Attorney, District of Hawaii
Michael Albanese
Assistant U.S. Attorney
Room 6-100, 300 Ala Moana Boulevard, Honolulu HI 96850

DATED: October 2, 2018 in Naalehu, Hawaii

/Sandra Lee Demoruelle

SANDRA LEE DEMORUELLE, *Pro Se*

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CASE NO. CV18-00172 JMS-KCS

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF HAWAII

SANDRA LEE DEMORUELLE, *Pro Se* **PLAINTIFF** - **v.** - **ANDREW WHEELER,** in his official capacity as Acting Administrator of the United States Environmental Protection Agency, and **ALEXIS STRAUSS**, in her official capacity as Acting Regional Administrator of the United States Environmental Protection Agency Region 9, **KATHLEEN H. JOHNSON**, in her official capacity as Director of the United States Environmental Protection Agency Region 9 Enforcement Division, and **KATE RAO**, in her official capacity as United States Environmental Protection Agency Region 9 LCC Project Coordinator **DEFENDANTS**	**SECOND AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF; ATTACHMENT A; CERTIFICATE OF SERVICE** **Hearing: October 29, 2018** **Time: 10:00 a.m.** **Honorable J. Michael Seabright** **Jury Trial: No**

SECOND AMENDED COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

1) Plaintiff SANDRA LEE DEMORUELLE *Pro Se*, respectfully files this timely amended complaint as a matter of right under F.R.C.P. 15(a) within "21 days after service of a motion under Rule 12(b)." On September 14, 2018, Defendants filed their Motion to Dismiss, Dkt. No. 25, *inter alia* "under Rule 12(b)(6) for failure to state a claim…" Dkt. No. 25-1 P. 12. Plaintiff's Second Amended Complaint is timely filed before October 5, 2018.

2) Plaintiff brings this action to compel Defendant ANDREW WHEELER in his capacity as Acting Administrator of the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ("EPA"), Defendant ALEXIS STRAUSS in her capacity as Acting Regional Administrator of the EPA Region 9, KATHLEEN H. JOHNSON in her capacity as Director, EPA Region 9 Enforcement Division, and Defendant KATE RAO in her capacity as EPA Region 9 Large Capacity Cesspool ("LCC") Project Coordinator who is EPA's NEPA "Responsible Official" under 40 CFR 6.200 *et seq.*, to perform their mandatory duties to ensure that EPA grant funds are used in compliance with the National Environmental Protection Act ("NEPA") (42 USC 4321 - 4347; 40 CFR 1502, 1503, 1504,1505, 1506 and 1507) and EPA regulations (40 CFR 35 *et seq.;* 40 CFR 6.300 *et seq.;* 40 CFR 1501.2(d); 40 CFR 25 *et seq.*).

3) Plaintiff challenges the decision by Kate Rao, the EPA Responsible Official under 40 CFR 6.200, determining that only the Pahala Large Capacity Cesspool ("LCC") Closure Project, Def. Ex. 1-A and Ex. 6, would be subject to NEPA environmental review procedures and "other environmental cross-cutters (see 40 CFR 6.300 et seq.) applicable to this project." Ex.5 [Grant Agreement P1.].

4) According to the Defendants' Exhibit 5, which is not authenticated by any affidavit [FRCP Rule 12(d) Presenting Matters Outside the Pleadings], purported to be the original EPA-County of Hawaii Grant Agreement XP-96942401 dated September 20, 2005, Section P1 requires that, ever since 2005, the EPA must comply with NEPA "and other environmental crosscutters" for the "Kau Cesspool Replacement Project" for the "design and construction of wastewater system improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii." Dkt. No. 25-11.

5) As stated in the original Grant Agreement [Def. Ex. 5], the EPA-assisted project "involves replacement of sewer lines …, installation of community septic tank systems and elimination of 5 large capacity cesspools." The Naalehu and Pahala LCCs, being geographically located 11 miles apart in the remote, sparsely populated District of Kau, were initially treated as a single project with EPA having the sole responsibility to comply with NEPA/cross-cutting statutes and regulations since 2005.

6) After Plaintiff filed her Complaint on May 14, 2018, on May 30, 2018, Defendants and County of Hawaii Department of Environmental Management ("COHDEM") entered into an "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations, "only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Work Plan and causing the Plaintiff concrete injuries.

7) The Plaintiff claims that the EPA Defendants are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* because no environmental impact statement for the Naalehu and Pahala LCC Closure Project has been prepared and submitted as required by NEPA and Hawaii environmental review statutes ("HEPA"), HRS 343 *et seq.* Defendant, Kate Rao, EPA's Responsible Official, has failed her duty to provide environmental review (40 CFR 6.200) of the cumulative effects of two new-build municipal secondary wastewater treatment plants planned to service under 170 households at each site (40 CFR 1508.25 (2)), projects which further have the geographic and common timing that require EPA "to treat them in a single impact statement." 40 CFR 1508.25 (3).

8) The Plaintiff also alleges that the Defendants failed to comply with the procedural requirements of 40 CFR Part 25 – PUBLIC PARTICIPATION IN PROGRAMS UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT, THE SAFE DRINKING WATER ACT, AND THE CLEAN WATER ACT for public participation in activities under the Clean Water Act (Pub. L. 95-217).

9) This Complaint seeks declaratory and injunctive relief requiring EPA to comply with NEPA statutes and other public participation requirements, treating the two remaining Ka'u LCC closures as one project and completing the NEPA Section 102 Environmental Impact Statement as a single document for both the Pahala and Naalehu Work Plans before any further wastewater planning; design; engineering, biologic and/or archaeological studies; or construction is done at any proposed site in either Naalehu or Pahala.

PARTIES

10) PLAINTIFF SANDRA LEE DEMORUELLE, natural-born citizen of the United States of America, is and, at all times relevant, was a resident of 94-1513 Kaalualu Road, Naalehu in the District of Kau in the County and State of Hawaii. Plaintiff has been actively seeking remedies for the harm caused by the failure to provide any environmental review from 2005 up until the publication of the sole Draft Environmental Assessment of the Pahala LCC Replacement Project with an [anticipated] Finding of No Significant Impact ("DEA/FONSI") on September 23, 2018 in *The Environmental Notice ("TEN")* of the Hawaii Office of Environmental Quality Control ("OEQC").

11) To demonstrate her standing based upon her ongoing interest, in Plaintiff's request for "Consulting Party" signed and dated September 21, 2018, she made the following attestation that

her aesthetic, recreational, scientific, spiritual, educational and economic interests have been and will continue to be affected by Defendants' actions:

> Dear Ms. Rao
>
> I am a homeowner and 38 year resident of Naalehu in the historic district of Ka'u. I raised two children here who graduated from Naalehu Elementary School (NES) and, currently, my 7 year old great-grandson attends first grade there. I serve as the Parent Representative on the NES School Community Council.
>
> The Naalehu Elementary School is listed on the National Register of Historic Places so I have an active interest in the Naalehu Work Plan receiving NHPA Section 106 consultation, as is being done for the Pahala Work Plan.
>
> Therefore, under 36 CFR 800.2(c)(5), I request Consulting Party Status for the Kau District Cesspool Replacement Project, EPA Assistance ID Number (now FAIN) XP 96942401-7.
>
> The EPA and County are making an irrevocable commitment of resources to place two full-sized, new-build secondary wastewater treatment plants to service about 300 homes in remote, rural Ka'u. This is a commitment of resources our community holds sacred – as Nohea Kaawa testified, her family says that "sacred is anything that cannot be replaced." (*County Council* testimony on Res. 650-18).
>
> To demonstrate my interest in this EPA undertaking, I would point to my attentive participation through testimony to relevant County authorities:
>
> **County of Hawaii Council**
>
> May 9, 2018 REGARDING BILL142: LONO KONA SEWAGE PROJECT BONDS (3 Pages).
>
> May 22, 2018 [Special Budget Hearing] REGARDING BILL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.
>
> June 6, 2018 [Special Budget Hearing] REGARDING BILL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.
>
> **County of Hawaii Council Finance Committee**
>
> August 7, 2018 [REGARDING FAILURE TO PLACE KA'U COMMUNITY REQUEST FOR AUDIT OF LCC CLOSURE PROJECTS FROM NOVEMBER 5, 2004 TO PRESENT].

August 21, 2018 REGARDING RES. 654-18: GRANT FOR FORMER NAALEHU SEWAGE TREATMENT SITE.

County of Hawaii Environmental Management Commission

April 25, 2018 "Lots of Pork, Little Sewage at the Two Ka'u Sewage Plants" (2 Pages).

May 23, 2018 Provided Commissioners with copies of 1) the Naalehu WWTP CWSRF Funding Form showing 33 points making it Priority #1; 2) the DEM CIP Budget changes 2005 to 2019; 3) AOC, Naalehu Work Plan Attachment B, and EPA Reponse to community comments; 4) Demoruelle v. EPA et al., CV 18-00172 JMS-RSC Complaint; 5) *Ka'u Calendar* dated May 2018 article; 6) County records demonstrating Souza family ownership of Naalehu property since 1968.

June 27, 2018 Complaining of the lack of environmental review and the Naalehu EA is still Step #8 – to be done AFTER the COHDEM has decided on the treatment plant site, and the COHDEM has not been transparent and has withheld requests for the two Ka'u DEAs, PERs and ESA Phase I.

July 27, 2018 RE: ITEM (1) DIRECTOR'S INFORMATIONAL UPDATE – *Status of the proposed Naalehu WWTP* ((Provided Commissioners with copies of the COHDEM Extension Compliance Request letter dated June 14, 2018 to EPA; article about Ka'u Royal Hawaiian Coffee and Tea LP and its land manager, John Cross.

July 27, 2018 RE: ITEM 5.A. Policy on commenting on environmental review.

Therefore, I am formally requesting "consulting party" status under NEPA, HEPA, and all cross-cutting statutes including ESA and NHPA, and to be consulted and informed of all EPA and COH historic property identification and determination of effect for the Naalehu Work Plan project, and for the remaining environmental review actions and decisions on mitigation measures for the Pahala Work Plan project.

12) DEFENDANT ANDREW WHEELER is Acting Administrator of the EPA. The Administrator is charged with implementing and enforcing the NEPA.

13) DEFENDANT ALEXIS STRAUSS is Acting Regional Administrator of the EPA Region 9, with authority delegated by the EPA Administrator, EPA Delegation 9-34 (May 11, 1994), to take actions to close the Ka'u LCCs.

14) DEFENDANT KATHLEEN H. JOHNSON is Director of the EPA Region 9 Enforcement Division.

15) DEFENDANT KATE RAO is EPA Region 9 LCC Project Coordinator who historically has been the EPA decision-maker for the EPA Grant payment to the County when on January 4, 2011, Kate Rao approved the payment of $133,853 of COH contact Robin Bauman's $207,006 requested for EFT # 90204 U.S. EPA Payment Request of November 5, 2010.

16) Defendant Rao, in her capacity as EPA Region 9 Large Capacity Cesspool Project Coordinator, is also EPA's NEPA "Responsible Official" under 40 CFR 6.200 *et seq.*, who is thereby required to perform her mandatory duties to ensure that the COHDEM-EPA grant funds are used in compliance with the National Environmental Protection Act ("NEPA") (42 USC 4321 -4347; 40 CFR 1502, 1503, 1504,1505, 1506 and 1507) and EPA regulations (40 CFR 35 *et seq.;* 40 CFR 6.300 *et seq.;* 40 CFR 1501.2(d); 40 CFR 25 *et seq.*

BASIS FOR JURISDICTION AND VENUE

17) This action arises under the laws of the United States and involves the United States as a defendant. Therefore, this Court has jurisdiction over the claims specified in this Complaint pursuant to 28 U.S.C. Secs. 1331 (federal question jurisdiction) and 1361 (action to compel officer or agency to perform a duty owed to the Plaintiff).

18) This is a civil action for judicial review under Administrative Procedures Act 5 U.S.C. Sec. 701 -706, as the Defendants evaded NEPA/cross-cutters statutory requirements when, on May 30, 2018, Defendants and COHDEM entered into the "Assistance Amendment" [XP-96942401-7] that caused harm to the Plaintiff by "the shift[ing] of project location from Naalehu to Pahala" and allocating the EPA funding, with concurrent NEPA/cross-cutting obligations,

"only to the 'Construction-Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan," thereby avoiding any NEPA/crosscutting procedures for the Naalehu Project and causing the Plaintiff concrete injuries.

19) Under 5 USC 702:

> A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: Provided, That any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance.

20) Plaintiff has suffered procedural injuries based on a procedural right test where the decisionmaking failure to follow NEPA/HEPA was a violation of her procedural rights under HRS 343. The Plaintiff seeks public participation during the review process because such participation as she seeks "benefits all parties involved and society as a whole." (HRS 343-1; *see also* , HRS 344-4(10)).

21) Factually, the EPA is the "ultimate authority" for the two Kau LCC Closure Projects' NEPA procedures as the EPA stated on June 7, 2018: "This project triggers the application of the National Environmental Policy Act (NEPA) and numerous Federal cross-cutting authorities including the Endangered Species Act (ESA)."

22) The Court has jurisdiction in this claim because even a perfunctory review of remedies available to the Plaintiff for "concrete injuries" caused by violation of NEPA statutes and the EPA's own regulations would demonstrate no other Court holds the remedies Plaintiff requires

to repair the NEPA violations. "To the extent that the [Work] [P]lan pre-determines the future, it represents a **concrete injury** that plaintiffs must, at some point, have standing to challenge. **That point is now or it is never.**" [emphasis added.] (*Idaho Conservation League v. Mumma*, 956 F.2d 1508 at 1516 (9th Cir. 1992)); and in *Ohio Forestry Association v. Sierra Club*, 523 U.S. 726 (1998) the Supreme Court stated: "Hence a person with standing who is injured by a failure to comply with the NEPA procedure may complain of that failure at the time the failure takes place, for the claim can never get riper.")

23) First, the remedy for Plaintiffs' personal injuries from emotional distress, along with other affected Ka'u residents, must be individually addressed in a State Court, which cannot address Federal issues.

24) Next, the recalcitrance of the County of Hawaii Department of Environmental Management has caused it repeatedly to fail to grasp the fact that environmental review laws are "procedural," while COHDEM Director Kucharski maintains that an EA cannot even be started for the pre-determined wastewater treatment projects until the County has done site-specific environmental studies, which is "substantive," after the fact, rationalization. Word-for-word, Director Kucharski said: "*In an EA you come up with a preferred alternative, and that preferred alternative is what all of the environmental studies and impacts are centered around. And you have to go through a* ***justification*** *as to how you got to that preferred site. And that is the process.*" Director Kucharski statement at COH Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], page 26.

25) The State Courts could order this local agency, the County of Hawaii, to enact NEPA/HEPA environmental review procedures, following the NEPA statutes EPA acknowledges is "ultimately their responsibility" (June 7, 2018 letter to F&WS), but the County

obviously does not have the capacity to learn, as the Plaintiff has explained the NEPA/HEPA triggers and requirements for public participation, "early and often," [as cited from the OEQC justification for revisions in the new HAR] at every meeting of the EMC since she first learned of the violation of NEPA statutes at the April 2018 Naalehu "talkstory" meetings.

26) Since the only remedy for the injury of NEPA procedural violations, especially enacting stronger means of on-going public participation at every level of environmental review, requires actions by the EPA, this Court is the appropriate place for judicial review and has jurisdiction to provide the Plaintiff her required remedy.

27) Plaintiff herein demonstrates a substantial likelihood that the judicial relief she seeks that is directed at this illegal government action will have the effect of reducing Plaintiff's ongoing environmental injury.

28) Venue in this case is proper under 28 U.S.C. 1391(e)(1)(B). A substantial part of the events and omissions giving rise to this claim occurred in the State of Hawaii.

STATEMENT OF CLAIM

29) When faced with EPA enforced closure of Ka'u LCCs owned by the COH, in compliance with HEPA, a Final Environmental Assessment with Finding of No Significant Impact ("FEA/FONSI") was published in the August 23, 2007 *The Environmental Notice.*

30) No notice of "withdrawal" of the 2007 LCC Conversion FEA/FONSI has been published as required by Hawaii statute and regulations.

31) COHDEM stated an "amended Draft Environmental Statement for the Naalehu Wastewater Transmission, Treatment and Disposal System" "was issued in 2013" and "drew a number of concerns and objections," and "that the County would need to expend additional time

and effort to achieve **community acceptance** of not only the proposed land location, but also the proposed type of wastewater treatment and disposal system."

32) No Naalehu Project "amended DEA" has ever been published in *TEN* as required by HEPA Hawaii Revised Statutes ("HRS") 343-5(b)(1)(A) and Hawaii Administrative Rules ("HAR") Chapter 11-200 *et seq.*, so it is unclear how under NEPA/HEPA the public expressed "a number of concerns and objections" to COHDEM.

33) The COHDEM and the Mayor's Office have both denied access to provide the publicly referenced Naalehu DEA to either the Plaintiff or to the local public libraries, enabling community review of the controversial actions.

34) The EPA Region 9 Enforcement Division has also been derelict in ensuring that the County of Hawaii Department of Environmental Management, an "assisted agency," used EPA grant funds in compliance with 40 CFR 1506.6(a) (involving the public in preparing and implementing NEPA procedures) and 40 CFR Part 25 (Public Participation in Programs under … the Safe Drinking Water Act …) when the Naalehu/Pahala Large-Capacity Cesspool ("LCC") Replacement Project became two separate Wastewater System Projects in 2012.

35) Defendants' provided EPA grant funding for the Kau LCC Closure in 2011 without an Environmental Impact Statement ("EIS") in violation of the National Environmental Protection Act Sec. 102(2), 42 U.S.C. Sec. 4332 *et seq.* which require a "hard look" at the environmental effects of the Projects before any agency decision is made.

36) Plaintiff seeks declaratory and injunctive relief to protect Plaintiff's interests at law, especially her interests that the EPA comply with the NEPA and EPA regulatory requirements for public participation in identifying alternatives to the recommended projects (40 CFR 1501.7)

and the EPA's failure to require an environmental review statement from COHDEM to guide EPA officials in decision-making when significant environmental impacts should have been reasonably anticipated from two secondary wastewater treatment plant Projects placed where none have ever existed, one being located next to an elementary school (*see* Attachment A).

37) Further, without documented consideration of alternatives which included implementing the original decision to simply convert the LCCs to septic systems that has a Final Environmental Assessment ("FEA") with a Finding of No Significant Impact ("FONSI") that was approved in 2007, EPA and COHDEM were not able to make intelligent, optimally beneficial decisions without an early EIS (40 CFR 1501.2).

38) Plaintiff requests that the Court enjoin the EPA and COHDEM from implementing the Projects until Defendants fully comply with NEPA and their own 40 CFR 25 to require public input.

39) The decision to prepare an EIS is not a matter committed to the particular agency's discretion because NEPA's statutory EIS Directive is mandatory in nature.

40) Based on the EPA failure to oversee the assisted agency's public participation leading to failure to receive any public input into development of the Kau LCC Closure Projects, Plaintiff seeks a declaratory judgment, injunctive relief, the award of costs of suit, and other such relief as this Court deems just and proper.

41) Herein are described actual and concrete injuries caused by the Defendants' failure to comply with mandatory duties, including requiring the assisted agency to aid EPA to prepare the EIS/EID for the Naalehu Project.

42) The requested relief would redress these injuries and this Court has authority to grant the Plaintiff's requested relief.

Claim 1: **The Defendants are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* because the EPA Responsible Official failed to determine whether the criteria require an environmental impact statement (40 CFR 6.200(a)) for the Naalehu and Pahala LCC Closure Project be prepared and submitted as required by NEPA and Hawaii environmental review statutes ("HEPA"), HRS 343 *et seq.***

43) Plaintiff hereby incorporates all the allegations contained in paragraphs 1 through 42 above.

44) The EPA Responsible Official has failed to determine whether any environmental review documents evaluating the Naalehu LCC Closure Project's impact on the environment, environmental costs and alternative measures that described any appropriate alternatives to the COHDEM sole recommended course of action [NEPA 102(2)(C) and (E)] are required.

45) Initially, the EPA provided major funding for the $3,600,000 "Ka'u Cesspool Replacement Project" with grant funding (XP-96942401-0 Original and XP 96942401-1) totaling $1,980,000 in EPA funding with a 45% COH matching funding.

46) On January 4, 2011, Kate Rao of the EPA Region 9 Ground Water Office approved the payment of $133,853 of the $207,006 COH requested.

47) Having been awarded grant funding from EPA, COHDEM became an assisted agency and EPA Region 9 was required to provide oversight of the agency's environmental assessment of the Project's Work Plans under 40 CFR 35 *et seq.*, 40 CFR 1506.6 and 40 CFR 6.301 related to financial assistance awarded to "local agencies."

48) The Responsible Official failed to determine the scope of the environmental review for the Naalehu Project and has taken steps to avoid any NEPA/cross-cutting review by the "shift of project location from Naalehu to Pahala." Def. Ex. 7 Dkt. No. 25-11.

49) Without documented consideration of alternatives which included implementing the original decision to simply convert the LCCs to septic systems that has a Final Environmental Assessment with a Finding of No Significant Impact that was approved in 2007, EPA and COHDEM were not able to make intelligent, optimally beneficial decisions without an early EIS (40 CFR 1501.2).

Claim 2: **The Plaintiff suffers procedural injury because the two COHDEM Wastewater Treatment Plant Projects are proceeding in violation of NEPA 42 USC Sec. 4321 *et seq.* and no environmental impact statement has been prepared considering the cumulative impacts of the two similar actions, and submitted as required by NEPA and Hawaii environmental review statutes ("HEPA"), HRS 343 *et seq.***

50) Plaintiff hereby incorporates all the allegations contained in paragraphs 1 through 49 above.

51) No notice of "withdrawal" of the 2007 LCC Conversion FEA/FONSI has been published as required by Hawaii statute and regulations.

52) No notice of an EA or EIS for the Naalehu LCC Closure Project has been published in *TEN* as required by HEPA statutes and regulations.

53) No environmental statement has accompanied the Kau LCC Closure Project proposals through EPA and COH decision-making from 2005 to present.

54) The decision to prepare an EIS is not a matter committed to the particular agency's discretion because NEPA's statutory EIS Directive is mandatory in nature.

Claim 3: **The Plaintiff suffered procedural injuries because EPA Region 9 has been derelict in ensuring that the COHDEM, an EPA assisted agency, used EPA grant funds in compliance with 40 CFR Part 25 *et seq.*; 40 CFR 35 *et seq.*; 40 CFR 6.300 *et seq.*; and 40 CFR 1501.2(d).**

55) Plaintiff hereby incorporates all the allegations contained in paragraphs 1 through 54 above.

56) The reasons the COH abandoned the original 2004 LCC conversion agreement with the affected Naalehu homeowners is unclear as no verifiable reason as evidenced by COHDEM records has been given by COHDEM for why the "field studies" were done after the FEA concluded the LCC conversion projects had no significant impacts.

57) There is no documentation available for Plaintiff's review of consideration of any appropriate alternatives to the COH recommended course of action to construct two new secondary wastewater treatment systems, nor is there any evidence of public input in this LCC Closure Projects' decision.

58) The COH unilateral decision to construct two full-size secondary wastewater treatment plants in Naalehu and Pahala was in direct contradiction to the recommended course of action which public participation through the August 31, 2004 vote deemed optimally beneficial to both communities.

REQUESTED RELIEF

59) WHEREFORE, Plaintiff Sandra Demoruelle requests that the Court award her the following relief:

(A) Adjudge and declare that the EPA decision to reject following NEPA procedural statutes for environmental review of the original Kau LLC Closure Project and the current Naalehu Project is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with law under APA and NEPA ;

(B) Enjoin the Federal Defendants from authorizing any elements of the Kau LCC Closure Project in Naalehu or Pahala pending their full compliance with NEPA;

(C) Enjoin the Defendants from allowing COHDEM to do any planning; design; engineering, biologic and/or archaeological studies; or construction activities on the Naalehu and Pahala Wastewater System Projects until EPA fully complies with NEPA;

(D) Order Defendants to make all COHDEM and EPA environmental assessment documents, notices of meetings and comment periods, drafts and final documents available for public review, both in the Hilo Wastewater Department office and in the Pahala and Naalehu Libraries for community review because of the communities' remote locations and limited access to public transportation.

(E) Order Defendants to take remedial actions to mitigate the adverse effects of the COHDEM's failure since 2010 to meet the public participation requirement in decision-making and assure the COHDEM does not avoid public input in the future;

(F) Enter other appropriate injunctive relief to ensure that the Defendants comply with NEPA and APA and prevent irreparable harm to the Plaintiff and to the environment until such compliance occurs;

(G) Retain jurisdiction of this matter until Defendants have fulfilled their legal and Court-ordered obligations as set forth in this Complain;

(H) Award Plaintiff costs and reasonable attorney's fees, as incurred in this action;

(I) Grant such other relief as the Court may deem just and proper.

CERTIFICATION AND CLOSING

60) Under Federal Rule of Civil Procedure 11, by signing below, I certify to the best of my knowledge, information, and belief that this complaint: (1) is not being presented for an improper purpose, such as to harass, cause unnecessary delay, or needlessly increase the cost of litigation; (2) is supported by existing law or by non-frivolous argument for extending, modifying, or reversing existing law; (3) the factual contentions have evidentiary support and the complaint otherwise complies with the requirements of Rule 11.

61) I agree to provide the Clerk's Office with any changes to my address where case-related papers may be served. I understand that my failure to keep a current address on file with the Clerk's Office may result in the dismissal of my case.

Dated: September 26, 2018 at Naalehu, Hawaii

Plaintiff:

Sandra Lee Demoruelle, *Pro Se*

ATTACHMENT A

Six year-old Daniel McDowell points to his Naalehu Elementary School kindergarten classroom beside the four open sewage lagoons proposed by the County of Hawaii at the April 12, 2018, Brown and Caldwell "talkstory" meeting – the sole opportunity for "public participation."

 CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT, on this date and by the method of service noted below, a true and correct copy of the Plaintiff's Second Amended Complaint was served on the following at their last known address:

Served via U.S. Mail

Andrew Wheeler, U.S. EPA Acting Administrator
1200 Pennsylvania Ave, NW
Washington DC 20460

Alexis Strauss
U.S. EPA Acting Region 9 Administrator
75 Hawthorne St., San Francisco CA 94105

Kathleen H. Johnson
Director, Enforcement Division
U.S. EPA Region 9
75 Hawthorne St., San Francisco CA 94105

Kate Rao
LCC Project Coordinator
Drinking Water protection Section (WTR 3-2)
U.S. EPA Region 9
75 Hawthorne St., San Francisco CA 94105

Jeffrey H. Wood
Acting Assistant Attorney General
Simi Bhat
Trial Attorney
Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
301 Howard St., Ste.1051
San Francisco, CA 94105

Kenji M. Price
United States Attorney, District of Hawaii
Michael Albanese
Assistant U.S. Attorney
Room 6-100, 300 Ala Moana Boulevard
Honolulu HI 96850

DATED: September 26, 2018
Signed in Naalehu, Hawaii

Sandra Lee Demoruelle, *Pro Se*

NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT, 16 U.S.C. 1540 (g)(1)(A) and (2)(A)(i)

PERSON GIVING NOTICE:

Sandra Demoruelle,

Physical address: 94-1513 Kaalualu Road, Naalehu HI 96772

Mailing address: PO Box 588, Naalehu HI 96772-0588

Telephone: 1-808-929-9244

Email: naalehutheatre@yahoo.com

NOTICE:

Location: Naalehu and Pahala, District of Kau, County of Hawaii, State of Hawaii, U.S.A.

Date of commencement of ongoing ESA Sec. 7 consultation violation:

Date: **September 20, 2005** per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-0 for project period 06/01/2005 – 12/31/2007.

COH Project Manager: Dora Beck

EPA Project Officer: Laura Bose (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 5, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

> *The recipient [County of Hawaii] agrees not to bill or request reimbursement from EPA for any costs associated with the design or construction of the project [Kau Cesspool Replacement Project for Naalehu and Pahala in Kau] funded by this grant ...* ***until EPA has complied with the National Environmental Policy Act and other environmental cross-cutters (see 40 CFR 6.300 et seq) applicable to this project. (Id. Section P1.)***

Current Date: 05/30/2018 per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-7 for project period 06/01/2005 – 10/30/2020.

COH Project Manager: Dora Beck

EPA Project Officer: Kate Rao (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 7, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

Dates of violation: Ongoing during period of Grant Condition P1. from date of award 09/20/2005 through current Grant Period commencing 05/30/2018

EPA DISCRETIONARY ACTION IN VIOLATION OF ESA:

1) EPA FAILED TO TAKE EARLY HARD LOOK AT THE KAU PROJECTS AS REQUIRED BY NEPA AND CONSEQUENTLY FAILED TO COMPLY WITH ESA

In the original EPA-COH Grant Agreement Section P1 dated Sept. 20, 2005 (XP-96942401-0), EPA was first required to comply with NEPA "and other environmental cross-cutters" – including the ESA. Seven Grant Agreement revisions have resulted in splitting the original Naalehu and Pahala Projects, both requiring the EPA NEPA/cross-cutters ESA environmental review procedures, into two separate EPA WWTP Work Plans, only one of which will require ESA Section 7 consultation process. In the response to EPA from FWS, the need for a Naalehu ESA process, like what was occurring for Pahala, was expressed.

NEPA requires Federal agencies, including the EPA, to prepare a "detailed statement" prior to approving any "major federal action significantly affecting the quality of the human environment. 42 CFR 4332(2)(c). "The requirement to prepare an environmental impact statement creates a democratic decisionmaking process that assures that agency decisionmakers and the public review and carefully consider detailed information about environmental impacts before any decision is made. Agencies must '[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.'" 40 CFR 1500.2(d) as cited in *Dine CARE v. BIA, Complaint,* Case3:16 cv-08077-SPL Doc. 1 Page 19.

2) EPA HAS SEPARATED THE KAU LCC CLOSURE GRANT XP-96942401[As Amended 0 through 7] INTO TWO SEPARATE PROJECTS AND REFUSED TO FOLLOW NEPA/ESA PROCEDURES THAT EPA FOLLOWED FOR THE PAHALA PROJECT DEA AS FOR THE NAALEHU WWTP WORK PLAN

No NEPA environmental review procedures have been followed since the original project – the LCC conversion to septic for all of the illegal Kau LCCs – provided Notice of the FEA/FONSI in August 23, 2007 issue of *TEN*. The original 2007 FEA/FONSI for both the Pahala and Naalehu LCC closures has never had a Supplemental Notice published to account for the obvious changes to the original Kau Cesspool Project.

Further since this Naalehu/Pahala 2007 FEA/FONSI never been Supplemented or Withdrawn as Noticed in *TEN*, it is inappropriate to publish the *TEN* Pahala DEA/AFNSI Notice on September 23, 2018 as part of the NEPA/HEPA requisite procedural review.

"To make an informed decision about how or whether to proceed with the proposed projects and to comply with NEPA, an agency must identify their potential combined environmental impacts and make that information available to the public." *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

Therefore, I contend herein that the COHDEM proposed Naalehu WWS EA and the proposed Pahala WWS EIS/EID are legally inadequate because, being two separate studies and documents prepared at different points in time, fail to consider the aggregated and cumulative effects of the connected actions of the proposed wastewater sewage treatment projects on the human environment in the isolated and sparsely populated District of Ka'u.

CEQ regulations implementing NEPA "require that an agency consider 'connected actions' and 'cumulative actions' within a single *EA* or *EIS*." *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1118 (9th Cir. 2000) (emphasis added) (citing 40 CFR 1508.25). Further, under 1508.25, two or more agency actions must be discussed in the same impact statement when they are "connected' or "cumulative" action. 40 CFR 1508.25(a)(1),(2) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

A cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions .... Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR 1508.7.

For "connected" and "cumulative" actions, the agency is told it "should" analyze them in a single impact statement, which the 9th Circuit interpreted as a mandatory requirement. *See Eagle Island Institute v. USFS*, 351 F.3d 1291 (9th Cir. 2003) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

3) EPA HAS PUBLISHED NOTICE OF AVAILABILITY OF THE PAHALA DEA PUBLIC COMMENT PERIOD WITHOUT CONSIDERING THE CUMULATIVE EFFECTS OF THE AOC TWIN WWTP WORK PLANS WHICH SPECIFY BUILDING TWO SECONDARY SEWAGE TREATMENT PLANTS JUST 11 MILES APART IN REMOTE, RURAL KAU BEFORE APRIL 17, 2022

Despite Kate Rao approving EPA SAAP funding for the original Ka'u LCC to LCSS conversion projects, she has permitted the Naalehu Work Plan to be implemented in violation of NEPA, and failed to enact ESA Section 7 consultation with FWS, as she did with Pahala, designating ERG to do this ESA in the June 7, 2018 letter. By allowing avoidance of consideration of cumulative impacts and avoiding NEPA and ESA statutes, Ms. Rao has allowed the separation of the two Ka'u new-build WWTPs with no aggregation of impacts on the numerous affected endangered plants and wildlife and apparently intentionally avoiding any NEPA cumulative impact analysis. ("[T]he district court properly determined that the Forest Service violated the ESA when it decided not to reinitiate consultation after the FWS revised its critical habitat designation..." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015)).

In *Cottonwood*, the Forest Service contended that "[t]he EA or EIS on each action ... will document the cumulative impacts of that action and all previous actions." The Court believed "that consideration of cumulative impacts after the road has already been approved is insufficient to fulfill the mandate of NEPA. A central purpose of the EIS is to force the consideration of environmental impacts in the decisionmaking process. *See, e.g., Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975); *Lathan v. Brinegar*, 506 F.2d 677,693 (9th Cir. 1974) (*en banc)*;

Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971). That purpose requires that the NEPA process be integrated with agency planning 'at the earliest possible time,' 40 C.F.R. 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step is already taken." *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985).

Because the EPA has taken specific steps to change the EPA-COH Grant Assistance Amendments for XP-96942401, as demonstrated by the May 30, 2018 amendment #7, which result in effectively evading the same NEPA/ESA procedures on the Naalehu WWTP Project by simply moving the EPA statutory obligations 11 miles away to the twin Pahala WWTP Project, I hereby give Notice of a pending citizen suit under the ESA.

Herein I object to the EPA failure to implement the ESA Sec. 7 consultation for Naalehu as Kate Rao did for Pahala and request that before there is any decisions on either Project, that the EPA-COH be required to provide the same ESA Section 7 consultation and issuance of a Biological Opinion covering the cumulative actions that will "jeopardize the continued existence" of multiple Hawaiian endangered creatures and plants for both the Pahala and the Naalehu WWTP Projects.

I declare under penalty of perjury that the forgoing is true and correct.

Dated: September 24, 2018 at Naalehu, Hawaii

s/Sandra Demoruelle

SANDRA DEMORUELLE

SANDRA DEMORUELLE
P.O. Box 588
Naalehu, HI 96772
Tel. No. 808/929-9244
Email: naalehutheatre@yahoo.com

Case #:

Environmental Court

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAII

SANDRA L. DEMORUELLE, *Pro Se* **PLAINTIFF** - **v.** - **DORA BECK, P.E.** et al. **DEFENDANTS**	**PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION WITH MEMORANDUM OF LAW.**

PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

COMES NOW Plaintiff *pro se,* Sandra L. Demoruelle, who moves for a Preliminary Injunction halting all County of Hawaii planning and development activities on the Naalehu and Pahala Wastewater Treatment Plant Projects until the Environmental Assessments with the Finding of No Significant Impact ("FEA/FONSI") or Final Environmental Impact Statement are accepted. Plaintiff also seeks release of the Naalehu Draft Environmental Assessment ("DEA") under Uniform Information Practices Act ("UIPA") Hawaii Revised

Statutes 92f *et seq.* and immediate publication of notice for both DEAs in Office of Environmental Quality Control's *The Environmental Notice* on September 23, 2018.

In support of this Motion for Preliminary Injunction, Plaintiff relies upon the accompanying Memorandum of Law, Exhibits 1 through 23, and her Declaration in Lieu of an Affidavit

Plaintiff moves for a Preliminary Injunction on the ground that the County of Hawaii Department of Environmental Management through its officers, Dora Beck, P.E., Division Chief of the Wastewater Division and Director William A. Kucharski, has "[p]urposely or not"[1] failed to take "a hard look"[2] at their proposals for building two full-sized secondary sewage treatment plants, with one sited adjoining the Naalehu Elementary School, in the District of Ka'u, so, therefore, Plaintiff is entitled to judgment as a matter of law.

CONCLUSION

Because the Plaintiff has proven in her pleadings that the officers of the County of Hawaii Department of Environmental Management ("COHDEM") have violated HRS 343 *et seq.* and the Hawaii UIPA, she respectfully requests

[1] *Sierra Club v. Department of Transport (Superferry* I), 167 P.3d 292, 335 (2007).
[2] *Id.* (citing *Price v, Obayashi Haw. Corp.,* 81 Haw. 171, 182 n. 12, 914 P.2d 1364, 1375 n. 12(1996)(citation omitted)).

that the Court Order the Preliminary Injunction that will halt all COHDEM activities and expenditures on any and all implementation actions and consultant and sub-consultant contracts. COH shall provide the staff to complete the EA on both projects, and if significant impacts are determined, to produce and publish the Final EIS for acceptance by the Governor.

Further, as relief to the Plaintiff's injuries because the COHDEM failed to publish the DEAs and provide the Plaintiff and the two Ka'u libraries with copies of the DEAs, it is also ordered that COHDEM submit the DEAs to Hawaii Office of Environmental Quality Control by September 12th for *TEN* publication on September 23rd, 2018, and immediately provide the document to the Plaintiff and the Ka'u libraries under the UIPA requests.

The Plaintiff, on behalf of the whole Ka'u community, requests that the Court order that until the FEIS for both the Naalehu and Pahala Wastewater Treatment Plants have been accepted by the appropriate HRS 343 accepting authority, the COHDEM is to take no further actions to develop or site these sewage treatment plant projects under Order of this Court.

Dated: August 21, 2018 at Naalehu, Hawaii

Plaintiff:

Sandra Lee Demoruelle, *Pro Se*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (18)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 10, 2018 10:50 p.m.

Dear Ms. Demoruelle:

Thank you for your October 10, 2018 10:50 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

There is no requirement under Chapter 343, Hawaii Revised Statutes, as amended, or Hawaii Administrative Rules (HAR), Title 11, Chapter 200 that proposed wastewater treatment plants must be reviewed through an environmental impact statement (EIS). Pursuant to Section 11-200-11.1, "(a) After preparing an environmental assessment and reviewing public and agency comments, if any, applying the significance criteria in section 11-200-12, if the proposing agency…anticipates that the proposed action is not likely to have a significant effect, it shall issue a notice of determination which shall be an anticipated negative declaration subject to the public review provisions of section 11-200-9.1." As stated in the Pāhala Large Capacity Cesspool Replacement Draft EA Preface, this Draft EA was published in compliance with HAR 11-200.

HAR 11-200-10, Contents of an environmental assessment, does not specify a number of pages for an EA.

Other references are not comments to content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#19

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, October 12, 2018 10:20 AM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck; eplan1@aol.com
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; Bhat Simi (ENRD); TESSA BERMAN; kaena.horowitz@hawaiicounty.gov; Joe Kamelamela; Bob Martin; Albanese Michael (USAHI); David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph
Subject: Cease and Desist the Invasion of My Privacy

Several members of the Ka'u community have informed me that the "public participation" sub-contractor, Bernadette Senelly, has approached them requesting personal information about me, Sandra Demoruelle. This is invading my privacy as I have never called any contractor/sub-contractor/public officials' immediate community seeking personal information on them because I would consider such behavior criminal invasion.

Please be on notice that I am asking Pele Defense Fund to provide me with Counsel, and seeking their guidance in reporting these activities to the local FBI Public Corruption Officer to request the FBI's assistance in investigating what has happened to the Ka'u LCC Closure Project for over 13 years.

Any further invasion will be considered an intentional action and be reported to the local police. as well.

Sincerely,
/s Sandra Demoruelle
SANDRA DEMORUELLE

Dated October, 12, 2018 at Naalehu, Hawaii

On Wednesday, October 10, 2018 10:50:05 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Dear Mr. Matsukawa,

The Pahala DEA meeting tonight was held without the aforementioned DEA volume present to consult.

It was like having a Bible study class without any Bibles!

Was I the only person in the room who has actually read the meager DEA offerings? I mean 21 blank pages and untold repetition makes about 50 real pages to read. But to read it, you have to have a real live volume of the DEA to read. None were present at the DEA meeting???!!!

But not to worry! You will have hundreds of pages of comments to add bulk to your FEA - which will have yet another law suit since you did not go direct to EIS like ALL HAWAII WWTPS DO. Name one project without an EIS?!!!

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Best, Sandra Demoruelle

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All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

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Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
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Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
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The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

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This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

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INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (19)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 12, 2018 10:20 a.m.

Dear Ms. Demoruelle:

Thank you for your October 12, 2018 10:20 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment to content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#20

Earl Matsukawa

woc oct19-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Saturday, October 13, 2018 8:51 AM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck; eplan1@aol.com
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; Bhat Simi (ENRD); TESSA BERMAN; kaena.horowitz@hawaiicounty.gov; Joe Kamelamela; Bob Martin; Albanese Michael (USAHI); David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph
Subject: Re: Cease and Desist the Invasion of My Privacy - CORRECTION

I was in error stating I would be consulting Pele Defense Fund - I have been informed that is not occurring. I apologize to all who were affected by my erroneous claim. Pele Defense Fund is harmless, I am the one totally at fault for any misunderstanding. *Mea culpa!*

So correctly, re-stating my position:

Brown and Caldwell Sub-contractor Bernadette Senelly has been inquiring about me and I am placing everyone on notice that I am a private person by nature of my upbringing and have nothing to hide. But since I do not share private things like sex or finances with anyone - no Facebook persona for example - I find it offensive to have Bernadette Senelly make inquiries about me within Ka'u for any purpose. It comes to mind that she is seeking "dirt" to cause me harm, but she has driven me to paranoia with her ongoing traumatizing of me, so I have been informed that I may be overreacting.

In any case, my personal emotional distress from the Brown and Caldwell Ka'u "outreach" activities pales when compared to the harm being done to the whole community!!

Everyone in Ka'u wants to know the truth about the LCC Closure fiasco and we will continue to seek legitimate investigation of the 13 year ordeal. Either the County Council will request an audit or I will take my evidence of malfeasance to the FBI.

Please let me know so I can take appropriate action on my own.

Sincerely, Sandra Demoruelle

On Friday, October 12, 2018 10:19:49 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (20)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 13, 2018 8:51 a.m.

Dear Ms. Demoruelle:

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We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#21

#21

Earl Matsukawa

woc oct22-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Sunday, October 21, 2018 4:12 PM
To: clekven@brwncald.com; Irina Constantinescu; Kim Wagoner; Patrick Goodwin; braden.rosenberg@erg.com; Earl Matsukawa; Public Comment; John Sakaguchi; eplan1@aol.com
Subject: Fw: Courtesy copy of PI Reply
Attachments: COH_PI_REPLY.docx

BTW, if the PI is granted, you don't get paid. Lucky for you, I am having trouble finding a mass/tort attorney, but someone will be attracted to this cause. Its all God's Will. Best, Sandra Demoruelle

----- Forwarded Message -----
From: Naalehu Theatre <naalehutheatre@yahoo.com>
To: kaena.horowitz@hawaiicounty.gov <kaena.horowitz@hawaiicounty.gov>
Cc: William Kucharski <william.kucharski@hawaiicounty.gov>; Dora Beck <dora.beck@hawaiicounty.gov>; TESSA BERMAN <berman.tessa@epa.gov>; Joe Kamelamela <joe.kamelamela@hawaiicounty.gov>
Sent: Sunday, October 21, 2018 03:59:54 PM HST
Subject: Courtesy copy of PI Reply

Aloha, Am I going to have to tell the Court that you never made any attempt to even TALK to me about this case?

Best, Sandra Demoruelle

--
This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

SANDRA L. DEMORUELLE
P.O. Box 588
Naalehu, HI 96772
Tel. No. 808/929-9244
Email: naalehutheatre@yahoo.com

Case #: 18-1-00206
Environmental Court

IN THE CIRCUIT COURT OF THE THIRD CIRCUIT
STATE OF HAWAII

SANDRA L. DEMORUELLE, *Pro Se* **PLAINTIFF** - **v.** - **DORA BECK, P.E.** and **WILLIAM A. KUCHARSKI,** **DEFENDANTS**	**REPLY TO DEFENDANTS' OPPOSITION TO MOTION FOR PRELIMINARY INJUNCTION; CERTIFICATE OF SERVICE** **Hearing: October 25, 2018** **Time: 8:30 a.m.** **The Honorable Greg K. Nakamura**

REPLY TO DEFENDANTS' OPPOSITION TO MOTION FOR PRELIMINARY INJUNCTION

The Plaintiff, Sandra L. Demoruelle, herein replies to the *Defendants Dora Beck, P.E. and William Kucharski's Memorandum in Opposition to Plaintiff's Motion for Preliminary Injunction.* The Plaintiff filed its Motion for Preliminary Injunction seeking to enjoin and restrain Defendants during the pendency of this action, and for publication of the Naalehu and Pahala Wastewater Treatment Plant Draft Environmental Assessment ("DEA") documents.

I. STIPULATED FACTS – Naalehu and Pahala LCC Closure Project and the AOC

A. Defendants' Exhibit A titled *Naalehu and Pahala Villages Large Capacity Cesspool Conversion Project* and dated August 2007 prepared for the County of Hawaii Department of Environmental Management is the actual Final Environmental Assessment with a Finding of No Significant Impact ("FEA/FONSI") published in *The Environmental Notice* (*"TEN"*) on August 23, 2007 and it has never been withdrawn or supplemented since that date.

B. The reason the FEA/FONSI was completed was because this single "project is subject to the environmental documentation requirements prescribed under Chapter 343, Environmental Impact Statements, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's (DOH) Administrative Rules (HAR)." (Def. Memo of Opp. Ex. A, P. 5, Sec. 1.1.2).

C. Def. Memo of Opp. Ex. A on page 24 states the Naalehu Service Area of 164 parcels would generate a sewage flow rate of 103,800 gallons per day and the Pahala Service Area of 127 parcels would generate approximately 117,300 gallons of sewage flow per day.

D. Because of the cost consideration, DOH and all other parties "[a]pproved individual wastewater systems consisting of septic tanks will be used for the treatment of wastewater collected. Effluent from the septic tanks will be disposed through the use of seepage pits or leach fields to allow the effluent to percolate into the ground." *Id.*

E. In considering alternatives to the FEA/FONSI approved large capacity septic, the County of Hawaii Department of Environmental Management ("COHDEM") considered other community wastewater systems "such as small aerobic package treatment and disposal systems." "However, the residents from the Naalehu and Pahala community along with the County cannot practically afford the costs for constructing and operating such systems." *Id,* P. 25.

. F. The letter from the COH Department of Research and Development dated March 9, 2007 echoed the need to consider costs of the project: "4. The operation and maintenance costs of the proposed septic systems should be significantly lower than the operation and maintenance cost of mechanized secondary wastewater treatment plants such as that of the wastewater treatment plant in Hilo. Therefore, the user fees for the residents of Naalehu and Pahala should be significantly lower than the current County rates." *Id.*

G. The COHDEM explains the change from the FEA/FONSI approved Kau LCC Closure Project to two secondary treatment plants thus: "In 2008, based on poor soil percolation test results[1] for the disposal concept, the large capacity septic system was determined to not be a suitable option. Consequently, the County began exploring other land options that would accommodate a secondary treatment plant and disposal area that would

[1] *Cf.* The Def. Ex. A, P. 39, Sec. 3.1.2 states that two separate soil tests by SCS and Masa Fujioka and Associates findings were consistent for both the Naalehu and Pahala project areas.

provide better wastewater treatment and be expandable for potential growth of the community." HID 1:18-cv-00172 JMS-KSC Document 25-10 Page 4, Sec. #1 (the so-called *Pahala Grant Work Plan* which was dated the same as the AOC Attachment A Pahala Work Plan on April 21, 2017).

H. The COHDEM went from this single LCC closure project with a FEA/FONSI to two new-build, four lagoon, secondary sewage treatment plants with significantly higher costs as described in "F." above without any timely environmental review of the two newly proposed projects from 2008 to present day, including the Pahala DEA, which only considers siting of the secondary sewage treatment plant to close the LCC for 109 households without considering decentralized options.

I. Therefore, the present suit is because COHDEM failed to implement the FEA/FONSI project construction that was to have begun in 2008 and ended with the closure of all COH-owned, Large Capacity Cesspools ("LCC") in Kau, which would have been completed by 2009, and do environmental review on their two new projects. *Id,* P. 32.

II. STIPULATED FACTS – Naalehu Revised Workplan/Opportunity to Participate

A. The *Naalehu Project Schedule* showed in Section 3.2.4 of Def. Opp. Memo. Ex. D that two additional meetings were to have been held between May 28 and July 27, 2018, but were not held.

B. The *Naalehu Project Schedule* showed in Section 5.1 of the "HRS 343 EA Process" in the Def. Opp. Memo. Ex. D, highlighted on Opposition Memorandum on page 3, that two additional meetings were to have been held between August 27 and October 25, 2018, but again, no meetings were held as required by the AOC time line.

III. ARGUMENT

A. The AOC Sec. states: COH Cannot Rely on AOC for Relief

The AOC itself states that "[c]ompliance with this Consent Order shall not be a defense to any actions commenced pursuant to applicable laws, regulations, or permits, nor does it constitute a release." If it were otherwise, the COHDEM original timelines requiring acquisition of the County's preferred sites in Naalehu and Pahala before any EA/EIS was completed would not have needed the revision approved in Def. Ex. B, said to be needed to accommodate the HRS 343, as cited to Director Kucharski on Page 1 Paragraph 2 of Ex. B.

If the AOC did not constitute a release for the purchase of the chosen site land prior to environmental review, the AOC cannot constitute a release from any other HRS 343 requirement, including denying the requirement for an "early hard look."

B. COHDEM Failed to Withdraw or Supplement FEA/FONSI

Plaintiff has directly told Defendant, William Kucharski, that COHDEM has failed to consider the change from the FEA approved LCC conversion to two separate secondary wastewater treatment plants. The detailed minutes of the June 27, 2018, COH Environmental Management Commission ("EMC") meeting document the following exchange:

> Director Kucharski: …"In the initial stages, the [LCC conversion to septic] option was thought to be acceptable, however when they did their final testing, the technical evaluation determined that this is not an acceptable site. We cannot construct this facility here. So we are left with an initial okay, let's try to do this. But then technically, it doesn't work. Okay? **And so we are back to the drawing board.** [2] We're in the situation now. We know the technology. Where we are going to put it is not yet determined. We've looked at over 30 sites in Naalehu alone. …"
>
> Ms. Demoruelle: There has never been – what he's talking about is site selection [for] something that has not been [environmentally] reviewed.There has never been an EIS on the [sewage] treatment system. … He's saying do you want the sewage system treatment plant beside your [Naalehu Elementary] school, or do you want it somewhere else? He's not allowing us a review of the sewage treatment system. They went from the LCC conversion to septic, and then all of a sudden, with no – just because they [COHDEM] said it's not suitable for the site that they were going to put the septic -- they just suddenly went to two [new-build] wastewater treatment plants. **And that's what Mr. Kucharski hasn't addressed, is when are you going to do the EIS on these projects themselves? Not the siting of the project, but the project itself? …**
>
> … You don't do EAs after the [fact]. I can cite you the law. EISs are done early in the process, early[!] And the decision not to do an EIS on these two projects was made in the wastewater treatment department. Dora Beck, who is not here to discuss this with us today, as to why she changed from having the simple project, the sewage septic conversion, which may or may not be [needed], because they will not share with me the actual results of their [2008] studies. They won't give us the studies, put them in our library so we can review them ourselves. **He's just saying "trust me, we really do need two sewage treatment plants in Kau." And I am saying "I really do not trust that."** I have an FEA in front of me that shows that the sewage, septic, was going to be fine. So why – somewhere show me the paperwork that shows that we do need two sewage treatment plants.

[2] According to HRS 343/HAR 11-200, it is at this point that the COHDEM were procedurally required to either supplement or withdraw the August 2007 FEA.

At another point in the June 27th EMC meeting, Director Kucharski was directly asked if the siting of the secondary wastewater treatment plant with four lagoons located adjacent to the Naalehu Elementary School was "off the table." The June 27th EMC minutes state:

> Commissioner Osborne: So is the [Naalehu Elementary] school off the table, then, is the school site off the table or is it still being considered?
>
> Director Kucharski: When you do an EIS or an EA, you need to provide alternative sites for the process, whatever it is you're looking to do. So until the EA, the EIS, has started for this final location, completed, and a draft is put out, nothing is off the table."

Director Kucharski has made clear at other EMC meetings that the EA/EIS is to justify, but HAR 11-200.1-1(b) states that the EIS shall not be merely a self-serving recitation of benefits and a rationalization of the proposed action.

The Defendant, COHDEM Director William Kucharski said he has failed to do an "early" EA or EIS on the Naalehu Project because he cannot decide on his preferred site. Director Kucharski is stuck because he continues using the EA document as a rationalization for his pre-chosen alternative, and factually, for many years, COHDEM has looked at over 30 sites without deciding upon an alternative to the Naalehu Elementary School site. As Defendant Kucharski says: *"you have to go through a **justification** as to how you got to that preferred site…,"* showing he is in violation of Hawaii statutes and regulations.[3]

[3] Director Kucharski statement in the County of Hawaii Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], Page 26.

By waiting thirteen years to even begin preparation of the requisite "early" environmental review documents, the agencies are merely rationalizing and justifying their decisions which have been and are currently being made without any consideration of the environmental effects. EPA has shown that it failed to grasp the fact that environmental review laws are "procedural" by allowing COHDEM Director Kucharski to determine that an EA cannot even be started for the pre-determined wastewater treatment projects until the County has done site-specific environmental studies, which is after the fact rationalization. Word-for-word, Director Kucharski said: "*In an EA you come up with a preferred alternative, and that preferred alternative is what all of the environmental studies and impacts are centered around. And you have to go through a* ***justification*** *as to how you got to that preferred site. And that is the process."* Director Kucharski statement in the County of Hawaii Environmental Management Commission meeting minutes of June 27, 2018 [approved as presented July 26, 2018], Page 26.

C. Naalehu DEA Document Exists

Plaintiff read about the Naalehu DEA in the AOC Attachment B, the Naalehu WWS Work Plan on Page 3, and again when it was publicly announced in a County press release printed in the local monthly newspaper, *The Ka'u Calendar,* June 2018 (*see* Plain. Ex. 17). It is this document that is requested under UIPA.

D. Defendants Failed to Offer the Meaningful Opportunity to Participate

The COHDEM provided empty promises to the public and the Plaintiff in stating that the COHDEM provided "meaningful opportunities" for public participation. Since none of the four meetings shown on the Naalehu Work Plan time line have occurred, the Plaintiff and the rest of

the community have suffered concrete injuries from Defendants' mendacity in telling the Court that they are offering any "meaningful opportunity to participate."

IV. PRELIMINARY INJUNCTION: COHDEM Continue EA/EIS Procedures Without Contractors/Sub-contractors

Plaintiff seeks to have the current Contractors and Sub-contractors, who have wronged the Kau community in general and the Plaintiff in particular, discharged from further development and siting activities. Plaintiff does not seek to stop the COHDEM from continuing the environmental review of the change of the original, single LCC closure project to consider other infrastructure options, especially in light of improved wastewater treatment technology and Act 131-18.[4]

Plaintiff argues that since the County taxpayers are paying millions of dollars for Contractors/Sub-contractors who are doing a very bad job of following the laws, at least the COHDEM staff could do a bad job at a cheaper cost.

The exact relief Plaintiff seeks through the Preliminary Injunction:

1) *Defendants immediately release to Plaintiff the Naalehu Wastewater System Draft Environmental Assessment ("DEA") as requested under Uniform Information Practices Act, HRS 92F et seq., and immediately submit and publish notice of the Naalehu and the Pahala Wastewater Plant DEAs in Hawaii Office of Environmental Quality Control's "The Environmental Notice" as required by HRS 343-3(d).*

2) *County of Hawaii immediately to cease any and all County expenditures on consultant and sub-consultant contractors and halt all planning and development activities on the Naalehu and Pahala Wastewater Treatment Plant ("WWTP) Projects during the pendency of this action or until the requisite HRS 343 Final Environmental Assessments with the Finding of No Significant Impact ("FEA/FONSI") or Final Environmental Impact Statement ("FEIS")are accepted, whichever occurs first, as the public interest in being heard on the Ka'u WWTP*

[4] Act 131, dated July 5, 2018, limiting underground injection and providing that, generally, no permits will be issued for sewage wastewater injection wells.

Projects will be harmed by the irretrievable investment of resources in proceeding on the siting and planning activities. Further, until the final Court decision or the FEA/FONSI or FEIS are accepted, and since the present consultants and sub-consultants failed to follow statutory environmental review procedures, the County of Hawaii will use its own personnel to carry out the HRS 343 statutory environmental review procedures, and provide the requisite public participation for these LCC Closure Projects as required by the Ka'u CDP and HEPA HRS 343 et seq.

For the reasons given in its pleadings, Plaintiff respectfully requests the Court order a Preliminary Injunction to enjoin and restrain Defendants during the pendency of this action, and for publication of the Naalehu and Pahala Wastewater Treatment Plant Draft Environmental Assessment documents,

Dated: October 21, 2018 at Naalehu, Hawaii.

Plaintiff:

SANDRA LEE DEMORUELLE, *Pro Se*

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT, on this date and by the method of service noted below, a true and correct copy of the Plaintiff's Opposition to Defendants' Motion to Dismiss were served on the following at their last known address:

Served via postage pre-paid U.S. Mail.

Dora Beck, P.E.
Division chief, Wastewater Division
County of Hawaii Department of Environmental Management
108 Railroad Avenue
Hilo, Hawaii 96720
Fax: 961-8644

William A. Kucharski
Director, County of Hawaii Department of Environmental Management
345 Kekuanaoa Street, Suite 41
Hilo, Hawaii 96720
Fax: 961-8086

Corporation Counsel
101 Aupuni Street Unit 325
Hilo Hawaii 96720
Fax: 961-8622

Dated: October 21, 2018 at Naalehu, Hawaii

SANDRA LEE DEMORUELLE, *Pro Se*

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (21)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 21, 2018 4:12 p.m.

Dear Ms. Demoruelle:

Thank you for your October 21, 2018 4:12 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#22

#22

Earl Matsukawa

From:	Naalehu Theatre <naalehutheatre@yahoo.com> woc oct25-2108
Sent:	Wednesday, October 24, 2018 4:03 PM
To:	Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc:	clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; TESSA BERMAN; eplan1@aol.com; Bob Martin; David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph; Senator Hirono (imailagent); Senator Hirono's Office; sengreen@capitol.hawaii.gov; HI Office of Environmental Quality Control; tnapeahi@yahoo.com; Solali Hanoa
Subject:	Re: The Ka'u Community's Request to Extend the date for Pahala DEA/AFNSI comments
Attachments:	Pahala_Hwy11_Culvert.zip

Dear Mr. Matsukawa,

Because we in Ka'u have so many concerns that we have not been able to write into comments as yet - I myself have not even started on my concerns with the costs in the PER - I know a request has gone out for more time to comment.

With that in mind, I will continue to submit comments.

Like so many other people, I am concerned with the ACTUAL flooding potential of the water that flows through the culvert from the mac nut orchard where you want to place the four open sewage lagoons. All you COHDEM Contractors and Sub-contractors seemed totally unaware that this culvert even exists, so I am attaching pictures of it to prove it does exist.

I will continue submitting Pahala DEA comments because I have not had time to write up all my comments as yet - and we all deserve a chance to have our concerns fully heard on the two WWTPs in Kau - even if you are illegally making us do it one project at a time.

We will be suing on this forever! And maybe tomorrow **the snotty attitude of Corporate Counsel** will make the Judge sympathetic to this old lady!

To my Friends - pray that tomorrow in Hilo Courtroom 3E, I can speak truth to power, successfully. Aloha pumehana, Sandy Demoruelle

On Tuesday, October 23, 2018 02:47:36 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

I have not received any confirmation as was said would occur. Sandra Demoruelle

On Wednesday, October 10, 2018 10:50:05 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Dear Mr. Matsukawa,

The Pahala DEA meeting tonight was held without the aforementioned DEA volume present to consult.

It was like having a Bible study class without any Bibles!

Was I the only person in the room who has actually read the meager DEA offerings? I mean 21 blank pages and untold repetition makes about 50 real pages to read. But to read it, you have to have a real live volume of the DEA to read. None were present at the DEA meeting???!!!

But not to worry! You will have hundreds of pages of comments to add bulk to your FEA - which will have yet another law suit since you did not go direct to EIS like ALL HAWAII WWTPS DO. Name one project without an EIS?!!!

And you could very well lose your prelim inj. and no one will be paid for the meeting I so enjoyed tonight. But then, I didn't get paid, either.

Best, Sandra Demoruelle

On Monday, October 1, 2018 10:40:37 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle

SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

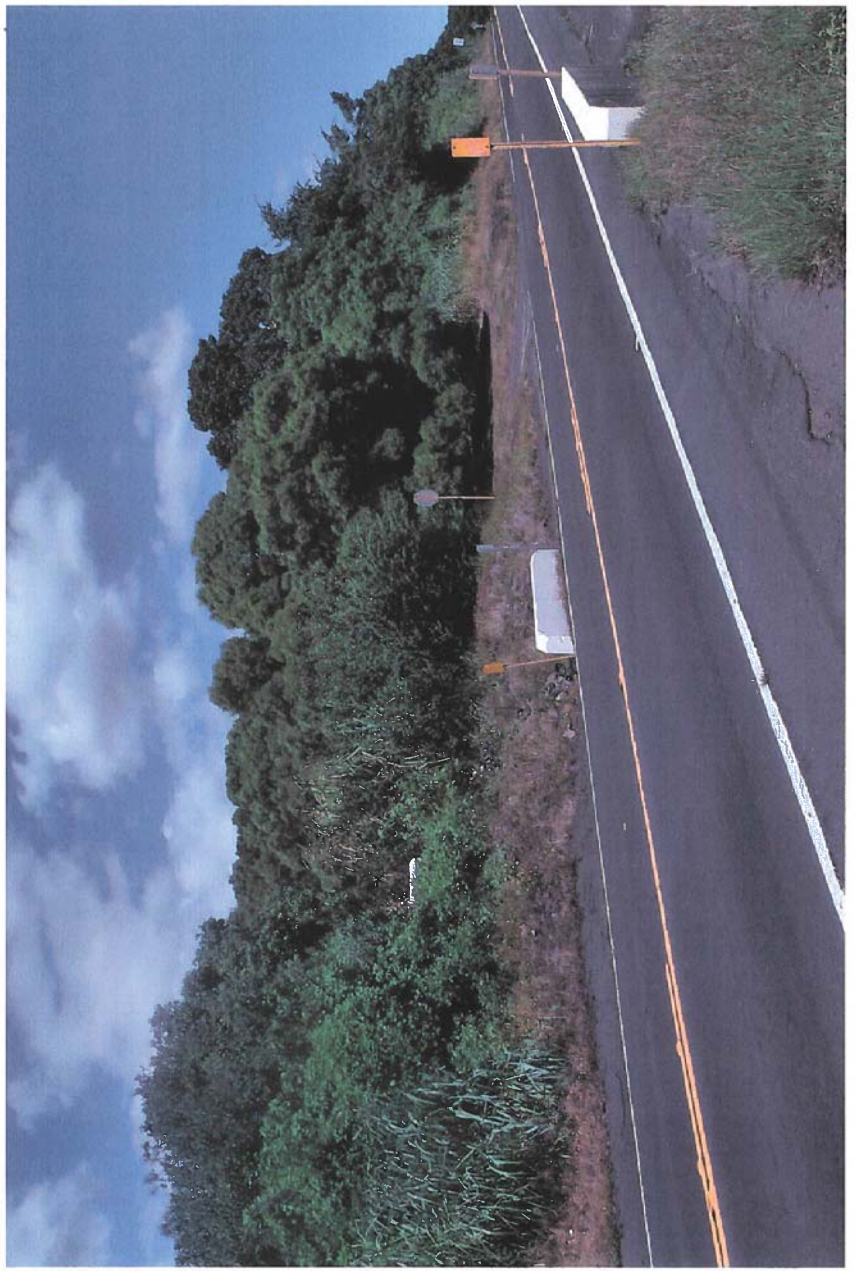
The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

--
This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.



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INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (22)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 24, 2018 4:03 p.m.

Dear Ms. Demoruelle:

Thank you for your October 24, 2018 4:03 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

The County is aware of two existing culverts that allow stormwater to flow across the Māmalahoa Highway in the vicinity of the project. The first is a box culvert located at the intersection with Maile Street that conveys stormwater under the highway. The second culvert is located approximately 600 feet east of the Maile Street intersection and was used to convey sugar mill flume water across the highway for disposal.

The Draft EA Section 3.9.1 (a) states:

> "The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel No. 155166 1800F, effective date September 29, 2017 shows that most of the Pāhala area is located in *Zone X*, which designates areas determined to be outside the 0.2-percent annual chance (500-year) floodplain. A small portion of the community of Pāhala, including some land within the collection system project site, is located within *Zone X – Other Flood Areas*, indicating areas within the 0.2-percent annual chance (500-year) floodplain, or areas with a 1-percent annual chance of flooding with average flood depths less than 1 foot.
>
> According to the FIRM, both existing LCCs are also located within *Zone X*. However, LCC-1 is very close to the edge of the 500-year floodplain.
>
> On April 16, 2018, in response to the pre-assessment notification, the State of Hawaiʻi Department of Land and Natural Resources Engineering Division stated the responsibility for conducting research as to the flood hazard designation for the project site lies with the project proponent. Also on April 16, 2018 and in response to the pre-assessment notification, the

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> County of Hawaiʻi Department of Public Works confirmed that the proposed treatment and disposal project site at Site 7 is designated as *Zone X* on the FIRM and is outside the 500-year floodplain."

The relevant FIRM panel is reproduced in Appendix B as Figure 4-13.

This information will be repeated in the Final EA.

The Draft EA Section 3.23.2 (a), states:

> "The proposed wastewater treatment and disposal facility would include an on-site drainage system to address stormwater surface runoff created by new impervious surfaces within the facility. The site would include a system to collect runoff via grated inlets or swales, and flows would be conveyed to on-site drainage detention systems, such as subsurface linear infiltration or depressed detention basins."

This information will be repeated in the Final EA.

The preferred alternative (Site 7) slopes from approximately north to south (mauka to makai) such that, during rain events, surface flows pass through the existing orchard to the southern (makai) end where the flows eventually drain through the culvert located at the Maile Street-Māmalahoa Highway intersection to the areas below (makai) the highway. Most of the land surface area below the existing macadamia nut orchard contains little to no vegetation to absorb or slow these flows. The gradient of Site 7 and surrounding area results in this natural pattern of surface flows which also existed when the area was planted in sugar cane and is not considered flooding.

Based on the roadway flooding concerns expressed by the community during the Pahala public meetings held in December 2017 and October 2018, the State of Hawaiʻi Department of Transportation (DOT) Hawaiʻi District office was contacted to discuss drainage at the treatment and disposal facility project site and the culvert at the Maile Street and Māmalahoa Highway intersection. On February 20, 2019, the District office confirmed via telephone that the DOT owns and maintains the culvert at the Maile Street intersection, and that they have no record of the roadway being inundated by stormwater drainage during precipitation events at that location.

Stormwater runoff generated mauka of the treatment and disposal facility project site will be directed around the perimeter of the site via diversion swales that will convey flow back to the existing drainage pattern that flows to the existing culvert at Maile Street. During heavy rain events, stormwater may temporarily back up behind the culvert. There will be no changes to this culvert and the proposed treatment and disposal facility will not be located within the area of the culvert.

As stated in the Draft EA, the on-site stormwater management system would meet the requirements of Hawai'i County Code (HCC), Chapter 27 Floodplain Management, Section 20, Standards for subdivisions and other developments (e) which mandates a site drainage plan to "comply with sections 27-20(a) and (b) and section 27-24, and shall include a storm water disposal system to contain run-off caused by the proposed development, within the site boundaries, up to the expected [design] storm event, as shown in the department of public works "Storm Drainage Standards"."

To meet the requirements of HCC, Chapter 27, Section 20 (f), the project "shall not alter the general drainage pattern above or below the development". Thus, for the design storm event, no increase in flow amount will be directed to either of the culverts at the highway as a result of the site development. A drainage study will be prepared during the design process to evaluate the improvements necessary to comply with HCC Chapter 27 requirements.

The wastewater treatment processes will be designed to accommodate the associated peak flows, including precipitation that falls on the area occupied by the aerated lagoon treatment system. The Draft EA Appendix B, Section 2.2 outlines the anticipated peak wastewater flows from the community, based on the applicable flow standard. The Draft EA Section 2.3.1, states the aerated lagoons will be lined to prevent water seepage through the bottom and sides of the lagoons. The Draft EA Appendix B, Section 5.3 shows the operational freeboard that will be available to contain and to equalize lagoon flows. In addition, the slow-rate land application groves will be designed to completely contain both peak effluent flows and precipitation from a 100-year, 24-hour storm event. A geotechnical engineering assessment of berm stability will be conducted during the design process. The tree groves will be designed in accordance with the EPA's "Process Design Manual, Land Treatment of Municipal Wastewater Effluents". Effluent will be applied at a hydraulic loading rate that is a small percentage of the percolation rate of the soil, ensuring sufficient capacity for assimilation of peak effluent flow rates and precipitation from the design storm event.

This information will be included in the Final EA

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#39

#26

Earl Matsukawa

woc oct 29-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Tuesday, October 23, 2018 2:48 PM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; Bhat Simi (ENRD); TESSA BERMAN; eplan1@aol.com; kaena.horowitz@hawaiicounty.gov; Joe Kamelamela; Bob Martin; Albanese Michael (USAHI); David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph
Subject: Pahala DEA comments with hard copies in the mail
Attachments: COMMENTS_Pahala_DRAFT EA_Joe_Sandy_Comments_2.docx; COMMENTS_Pahala_DRAFT EA_Joe_Sandy_Comments.docx; COMMENTS_Pahala_DRAFT EA_Joe_Sandy.docx; COMMENTS_Pahala_DRAFT EA_Charles.docx; COMMENTS_Pahala_DRAFT EA_lila.docx

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SANDRA DEMORUELLE

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/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

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--
This message has been scanned for viruses and
dangerous content by **MailScanner**, and is
believed to be clean.

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INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (39)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 23, 2018 2:48 p.m.

Dear Ms. Demoruelle:

Thank you for your October 23, 2018 2:48 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

This is not a comment to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

The attachment comments will be addressed under a separate cover.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#46

KATE 47

woc 12-12-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Wednesday, October 31, 2018 8:03 PM
To: tessa@munekiyohiraga.com
Cc: Rao, Kate <Rao.kate@epa.gov>; Dora Beck <dora.beck@hawaiicounty.gov>; HI Office of Environmental Quality Control <hiofficeofenvironmentalq@doh.hawaii.gov>; Albright, David <Albright.David@epa.gov>; Maile David <maile.david@hawaiicounty.gov>; Public Comment <pahalaea@wilsonokamoto.com>; Irina Constantinescu <iconstantinescu@brwncald.com>; Kaena Horowitz <kaena.horowitz@hawaiicounty.gov>; BERMAN, TESSA <Berman.Tessa@epa.gov>; eplan1@aol.com
Subject: Your APA prize for the Ka'u CDP is a TOTAL JOKE!!!

Aloha,

The Hawaii County Planning announced that APA-Hawaii Chapter made an award for the totally ignored Ka'u CDP. A more obvious document produced just for the "looks" without actually impacting any "planning" activities could not be found.

It is laughable that APA-Hawaii thought anyone, like COHDEM, would actually IMPLEMENT it!!

The COHDEM is shoving two sewage plant projects - costing $40.5 mill EACH! - down our throats and Ka'u is organizing and lawyering-up. So much for Ka'u CDP Policy 90 - involve the community and we will help raise money. What a laugh! The ink wasn't dry on the CDP before Brown and Caldwell was terrorizing us - as pictured attached below.

Everyone should re-consider the optics of awarding this prize for a CDP that is so totally ignored in practice - ALREADY!! The $40.5 mill represents about $250,000 per LCC/household closed and the homes are only worth about $60,000.

For under $10 mill, the homes could be purchased and save taxpayers the $30 mill plus interest for 35 years. Doesn't the COHDEM "plan" to spend $40 mill on a sewage plant for $10 mill worth of housing sound downright stupid and not deserving of your "award?"

If you don't think I am accurate - just look for Policy 90 in the Pahala DEA. See if COHDEM gives a damn about what the Ka'u community thinks?

Most sincerely, Sandra Demoruelle

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (46)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘u, Hawai‘i
Response to Comment – October 31, 2018 8:03 p.m.

Dear Ms. Demoruelle:

Thank you for your October 31, 2018 8:03 p.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#45

KAK 46

woc 12-12-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Wednesday, October 31, 2018 8:13 PM
To: Public Comment <pahalaea@wilsonokamoto.com>; Dora Beck <dora.beck@hawaiicounty.gov>; Rao, Kate <Rao.kate@epa.gov>; Shareem, Jelani <SHAREEM.JELANI@EPA.GOV>
Subject: Since the Naalehu Project will cost $40.5 mill. -or about $250,000 per LCC household closed - how can this be an affordable option?

The Pahala Project is the twin of Naalehu and will cost a similar amount. How can the County justify spending over $250,000 for each LCC/household closed.

The whole Ka'u community is concerned that these are totally excessive costs that will harm the economics of the County well into the future.

Much less expensive options must be found.

The solution should not cost more than the $10 mill in property values - or the COH should just buy all the homes and save the $30 mill in each town.

Sincerely, Sandra Demoruelle

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (45)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻū, Hawaiʻi
Response to Comment – October 31, 2018 8:13 p.m.

Dear Ms. Demoruelle:

Thank you for your October 31, 2018 8:13 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

Hawaiʻi Administrative Rules (HAR) Title 11 Chapter 200-10 **Contents of an environmental assessment** does not include a requirement for evaluating the fiscal impacts of a project on a County's budget or ability to obtain funding.

The Nāʻālehu project is not the subject of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
B. Rosenberg, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#48

woc 12-17-2018

45

From: Naalehu Theatre <naalehutheatre@yahoo.com>
To: David Albright <albright.david@epa.gov>; shareem.jelanie@epa.gov <shareem.jelanie@epa.gov>; Kate Rao <rao.kate@epa.gov>; Dora Beck <dora.beck@hawaiicounty.gov>
Cc: Sara Kamibayashi <sara.kamibayashi@librarieshawaii.org>; Maelene Kaapana <maelene.kaapana@librarieshawaii.org>; Linda Morgan <lindainhawaii65@gmail.com>; Bob Martin <bmartin@naalehu.org>; Maile David <maile.david@hawaiicounty.gov>; Ka'u Calendar News <kaucalendarnews@gmail.com>
Sent: Wednesday, October 31, 2018 11:39:24 AM HST
Subject: Naalehu PER in Naalehu/Pahala Libraries?

Since this Naalehu Preliminary Engineering Report (PER) is a very important document that could potentially remove some of the terror that people have felt with the Naalehu School as a site for the sewage plant, has it been placed in the local libraries?

Attentive as I am to this issue, I did not know the Naalehu PER had been published Oct 26 because the Task 5.1 two meetings had not been held between August 27 and October 25, 2018 and the PER document isn't readily available at our libraries.

I remain extremely concerned as this property, like property #1 (Weatherford), is PONC land (see HCC Res. 650-18) under care of the Ala Kahakai group.

Sincerely, Sandra Demoruelle

----- Forwarded Message -----
From: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
To: Naalehu Theatre <naalehutheatre@yahoo.com>
Cc: Hirayama, Emily <Emily.Hirayama@hawaiicounty.gov>
Sent: Monday, October 29, 2018 10:19:03 AM HST
Subject: RE: I have to cancel tomorrow's meeting

Ms. Demoruelle,

The below link went up on 10/26/18 and is available for public comment.

http://records.co.hawaii.hi.us/weblink/1/edoc/96399/Preliminary Engineering Report (Naalehu WWTP) October 2018.pdf

As you can see from Section 8 in the link (pdf pages 75 and 84), the recommended site to develop is TMK (3) 9-5-007:016, a parcel of land that is well away from the school that your grandson attends.

If I can be frank, Ms. Demoruelle, what is it that you're looking for? How can we resolve this matter?

Please advise.

Mahalo,

D. Kaena Horowitz

Deputy Corporation Counsel

County of Hawai`i

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:25 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: Re: I have to cancel tomorrow's meeting

Thank you so much. I put it on my calendar. Best, Sandra Demoruelle

On Monday, October 29, 2018 09:23:39 AM HST, Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov> wrote:

Ms. Demoruelle,

I hope you feel better soon.

November 7 @ 1:30pm works for me.

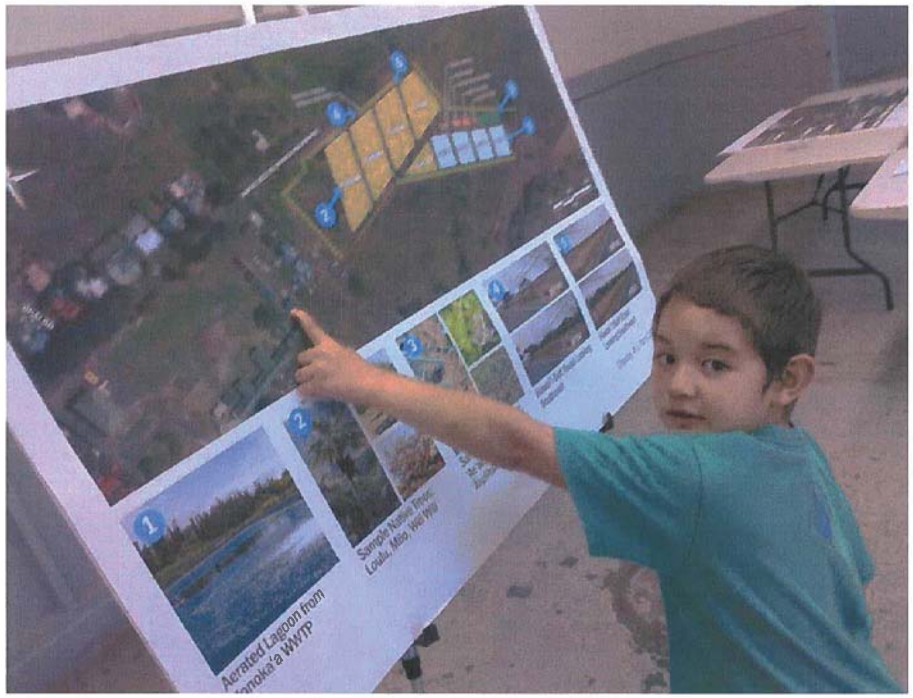
Mahalo,

Kaena

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:19 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: I have to cancel tomorrow's meeting

Aloha, I am so sorry but I have been sick all weekend and will not be coming to Hilo tomorrow. Can I re-schedule for any time on November 7 or any day the week of Nov. 12 Mon. - 16 Fri?

Again, I apologize for the inconvenience this may cause you. Best, Sand



WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (48)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 31, 2018 11:39 a.m.

Dear Ms. Demoruelle:

Thank you for your October 31, 2018 11:39 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#47

KATE 48

From: Naalehu Theatre <naalehutheatre@yahoo.com> woc 12-12-2018
Sent: Wednesday, October 31, 2018 12:41 PM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Cc: Hirayama, Emily <Emily.Hirayama@hawaiicounty.gov>; Dora Beck <dora.beck@hawaiicounty.gov>; Joe Kamelamela <joe.kamelamela@hawaiicounty.gov>; clekven@brwncald.com; Public Comment <pahalaea@wilsonokamoto.com>; eplan1@aol.com; Albright, David <Albright.David@epa.gov>; ematsukawa@wilsonokamoto.com; Rao, Kate <Rao.kate@epa.gov>; Kim Wagoner <Kim.Wagoner@erg.com>; Patrick Goodwin <Patrick.Goodwin@erg.com>; Braden Rosenberg <braden.rosenberg@erg.com>
Subject: Naalehu WWTP Prelim. Eng. Report w/details for spending over $40 mill of taxpayers money [per project!]

Aloha Mr. Horowitz,

How can we make public comments?

It is just a Preliminary Engineering Report, not an Environmental Assessment document. In fact, your pleadings [P. 3 highlighted Exhibit C/D] indicate that under **Task 5.1, the Naalehu DEA was to have had two public meetings between Aug 27 and Oct 25, 2018 - neither of which were held.**

The problem has been that lacking publication of the Naalehu DEA under NEPA/ESA/NHPA, or even HEPA, the public has no way to comment on anything. "No comments" led to a sewage plant beside the Naalehu Elementary School, so it might be wise to receive public comment on this new location - which is right next to a well and is PONC land per Res. 650-18. And to support our personal injury lawsuits, the site now puts property held by my husband on the "must hook up" economically affected list.

Actually, Mr. Kucharski should send you, personally, out to meet with us since now we hold regular community meetings.

Thanks to two true community heroes who are coming out each Monday to offer us their kokua - which includes rescuing people from a truck that had just flipped off the road in the flooding rain - Ka'u has meetings at 6:30 pm on Mondays at the Pahala Community Clubhouse that I am sure Terri and Pali would like to have you attend.

Rain or shine, Ka'u is talking about the now $40 million **each** WWTPs each Monday evening, and EVERYONE is welcome here, as far as I can see.

Therefore, so I can tell everyone at the next meeting, how can everyone make comments on this Naalehu WWTP plan?

Best, Sandra Demoruelle

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (47)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – October 31, 2018 12:41 p.m.

Dear Ms. Demoruelle:

Thank you for your October 31, 2018 12:41 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#49

ICATE 50

From: Naalehu Theatre <naalehutheatre@yahoo.com> woc 12-12-2018
Sent: Friday, October 26, 2018 11:12 AM
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; Rao, Kate <Rao.kate@epa.gov>; Dora Beck <dora.beck@hawaiicounty.gov>
Cc: clekven@brwncald.com; Kim Wagoner <Kim.Wagoner@erg.com>; Patrick Goodwin <Patrick.Goodwin@erg.com>; Braden Rosenberg <braden.rosenberg@erg.com>; Maile David <maile.david@hawaiicounty.gov>; Rep. Richard Creagan <repcreagan@capitol.hawaii.gov>; iconstantinescu@brwncald.com; jsakaguchi@wilsonokamoto.com; BERMAN, TESSA <Berman.Tessa@epa.gov>; eplan1@aol.com; Bob Martin <bmartin@naalehu.org>; Albright, David <Albright.David@epa.gov>; Linda Morgan <lindainhawaii65@gmail.com>; Ka'u Calendar News <kaucalendarnews@gmail.com>; The Ka'ū Calendar Newspaper and Daily News Briefs <kaucalendarblog@gmail.com>; Nancy Cook Lauer <nclauer@gmail.com>; mail@environment-hawaii.org; Shannon Rudolph <shannonkona@gmail.com>; Senator Hirono (imailagent) <casework@hirono.senate.gov>; Senator Hirono's Office <hawaiioffice@hirono.senate.gov>; sengreen@capitol.hawaii.gov; HI Office of Environmental Quality Control <hiofficeofenvironmentalq@doh.hawaii.gov>; tnapeahi@yahoo.com; Solali Hanoa <saysohi@aol.com>
Subject: Re: The Ka'u Community's Request to Extend the date for Pahala DEA/AFNSI comments -thank you for the extension

Dear Mr. Matsukawa,

To up date the hearing yesterday, while the Judge dismissed the preliminary injunction, he also dismissed the COH Motion to Dismiss, so the case will move forward,

I will be able to present my claim to the Court!

I will be submitting comments and thank you for acknowledging the earlier comments.
Best, Sandra Demoruelle

On Wednesday, October 24, 2018 04:02:35 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Dear Mr. Matsukawa,

Because we in Ka'u have so many concerns that we have not been able to write into comments as yet - I myself have not even started on my concerns with the costs in the PER - I know a request has gone out for more time to comment.

With that in mind, I will continue to submit comments.

Like so many other people, I am concerned with the ACTUAL flooding potential of the water that flows through the culvert from the mac nut orchard where you want to place the four open sewage lagoons. All you COHDEM Contractors and Sub-contractors seemed totally unaware that this culvert even exists, so I am attaching pictures of it to prove it does exist.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (49)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘u, Hawai‘i
Response to Comment – October 26, 2018 11:12 a.m.

Dear Ms. Demoruelle:

Thank you for your October 26, 2018 11:12 a.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

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#50

#24

Earl Matsukawa

woc nov18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, November 2, 2018 12:22 PM
To: Tessa Munekiyo Ng
Cc: Kate Rao; Dora Beck; HI Office of Environmental Quality Control; David Albright; Maile David; Public Comment; Irina Constantinescu; Kaena Horowitz; TESSA BERMAN; eplan1@aol.com
Subject: Re: Your APA prize for the Ka'u CDP is a TOTAL JOKE!!!

Thank you for your response. However, you have not addressed the problem of an award for a CDP that has been totally ignored. The Pahala WWTP DEA shows no respect for the CDP Policy 90 - not even mentioning it.

The four judges were mislead. Sandra Demoruelle

On Thursday, November 1, 2018 09:40:29 PM HST, Tessa Munekiyo Ng <tessa@munekiyohiraga.com> wrote:

Aloha Ms. Demoruelle,

Thank you for your email and we appreciate you sharing your thoughts with us. The APA Hawaii Chapter awards are selected annually by a panel of four judges based on nomination materials submitted for the projects. This year, seven projects were recognized. As you noted, the Ka`u CDP was nominated and selected by the jury to receive an award.

Thank you again for reaching out and sharing your comments with us.

Tessa Munekiyo Ng, AICP, Vice President

Email: tessa@munekiyohiraga.com

MUNEKIYO HIRAGA

Oahu: 735 Bishop Street, Suite 321, Honolulu, Hawaii 96813 **T:** 808.983.1233

Maui: 305 High Street, Suite 104, Wailuku, Hawaii 96793 **T:** 808.244.2015 **F:** 808.244.8729

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CONFIDENTIAL AND PRIVILEGED COMMUNICATION: This message (including attachments) is intended for the use of the designated recipient(s) named above. The contents of this correspondence are considered privileged and confidential. If you have received this message in error, kindly notify us immediately by email or telephone, and delete this email from your computer system. Thank you.

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Wednesday, October 31, 2018 5:03 PM
To: Tessa Munekiyo Ng
Cc: Kate Rao; Dora Beck; HI Office of Environmental Quality Control; David Albright; Maile David; Public Comment; Irina Constantinescu; Kaena Horowitz; TESSA BERMAN; eplan1@aol.com
Subject: Your APA prize for the Ka'u CDP is a TOTAL JOKE!!!

Aloha,

The Hawaii County Planning announced that APA-Hawaii Chapter made an award for the totally ignored Ka'u CDP. A more obvious document produced just for the "looks" without actually impacting any "planning" activities could not be found.

It is laughable that APA-Hawaii thought anyone, like COHDEM, would actually IMPLEMENT it!!

The COHDEM is shoving two sewage plant projects - costing $40.5 mill EACH! - down our throats and Ka'u is organizing and lawyering-up. So much for Ka'u CDP Policy 90 - involve the community and we will help raise money. What a laugh! The ink wasn't dry on the CDP before Brown and Caldwell was terrorizing us - as pictured attached below.

Everyone should re-consider the optics of awarding this prize for a CDP that is so totally ignored in practice - ALREADY!! The $40.5 mill represents about $250,000 per LCC/household closed and the homes are only worth about $60,000.

For under $10 mill, the homes could be purchased and save taxpayers the $30 mill plus interest for 35 years. Doesn't the COHDEM "plan" to spend $40 mill on a sewage plant for $10 mill worth of housing sound downright stupid and not deserving of your "award?"

If you don't think I am accurate - just look for Policy 90 in the Pahala DEA. See if COHDEM gives a damn about what the Ka'u community thinks?

Most sincerely, Sandra Demoruelle

----- Forwarded Message -----

From: Naalehu Theatre <naalehutheatre@yahoo.com>

To: Jelani Shareem <shareem.jelani@epa.gov>

Sent: Wednesday, October 31, 2018 11:49:07 AM HST

Subject: Fw: Naalehu PER in Naalehu/Pahala Libraries?

----- Forwarded Message -----

From: Naalehu Theatre <naalehutheatre@yahoo.com>

To: David Albright <albright.david@epa.gov>; shareem.jelanie@epa.gov <shareem.jelanie@epa.gov>; Kate Rao <rao.kate@epa.gov>; Dora Beck <dora.beck@hawaiicounty.gov>

Cc: Sara Kamibayashi <sara.kamibayashi@librarieshawaii.org>; Maelene Kaapana <maelene.kaapana@librarieshawaii.org>; Linda Morgan <lindainhawaii65@gmail.com>; Bob Martin <bmartin@naalehu.org>; Maile David <maile.david@hawaiicounty.gov>; Ka'u Calendar News <kaucalendarnews@gmail.com>

Sent: Wednesday, October 31, 2018 11:39:24 AM HST

Subject: Naalehu PER in Naalehu/Pahala Libraries?

Since this Naalehu Preliminary Engineering Report (PER) is a very important document that could potentially remove some of the terror that people have felt with the Naalehu School as a site for the sewage plant, has it been placed in the local libraries?

Attentive as I am to this issue, I did not know the Naalehu PER had been published Oct 26 because the Task 5.1 two meetings had not been held between August 27 and October 25, 2018 and the PER document isn't readily available at our libraries.

I remain extremely concerned as this property, like property #1 (Weatherford), is PONC land (see HCC Res. 650-18) under care of the Ala Kahakai group.

Sincerely, Sandra Demoruelle

----- Forwarded Message -----

From: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>

To: Naalehu Theatre <naalehutheatre@yahoo.com>

Cc: Hirayama, Emily <Emily.Hirayama@hawaiicounty.gov>

Sent: Monday, October 29, 2018 10:19:03 AM HST

Subject: RE: I have to cancel tomorrow's meeting

Ms. Demoruelle,

The below link went up on 10/26/18 and is available for public comment.

http://records.co.hawaii.hi.us/weblink/1/edoc/96399/Preliminary Engineering Report (Naalehu WWTP) October 2018.pdf

As you can see from Section 8 in the link (pdf pages 75 and 84), the recommended site to develop is TMK (3) 9-5-007:016, a parcel of land that is well away from the school that your grandson attends.

If I can be frank, Ms. Demoruelle, what is it that you're looking for? How can we resolve this matter?

Please advise.

Mahalo,

D. Kaena Horowitz

Deputy Corporation Counsel

County of Hawai'i

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:25 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: Re: I have to cancel tomorrow's meeting

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Ms. Demoruelle,

I hope you feel better soon.

November 7 @ 1:30pm works for me.

Mahalo,

Kaena

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:19 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: I have to cancel tomorrow's meeting

Aloha, I am so sorry but I have been sick all weekend and will not be coming to Hilo tomorrow. Can I re-schedule for any time on November 7 or any day the week of Nov. 12 Mon. - 16 Fri?

Again, I apologize for the inconvenience this may cause you. Best, Sandra Demoruelle

--
This message has been scanned for viruses and
dangerous content by **MailScanner**, and is
believed to be clean.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (50)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – November 2, 2018 12:22 p.m.

Dear Ms. Demoruelle:

Thank you for your November 2, 2018 12:22 p.m. comment message regarding the County Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#51

(E 30)

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com> woc nov18-2018
Sent: Monday, November 5, 2018 9:26 AM
To: Public Comment; Earl Matsukawa; Kate Rao; Dora Beck
Cc: clekven@brwncald.com; kim.wagoner@erg.com; Patrick Goodwin; braden.rosenberg@erg.com; Maile David; Rep. Richard Creagan; iconstantinescu@brwncald.com; John Sakaguchi; TESSA BERMAN; eplan1@aol.com; Bob Martin; David Albright; Linda Morgan; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; mail@environment-hawaii.org; Shannon Rudolph; Senator Hirono (imailagent); Senator Hirono's Office; sengreen@capitol.hawaii.gov; HI Office of Environmental Quality Control; tnapeahi@yahoo.com; Solali Hanoa; tcallis@hawaiitribune-herald.com; valerie.poindexter@hawaiicounty.gov; tim.richards@hawaiicounty.gov; aaron.chung@hawaiicounty.gov; Dru Kanuha; karen.eoff@hawaiicounty.gov; Sue Lee Loy; eileen.ohara@hawaiicounty.gov; jen.ruggles@hawaiicounty.gov; Jelani Shareem; Joe Kamelamela; Kaena Horowitz; Tom Hasslinger; mpoffice@earthjustice.org; Charles Tuttle
Subject: Re: COST OF THE PAHALA PROJECT IS TOTALLY INACCURATE
Attachments: PAHALA_WWTP_COST_ESTIMATES_OCT_2018.jpg

The Section 5.5 Cost Estimates are totally off for the Pahala WWTP Project.

The Pahala EA shows costs as $14.6 mill. while the actual total cost will be more like $40 mill - see the Naalehu Sec 5.5 Cost Estimates attached.

The COHDEM is lying to the people by claiming the costs will be "only" $14.6 mill when it will actually cost at least $40 mill!

Can the County afford over $80 mill in loan obligation for at least 30 years?

The County Council should set a limit for costs and it should not exceed the value of the 109 (Pahala) and 163 (Naalehu) LCC households - or about $10 mill!

Think about it - $81 mill divided by 272 (total households) results in spending $300,000 for each home to just close the offending LCCs.

The County cannot afford these twin boondoggles!

Submitted on Nov. 5, 2018 by Sandra Demoruelle

On Wednesday, October 24, 2018 04:02:35 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Dear Mr. Matsukawa,

Because we in Ka'u have so many concerns that we have not been able to write into comments as yet - I myself have not even started on my concerns with the costs in the PER - I know a request has gone out for more time to comment.

With that in mind, I will continue to submit comments.

Like so many other people, I am concerned with the ACTUAL flooding potential of the water that flows through the culvert from the mac nut orchard where you want to place the four open sewage lagoons. All you COHDEM Contractors and Sub-contractors seemed totally unaware that this culvert even exists, so I am attaching pictures of it to prove it does exist.

I will continue submitting Pahala DEA comments because I have not had time to write up all my comments as yet - and we all deserve a chance to have our concerns fully heard on the two WWTPs in Kau - even if you are illegally making us do it one project at a time.

We will be suing on this forever! And maybe tomorrow **the snotty attitude of Corporate Counsel** will make the Judge sympathetic to this old lady!

To my Friends - pray that tomorrow in Hilo Courtroom 3E, I can speak truth to power, successfully. Aloha pumehana, Sandy Demoruelle

On Tuesday, October 23, 2018 02:47:36 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

I have not received any confirmation as was said would occur. Sandra Demoruelle

On Wednesday, October 10, 2018 10:50:05 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Dear Mr. Matsukawa,

The Pahala DEA meeting tonight was held without the aforementioned DEA volume present to consult.

It was like having a Bible study class without any Bibles!

Was I the only person in the room who has actually read the meager DEA offerings? I mean 21 blank pages and untold repetition makes about 50 real pages to read. But to read it, you have to have a real live volume of the DEA to read. None were present at the DEA meeting???!!!

But not to worry! You will have hundreds of pages of comments to add bulk to your FEA - which will have yet another law suit since you did not go direct to EIS like ALL HAWAII WWTPS DO. Name one project without an EIS?!!!

And you could very well lose your prelim inj. and no one will be paid for the meeting I so enjoyed tonight. But then, I didn't get paid, either.

Best, Sandra Demoruelle

On Monday, October 1, 2018 10:40:37 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

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This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

PAHALA

5.5 Cost Estimates

An order of magnitude probable construction is summarized in Table 5-3. The estimate includes a 25 percent estimating contingency. The detailed cost estimate is included as Appendix A.

Table 5 3. Pahala WWTP Order of Magnitude Construction Cost Estimate

Description	Estimated Construction Cost
Electrical and Instrumentation	$1,976,000
Headworks	$906,000
Odor Control	$412,000
Lagoons	$2,222,000
Constructed Wetland	$611,000
Land Application	$925,000
On-site improvements	$6,325,000
Off-site improvements	$1,223,000
Total Estimated Construction Cost	$14,600,000

5.6 Future Expansion

5.6.1 Full Buildout Flows

Full buildout wastewater flow projections were developed using the Draft Ka'u Community Development Plan (March 2015) and the CCH's current (2017) wastewater standards. Table 5-4 summarizes the projected full buildout flows for the community, and Figure 2-1 shows the WWTP full buildout service area.

Table 5 4. Pahala WWTP Full Buildout Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	360,000 gallons per day	1.0
Peak day wet weather flow	1,260,000 gallons per day	3.5
Peak hour wet weather flow	1,200 gallons per minute	4.8

5.6.2 Improvements

To accommodate the flow increase anticipated from the full buildout of the Pahala wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the 14.9-acre site.

Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solids recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater

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10349-01 ref (51)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'u, Hawai'i
Response to Comment – November 5, 2018 9:26 a.m.

Dear Ms. Demoruelle:

Thank you for your November 5, 2018 9:26 a.m. comment message regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

The Draft EA Appendix B Section 5.5 and Table 5.3 provides a conceptual planning level construction cost estimate of about $14.6 million for the secondary wastewater treatment and disposal facility only. Table 5.3 does not reflect the total cost of the Proposed Action and does not include planning, design, land acquisition, the collection system or past project costs. As stated in the Draft EA Section 2.1.2, the project may be funded by the State of Hawai'i Department of Health Clean Water State Revolving Fund which authorizes low interest loans for the construction of publicly owned wastewater treatment works and an EPA Special Appropriation Grant. This information will be included in the Final EA.

Hawai'i Administrative Rules (HAR) Title 11 Chapter 200-10 **Contents of an environmental assessment** does not include a requirement for evaluating the fiscal impacts of a project on a County's budget or ability to obtain funding.

The cost estimate for the Nā'ālehu project is not pertinent to the content requirements for the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Project Manager
cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#52

(L 31)

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com> woc nov18-2018
Sent: Tuesday, November 6, 2018 11:51 AM
To: sengreen@capitol.hawaii.gov; senruderman@capitol.hawaii.gov; Rep. Richard Creagan; reponishi@capitol.hawaii.gov; Senator Hirono (imailagent); Senator Hirono's Office; Office of U.S. Senator Brian Schatz; Congresswoman Tulsi Gabbard; Maile.David@hawaiicounty.gov
Cc: cohdem@hawaiicounty.gov; rao.kate@epa.gov; eplan1@aol.com; Jelani Shareem; Dora Beck; Kaena Horowitz; Linda Morgan; TESSA BERMAN; Bob Martin; Ka'u Calendar News; The Ka'ū Calendar Newspaper and Daily News Briefs; Nancy Cook Lauer; tcallis@hawaiitribune-herald.com; Shannon Rudolph; mail@environment-hawaii.org; Joe Kamelamela; Charles Tuttle; mpoffice@earthjustice.org; Tom Hasslinger; Dru Kanuha; Sue Lee Loy; David Albright; Craig Lekven; Earl Matsukawa; Public Comment; aaron.chung@hawaiicounty.gov; eileen.ohara@hawaiicounty.gov; tim.richards@hawaiicounty.gov; karen.eoff@hawaiicounty.gov; valerie.poindexter@hawaiicounty.gov; jen.ruggles@hawaiicounty.gov
Subject: Re: The sewage projects in Ka'u will cost at least $40,5 million - EACH - and still climbing!
Attachments: NAALEHU_WWTP_COST_ESTIMATES_Nov_2018.jpg

These Wastewater Projects have become a total boondoggle. Please stop this waste of tax dollars and set a firm budget of under $10 million! Sincerely, Sandra Demoruelle

On Sunday, April 22, 2018 10:57:00 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Aloha Ka'u legislators.

Are you expecting COH and State taxpayers to volunteer to cover this oversized, overpriced monstrosity (the COHDEM AOC) that is neither wanted or needed? Meanwhile, no alternatives have been offered to the taxpayers (or the communities affected, if anyone cares), such as a micro-sewage projects serving the under 300 properties in total?

How can ANYONE who is sane justify spending at least $23,340,000 for 300 properties on LCCs? You plan to spend almost $100,000 per household!

Please come and meet with our community! This is the dumbest idea that has ever been planned down here (and that is saying a lot because Ka'u seems to be the epicenter of dumb ideas being foisted upon the community by outsiders). Just ask my great-grandson Daniel how much he looks forward to having the four open sewage lagoons right next door to his classroom (pictured below).

If you think the community is not going to fight this with every legal means available to us, especially citizen suits, you are badly mistaken.

Plus, since we do have a sense of humor down here so look for us to form an organization to fight COHDEM and the EPA. Something like "People Opposed to Oppressing People" - POOP - and then we can have a Poop Festival this 4th of July and highlight the dumb WWTP projects in Ka'u - which are costing Hawaii taxpayers $23,340,000 because the meter is now running and COHDEM has their contracts for spending this money already in place.

Mahalo, Sandra Demoruelle

----- Forwarded Message -----
From: Amanda Tuttle <amcdowell4929@gmail.com>
To: "naalehutheatre@yahoo.com" <naalehutheatre@yahoo.com>
Sent: Thursday, April 12, 2018 06:05:05 PM HST
Subject:

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NAALEHU

5.5 Cost Estimates

An order of magnitude probable capital cost is summarized in Table 5-3. The estimate includes a 20 percent estimating contingency. The detailed cost estimate is included in Appendix B.

Table 5-3. Naalehu WWTP Order of Magnitude Capital Cost Estimate

Description	Estimated Construction Cost
Wastewater treatment plant and utilities	$14,600,000
Land application system	$6,400,000
Drainage improvements	$11,400,000
Total construction cost	$32,400,000
Engineering, administration, and legal at 25% of construction cost	$8,100,000
Total capital cost	$40,500,000

5.6 Future Expansion

5.6.1 Full Buildout Flows

Full buildout wastewater flow projections were developed using the Draft Ka'u Community Development Plan (March 2015) and the CCH's current (2017) wastewater standards. Table 5-4 summarizes the projected full buildout flows for the community, and Figure 2-2 shows the WWTP full buildout service area.

Table 5-4. Naalehu WWTP Full Buildout Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	390,000 gallons per day	1.0
Peak day wet weather flow	1,200,000 gallons per day	2.5*
Peak hour wet weather flow	1,250 gallons per minute	4.6

*Derived from Crites and Tchobanoglous, 1998

5.6.2 Improvements

To accommodate treatment of the increased flow anticipated from the full buildout of the Naalehu wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the existing WWTP site.

Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solids recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater opportunity for contact between the naturally-occurring micro-organisms in the lagoon and dissolved organic matter. As a result, complete mix lagoons provide greater levels of treatment within a smaller volume than partial mix lagoons. However, facilities must be provided downstream of

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10349-01 ref (52)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka'u, Hawai'i
Response to Comment – November 6, 2018 11:51 a.m.

Dear Ms. Demoruelle:

Thank you for your November 6, 2018 11:51 a.m. comment message regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

This is not a comment pertinent to the content requirements of the Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

The Draft EA Section 2.4 to 2.8 provides an evaluation of siting, treatment, and effluent management alternatives

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

#53

nov18-2018

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Thursday, November 8, 2018 11:52 AM
To: State Office of Environmental Quality Control; Public Comment; Earl Matsukawa; Dora Beck; Kaena Horowitz
Cc: Kate Rao; Jelani Shareem; David Albright; TESSA BERMAN; Craig Lekven; Irina Constantinescu; eplan1@aol.com
Subject: Re: The November 8, 2018 Issue of The Environmental Notice - Pahala DEA notice is still deficient because the 9A Wastewater Unit is not listed as a trigger!

The COHDEM has failed to include the true purpose of this project in the latest Pahala DEA notice, which actually is to place a secondary sewage treatment plant with four open sewage lagoons in remote Ka'u.

The failure to include the "9A" trigger in this OEQC notice and calling this just a "collection system" is totally deceptive and will be challenged in Court.

EVERY Wastewater Treatment Unit in Hawaii has had an EIS - and there is no reason to expect a FONSI when the controversy has already caused this second notice and extension of the comment period.

The County is guilty of inequitable behavior by publishing this deceitful notice a second time!

Everyone involved should be very ashamed of these unconscionable representations to OEQC and the public - since the COHDEM and its Contractors were warned, it must be considered bad faith by the Courts.

Pahala DEA comment submitted by Sandra Demoruelle

On Thursday, November 8, 2018 09:10:50 AM HST, State Office of Environmental Quality Control <oeqchawaii@doh.hawaii.gov> wrote:

Aloha,

The November 8, 2018 issue of The Environmental Notice is now available online for your review.

Regards,

Office of Environmental Quality Control
(808) 586-4185
http://health.hawaii.gov/oeqc/

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Honolulu, Hi 96813

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10349-01 ref (53)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – November 8, 2018 11:52 a.m.

Dear Ms. Demoruelle:

Thank you for your November 8, 2018 11:52 a.m. comment message regarding the County Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project.

The Office of Environmental Quality Control *The Environmental Notice* dated November 8, 2018 indicated under status that the proponent is republishing the draft EA originally published September 23, 2018 and provided the following project description:

> The County of Hawaiʻi Department of Environmental Management proposes to construct wastewater system improvements replacing the large capacity cesspools (LCCs) currently serving Pāhala, in order to comply with U.S. Environmental Protection Agency (EPA) regulations. The project improvements would include a new wastewater collection system located primarily within public streets in the Pāhala community, and a treatment and disposal system on land to be acquired by the County (TMK: 9-6-002: 018). The project would be partially funded by an EPA grant and by the Clean Water State Revolving Fund loan program. The proposed wastewater collection system is described in the Draft EA, and the existing LCCs and associated collection system would be abandoned.

A link was provided in the November 8 2018 TEN to the Draft EA: http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-11-08-HA-Republished-DEA-Pahala-Community-Large-Capacity-Cesspool-Replacement.pdf. Section 2 of the Draft EA is the project description.

The Office of Environmental Quality Control *The Environmental Notice* dated September 23, 2018 provided the following project description:

The project improvements would include a new wastewater collection system located primarily within public streets in the Pāhala community, and a treatment and disposal system on land to be acquired by the County (TMK: 9-6-002: 018). The project would be partially funded by an EPA grant and by the Clean Water State Revolving Fund loan program.

The collection system would consist of approximately 12,120 linear feet of 8 to 12-inch diameter underground gravity flow piping in Maile, ʻIlima, Huapala, Hīnano, Hala, Puahala and Pīkake Streets. The treatment and disposal facility would occupy about 14.9 acres and consist of a headworks and an odor control unit, an operations building, four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen with an adjacent disinfection system to remove pathogens, and four slowrate land treatment basins for further treatment and disposal of the treated effluent. A perimeter security fence would enclose the entire facility. The existing LCCs and associated wastewater collection system would be abandoned.

The Purpose and Need for Action is included in the Draft EA Section 2.2.

Hawaiʻi Revised Statutes (HRS) Chapter 343 Section 5 (a)(9)(A), states as follows: "(a) "Except as otherwise provided, an environmental assessment shall be required for actions that: (1) Propose the use of state or county lands or the use of state or county funds…" as well as, "(9) Propose any: (A) Wastewater treatment unit…"

The County of Hawaiʻi is the Proposing Agency for the Pāhala Large Capacity Cesspool Replacement Project.

Hawaiʻi Revised Statutes (HRS) Section 343-5 Applicability and requirements states under item (c) (4) "A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…" The criteria by which the proposing agency makes the significance determination is provided in Hawaiʻi Administrative Rules (HAR) Title 11 Section 200-12 (a) and (b) which states: "(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences,… and the…effects of the action."

HAR Section 11-200-10 Contents of an environmental assessment includes "(9) Findings and reasons supporting the agency determination or anticipated determination…" The Draft EA provides this in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an Environmental Impact Statement (EIS).

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#54

Earl Matsukawa

woc nov18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Tuesday, November 13, 2018 12:40 PM
To: Sara Kamibayashi; Maelene Kaapana
Cc: Kate Rao; Dora Beck; Kaena Horowitz; TESSA BERMAN; David Albright; Public Comment; Terri Napeahi; Solali Hanoa
Subject: Naalehu Preliminary Engineering Report Oct. 2018 in the Naalehu & Pahala Libraries?

Aloha Sara,

Because of the interest generated by the community meetings they are holding Monday evenings in Pahala (and, in Naalehu, starting on Sat., Nov. 24th at 10 am at Punaluu Bakery rear pavilion), I need to know if the County or EPA provided the copies of the new Preliminary Engineering Report for the Naalehu sewage treatment plant (dated Oct. 2018) to the Ka'u libraries so we can let folks know where to find the information?

Considering the extreme public controversy of the twin $81 mill. wastewater projects, thank you so much for maintaining this reference info for us to use!! Mahalo, Sandy Demoruelle

----- Forwarded Message -----
From: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
To: Naalehu Theatre <naalehutheatre@yahoo.com>
Cc: Hirayama, Emily <Emily.Hirayama@hawaiicounty.gov>
Sent: Monday, October 29, 2018 10:19:03 AM HST
Subject: RE: I have to cancel tomorrow's meeting

Ms. Demoruelle,

The below link went up on 10/26/18 and is available for public comment.

http://records.co.hawaii.hi.us/weblink/1/edoc/96399/Preliminary Engineering Report (Naalehu WWTP) October 2018.pdf

As you can see from Section 8 in the link (pdf pages 75 and 84), the recommended site to develop is TMK (3) 9-5-007:016, a parcel of land that is well away from the school that your grandson attends.

If I can be frank, Ms. Demoruelle, what is it that you're looking for? How can we resolve this matter?

Please advise.

Mahalo,

D. Kaena Horowitz

Deputy Corporation Counsel

County of Hawai`i

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:25 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: Re: I have to cancel tomorrow's meeting

Thank you so much. I put it on my calendar. Best, Sandra Demoruelle

On Monday, October 29, 2018 09:23:39 AM HST, Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov> wrote:

Ms. Demoruelle,

I hope you feel better soon.

November 7 @ 1:30pm works for me.

Mahalo,

Kaena

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:19 AM

Mahalo,

D. Kaena Horowitz

Deputy Corporation Counsel

County of Hawai`i

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:25 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: Re: I have to cancel tomorrow's meeting

Thank you so much. I put it on my calendar. Best, Sandra Demoruelle

On Monday, October 29, 2018 09:23:39 AM HST, Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov> wrote:

Ms. Demoruelle,

I hope you feel better soon.

November 7 @ 1:30pm works for me.

Mahalo,

Kaena

From: Naalehu Theatre [mailto:naalehutheatre@yahoo.com]
Sent: Monday, October 29, 2018 9:19 AM
To: Horowitz, Kaena <Kaena.Horowitz@hawaiicounty.gov>
Subject: I have to cancel tomorrow's meeting

Aloha, I am so sorry but I have been sick all weekend and will not be coming to Hilo tomorrow. Can I re-schedule for any time on November 7 or any day the week of Nov. 12 Mon. - 16 Fri?

Again, I apologize for the inconvenience this may cause you. Best, Sandra Demoruelle

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dangerous content by **MailScanner**, and is
believed to be clean.

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10349-01 ref (54)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – November 13, 2018 12:40 p.m.

Dear Ms. Demoruelle:

Thank you for your November 13, 2018 12:40 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

The Nāʻālehu project PER is not part of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#57

Earl Matsukawa

nov18-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, November 16, 2018 10:03 AM
To: Public Comment; Dora Beck; Kate Rao; David Albright
Subject: FWS required Sec. 7 Consult for Pahala

On Page 5 of the FWS letter to Earl Matsukawa (dated April 23, 2018) - and long before the Pahala Project was designated for NEPA/crosscutters like Sec. 7 Consultation in Grant Amendment 7 on May 30, 2018 - you were informed that this federal funding would "require a Section 7 consultation with the [FW]Service."

This Sec. 7 consultation is part of the full EIS process and is not included in this hasty EA/AFNSI document.

The COHDEM and its Contractors are purposely avoiding this Section 7 consultation (under Endangered Species Act) on both this Pahala WWTP Project and the Naalehu WWTP Project - most notably avoided on the Naalehu Project because the ESA had been applied to the Naalehu WWTP Project from September 20, 2005 up until May 29, 2018, and appears to have been purposely changed to avoid ESA on the "Waikapuna" Public Access, Open Space, and Natural Resources property, the so-called PONC property described as TMK (3) 9-5-007:016 per County of Hawaii Resolution 650-18 authorizing acquisition of the land.

The current Naalehu PER dated October 2018 states TMK (3) 9-5-007:016 is now the site of the new secondary sewage treatment plant and the Res. 650-18 describes native and endangered bird and plant species and this upper portion includes the remnants of a lowland dry forest. Yet, the COHDEM refuses to perform a Section 7 consultation for use of this PONC land as a WWTP.

Comment by Sandra Demoruelle

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10349-01 ref (57)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – November 16, 2018 10:03 a.m.

Dear Ms. Demoruelle:

Thank you for your November 16, 2018 10:03 a.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA Section 3.13.2 states:

> "On April 23, 2018, as part of the pre-assessment consultation process, the FWS provided a letter (01EPIF00-2018-TA-0275) with information on various avoidance and minimization measures to avoid adverse impacts to listed species (see Appendix A)."
>
> "Prior to finalization of this EA and initiation of the Proposed Action, EPA and the County of Hawaiʻi will conclude consultation with FWS in accordance with Section 7 of the Endangered Species Act and will incorporate additional impact avoidance and minimization measures as necessary to result in a finding of Not Likely to Adversely Affect (NLAA) protected species."

On December 21, 2018, the designated non-Federal representative for consultations under Section 7 of the Endangered Species Act, on behalf of the United States Environmental Protection Agency (EPA) and the County of Hawaiʻi, requested concurrence from the U.S. Fish and Wildlife Service (FWS) that the Pāhala Community Large Capacity Cesspool Replacement project is not likely to adversely affect federally-listed threatened and endangered species or critical habitat.

On February 19, 2019, the FWS provided a letter (REF 01EPIF00-2018-TA-0275; 01EPIF00-2019-I-0153) that concluded: "The Service has analyzed potential impacts to listed species due to the implementation of [the] project. Based on the inclusion of the avoidance and minimization measures listed above, the Service anticipates that any potential impacts will be discountable or

insignificant and therefore we concur that the Pahala Large Capacity Cesspool Replacement Project may affect, but is not likely to adversely affect the endangered Hawaiian hoary bat, Hawaiian Hawk, Hawaiian goose, Hawaiian Petrel, Band-rumped Storm-Petrel, Hawaiian Stilt, and Hawaiian Coot, and the threatened Newell's Shearwater."

This information will be included in the Final EA Section 3.13.2 and Appendix C.

The Nā'ālehu wastewater treatment plant PER is not a part of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project. Comments related to that document are not pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#58

#25

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Friday, November 2, 2018 12:14 PM
To: Public Comment
Subject: Re: Republication Notice for Draft Environmental Assessment/Anticipated Finding of No Significant Impact for Pahala Community Large Capacity Cesspool Replacement Project

woc nov18-18

I hope you listed the "9a wastewater unit" trigger!

It would be intentionally left off, since we told you of the failure to state this "9a" trigger on the first notice.

Sandra Demoruelle

On Friday, November 2, 2018 10:22:47 AM HST, Public Comment <PahalaEA@wilsonokamoto.com> wrote:

Dear Ms. Sandra Demoruelle,

On behalf of the County of Hawai`i Department of Environmental Management, we are notifying parties who submitted comments on the subject Draft Environmental Assessment (EA) that the document will be republished in the November 8, 2018 issue of the Office of Environmental Quality Control's *Environmental Notice*. This essentially extends the public comment period to December 10, 2018.

Attached is a copy of the press release issued by the County of Hawai'i Department of Environmental Management announcing the republication accompanied by a cover letter.

We appreciate your interest in this EA Process.

WILSON OKAMOTO CORPORATION
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10349-01 ref (58)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – November 2, 2018 12:14 p.m.

Dear Ms. Demoruelle:

Thank you for your November 2, 2018 12:14 p.m. comment message regarding the County Hawaiʻi Department of Environmental Management's (DEM) Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Hawaii Revised Statutes (HRS) Section 343-5 Applicability and requirements (a) states "Except as otherwise provided, an environmental assessment shall be required for actions that: (1) Propose the use of state or county lands or the use of state or county funds…" as well as, "(9) Propose any: (A) Wastewater treatment unit…"

However, Hawaii Administrative Rules (HAR) Title 11, Chapter 200, which implements HRS Chapter 343, differentiates between "agency actions" - those proposed by an agency to utilize state or county lands or funds; and, "applicant" actions" – those for which an applicant requires approval from an agency.

The Pāhala Large Capacity Cesspool Replacement project is a proposal by an agency (DEM) to use County funding, thereby "triggering" the need for an EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#64

#51

Earl Matsukawa

woc 12-12-2018

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, December 10, 2018 2:36 PM
To: Public Comment
Cc: Kaena Horowitz; Dora Beck; William Kucharski; Kate Rao; TESSA BERMAN; David Albright; Craig Lekven
Subject: Comment on Engineer statement at the Pahala DEA meeting that 80,000 g/d flow is "municipal" quantities
Attachments: COH_Packaged_Plant_$4_Mill.jpeg; COH_Packaged_Plant_Extra_Costs.jpeg

At the October 10, 2018 Pahala DEA meeting, I specifically asked the Brown and Caldwell engineer, Craig Lekven if 80,000 gallons a day of waste flow was considered a "municipal" flow, and he replied that it was.

This is a false statement as EPA cites **small wastewater flows (non-municipal)** as under 1 million gallons a day.

The reason this is extremely critical is that all consideration of packaged treatment plants were dismissed because of Mr. Lekven's statement that the "municipal" flow (of under 80,000 g/d) for the Pahala wastewater treatment plant eliminated the choice.

Since a package plant that would be adequate to close the Pahala LCCs would cost around $4 million (in 2012 dollars) per the Naalehu Sewage Transmission, Wastewater Treatment and Disposal System Revised PER (June 2013), this option should be given real consideration as a cost effective alternative. It also would require far less land and would fit closer to the existing LCCs.

Since packaged plants are modular, capacity could be easily expanded for future flows by just adding new units.

The added cost for sludge removal and electricity would be far off-set by the saving of $10 million in borrowed SRF funds.

See attached information on the Naalehu WWTP Revised PER. Thank you for considering the packaged plant options in your upcoming EIS.

Sandra Demoruelle

--

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① Packaged Plant
manpower
② Sludge handling
③ electricity

5.1.5 Treatment Recommendation

A lagoon system on the DLNR property is the recommended treatment option. Although a lagoon system has the highest capital cost and the largest footprint, it produces good effluent quality and does not require as much electricity, sludge disposal, or manpower as a packaged treatment plant. County operators are familiar with this type of system. Constructing the treatment plant on the DLNR property will not require a variance and is not located in a residential area. As described in section 5.1.4.4, three partial mix lagoons shall be constructed. The lagoons shall be constructed of reinforced concrete and can be expanded for additional wastewater flows by increasing the size of the aerator in the first tank.

A packaged treatment plant was not selected because the complexity of the process requires more manpower, sludge handling, and electricity than a lagoon system.

5.2 FLOW METERING

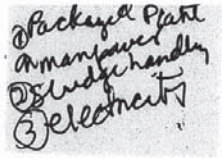
Metering of influent wastewater flow is necessary to monitor the quantity of wastewater entering the treatment plant. Monitoring influent flow can help to indicate if there are problems with the collection system. Flow metering can be accomplished using both open channels and closed conduits (pipe flow). Weirs and flumes are commonly used open channel flow metering devices. Propeller, magnetic, and ultrasonic flow meters are commonly used closed conduit flow metering devices.

5.2.1 Flumes

Flumes create a constriction in the flow channel that causes a hydraulic jump. Flow rate through the flume is determined by measuring the liquid depth upstream of the flume. Flumes are capable of accuracies of approximately 5% of the actual flow. Metering should be done downstream of the screening process so that any large debris is removed and will not affect the flow measurement. The water surface elevation or height within a flume can be verified by visual inspection. Flumes are self-cleaning with respect to solids and have moderate head loss. However, if the flume becomes submerged, flow readings will not be accurate. A relatively long and straight approach channel is required.

5.2.2 Weirs

Weirs create an obstruction in the flow path, where influent flow has to flow over a rectangular or v-notch weir. Flow is measured by measuring the height of the water passing over the weir. Weirs have an accuracy of measuring approximately 5% of the actual flow. Weirs are relatively easy to install at a low cost. The water surface elevation or height can be verified by visual inspection. If the weir becomes submerged, flow readings will not be accurate. Solids may build up on the upstream side of the weir plate. Weirs create a great deal of head loss.



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A packaged treatment plant was not selected because the complexity of the process requires more manpower, sludge handling, and electricity than a lagoon system.

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Metering of influent wastewater flow is necessary to monitor the quantity of wastewater entering the treatment plant. Monitoring influent flow can help to indicate if there are problems with the collection system. Flow metering can be accomplished using both open channels and closed conduits (pipe flow). Weirs and flumes are commonly used open channel flow metering devices. Propeller, magnetic, and ultrasonic flow meters are commonly used closed conduit flow metering devices.

5.2.1 Flumes

Flumes create a constriction in the flow channel that causes a hydraulic jump. Flow rate through the flume is determined by measuring the liquid depth upstream of the flume. Flumes are capable of accuracies of approximately 5% of the actual flow. Metering should be done downstream of the screening process so that any large debris is removed and will not affect the flow measurement. The water surface elevation or height within a flume can be verified by visual inspection. Flumes are self-cleaning with respect to solids and have moderate head loss. However, if the flume becomes submerged, flow readings will not be accurate. A relatively long and straight approach channel is required.

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10349-01 ref (64)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – December 10, 2018 2:36 p.m.

Dear Ms. Demoruelle:

Thank you for your December 10, 2018 2:36 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Hawaii Administrative Rules (HAR) 11-62-24 (b) requires County wastewater treatment works to be designed in accordance with County standards. If a county does not have design standards, then the design standards for the City and County of Honolulu shall be used. The County of Hawaii does not have design standards; therefore, the City and County of Honolulu standards are applicable to the Pāhala WWTP. The Draft EA Section 2.3.1 states that wastewater flow projections were developed for the treatment and disposal facility using the City and County of Honolulu wastewater standards, most recently updated during 2017. Based on these standards, the Pāhala treatment and disposal facility would be designed to provide an average dry weather flow capacity of 190,000 gallons per day (gpd), which would be sufficient capacity to allow closure of the two LCCs. The Draft EA Appendix B contains additional detail on the flow projections. The corresponding design peak day wet weather flow is 650,000 gpd. Future sewer main extensions and subdivisions will be accommodated, as capacity allows, on a first come, first served basis. Further, the wastewater treatment plant (WWTP) design will be expandable to not preclude treating future average dry weather flows up to 360,000 gpd (with a corresponding peak day wet weather flow of 1,260,000 gpd) to meet the future needs of the community in accordance with the requirements established in the Kaʻū Community Development Plan Policy 120. This information will be repeated in the Final EA.

It should be noted that wastewater flows from a community are highly variable, and peak flow rates from small community wastewater collection systems are typically three to five times higher than the average flow rates. The City and County of Honolulu standards take this variability into account, and application of the standards results in conservatively-designed facilities that are protective of human health and the environment in anticipated operational conditions.

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This information will be added to the Final EA.

Package plants are pre-manufactured treatment facilities that may be used to treat wastewater in small communities, or on individual properties. Typical flows for this technology range between 10,000 and 250,000 gallons per day (Metcalf and Eddy, 1991). Although they have the advantage of a small footprint and associated capital cost, these plants have limited storage and equalization capacity, require the addition of chemicals, and are operationally complex. They are energy intensive, and the solids produced must be properly handled and disposed. Package plants do not commonly achieve denitrification or phosphorus removal without supplemental unit processes. Often, package plants utilize proprietary equipment adding to operational costs and equipment availability issues when replacements are unavailable or the equipment becomes obsolete.

Because of the need for daily operations and maintenance, on-site chemical storage and chemical addition, mechanical complexity, lack of operational flexibility under changing conditions, energy consumption, and sludge handling concerns, package plants were removed from consideration for the Proposed Action.

The above information will be included in the Final EA, Section 2.8.2

Regardless of the treatment process, the proposed treatment facility will require a method to dispose of the treated effluent. As outlined in the Draft EA section 2.3.1, the Proposed Alternative will utilize a land application system. As stated in the Draft EA Section 2.8.3, several effluent management options were evaluated for feasibility as an alternative to land application. Options removed from consideration included ocean discharge, injection wells, water recycling, and drain (leach) field. Additional detail can be found in the Draft EA Appendix B, Section 3.1.6.

The Naalehu PER is not the subject of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#65

#52

Earl Matsukawa

From:	Naalehu Theatre <naalehutheatre@yahoo.com>
Sent:	Monday, December 10, 2018 3:01 PM woc 12-12-2018
To:	Public Comment
Cc:	Kaena Horowitz; Dora Beck; William Kucharski; Kate Rao; TESSA BERMAN; David Albright; Craig Lekven
Subject:	Comment on failure to publish NHPA Section 106 Consultation in OEQC TEN
Attachments:	COH_Naalehu_NHPA_106_Feb_2012.jpeg; COH_Naalehu_NHPA_106_Feb_2012_Page2.jpeg; EPA_GRANT_XP96942401_7_May_30_2018.pdf

The National Historic Preservation Act (NHPA), Section 106 Consultation in the OEQC *The Environmental Notice* for the Pahala WWTP Project was never published as required by statute.

Since the NHPA consultation should have also occurred on the Naalehu Project, as happened in 2012 (attached letter to COHDEM Wastewater Div.) when the NHPA 1Sec. 06 led to selecting a new site), neither one is valid at this time.

The Naalehu Project was subject to NEPA and NHPA/ESA statutes up to May 30, 2018, when the EPA and COHDEM with the assistance of their consultants - transferred the EPA Grant funding away from the Naalehu Project to evade the laws (see May 30, 2018 amendment 7 attached).

It is so illegal to proceed in violation of statutes and separate the NEPA/HEPA/NHPA/ESA for the twin Naalehu/Pahala wastewater treatment plants that far exceed the taxable value of the houselots being disconnected from the LCCs.

For example, the 165 houselots listed in the Naalehu Revised PER (June 2013) show a current value of about $80,000 per lot - cumulatively amounting to **under $25 million** - and the **COHDEM wants to spend $40.5 million (and climbing) to put on sewage.**

This mad spending must be curbed with sensible alternatives as there is no way that the COH taxpayer should be stuck with these expensive boondoggles that no one can even properly comment upon since no EIS has been started on the designs or sites.

The NHPA consultation on the Pahala Project was done hastily and without due regard for the publication of notice. If I had been allowed to be a consulting party, I could have advised the COH and EPA on proper procedures and helped send some requests to the local Hawaiian individuals and groups, as none were ever pre-consulted before the hasty Sec. 106 was allowed to happen.

However, no one from EPA, COHDEM or any of the contractors has ever asked for my opinion or my assistance in any regard. The sole chance I have had to participate is through this one-way comment on a single DEA. It is terribly frustrating to all of us in Ka'u who should have been heard - if COHDEM had followed the CDP statutes for Ka'u and sought our help upfront.

Sincerely, Sandra Demoruelle

On Monday, December 10, 2018 02:36:17 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

At the October 10, 2018 Pahala DEA meeting, I specifically asked the Brown and Caldwell engineer, Craig Lekven if 80,000 gallons a day of waste flow was considered a "municipal" flow, and he replied that it was.

This is a false statement as EPA cites **small wastewater flows (non-municipal)** as under 1 million gallons a day.

The reason this is extremely critical is that all consideration of packaged treatment plants were dismissed because of Mr. Lekven's statement that the "municipal" flow (of under 80,000 g/d) for the Pahala wastewater treatment plant eliminated the choice.

Since a package plant that would be adequate to close the Pahala LCCs would cost around $4 million (in 2012 dollars) per the Naalehu Sewage Transmission, Wastewater Treatment and Disposal System Revised PER (June 2013), this option should be given real consideration as a cost effective alternative. It also would require far less land and would fit closer to the existing LCCs.

Since packaged plants are modular, capacity could be easily expanded for future flows by just adding new units.

The added cost for sludge removal and electricity would be far off-set by the saving of $10 million in borrowed SRF funds.

See attached information on the Naalehu WWTP Revised PER. Thank you for considering the packaged plant options in your upcoming EIS.

Sandra Demoruelle

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NHPA Sec 106 Consult Naalehu

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY H. KAULUKUKUI
DEPUTY DIRECTOR - WATER

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

February 07, 2012

LOG NO: 2012.0292
DOC NO: 1202TD03
Archaeology

Lyle Hirota, Deputy Division Chief
Wastewater Division
Department of Environmental Management
108 Railroad Avenue
Hilo, Hawaii 96720

Dear Mr. Hirota:

SUBJECT: **Chapter 6E-8 and National Historic Preservation Act Section 106 Consultation – Ethnohistoric Research, Proposed Nā'ālehu Waste Water Treatment Plant Kaunamano Ahupua'a, Ka'ū District, Island of Hawai'i**
TMK: (3) 9-5-012: 002 and 005 (por.)

This is in response to a request for comments on a letter report prepared by Pacific Legacy (Reeve, January 2012) regarding the subject 51-acre project area, which is being considered as the location for a County of Hawai'i waste water facility. The facility will be partially funded by the Environmental Protection Agency (EPA), triggering Section 106 consultation. The report was prepared for Fukunaga and Associates and the County of Hawai'i, and is based on background research conducted in preparation for an archaeological inventory survey. We received a copy of this report on January 23, 2012.

The report indicates that the proposed project area is situated at a place known historically as Kahua Olohu, a traditional gaming field and Makahiki grounds. The place name appears on USGS quadrangle maps dating 1962 and 1981; and its location is specifically identified by Mary Kawena Pukui, whose grandmother lived directly upslope from the site (Handy et al. 1972). Reeves (2012:3) notes that although several Makahiki grounds existed in Hawai'i, the actual locations of very few are known today. These places are directly linked to an important religious event in the Hawaiian calendar and were also the sites of rituals and ceremonies associated with the Makahiki games. In addition, this particular site is described in sources as being a famous bowling (*'ulu maika*) and *pahe* field. An estimated extent for this site is presented in Reeves' report (Figure 6); existing topographic contours show a distinctive flat area in the otherwise sloping terrain. The site encompasses approximately 38 acres, 24 of which are within the State-owned parcel 002.

We concur with the assessment that this site is significant under National Register criteria (a), (c), (d); and State of Hawaii significance criterion (e). Further research could potentially indicate significance under National Register criterion (b) as well. The site has been listed in the State Inventory of Historic Places (Site 50-10-74-29231), and is eligible for inclusion in the State and National Registers. The most suitable mitigation measure for historic properties and traditional cultural properties significant under multiple criteria is to avoid the site and take measures to ensure preservation and protection of the site. We concur with the recommendation that the project area be relocated to ensure there are no direct or indirect impacts to Kahua Olohu. We are willing to work with DLNR Land Division and the adjacent landowner of parcel 005 to pursue State and National Register nomination of this significant cultural property. Thank you for considering an alternative location for this project.

Aloha,

Theresa K. Donham
Deputy State Historic Preservation Officer
State Historic Preservation Division

cc: Wynn Miyamoto (via email)
Gordon Heit (via email)
Rowland Reeve (via email)

character of each feature. The Feature A platform, which possessed the potential to contain a burial or to mark a lava tube entrance, was determined to be just a stone platform. The lack of any cultural material, other than a since fragment of marine shell, makes determining the original function of the platform difficult. At this time Feature A has no identified function.

The opposite is true for the excavations at Site 29387. The site was originally postulated to be an agricultural terrace. Test excavations, however, recovered a number of historic materials (rubber, metal, glass and a red brick) within the fill of the supposed terrace. The recovered material allowed for the determination that the site was not an agricultural terrace, but rather, a ranch era wall against which soil and debris has been pushed during the bulldozing of an adjacent area. It is for these reasons that the subsurface testing was successful.

The seventeen sites located outside the two project parcels and identified during the reconnaissance survey were not recorded at the inventory survey level. Thus they cannot be adequately evaluated for their cultural and historic significance. However, for the purposes of future work in the area, the complex of sites should be viewed as a whole, in conjunction with the *makahiki* field, and should be considered during the planning process due to their importance and significance to the prehistory of the area.

If, for any reason, the current project areas are determined to be unsuitable for the waste water treatment facility and it is necessary to shift the site location to an area outside the limits of the two parcels which were examined during the present inventory survey, additional archaeological work will need. Another inventory survey will be need to be undertaken within this newly established project area.

It is our understanding that some of the funding for the Nā'ālehu WWTP is being provided by the Environmental Protection Agency (EPA). This makes the project a federal undertaking subject to Section 106 of the National Historic Preservation Act of 1966 (NHPA). Section 106 requires federal agencies to take into account the effects of their undertakings on historic properties. It is understood that consultations related to the Section 106 process will be conducted for this project.

Sec 106 on Naalehu July 2012

U.S. ENVIRONMENTAL PROTECTION AGENCY

Assistance Amendment

GRANT NUMBER (FAIN):	96942401
MODIFICATION NUMBER:	7
PROGRAM CODE:	XP
DATE OF AWARD	05/30/2018
TYPE OF ACTION	No Cost Amendment
MAILING DATE	05/30/2018
PAYMENT METHOD:	Reimbursement
ACH#	

RECIPIENT TYPE:
State

RECIPIENT:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720
EIN: 99-6000567

Send Payment Request to:
Las Vegas Finance Center, Fax (702) 798-2423

PAYEE:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Dora Beck 25 Aupuni Street Hilo, HI 96720 **E-Mail:** dbeck@co.hawaii.hi.us **Phone:** 808-961-8513	Kate Rao 75 Hawthorne Street, WTR-3-2 San Francisco, CA 94105 **E-Mail:** rao.kate@epa.gov **Phone:** 415-972-3533	Martha Villarreal Grants Management Office, EMD-6-1 **E-Mail:** villarreal.martha@epa.gov **Phone:** 415-972-3666

PROJECT TITLE AND EXPLANATION OF CHANGES
Special Appropriation - Kau District Cesspool Replacement Project

The purpose of the award is for the design and construction of wastewater system improvements in Pahala (Kau District) in the County of Hawaii. The award description is being updated to reflect the shift of project location from Na'alehu to Pahala. Both of these sites are located in the Kau District. Federal funds and the recipient match will be allocated only to the 'Construction - Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan.

This action decreases the recipient contribution to $1,507,214 which is reflected in the revised budget and project workplan.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
06/01/2005 - 10/30/2020	06/01/2005 - 10/30/2020	$3,349,364.00	$3,349,364.00

NOTICE OF AWARD

Based on your Application dated 03/24/2006 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards $0. EPA agrees to cost-share 55.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of $1,842,150. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions, all terms and conditions of this agreement and any attachments.

ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	**ORGANIZATION / ADDRESS**
U.S. EPA, Region 9 - Grants Management Section, EMD 6-1 75 Hawthorne Street San Francisco, CA 94105	U.S. EPA, Region 9 Water Division, WTR-1 75 Hawthorne Street San Francisco, CA 94105

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official for Carolyn Truong - Grants Management Officer
Martha Villarreal - Award Official delegate

DATE 05/30/2018

EXHIBIT 7

EPA Funding Information

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	$ 1,842,150	$ 0	$ 1,842,150
EPA In-Kind Amount	$ 0	$	$ 0
Unexpended Prior Year Balance	$ 0	$	$ 0
Other Federal Funds	$ 0	$	$ 0
Recipient Contribution	$ 5,657,850	$ -4,150,636	$ 1,507,214
State Contribution	$ 0	$	$ 0
Local Contribution	$ 0	$	$ 0
Other Contribution	$ 0	$	$ 0
Allowable Project Cost	$ 7,500,000	$ -4,150,636	$ 3,349,364

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.606 - Surveys - Studies - Investigations and Special Purpose Grants	Consolidated Appropriations Act of 2006 Consolidated Appropriations Act of 2004 (PL 108-199) Consolidated Appropriations Act of 2005 (PL 108-447) Consolidated Appropriations Resolution 2003 (PL 108-7)	40 CFR PART 31

Fiscal

Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation

Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	$0
2. Fringe Benefits	$0
3. Travel	$0
4. Equipment	$0
5. Supplies	$0
6. Contractual	$3,349,364
7. Construction	$0
8. Other	$0
9. Total Direct Charges	$3,349,364
10. Indirect Costs: % Base	$0
11. Total (Share: Recipient 45.00 % Federal 55.00 %.)	$3,349,364
12. Total Approved Assistance Amount	$1,842,150
13. Program Income	$0
14. Total EPA Amount Awarded This Action	$0
15. Total EPA Amount Awarded To Date	$1,842,150

Detailed Table B Budget Page: 1

Table B - Program Element Classification (Non-construction)	Total Approved Allowable Budget Period Cost
1. A REQUIRED MATCH OF 45% OF THE TOTAL PROJECT COSTS IS REQUIRED.	$
2.	$
3.	$
4.	$
5.	$
6.	$
7.	$
8.	$
9.	$
10.	$
11. Total (Share: Recip % Fed %)	$
12. Total Approved Assistance Amount	$

Administrative Conditions

Previous Administrative Conditions Remain the Same

Programmatic Conditions

Previous Programmatic Conditions Remain the Same

END OF DOCUMENT

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (65)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – December 10, 2018 3:01 p.m.

Dear Ms. Demoruelle:

Thank you for your December 10, 2018 3:01 p.m. comment message regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our response follows:

The Draft EA Section 3.15 states, on March 29, 2018, consultation was initiated for the project under the National Historic Preservation Act. The Draft EA Section 10 provides a list of the consulted parties. The Final EA Section 3.15 will include that the list of Native Hawaiian Organizations (NHO) was generated by the EPA from the U.S. Department of the Interior, Office of Native Hawaiian Relations, Native Hawaiian Organization (NHO) Notification List for NHPA Section 106 and HRS Chapter 6E compliance. Letters were sent to 14 NHOs during the pre-assessment consultation. No responses were received from these organizations.

On March 13, 2019, the HRS Chapter 6E determination and Section 106 review packet were submitted to SHPD along with a draft Archeological Inventory Survey (AIS). The SHPD response is pending. The Draft EA Section 3.15.2 states that prior to finalization of this EA and initiation of the Proposed Action, the Environmental Protection Agency (EPA) and the County of Hawaiʻi will conclude consultation with SHPD in accordance with Section 106 of the NHPA and will incorporate additional impact avoidance and minimization measures as necessary to result in a finding of no adverse effects to historic properties.

The Final EA Section 7 will include that on September 26, 2018, a public notice was published in the *Hawaii Tribune Herald* and *West Hawaii Today* newspapers. The public notice was to advertise the October 10, 2018, public information meeting conducted by the County in the Pāhala at the Kaʻū Gym Multi-Purpose Conference Room to discuss the availability of the Draft EA and process for submitting comments. The notice stated the second part of the meeting would address Section 106 of the National Historic Preservation Act of 1966, as amended (2006) involving consultation with Native Hawaiian Organizations and the Native Hawaiian descendants with ancestral lineal or cultural ties to, cultural knowledge or concerns for, and

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

cultural religious attachment to the proposed project area. Eight persons placed their names on a sign in sheet at the October 10, 2018 public meeting to contribute during the second part of the meeting dedicated to the Section 106 consultation. No comments or information were forthcoming during the Section 106 portion of the meeting.

The Naalehu projects are not the subject of the Pahala Large Capacity Cesspool Replacement Project Draft EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#66

#53

Earl Matsukawa

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, December 10, 2018 3:29 PM
To: Public Comment
Cc: Kaena Horowitz; Dora Beck; William Kucharski; Kate Rao; TESSA BERMAN; David Albright; Craig Lekven
Subject: Pahala sewage flow rates not detailed

woc 12-12-2018

The engineers fail to justify the extremely high Pahala wastewater flow rates which should have been based on City and County of Honolulu Sewer Standards with an Average Wastewater Flowrate of 320 g/d per lot (4 persons per home X 80 gal. per person per day).

The LCC closure only required disconnecting from around a hundred households, so the flow rate for LCC closure purposes is around 32,000 g/d, which could easily be handled by one or two small packaged plants, affordably modular to accommodate growth, on a very small footprint of land with no noxious odors. **The Dec. 8, 2018 *TEN* shows a condo unit with a flow rate of 25,000 g/d handled by a renewable packaged plant. Why can't YOU consider 1 or 2 of these? The County and Ka'u taxpayers are not RICH! How can we afford your grandiose plans to spend $81 million on two $20 mill dollar towns?**

Plus, it is suspicious that the Naalehu Project should cite a "costs plus 25%" wherein over $8 million of the projected total of $40.5 mill. is allotted, loosely, to admin and legal costs. It suggests a "slush-fund" for kick-backs or other fraudulent purposes!

This whole boondoggle has resulted in spending untold dollars for no results - and the Hawaii County Council does not care enough about spending to call for a legislative audit.

Unfortunately, with the twin WWTP projects in Ka'u, the money has flowed more freely than the sewage will.

Sandra Demoruelle

--

This message has been scanned for viruses and dangerous content using **Worry-Free Mail Security**, and is believed to be clean. Click here to report this message as spam.

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (66)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Ka‘u, Hawai‘i
Response to Comment – December 10, 2018 3:29 p.m.

Dear Ms. Demoruelle:

Thank you for your December 10, 2018 3:29 p.m. comment message regarding the County of Hawai‘i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Hawaii Administrative Rules (HAR) 11-62-24 (b) requires County wastewater treatment works to be designed in accordance with County standards. If a county does not have design standards, then the design standards for the City and County of Honolulu shall be used. The County of Hawaii does not have design standards; therefore, the City and County of Honolulu standards are applicable to the Pāhala WWTP. The Draft EA Section 2.3.1 states that wastewater flow projections were developed for the treatment and disposal facility using the City and County of Honolulu wastewater standards, most recently updated in 2017. Based on these standards, the Pāhala treatment and disposal facility would be designed to provide an average dry weather flow capacity of 190,000 gallons per day (gpd) which would be sufficient capacity to allow closure of the two LCCs. The Draft EA Appendix B contains additional detail on the flow projections. The corresponding design peak day wet weather flow is 650,000 gpd. Future sewer main extensions and subdivisions will be accommodated, as capacity allows, on a first come, first served basis. Further, , the wastewater treatment plant (WWTP) design will be expandable to not preclude treating future average dry weather flows up to 360,000 gpd (with a corresponding peak day wet weather flow of 1,260,000 gpd) to meet the future needs of the, in accordance with the requirements established in the Ka‘ū Community Development Plan Policy 120.

Further, The Draft EA, Appendix B states the proposed treatment facility will accommodate modification within the proposed 14.9-acre site for the future expansion of the service area.

It should be noted that wastewater flows from a community are highly variable, and peak flow rates from small community wastewater collection systems are typically three to five times higher than the average flow rates. The City and County of Honolulu standards take this variability into account, and application of the standards results in conservatively-designed

facilities that are protective of human health and the environment in anticipated operational conditions. This information will be added to the Final EA.

Package plants are pre-manufactured treatment facilities that may be used to treat wastewater in small communities or on individual properties. Typical flows for this technology range between 10,000 and 250,000 gallons per day (Metcalf and Eddy, 1991). Although they have the advantage of a small footprint and associated capital cost, these plants have limited storage and equalization capacity, require the addition of chemicals, and are operationally complex. They are energy intensive, and the solids produced must be properly handled and disposed. Package plants do not commonly achieve denitrification or phosphorus removal without additional unit processes. Often, package plants utilize proprietary equipment adding to operational costs and equipment availability issues when replacements are unavailable or the equipment becomes obsolete.

Because of the need for daily operations and maintenance, on-site chemical storage and chemical addition, mechanical complexity, lack of operational flexibility under changing conditions, energy consumption and sludge handling concerns, packaged plants were removed from consideration for the Proposed Action.

The above information will be included in the Final EA, Section 2.8.2

Regardless of the treatment process, the proposed treatment facility will require a method to dispose of the treated effluent. As outlined in the Draft EA section 2.3.1, the Proposed Alternative will utilize a land application system. As stated in the Draft EA Section 2.8.3, several effluent management options were evaluated for feasibility as an alternative to land application. Options removed from consideration included ocean discharge, injection wells, water recycling, and drain (leach) field. Additional detail can be found in the Draft EA Appendix B, Section 3.1.6.

The Naalehu project is not the subject of the Pāhala Large Capacity Cesspool Replacement Project Draft EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

75

EPA

woc 12-12-2018

808-946-3253

COMMENT: PAHALA DEA

TO: Pahala Public Comment

FROM: SANDRA DEMORUELLE — The Naalehu PER reflects Brown & Caldwell and

Total Pages: 19

12/10/2018

Testimony to Environmental Management Commission
November 28, 2018 Meeting

The following is to provide the Commissioners with factual information: The project is on POAHA LAND (TMK-3) 7-5-007: 016 Pod 65018.

1) Updated location and costs of the Naalehu WWTP

   a. Site: 100 ft behind the Naalehu Hongwanji and 400 ft from the well

   (Apparently Brown and Caldwell and COHDEM are not aware of the difference between a 1000 foot radius and a 1000 foot diameter – as pictured in Figure 5-1)

   b. 30-year Cost (**for 163 households on LCCs): Between $50,317, 478 and $91,059,595**

2) *Demoruelle v. Beck* evidence of misconduct in following NEPA/HEPA

   a. Original joint Naalehu/Pahala EPA grant funding triggering NEPA/HEPA (see Section P1)

   b. EPA grant payment of $133,853 on 1/6/2011

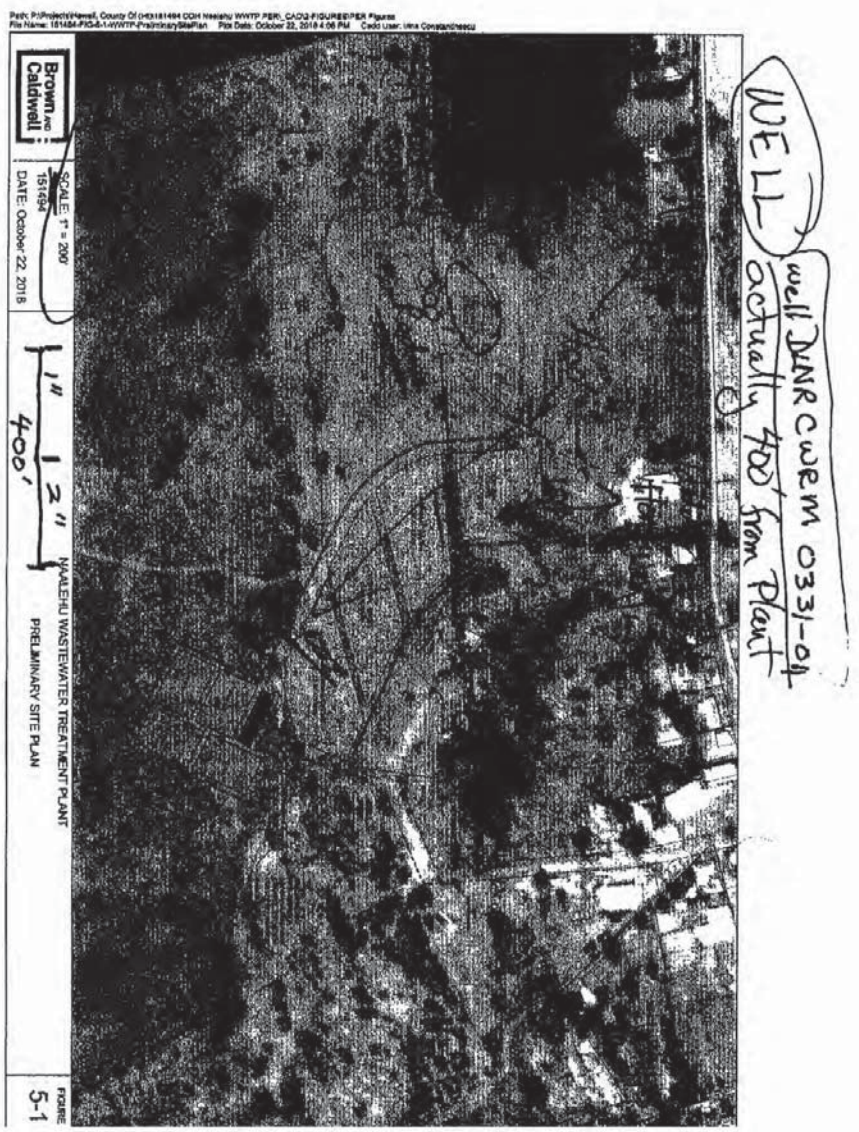
   c. Dora Beck signed Federal Financial Report for joint grant on 11/7/2011 leaving grant fund balance of $1,728,297 as of that date

   d. Naalehu LCC Conversion Schedule of Deliverables for EPA grant payment of $133,853

   e. "Pahala Grant Work Plan" dated April 21, 2017 that does not show the $133,853 payment made in 2011, showing a continuing original grant funds payable balance of $1,842,150 and stating that all six grant amendments were for the Naalehu project with the separation of projects to only Naalehu per Dora Beck's May 2009 Work Plan (see EPA Kate Rao email of 03/11/2009 9:46 AM)

   f. While the Pahala Project was not subject to NEPA procedures until Grant Amendment 7 on 05/30/20118, EPA and COHDEM had started NEPA procedures much earlier (see Feb. 28, 2018 email starting NHPA consultation for ONLY Pahala – thus avoiding Historic Preservation and Endangered Species Act on the Naalehu [PONC] property – which is described in Res. 650-18 as having special historic and endangered species concerns)

Thank you, Sandra Demoruelle



COUNTY OF HAWAI'I STATE OF HAWAI'I

RESOLUTION NO. 650 18

A RESOLUTION AUTHORIZING THE DIRECTOR OF FINANCE TO ENTER INTO NEGOTIATIONS FOR THE ACQUISITION OF LAND OR A CONSERVATION EASEMENT FOR ALL OR A PORTION OF THE PROPERTY IDENTIFIED AS TAX MAP KEY (3) 9-5-007:016 IN THE AHUPUA'A OF KAHILIPALI'IKI AND KAHILIPALINUI, DISTRICT OF KA'U, PURSUANT TO CHAPTER 2, ARTICLE 42, HAWAI'I COUNTY CODE 1983 (2016 EDITION, AS AMENDED).

WHEREAS, Ka'u Mahi, LLC owns the property identified as Tax Map Key: (3) 9-5-007:016, which comprises approximately 2,013.142 acres, in the Ahupua'a of Kahilipali'iki and Kahilipalinui, District of Ka'u, which is located makai (oceanside) of Na'alehu Town and includes the historic fishing village of Waikapuna, hereinafter referred to as the "Waikapuna Property" or the "Property"; and

WHEREAS, Chapter 2, Article 42, Hawai'i County Code provides for a Public Access, Open Space, and Natural Resources Preservation Fund; and

WHEREAS, Section 2-215, Hawai'i County Code, established the Public Access, Open Space, and Natural Resources Preservation Commission (hereinafter "Commission"); and

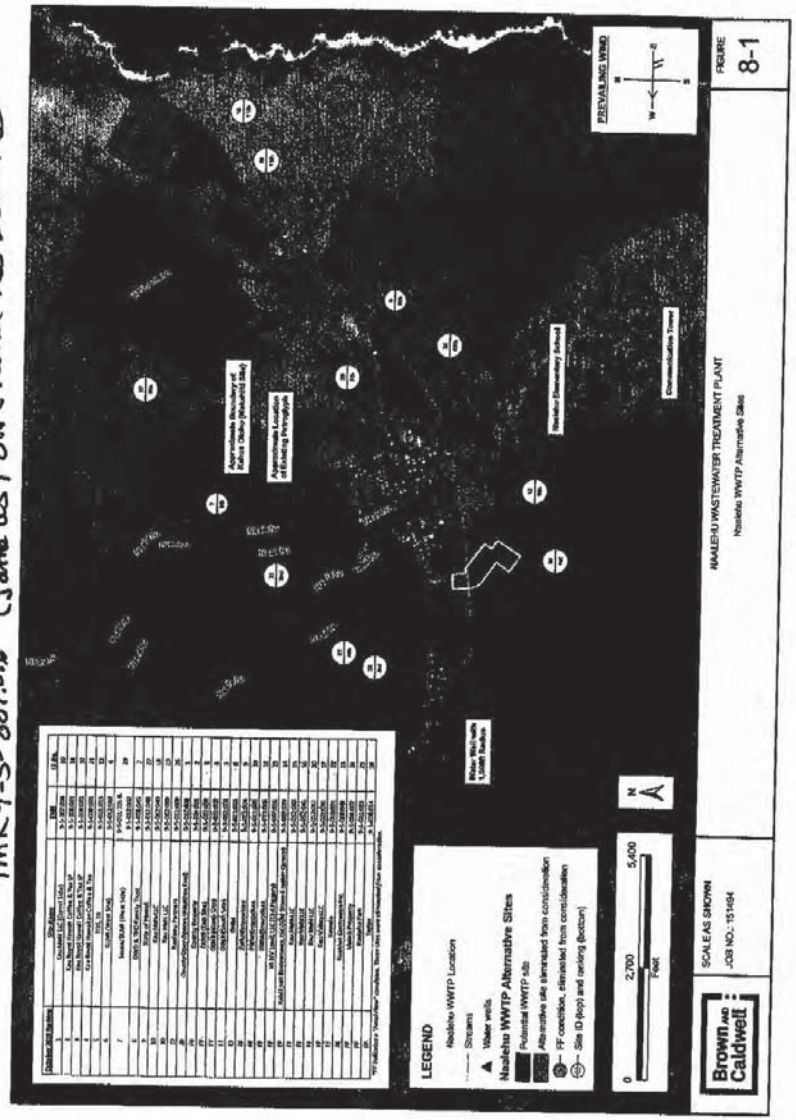
WHEREAS, Section 2-217, Hawai'i County Code, provides, in pertinent part, that the Commission's first duty and responsibility is, "[t]o develop and submit to the Mayor an initial island-wide prioritized list of qualifying lands worthy of preservation ..." and for the priorities to be "listed on an island-wide rather than district basis"; and

WHEREAS, the 2017 Annual Report of the Commission listed the Waikapuna Property and assigned it the highest priority for acquisition of any property listed in the 2017 Annual Report; and

WHEREAS, Communication No. 72.2 from the Mayor, dated January 18, 2018, recommended that the Council accept the prioritized list presented in the 2017 Annual Report of the Commission, pursuant to Section 2-218(a) of the Hawai'i County Code; and

WHEREAS, the Waikapuna Property has exceptional cultural, historical, environmental, and natural significance and value as it contains 2.3 miles of coastline that includes the ancient Alaloa footpath which once encircled the island, also known as the Alanui or Ala Kahakai National Historic Trail, and the Property is presently used by local fishermen, Native Hawaiian descendants, and gatherers of various natural and marine resources for subsistence, recreational, and cultural purposes; and

TMK 9-5-007:016 (same as PDC land Res 650-18)



County of Hawaii, DEM
Naalehu WWTP Options Assessment
Alternatives Net Present Value Analysis

			Sensitivity Adjustments (%)			Results		
Agency:	County of Hawaii, DEM							
Project/Problem:	Naalehu WWTP Options Assessment							
Alternative 1	Lagoons / wetlands/ disinfection / land application					$40,500,000	($50,317,478)	
Alternative 2	R-1 treatment / land application					$45,000,000	($71,891,318)	($21,573,840)
Alternative 3	R-1 treatment / seasonal recycling (25%)					$47,100,000	($72,719,813)	($22,402,335)
Alternative 4	R-1 treatment / annual storage res (100%)					$54,400,000	($80,146,964)	($29,829,486)
Alternative 5	Limit of treatment technology / 25% recycle					$55,000,000	($91,059,595)	($40,742,117)
Alternative 6								
Alternative 7								
Alternative 8								
Alternative 9								
Alternative 10								
Alternative 11								
Alternative 12								

Year of analysis:	2018
Escalation rate:	3.20%
Discount rate:	5.50%

Select one
(●) All entries in dollars
( ) All entries in thousands of dollars

Note: "Status quo" refers to Alternative 1

Make entries in yellow cells only

COSTS

County of Hawaii, DEM
Naalehu WWTP Options Assessment
Alternatives Net Present Value Analysis

			Sensitivity Adjustments (%)			Results		
Agency:	County of Hawaii, DEM							
Project/Problem:	Naalehu WWTP Options Assessment							
Alternative 1	Lagoons / wetlands/ disinfection / land application					$40,500,000	($50,317,478)	
Alternative 2	R-1 treatment / land application					$45,000,000	($71,891,318)	($21,573,840)
Alternative 3	R-1 treatment / seasonal recycling (25%)					$47,100,000	($72,719,813)	($22,402,335)
Alternative 4	R-1 treatment / annual storage res (100%)					$54,400,000	($80,146,964)	($29,829,486)
Alternative 5	Limit of treatment technology / 25% recycle					$55,000,000	($91,059,595)	($40,742,117)
Alternative 6								
Alternative 7								
Alternative 8								
Alternative 9								
Alternative 10								
Alternative 11								
Alternative 12								

Year of analysis:	2018
Escalation rate:	3.20%
Discount rate:	5.50%

Select one
(●) All entries in dollars
( ) All entries in thousands of dollars

Note: "Status quo" refers to Alternative 1

Make entries in yellow cells only

Lowest - $50,317,478
÷ 163 Households =
$308,696/Household

UP to

Highest - $91,059,595
÷ 163 =
$558,648/Household

PAHALA

5.5 Cost Estimates

An order of magnitude probable construction is summarized in Table 5-3. The estimate includes a 25 percent estimating contingency. The detailed cost estimate is included as Appendix A.

Table 5-3 Pahala WWTP Order of Magnitude Construction Cost Estimate

Description	Estimated Construction Cost
Electrical and instrumentation	$1,976,000
Headworks	$906,000
Odor Control	$412,000
Lagoons	$2,222,000
Constructed Wetland	$611,000
Land Application	$925,000
On-site improvements	$6,325,000
Off-site improvements	$1,223,000
Total Estimated Construction Cost	$14,600,000

5.6 Future Expansion

5.6.1 Full Buildout Flows

Full buildout wastewater flow projections were developed using the Draft Ka'u Community Development Plan (March 2015) and the CCH's current (2017) wastewater standards. Table 5-4 summarizes the projected full buildout flows for the community, and Figure 2-1 shows the WWTP full buildout service area.

Table 5-4. Pahala WWTP Full Buildout Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	360,000 gallons per day	1.0
Peak day wet weather flow	1,260,000 gallons per day	3.5
Peak hour wet weather flow	1,200 gallons per minute	4.8

5.6.2 Improvements

To accommodate the flow increase anticipated from the full buildout of the Pahala wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the 14.9-acre site.

Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solids recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater

NAALEHU

5.5 Cost Estimates

An order of magnitude probable capital cost is summarized in Table 5-3. The estimate includes a 20 percent estimating contingency. The detailed cost estimate is included in Appendix B.

Table 5-3. Naalehu WWTP Order of Magnitude Capital Cost Estimate

Description	Estimated Construction Cost
Wastewater treatment plant and utilities	$14,800,000
Land application system	$6,400,000
Drainage improvements	$11,400,000
Total construction cost	$32,400,000
Engineering, administration, and legal at 25% of construction cost	$8,100,000
Total capital cost	$40,500,000

5.6 Future Expansion

5.6.1 Full Buildout Flows

Full buildout wastewater flow projections were developed using the Draft Ka'u Community Development Plan (March 2015) and the CCH's current (2017) wastewater standards. Table 5-4 summarizes the projected full buildout flows for the community, and Figure 2-2 shows the WWTP full buildout service area.

Table 5-4. Naalehu WWTP Full Buildout Flow Projections

Description	Value	Peaking Factor
Average dry weather flow	390,000 gallons per day	1.0
Peak day wet weather flow	1,200,000 gallons per day	2.5*
Peak hour wet weather flow	1,250 gallons per minute	4.6

*Derived from Crites and Tchobanoglous, 1998

5.6.2 Improvements

To accommodate treatment of the increased flow anticipated from the full buildout of the Naalehu wastewater collection system, the WWTP will require facility upgrades. The recommended upgrades include headworks and odor control expansion within the existing WWTP site.

Additionally, the lagoon system will require modifications. Lagoon 1 will be converted to a complete mix aerated lagoon environment to accommodate wastewater treatment needs. In a complete mix aerated lagoon, sufficient mixing energy is provided to maintain the lagoon solids in suspension always. A completely mixed aerated lagoon system performs as an activated sludge process without solids recycle. The higher mixing energy, as compared to a partial mix lagoon, creates greater opportunity for contact between the naturally-occurring micro-organisms in the lagoon and dissolved organic matter. As a result, complete mix lagoons provide greater levels of treatment within a smaller volume than partial mix lagoons. However, facilities must be provided downstream of

U.S. ENVIRONMENTAL PROTECTION AGENCY

Grant Agreement

DATE OF AWARD
SEP 2 9 2005

EFFECTIVE DATE
SEP 2 9 2005

RECIPIENT TYPE:
County

RECIPIENT:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

PAYEE:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

PROJECT OFFICER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Dora Beck 25 Aupuni Street Hilo, HI 96720 E-Mail: dbeck@co.hawaii.hi.us Phone: 808-961-8288	Lisa Lasky 75 Hawthorne Street, WTR-1 San Francisco, CA 94105 E-Mail: lasky.lisa@epamail.epa.gov Phone: 415-972-3556	Marie Vianney Grants Management Office, PMD-7 E-Mail: Vianney.Marie@epamail.epa.gov Phone: 415-972-3686

PROJECT TITLE AND DESCRIPTION:

Senator Appropriation - Kau Basepoint Reclamation Project

This assistance agreement provides for partial funding for the construction of infrastructure for design and construction of wastewater system improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii. The project involves replacement of sewer lines (approximately 8,900 and 10,350 linear feet, respectively), installation of community septic tank systems and elimination of 3 large capacity cesspools.
Pre-award Costs have been approved back to June 1, 2005.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
09/01/2005 - 10/31/2007	09/01/2005 - 10/31/2007	$2,000,000.00	$2,000,000.00

NOTE: This [illegible] Office Seed Select, [illegible] of a written refusal or failure [illegible] by this Ability. Any [illegible] by the EPA Award Official, which the Award [illegible]

OFFER AND ACCEPTANCE

This United States, acting by and through the U.S. Environmental Protection [illegible], hereby offers Assistance/Amendment to the [illegible] for the budget period(s) set forth in this award not exceeding [illegible] all application modifications) [illegible] by reference.

AWARD APPROVAL OFFICER	AWARD APPROVAL OFFICER
ORGANIZATION / ADDRESS	ORGANIZATION / ADDRESS
U.S. EPA, Region 9 Grants Management Office, PMD-7 75 Hawthorne Street San Francisco, CA 94105	U.S. EPA, Region 9 Water Division, WTR-1 75 Hawthorne Street San Francisco, CA 94105

THE UNITED STATES OF AMERICA, ENVIRONMENTAL PROTECTION AGENCY

SIGNATURE OF AWARD OFFICIAL	TYPED NAME AND TITLE	DATE
[signature]	Director - Water Division	SEP 2 9 2005

This agreement is subject to Subpart B of 40 CFR, Environmental Protection Agency statutory provisions and assistance regulations. In accepting this award or amendment, and any part thereof, the undersigned represents that he is duly authorized to act on behalf of the recipient organization, and (2) this assistance agreement (or this award is subject to the applicable provisions of 40 CFR Chapter I, Subchapter B, and of the provisions of this agreement, and all attachments), and (b) that acceptance of [illegible] by the recipient that the amounts, if any, owed by them to have been overpaid will be refunded or [illegible] in full to EPA.

BY THE RECIPIENT - NOTIFICATION

SIGNATURE	TYPED NAME AND TITLE	DATE
	Harry Kim, Mayor	

EXHIBIT 5

13. The recipient shall fully comply with Subpart C of 40 CFR Part 32, entitled "Responsibilities of Participants Regarding Transactions." The recipient is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 40 CFR Part 32, entitled "Covered Transactions," includes a term or condition requiring compliance with Subpart C. The recipient is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transactions. The recipient acknowledges that failing to disclose the information required under 40 CFR 32.335 may result in the delay or negation of this assistance agreement, or pursuance of remedies. [illegible]

The recipient may access the Excluded Parties List System at http://epls.arnet.gov. This term and condition supersedes EPA Form 5700-49, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters."

14. In accordance with 40 C.F.R. §31.40, the recipient agrees to submit performance reports that include brief information on each of the following areas: 1) a comparison of actual accomplishments to the outputs/outcomes established in the assistance agreement workplan for the period; 2) the reasons for slippage if established outputs/outcomes were not met; and 3) additional pertinent information, including, when appropriate, analysis and formation of cost overruns or high unit costs.

In accordance with 40 C.F.R. § 31.40 (d), the recipient agrees to inform EPA as soon as problems, delays or adverse conditions become known which will materially impair the ability to meet the outputs/outcomes specified in the assistance agreement work plan.

Programmatic Conditions

P1. The recipient agrees not to bill or request reimbursement from EPA for any costs associated with the design or construction of the project funded by this grant, except for planning, environmental review and/or conceptual design until EPA has complied with the National Environmental Policy Act and other environmental cross-cutters (see 40 CFR 6.300 et seq) applicable to this project. If the grantee incurs such costs prior to the completion of any required environmental review, it does so at its own risk.

P2. The recipient agrees to provide to EPA Region 9 locational data (i.e., longitude and latitude) for the EPA-funded infrastructure project. The EPA Project Officer will provide further instructions at a later date on how to comply specifically with this requirement.

P3. At the conclusion of the project, the recipient shall submit an assessment of how effective the project was in achieving the stated environmental benefit.

– END OF DOCUMENT –

12/30/2010 08:00:37 PM RCVD LVFC -> Page 3 / 4

AW

U.S. EPA PAYMENT REQUEST

Recipient Name: County of Hawaii
25 Aupuni Street
Hilo, HI 96720
EIN: 99-6000567
(808) 961-8086
Fax #:

Contact Person: Robin Bauman
Phone #: (808) 961-8083
Email address: rbauman@co.hawaii.hi.us

EFT # 90394 Request # 6988 Cash on Hand: $.00

Assistance Agreement No.	Account No/Activity Code (Site specific)	(Superfund)	$ Amount	Match (%) ID/Code	For EPA Internal Use Only
XP-96942401-7			113,853		11A5053172 7

TABLE 1: NAALEHU LARGE CAPACITY CESSPOOL CONVERSION-SCHEDULE OF DELIVERABLES AND COST BREAKDOWN

Task	Sub-Task	Estimated Completion	Deliverable	Estimated Cost	Category of Funds
	Task 1.1- Provide Preliminary Engineering Report	2007 - Third Quarter	PER		
	Task 1.2- Provide Environmental Assessment	2007 - Fourth quarter	EA	$299,100	Actual Funding through Congressional Earmark, Ohana
	Task 2.1- Phase I ESA for TMK 9-5-024:016	2007 - Fourth Quarter	Phase I ESA Report	$4,478	Actual Paid by State Department of Health HEER Office
	Task 2.2 - ESA and Appraisal of TMK 9-5-024:007	2008 - Second Quarter	ESA Report and Appraisal Report	$27,600	County
	Task 2.3- Purchase of TMK 9-5-024:007	2008 - Third Quarter	Deed	$900,000	County
	Task 2.4- Purchase or Easement(s) for Sewer Collection System	2008 - Third quarter	Deed	$50,000	County
	Task 4.1- Revise PER and NEPA-like Document for Preferred and Alternate on TMK 9-5-024:007	2009 - First Quarter	PER and EA Revision	$40,000	County
	Task 4.2- Roadway Collection and Septic Tank System Design	2009 - First quarter	Design Documents	$339,696	County
	Task 5.1- Construction (conversion) by Others (Ohana)	2010 - Second Quarter	As - Built by Ohana Entity	By Others	By Others
	Task 5.2- Roadway and Septic Tank System	2010 - Fourth Quarter	Construction of Collection	$8,021,000	Contractor Earnmark Construction
	Task 5.3- Private lateral hook-up to new collection system	2011 - First Quarter	Connection of Private Laterals to new Collection System	NIA, included in design cost	By Others
	Task 5.4-Conversion of LCC to Stockpile Pit for ultimate disposal system.	2011 - First Quarter	LIC Conversion Report		County
				TOTAL =	$9,779,374

Task Breakdown
Waiting on EPA
Continue w/ Funding

In January 2017, it was proposed by the County in discussion with the EPA to shift the EPA Grant funds from Nā'ālehu to Pāhala as the probability of LCC closure in the latter community would be higher.

The Pāhala Community is located within the District of Ka'ū in the County of Hawai'i (Figure 1). The District of Ka'ū is situated at the southern tip of the Island and extends across the southern and southeastern flanks of Mauna Loa. With a land area of over 630,000 acres and an estimated population of over 5,000 persons, the District of Ka'ū is relatively isolated and unspoiled. The Pāhala Community is one of two major population centers in the District of Ka'ū with a population of 1,378 according to the year 2000 census. Since the closing of the Ka'ū Sugar Company in 1996, many of the residents within the community are former sugar workers and their descendants.

The initial site reconnaissance involved exploring possible properties southwest of Pāhala that are currently owned by the Department of Land and Natural Resources and Kamehameha Schools. While the properties would be suitable in size and distance from the town, it was decided that the topographic challenges would make extending the collection system to these areas very cost prohibitive.

Upon further exploration closer to town, it became evident that another property also owned by Kamehameha Schools and currently being leased by a local macadamia nut grower was a strong possibility for a wastewater treatment and disposal facility. The treated effluent would be treated to reuse quality and used to irrigate the macadamia nut trees. The archaeological field inspection conducted in November 2016 showed that while some relevant surface artifacts were found, the property was still considered a strong possibility for siting a wastewater treatment facility. The County has hired a designer who will help the County with acquiring the necessary acreage of property upon completion of further archaeological studies and interfacing with the landowner and concerning agencies.

Since the intent is to shift the federal funds from Nā'ālehu to Pāhala to be utilized in the LCC replacement effort, federal NEPA requirements apply. No construction related to the project can begin until NEPA is completed. A new EA will be done for Pāhala as the 2007 EA does not describe the type of wastewater treatment and disposal system envisioned for Pāhala .

II. Summary of Congressional Earmark Funds

Prg-Doc ID	Amend #	Award Amount	This Action	Budget Period	Date of Award
XP-96942401	0	$1,364,250	Initial Award	06/01/05-12/31/07	09/20/05
XP-96942401	-1-	$1,842,750	$477,900	06/01/05-04/28/10	06/01/06
XP-96942401	2	$1,842,150	$0	06/01/05-06/01/12	03/18/10
XP-96942401	3	$1,842,150	$0	06/01/05-06/30/14	07/14/11
XP-96942401	4	$1,842,150	$0	06/01/05-06/30/14	08/16/11
XP-96942401	5	$1,842,150	$0	06/01/05-06/30/16	01/28/14
XP-96942401	6	$1,842,150	$0	06/01/05-10/30/20	04/26/16

All for NAALEHU
REQUIRING NEPA PROCEDURES from 9/20/05 to 5/29/2018 for NAALEHU PROJECT

As shown in the above table, following the initial award there was one (1) added cost extension followed by five (5) no-cost extensions. Information pertaining to the reason for the added cost extension is not at hand.

1. Amendment Nos. 1 through 3 was intended to fund the Ka'ū Project (Nā'ālehu and Pāhala Large Capacity Cesspool Replacement projects). The plan was to fund the Project that would service both communities by installing a new collection system to be connected to a large capacity septic system. Delays that likely contributed to the no-cost extensions under Amendment Nos. 2 and 3 are as follows: From late 2005 to 2010, the County became more involved with the project and worked with the owner of the existing sewer system (C. Brewer) who had requested the assistance of the County of Hawai'i with closing their large capacity cesspools. In 2006, the County hired a consultant to begin the conceptual design for a wastewater treatment plant and disposal system and to hold public meetings. Due to the upcoming dissolution of their company, C. Brewer requested that the County enter into an agreement that they construct, own, operate and maintain a new wastewater system, or take over the existing C. Brewer system by April 30, 2010. In 2008, based on poor soil percolation test results for the disposal concept, the large capacity septic system was determined to not be a suitable option. Consequently, the County began exploring other land options that would accommodate a secondary treatment plant and disposal area that would provide better wastewater treatment and be expandable for potential growth of the community. Also during this time, the County had been working with C. Brewer to ensure that they fulfilled their end of the agreement to install sewer laterals within each of the private properties in Nā'ālehu and Pāhala and install the booster pump cans and associated plumbing and electrical conduits for those properties that require pumping.

Project Separation email to Dora Beck 3/11/2009

2. Amendment No. 4 took place when the County was given the approval to separate the Ka'ū Project into Nā'ālehu and Pāhala with each location having a new sewer collection system and wastewater treatment/disposal facility to replace the existing sewer system including large capacity cesspool closure. The intent was to direct EPA Grant funds to the Nā'ālehu Project because at that time, the probability of identifying available land in Nā'ālehu was higher compared to Pāhala. The no-cost extension was to give the County additional time to work on identifying a suitable site for a wastewater treatment plant in Nā'ālehu.

3. Amendment No. 5 took place when the County determined that the Nā'ālehu project would be delayed by approximately 24 months due to efforts of finding a site for the new wastewater treatment plant. The additional time required was spent investigating thirteen (13) properties consisting of private, County and State ownership and narrowing down the choice to a State-owned property. Consideration was required to avoid impacting residential areas, potable water wells, flood zones, lava tubes and cultural/archaeological sites. Apparent community concern for the wastewater treatment plant site location and additional consultations were also anticipated as part of the delay.

4. Amendment No. 6 took place when the County determined that the Nā'ālehu project would be delayed by approximately 48 months based on actual Nā'ālehu Community Member concerns and oppositional comments to the choice of site received during the Pre-Consultation Notice period for the draft Environmental Assessment for Nā'ālehu . The delay time took into account potential re-planning depending upon the outcome of upcoming community meetings.

5. Due to the anticipated delays on the Nā'ālehu project, the shifting of the EPA Grant from Nā'ālehu to Pāhala (where a land option has been identified) is under consideration.

Amendment 7 Date of Award 5/30/2018 + Date Pahala NEPA STARTED

III. Purpose

Per Federal regulations, all existing LCCs must be closed and the Pāhala Community must be serviced by an acceptable wastewater collection, treatment and disposal system. There are no existing County of Hawai'i (County) wastewater treatment plants in the Ka'ū District. The closest County wastewater treatment plant is located in the town of Hilo which is approximately 60 miles north of Nā'ālehu.

The residential community is served by a sewer system comprised of substandard gravity lines that convey sewage to two (2) large capacity cesspools (LCCs) which were previously owned and operated by C. Brewer and Company, Ltd. (C. Brewer) and are approximately 60 years old. Per an agreement between the County and C. Brewer, the County assumed ownership of the sewer system in 2010. The existing Pāhala Sewer System is as shown in Figure 2 herein.

IV. Objectives

The objective is to replace and close two (2) LCCs currently servicing the Pāhala Community.

The existing Pāhala Community sewer system servicing 109 properties will be replaced with a collection system meeting County standards; and a Secondary Wastewater Treatment and Disposal facility meeting State Department of Health standards. An additional 65 properties, including the Pāhala Elementary School, that are not currently being served by the C. Brewer system will be made accessible to the County Sewer system as required by Hawai'i County Code Chapter 21, Sewers, and Hawai'i Administrative Rules (HAR) Section 11-62-06, Wastewater Systems. The result is a total of 174 properties serviced by the new Pāhala Collection, Treatment, and Disposal system. The new Pāhala Collection System is as shown in Figure 3 herein and the new Wastewater Treatment and Disposal System is as shown in Figure 4 herein.

V. Methods

To meet the objective, the County will contract the services of an engineering design consultant to carry out the requirements of the State of Hawai'i Revised Statutes (HRS) 343; prepare the Environmental Information Document (EID) for EPA's review; prepare a NEPA EIS; plan and design a wastewater treatment and disposal system for the Pāhala

{In Archive} Note to File: Kau LCC Replacement Project
Kate Rao to: Kate Rao 03/11/2009 08:46 AM

Archive: This message is being viewed in an archive.

March 10, 2009: Spoke with Dora Beck about modifying scope of project to focus on Naalehu only. She agreed with this approach and plans to submit a revised workplan noting this change.

Workplan Dated May 2009

Kate Rao
Ground Water Office (WTR-9)
USEPA Region 9
75 Hawthorne St., San Francisco, CA 94105
tel: (415) 972-3533 / fax: (415) 947-3549

XP - 96942401 - 7 Page 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
Assistance Amendment

GRANT NUMBER (FAIN): 96942401	DATE OF AWARD 05/30/2018
MODIFICATION NUMBER: 7	
PROGRAM CODE: XP	
TYPE OF ACTION: No Cost Amendment	MAILING DATE 05/30/2018
PAYMENT METHOD: Reimbursement	ACH#

RECIPIENT TYPE: State

RECIPIENT:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720
EIN: 99-6000587

Send Payment Request to: Las Vegas Finance Center, Fax (702) 798-2423

PAYEE:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Dora Beck 25 Aupuni Street Hilo, HI 96720 E-Mail: dbeck@co.hawaii.hi.us Phone: 808-961-8513	Kate Rao 75 Hawthorne Street, WTR-3-2 San Francisco, CA 94105 E-Mail: rao.kate@epa.gov Phone: 415-972-3533	Martha Villarreal Grants Management Office, EMD-6-1 E-Mail: villarreal.martha@epa.gov Phone: 415-972-3666

PROJECT TITLE AND EXPLANATION OF CHANGES
Special Appropriation - Kau District Cesspool Replacement Project

The purpose of the award is for the design and construction of wastewater system improvements in Pahala (Kau District) in the County of Hawaii. The award description is being updated to reflect the shift of project location from Na'alehu to Pahala. Both of these sites are located in the Kau District. Federal funds and the recipient match will be allocated only to the 'Construction - Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan.

This action decreases the recipient contribution to $1,507,214 which is reflected in the revised budget and project workplan.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD COST	TOTAL PROJECT PERIOD COST
06/01/2005 - 10/30/2020	06/01/2005 - 10/30/2020	$3,349,364.00	$3,349,364.00

NOTICE OF AWARD

Based on your Application dated 03/24/2006 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards $0. EPA agrees to cost-share 55.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of $1,842,150. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA regulatory and statutory provisions all terms and conditions of this agreement and any attachments.

ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)	AWARD APPROVAL OFFICE
ORGANIZATION / ADDRESS	ORGANIZATION / ADDRESS
U.S. EPA, Region 9 Grants Management Section, EMD 6-1 75 Hawthorne Street San Francisco, CA 94105	U.S. EPA, Region 9 Water Division, WTR-1 75 Hawthorne Street San Francisco, CA 94105

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

Digital signature applied by EPA Award Official for Carolyn Truong - Grants Management Officer Martha Villarreal - Award Official delegate	DATE 05/30/2018

EXHIBIT 7

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (75)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – December 10, 2018 4:38 p.m.

Dear Ms. Demoruelle:

Thank you for your December 10, 2018 4:30 p.m. facsimile comment message regarding the County of Hawai'i Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow:

Pages 1 to 13
This is not a comment pertinent to the contents of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Page 14
The treatment and disposal facility for the Pāhala Large Capacity Cesspool Replacement project will not provide treated effluent to reuse quality which could be used to irrigate macadamia nut trees. This information will be repeated in the Final EA.

Pages 15 to 19
This is not a comment pertinent to the contents of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Project information, including US Environmental Protection Agency (USEPA) compliance dates, project updates, schedules and milestones can be found on the USEPA website at: https://www.epa.gov/uic/county-hawaii-administrative-order-consent-closure-cesspools-pahala-and-naalehu.

We appreciate your participation in the Draft EA process.

1907 S. Beretania Street, Suite 400 • Honolulu, Hawaii • 96826 • (808) 946-2277

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG

#23a

#23 1

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT

woc oct27-2018

SUBMITTED TO:

Earl Matsukawa, AICP

Project Manager

Wilson Okamoto Corporation

1907 South Beretania Street, Suite 400

Honolulu, HI 96826

Fax: 808/946-2253

SUBMITTED BY:

Sandra and Joseph Demoruelle

Box 588

Naalehu HI 96772

Comment:

See attached comments and supporting evidence that follow.

Signed in Naalehu, Hawaii on October 22, 2018

Sandra L. Demoruelle

Joseph L. Demoruelle

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT –

Demoruelle Page 1

Mr. and Mrs. Demoruelle, forty year residents of Ka'u, point out that it is the public's duty to raise issues.

They must distinguish themselves by their open-mindedness, their high sense of justice and duty, by candor, modesty and their entire devotion to the welfare and interests of their community and humanity. The truth they state will become clear and evident to all. They are speaking the truth and never entertained hatred toward anyone. Their sole purpose in speaking out about the Ka'u LCC Closure Project is to state the truth and explain the situation.

Our Ka'u community, as a body, strives to the spirit of exclusiveness and the County and EPA atmosphere is one of secrecy to carry out their domineering activities.

Lacking collaboration with members of the Ka'u community, the common-sense and good judgment of people who reside here, the County and EPA has led to poor siting decisions in both Pahala and Naalehu.

Lacking any reciprocity, there was no thorough exploration of issues to seek unity of vision. There has been no spirit of inquiry into what is best for all concerned.

Instead, the people of Ka'u who speak out are belittled, humiliated, insulted, ignored, and generally not accorded courtesy and respect.

We urge the use of consultation to overcome this feeling of powerlessness. But consultation is not an isolated event. It is a process that allows participants to grow more capable of fostering collaboration.

There are two types of consultation:

1) between equals leading to a joint decision like Ka'u CDP Policy 90 envisions (supported by both parties), and

2) decision being made by those with authority – so consultation takes form of discussion to draw out thoughts and information towards the enrichment of common understanding. In many cases, such interaction leads to consensus on a set of goals, both individual and collective.

"[T]he views of several individuals are assuredly preferable to one man, even as the power of a number of men is of course greater than the power of one man." (Cited in a letter written by Shoghi Effendi to the National Spiritual Assembly of Persia, February 15, 1922).

Therefore, the Demoruelles recommend the use of consultation with and within the Ka'u community to investigate reality and seek truth, convinced that this has the power to unite us.

PROBLEM WITH THE USE OF THE THREAT OF SITING BY THE SCHOOL

We are sick of seeing blameless children used as political pawns to allow Director Kucharski to place the Naalehu WWTP on his preferred site and use the school site as an "alternative." Every discerning person can see the need for justice for Ka'u!

We don't know if it affects everyone in the same way, but the Environmental Management Commissioners appeared visibly horrified to see a kindergarten classroom beside the open sewage lagoons.

> "All I could see was a horrible place for my great-grandson to drown…" is what Sandra Demoruelle thought when she saw the Brown and Caldwell presentation on April 11, 2018 at the Naalehu Community Clubhouse. "From the moment I saw the project last April, I have been running scared. It struck fear in my heart – and because they denied us any access to the EADs , it remains unclear how much this terrorism has cost us in wasted tax dollars and damage to our community. We ask – who will make reparations to the Ka'u LCC homeowners? And who will pay us for the personal injuries caused by the County's terroristic manipulations."

Demoruelle Page 4

Surely we are all in **agreement with COHDEM Director Kucharski that his Department "have failed miserably in doing their duty to the environment and local residents."** Let us be crystal clear, Mr. Kucharski is speaking of the taxpayer-funded COHDEM. (EMC, 4/25/18, Page 13).

The full quote is: "The cesspools were to have been closed by 2005, and they have failed miserably in doing their duty to the environment and local residents." So we cannot understand why County Council has not done a legislative audit?

This is another depressing example of the ease with which taxpayer dollars are wasted and unknown collateral damage done to the community – like the harm done to the LCC households that now deserve reparations. It has been unfair and inhumane for Mr. Kucharski to abuse us this way.

Please contrast this failed process that led to terrorizing our community with a wastewater treatment plant adjoining our elementary school to Lono Kona, which, as Ka'u CDP requires, used USDA RD to promote broad participation in the decision-making process.

Demoruelle Page 5

Differences between the way the County of Hawaii Department of Environmental Management (COHDEM) has handled the Ka'u and Lono Kona LCC closure project:

1) Participation – Lono Kona had broad participation by many stakeholders in multiple public meetings held before project planning was completed. But both held household votes and the vote expressed consensus.

2) Public records – Lono Kona has readily available public records documenting the participatory process and public meetings – records that do not have to be requested and paid for!

3) County CDP Statutes were followed – during Lono Kona, the CDP statutes were followed and a large RD grant funded Lono Kona, while the 2017 Ka'u CDP makes no mention of either WWTP, nor was Policy 90 for public participation followed.

4) Self-funded Lono Kona v. CWSRF Loan funded Ka'u WWTPs – Kona households voted to pay the balance of the LCC closure costs – with RD grant funding for most of the projected costs. Except for a small amount of remaining EPA SAAP grant funding, the COHDEM plans to totally pay for the two WWTP projects with CWSRF funding, without informing and seeking

participation from Hawaii taxpayers for these impending significant financial obligations.

5) Biggest difference is use of terrorism – COHDEM met with Lono Kona stakeholders early and made public records available for review. In Ka'u, the COHDEM and EPA failed to provide HRS 343 or NEPA notice in *TEN* for the two "talkstory" sessions intended "to inform the community the two WWTPs were going to happen" (Kucharski, EMC April 25, 2018, Page 13). No EA/EIS has been published for the Naalehu CWSRF funded project.

Instead of the Pahala and Naalehu meeting records being available online, as are Lono Kona's meeting records indicating who was present and the meeting agenda and outcomes, the COHDEM refuses to provide any meeting information or environmental review records (except the Pahala PER/DEA) to the local libraries or online. By denying access under UIPA, the Naalehu DEA has been withheld since at least April 2017 per the AOC Attachment B Page 3 statement.

Under 92F-12, Mrs. Demoruelle's request that COHDEM shall make available for public inspection and duplication during your regular business hours (3) government purchasing information (10) consultants (14) contracts has been denied. (*See* also, 92F-15 denial of record).

FAILURE TO DO AN EIS ON TWO FULL-SIZE WWTPS (11 MI. APART)

ALL HAWAII WWTPs HAVE A HEPA EIS:

1996 Waialua –Haleiwa WWTP

1998 Waimanalo WWTP

2009 Koloa-Poipu WWTP

2010 Waiale Water Treatment Facility

2011 Kaneohe-Kailua Treatment Facility

2017 Honouliuli WWTP Secondary Treatment

3/23/2017 Kealakehe WWTP R1

The EISPN Act 172-12 Direct to EIS would have been the appropriate choice instead of this Pahala DEA, since all new-build WWTPs have required an EIS. In fact, HRS 11-400-12 and 13 (significant criteria) require that agencies show prior consultation; community meeting record; notice of public hearing; record and affidavit of publication, which COHDEM/EPA have failed to do.

Nowadays, it is hard to find an environmental suit where no NEPA EIS document was ever produced. Now, all the suits do is challenge the adequacy of

the EIS document or the adequacy of public review. But this suit harkens back to the 1970s and early 1980s, when the idea that NEPA was procedural and the EIS was a requisite early guide to decision-making at all levels.

HARM TO THE KA'U COMMUNITY

The citizens of Ka'u, including Sandra and Joseph Demoruelle, have been significantly harmed by COHDEM and EPA failure to incorporate environmental review from the initial proposal of the WWTP projects in 2012 DEM's CIP 2012-13 Budget. There has been injury in fact that is timely being pursued and which will be remedied by a lawsuit.

The EPA and County are making an irrevocable commitment of resources to place two full-sized, new-build secondary wastewater treatment plants to service about 300 homes in remote, rural Ka'u. This is a commitment of resources our community holds sacred – as Nohea Kaawa testified, her family says that "sacred is anything that cannot be replaced." (*County Council* testimony on Res. 650-18).

There are redressable injuries from a final agency decision by EPA to extend compliance dates over which EPA R9 exercises "power, authority and control" over the planning and implementation over the Ka'u WWTP Projects. Federal

funding has been used from the beginning of the LCC closures under NEPA 42 USC 4321 *et seq*.

There has been an ongoing procedural violation under HRS 343 which require preparation of notice with publication to announce intent; commence public outreach with notice of holding public meetings and soliciting public comments; consultation of Federal, State, COH and Others - businesses, NGOs, organizations, and individuals; and finally issue a DEA.

In fact, the Project Schedule required meeting in Naalehu by 10/25//2018 and none have occurred in compliance with the EPA June extension approved by the EPA.

HRS 343-3 requires EADs be made available for public inspection, providing transparency and avoiding potential for deception. By denying any access to the Naalehu DEAs, there has been no opportunity for public review and comments.

The Pahala WWTP Project was separated from the Naalehu WWTP – and EPA SAAP grant funds were transferred on May 30, 2018, to Pahala from Naalehu to evade NEPA review. Since Kate Rao is overseeing the Federal EID/EA, why hasn't she done one for the Naalehu project.

Demoruelle Page 10

As demonstrated by the November Resolution 412-17, County is taking irrevocable siting action before the environmental review of the proposed WWTP action itself. At the time, the Pahala landlord manager had not been consulted on this action.

Without consideration of alternative actions, how can enlightened decision-makers make intelligent, optimally beneficial decision be made?

Sec.102(2)(C) [42 USC 4332(2)(c)] state that a detailed statement of impact on the environment, environmental costs and alternate measures. A detailed statement is supposed to "accompany the proposal through the existing agency [EPA an COHDEM] review processes." The procedural statutes require the environmental review start early to accompany the project step by step. Thus, for all of us in Ka'u, the personal injury is *de facto* caused by violation of NEPA procedural statutes.

HAR 11-200-14 requires that an EIS be prepared at earliest opportunity in planning and decision-making process. In HAR 11-200.1-1(b), it states that the EIS shall not be merely a self-serving recitation of benefits and a rationalization of the proposed action, as Mr. Kucharski stated 4/25/2018 EMC Minutes,- Ka'u was "informed" a WWTP was going to happen – siting was being determined.

Demoruelle Page 11

As the Ka'u LCC Closure Project started as a single action, it was a violation of HAR 11-200-8 to separate the projects into two WWTP Projects and fail to consider them as a "larger total undertaking" that is treated as a single action.

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COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT –

Demoruelle Page 12

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E. The community plans to file multiple lawsuits, which may impact the "rapport" between the project team and the Ka'u residents.

Demoruelle Page 13

F. The costs of the Kealakehe WWTP lagoon liner replacement ran so much over budget, the $14 million budget for the Pahala Project is grossly underestimated in the PER. And since the WWTP is the most important project in Kona, why aren't the Ka'u two WWTPs treated as important and provided with an EIS?

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H. According to Director Kucharski, the Naalehu School is still the preferred site for the Naalehu WWTP and it is only 11 miles away from the Pahala WWTP proposed site.

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Demoruelle Page 14

J. During the May 10, 2018, "team update call," the EPA and COH conspired with the Contractors to evade the State of Hawaii Land Use Commission (LUC) review of the Pahala Project which would be a "much longer process" by stating the site acreage under 15 acres. *See* Sec 205-6(d) (attached) requiring special LUC permits for land area greater than 15 acres. But the Pahala Project as sited in the DEA is on "lands designated as important agricultural lands," so regardless of size, the Project will be subject to the LUC permitting process.

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT

woc oct27-2018

SUBMITTED TO:

Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826
Fax: 808/946-2253

SUBMITTED BY:

Sandra and Joseph Demoruelle
Box 588
Naalehu HI 96772

Comment:

See attached comments and supporting evidence that follow.

Signed in Naalehu, Hawaii on October 22, 2018

Sandra L. Demoruelle

Joseph L. Demoruelle

COMMENTS ON THE DRAFT EA, PAHALA LCC REPLACEMENT PROJECT –

Demoruelle Page 1

Mr. and Mrs. Demoruelle, forty year residents of Ka'u, point out that it is the public's duty to raise issues.

They must distinguish themselves by their open-mindedness, their high sense of justice and duty, by candor, modesty and their entire devotion to the welfare and interests of their community and humanity. The truth they state will become clear and evident to all. They are speaking the truth and never entertained hatred toward anyone. Their sole purpose in speaking out about the Ka'u LCC Closure Project is to state the truth and explain the situation.

Our Ka'u community, as a body, strives to the spirit of exclusiveness and the County and EPA atmosphere is one of secrecy to carry out their domineering activities.

Lacking collaboration with members of the Ka'u community, the common-sense and good judgment of people who reside here, the County and EPA has led to poor siting decisions in both Pahala and Naalehu.

Lacking any reciprocity, there was no thorough exploration of issues to seek unity of vision. There has been no spirit of inquiry into what is best for all concerned.

Demoruelle Page 2

Instead, the people of Ka'u who speak out are belittled, humiliated, insulted, ignored, and generally not accorded courtesy and respect.

We urge the use of consultation to overcome this feeling of powerlessness. But consultation is not an isolated event. It is a process that allows participants to grow more capable of fostering collaboration.

There are two types of consultation:

1) between equals leading to a joint decision like Ka'u CDP Policy 90 envisions (supported by both parties), and

2) decision being made by those with authority – so consultation takes form of discussion to draw out thoughts and information towards the enrichment of common understanding. In many cases, such interaction leads to consensus on a set of goals, both individual and collective.

"[T]he views of several individuals are assuredly preferable to one man, even as the power of a number of men is of course greater than the power of one man." (Cited in a letter written by Shoghi Effendi to the National Spiritual Assembly of Persia, February 15, 1922).

Therefore, the Demoruelles recommend the use of consultation with and within the Ka'u community to investigate reality and seek truth, convinced that this has the power to unite us.

PROBLEM WITH THE USE OF THE THREAT OF SITING BY THE SCHOOL

We are sick of seeing blameless children used as political pawns to allow Director Kucharski to place the Naalehu WWTP on his preferred site and use the school site as an "alternative." Every discerning person can see the need for justice for Ka'u!

We don't know if it affects everyone in the same way, but the Environmental Management Commissioners appeared visibly horrified to see a kindergarten classroom beside the open sewage lagoons.

> "All I could see was a horrible place for my great-grandson to drown…" is what Sandra Demoruelle thought when she saw the Brown and Caldwell presentation on April 11, 2018 at the Naalehu Community Clubhouse. "From the moment I saw the project last April, I have been running scared. It struck fear in my heart – and because they denied us any access to the EADs , it remains unclear how much this terrorism has cost us in wasted tax dollars and damage to our community. We ask – who will make reparations to the Ka'u LCC homeowners? And who will pay us for the personal injuries caused by the County's terroristic manipulations."

Surely we are all in **agreement with COHDEM Director Kucharski that his Department "have failed miserably in doing their duty to the environment and local residents."** Let us be crystal clear, Mr. Kucharski is speaking of the taxpayer-funded COHDEM. (EMC, 4/25/18, Page 13).

The full quote is: "The cesspools were to have been closed by 2005, and they have failed miserably in doing their duty to the environment and local residents." So we cannot understand why County Council has not done a legislative audit?

This is another depressing example of the ease with which taxpayer dollars are wasted and unknown collateral damage done to the community – like the harm done to the LCC households that now deserve reparations. It has been unfair and inhumane for Mr. Kucharski to abuse us this way.

Please contrast this failed process that led to terrorizing our community with a wastewater treatment plant adjoining our elementary school to Lono Kona, which, as Ka'u CDP requires, used USDA RD to promote broad participation in the decision-making process.

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Differences between the way the County of Hawaii Department of Environmental Management (COHDEM) has handled the Ka'u and Lono Kona LCC closure project:

1) Participation – Lono Kona had broad participation by many stakeholders in multiple public meetings held before project planning was completed. But both held household votes and the vote expressed consensus.

2) Public records – Lono Kona has readily available public records documenting the participatory process and public meetings – records that do not have to be requested and paid for!

3) County CDP Statutes were followed – during Lono Kona, the CDP statutes were followed and a large RD grant funded Lono Kona, while the 2017 Ka'u CDP makes no mention of either WWTP, nor was Policy 90 for public participation followed.

4) Self-funded Lono Kona v. CWSRF Loan funded Ka'u WWTPs – Kona households voted to pay the balance of the LCC closure costs – with RD grant funding for most of the projected costs. Except for a small amount of remaining EPA SAAP grant funding, the COHDEM plans to totally pay for the two WWTP projects with CWSRF funding, without informing and seeking

Demoruelle Page 6

participation from Hawaii taxpayers for these impending significant financial obligations.

5) Biggest difference is use of terrorism – COHDEM met with Lono Kona stakeholders early and made public records available for review. In Ka'u, the COHDEM and EPA failed to provide HRS 343 or NEPA notice in *TEN* for the two "talkstory" sessions intended "to inform the community the two WWTPs were going to happen" (Kucharski, EMC April 25, 2018, Page 13). No EA/EIS has been published for the Naalehu CWSRF funded project.

Instead of the Pahala and Naalehu meeting records being available online, as are Lono Kona's meeting records indicating who was present and the meeting agenda and outcomes, the COHDEM refuses to provide any meeting information or environmental review records (except the Pahala PER/DEA) to the local libraries or online. By denying access under UIPA, the Naalehu DEA has been withheld since at least April 2017 per the AOC Attachment B Page 3 statement.

Under 92F-12, Mrs. Demoruelle's request that COHDEM shall make available for public inspection and duplication during your regular business hours (3) government purchasing information (10) consultants (14) contracts has been denied. (*See* also, 92F-15 denial of record).

FAILURE TO DO AN EIS ON TWO FULL-SIZE WWTPS (11 MI. APART)

ALL HAWAII WWTPs HAVE A HEPA EIS:

1996 Waialua –Haleiwa WWTP

1998 Waimanalo WWTP

2009 Koloa-Poipu WWTP

2010 Waiale Water Treatment Facility

2011 Kaneohe-Kailua Treatment Facility

2017 Honouliuli WWTP Secondary Treatment

3/23/2017 Kealakehe WWTP R1

The EISPN Act 172-12 Direct to EIS would have been the appropriate choice instead of this Pahala DEA, since all new-build WWTPs have required an EIS. In fact, HRS 11-400-12 and 13 (significant criteria) require that agencies show prior consultation; community meeting record; notice of public hearing; record and affidavit of publication, which COHDEM/EPA have failed to do.

Nowadays, it is hard to find an environmental suit where no NEPA EIS document was ever produced. Now, all the suits do is challenge the adequacy of

the EIS document or the adequacy of public review. But this suit harkens back to the 1970s and early 1980s, when the idea that NEPA was procedural and the EIS was a requisite early guide to decision-making at all levels.

HARM TO THE KA'U COMMUNITY

The citizens of Ka'u, including Sandra and Joseph Demoruelle, have been significantly harmed by COHDEM and EPA failure to incorporate environmental review from the initial proposal of the WWTP projects in 2012 DEM's CIP 2012-13 Budget. There has been injury in fact that is timely being pursued and which will be remedied by a lawsuit.

The EPA and County are making an irrevocable commitment of resources to place two full-sized, new-build secondary wastewater treatment plants to service about 300 homes in remote, rural Ka'u. This is a commitment of resources our community holds sacred – as Nohea Kaawa testified, her family says that "sacred is anything that cannot be replaced." (*County Council* testimony on Res. 650-18).

There are redressable injuries from a final agency decision by EPA to extend compliance dates over which EPA R9 exercises "power, authority and control" over the planning and implementation over the Ka'u WWTP Projects. Federal

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funding has been used from the beginning of the LCC closures under NEPA 42 USC 4321 *et seq*.

There has been an ongoing procedural violation under HRS 343 which require preparation of notice with publication to announce intent; commence public outreach with notice of holding public meetings and soliciting public comments; consultation of Federal, State, COH and Others - businesses, NGOs, organizations, and individuals; and finally issue a DEA.

In fact, the Project Schedule required meeting in Naalehu by 10/25//2018 and none have occurred in compliance with the EPA June extension approved by the EPA.

HRS 343-3 requires EADs be made available for public inspection, providing transparency and avoiding potential for deception. By denying any access to the Naalehu DEAs, there has been no opportunity for public review and comments.

The Pahala WWTP Project was separated from the Naalehu WWTP – and EPA SAAP grant funds were transferred on May 30, 2018, to Pahala from Naalehu to evade NEPA review. Since Kate Rao is overseeing the Federal EID/EA, why hasn't she done one for the Naalehu project.

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As demonstrated by the November Resolution 412-17, County is taking irrevocable siting action before the environmental review of the proposed WWTP action itself. At the time, the Pahala landlord manager had not been consulted on this action.

Without consideration of alternative actions, how can enlightened decision-makers make intelligent, optimally beneficial decision be made?

Sec.102(2)(C) [42 USC 4332(2)(c)] state that a detailed statement of impact on the environment, environmental costs and alternate measures. A detailed statement is supposed to "accompany the proposal through the existing agency [EPA an COHDEM] review processes." The procedural statutes require the environmental review start early to accompany the project step by step. Thus, for all of us in Ka'u, the personal injury is *de facto* caused by violation of NEPA procedural statutes.

HAR 11-200-14 requires that an EIS be prepared at earliest opportunity in planning and decision-making process. In HAR 11-200.1-1(b), it states that the EIS shall not be merely a self-serving recitation of benefits and a rationalization of the proposed action, as Mr. Kucharski stated 4/25/2018 EMC Minutes,- Ka'u was "informed" a WWTP was going to happen – siting was being determined.

Demoruelle Page 11

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Demoruelle Page 12

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Pahala DEA meeting Submitted by Sandra Demonte Oct 10 2018

HAWAI'I

Pāhala Large Capacity Cesspool Replacement--Draft EA (AFNSI)

HRS §343-5(a) Trigger	(1) Propose the use of state or county lands or the use of state or county funds (9A) Wastewater Treatment Unit. Failure to state true nature of Project!
District(s)	Ka'ū
TMK(s)	(3) No Section (9A) Trigger
Permit(s)	var
Proposing/ Determining Agency	Dep ent, County of Hawai'i Dor hawaiicounty.gov 345 20
Consultant	Wils St., Suite 400, Honolulu, HI 96826 Earl 77 / fax: (808) 946-2253, PahalaEA@wilsonokamoto.com Wastewater treatment Unit
Status	Statutory 30-day public review and comment period starts. Comments are due by October 23, 2018. Please send comments to the proposing/determining agency and copy the consultant.

The County of Hawai'i Department of Environmental Management proposes to construct wastewater system improvements replacing the large capacity cesspools (LCCs) currently serving Pāhala, in order to comply with U.S. Environmental Protection Agency (EPA) regulations. The project improvements would include a new wastewater collection system located primarily within public streets in the Pāhala community, and a treatment and disposal system on land to be acquired by the County (TMK: 9-6-002: 018). The project would be partially funded by an EPA grant and by the Clean Water State Revolving Fund loan program.

The collection system would consist of approximately 12,120 linear feet of 8 to 12-inch diameter underground gravity flow piping in Maile, 'Ilima, Huapala, Hīnano, Hala, Puahala and Pīkake Streets. The treatment and disposal facility would occupy about 14.9 acres and consist of a headworks and an odor control unit, an operations building, four lined aerated lagoons, a subsurface flow constructed wetland to remove nitrogen with an adjacent disinfection system to remove pathogens, and four slowrate land treatment basins for further treatment and disposal of the treated effluent. A perimeter security fence would enclose the entire facility. The existing LCCs and associated wastewater collection system would be abandoned.

Kohala Shoreline, LLC--(Withdrawal of Draft EA)

HRS §343-5(a) Trigger	(1) Propose the use of state or county lands or the use of state or county funds
District(s)	North Kohala
TMK(s)	(3) 5-9-001:008
Permit(s)	various (see document)
Proposing/ Determining Agency	Planning Department, County of Hawai'i Bethany Morrison, (808) 961-8138, Bethany.Morrison@hawaiicounty.gov 101 Aupuni St., Suite 3, Hilo, HI 96720
Applicant	Kohala Shoreline, LLC, c/o Carlsmith Ball LLP Jennifer Lim, (808) 523.2557, jlim@carlsmith.com 1001 Bishop St., Suite 2100, Honolulu, HI 96813
Consultant	Geometrician Associates Ron Terry, (808) 969-7090, rterry@hawaii.rr.com P.O. Box 396, Hilo, HI 96721
Status	The Draft EA and Anticipated Finding of No Significant Impact, originally published on July 8, 2015, are being withdrawn.

A

The Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the proposed Kohala Shoreline, LLC Project, notice of which was published on July 8, 2015, in The Environmental Notice, are being withdrawn. The project proposed in that Draft Environmenal Assessment was a subdivision makai of Akoni Pule Highway, on a 37.88-acre parcel located 3 miles north of Kawaihae. Kohala Shoreline LLC's original development concept, as described in the DEA-AFONSI, was a 9-lot residential subdivision, with several building sites makai of the Ala Loa. The project also proposed a downzoning from Single-Family Residential (RS-15) to Residential and Agricultural (RA-3a) to permit less dense development. Kohala Shoreline LLC is no longer pursuing that project and for that reason the DEA-AFONSI is being withdrawn. Kohala Shoreline LLC intends to pursue a less dense project that has been substantially reduced in scale and moved away from the shoreline. A Draft EA for the reduced and reconfigured project is in preparation.

The DEA has no cost analysis for borrowing, 95%+ of the cost of 200 mill, COST≠PRICE SUPER IMPORTANT IN KAU!!

6. "One Thing"

At the end of the sessions, each participant was asked to share the "one thing" that they wanted to share with DEM. The following sessions lists comments.

6.1 December 12, 6 PM

I hope the department come back and respond to issues brought up tonight.

The devil is in the details. Don't make the same mistakes. Like the laterals on our street. When you connect sewage pipes, do not use sharp angles. Otherwise like Maui, it blocks up. The mayor of Maui asked me to come help fix this.

10/19/18 Submitted by Sandra Demonte

Keep taxes down.

I need to know the price because I have two properties with cesspools.

Would love the County to look below the highway. + Below Hwy site!

I want DEM to look at all these meetings and take input to heart. They have listened so far. Coming out early. Have faith in the director and appreciate that he listens. The cost impact is a big deal and I want them to reinvestigate funding to help. If the County can foot the cost to connect to main line, that would be a huge help.

I would like to see County help subsidize residents.

Biggest thing is cost. Lot of people have trouble meeting expenses. Not a lot of jobs.

Do archaeological study sooner than later. Gym project got held up.

I hope the conversation keeps going.

FUTURE COSTS!

The cost is not just about the present. I am worried about what my kids will have to pay later on. That blue line coming through our yard – we didn't ask for that. We should be exempt if the County wants to raise property taxes to pay for this. The purple properties are projected to be hooked up later. Some people think not affect them.

Cost. And the director should be out here listening. They make you two come here and there is only the tape he's listening to. He gets paid a lot of money. He should look at us in the face.

6.2 December 13, 10 AM

The site not big enough for future growth.

Use land on either side of Maile Road.

Go to the other side of Belt Road; or old mill site.

B

I just wanted to come here and find out. I wasn't on the gang system. Now I understand sure enough, something's up. I'm on the system. How long before whole community part of system? Only handling half the community. Doesn't solve the problem.

Think long term.

Where is construction road on Maile Street?

6.3 December 13, 6 PM

Make it cheaper. Cut the cost.

The cost concerns me.

Be more transparent. Tell the truth. Be honest. Open lines of communication as soon as possible. We understand the County is under time constraints, but you cannot expect others to be.

I agree. We need to know. We are a small community. Nobody talks to us.

Cost. Keep it low.

Everything is going up and up and up. We don't know how much it will cost. I'm afraid of that.

When will next round of meetings take place?

What is problem with siting below the highway?

The County built the gym and in the gym, there were bones. What did they do with bones if they find on this site?

General comment at the end: Appreciate meetings

6.4 December 14, 10 AM

Why are we now paying monthly if the thing not so good?

Why do we have to pay if they're not using the lines in our yard?

Why don't they move to the other side (east) of Maile Road so it's not below the town?

If they allowed us to use cesspool to begin with and change to septic tanks and want us to absorb the cost because they want to change, why don't they help us out?

Like my daughter, she has a big bill she pays monthly. What's going to happen in 2021? We live in the back of the school. Below the elementary. Not in the blue. We have our own cesspool. We'll have to get our own line to connect to the street?

I strongly encourage them to look at the property below Maile Road. It appears on paper that it's not that much different. It's interesting with waterways and lava that you wouldn't even know when they are cracks because of percolation. Running under Belt Road, is there any chance if they did expand with those yellow things, could that be expanded to the other side of the road? What's ideal for the county is not always ideal for the town.

6.5 December 14, 6 PM

How much will this cost me?

I want the County to be responsible for this project. Let us know. Inform us and be honest and respectful to people.

This is about trust. Plus take into consideration we have a lot of elderly at these meetings. We need to get young people involved. Take it to school. Let kids give feedback.

I can help Cisco get people to meeting.

Project life expectancy? Pipes given slope and pressure. Mains. More detail.

I like this system. You can deal with waste environmentally. I'm excited.

I'm all about cost to individual homeowners.

As a homeowner, what kind of responsibilities is the County expecting of me?

How much will it cost?

Keep coming back to talking to people.

Thank you to both of you. A lot of time people come with arrogance and they will fix us. So thank you.

LIST OF PREPARERS

Eastern Research Group, Inc. (ERG):

Braden Rosenberg
Patrick Goodwin
J.J. Johnson
April Eilers
Kettie Rupnik

Wilson Okamoto Corporation:

Earl Matsukawa
John Sakaguchi

Brown & Caldwell:

Craig Lekven

Why aren't the "Public participation - outreach" subContractors listed as preparers?
EPTan - Bernadette Senelly
BTC Michelle Sorenson

Signed:
Sandra Demorueke
Submitted on Oct 10, 2018 at Pahala DEA meeting

XP - 96942401 - 7 Page 1

U.S. ENVIRONMENTAL PROTECTION AGENCY
Assistance Amendment

GRANT NUMBER (FAIN): 96942401		
MODIFICATION NUMBER: 7		DATE OF AWARD
PROGRAM CODE: XP		05/30/2018
TYPE OF ACTION: No Cost Amendment		MAILING DATE: 05/30/2018
PAYMENT METHOD: Reimbursement		ACH#

RECIPIENT TYPE: State

Send Payment Request to: Las Vegas Finance Center, Fax (702) 798-2423

RECIPIENT:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720
EIN: 99-6000567

PAYEE:
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

PROJECT MANAGER	EPA PROJECT OFFICER	EPA GRANT SPECIALIST
Dora Beck 25 Aupuni Street Hilo, HI 96720 **E-Mail:** dbeck@co.hawaii.hi.us **Phone:** 808-961-8513	Kate Rao 75 Hawthorne Street, WTR-3-2 San Francisco, CA 94105 **E-Mail:** rao.kate@epa.gov **Phone:** 415-972-3533	Martha Villarreal Grants Management Office, EMD-6-1 **E-Mail:** villarreal.martha@epa.gov **Phone:** 415-972-3666

PROJECT TITLE AND EXPLANATION OF CHANGES
Special Appropriation - Kau District Cesspool Replacement Project

The purpose of the award is for the design and construction of wastewater system improvements in Pahala (Kau District) in the County of Hawaii. The award description is being updated to reflect the shift of project location from Na'alehu to Pahala. Both of these sites are located in the Kau District. Federal funds and the recipient match will be allocated only to the 'Construction - Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan.

This action decreases the recipient contribution to $1,507,214 which is reflected in the revised budget and project workplan.

BUDGET PERIOD	PROJECT PERIOD	TOTAL BUDGET PERIOD	TOTAL PROJECT PERIOD COST
06/01/2005 - 10/30/2020	06/01/2005 - 10/30/2020		$3,349,364.00

Based on your Application dated 03/24/2006 including Protection Agency (EPA) hereby awards $0. EPA agre federal funding of $1,842,150. Recipient's signature is either: 1) drawing down funds within 21 days after the E and conditions within 21 days after the EPA award or ar the authorized representative of the recipient must furni amendment mailing date. In case of disagreement, and award/amendment, and any costs incurred by the recipi all terms and conditions of this agreement and any attac

ISSUING OFFICE (GRANTS MANAGEMENT

ORGANIZATION / ADDRESS
U.S. EPA, Region 9 -
Grants Management Section, EMD 6-1
75 Hawthorne Street
San Francisco, CA 94105

THE UNITED STATES OF

Digital signature applied by EPA Award Official for C

...through the US Environmental ...ed, up to and not exceeding total ...mmitment to carry out this award by ...isagreement with the award terms ...nd conditions specified in this award, ...ys after the EPA award or ...own on the funds provided by this ...regulatory and statutory provisions.

...AL OFFICE

...NCY

DATE: 05/30/2018

Why were the EPA funds "shifted" to Pahala and the Naalehu Project left without NEPA + crosscutting laws + procedures after filed suit 5/14/2018

EXHIBIT D

Submitted 10/10/2018 to Pahala DEA meeting by Sandra Demorueke

Fax
Total Pages 6

SANDRA L. DEMORUELLE
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

September 24, 2018

The Honorable Ryan Zinke
Secretary, Department of Interior
1849 C Street NW
Washington DC 20240
Fax: 703/358-1930

RE: NOTICE OF IMPENDING CITIZEN SUIT UNDER ESA 16 USC 1540(g)(1)(A) and (2)(A)(i)

Dear Secretary,

Attached is my Notice of impending citizen suit. Thank you for your attention to my grave concerns which are causing me concrete injuries.

Sincerely,

SANDRA DEMORUELLE

NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT, 16 U.S.C. 1540 (g)(1)(A) and (2)(A)(i)

PERSON GIVING NOTICE:

Sandra Demoruelle,

Physical address: 94-1513 Kaalualu Road, Naalehu HI 96772

Mailing address: PO Box 588, Naalehu HI 96772-0588

Telephone: 1-808-929-9244

Email: naalehutheatre@yahoo.com

NOTICE:

Location: Naalehu and Pahala, District of Kau, County of Hawaii, State of Hawaii, U.S.A.

Date of commencement of ongoing ESA Sec. 7 consultation violation:

Date: **September 20, 2005** per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-0 for project period 06/01/2005 – 12/31/2007.

COH Project Manager: Dora Beck

EPA Project Officer: Laura Bose (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 5, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

> *The recipient [County of Hawaii] agrees not to bill or request reimbursement from EPA for any costs associated with the design or construction of the project [Kau Cesspool Replacement Project for Naalehu and Pahala in Kau] funded by this grant ...* ***until EPA has complied with the National Environmental Policy Act and other environmental cross-cutters (see 40 CFR 6.300 et seq) applicable to this project. (Id. Section P1.)***

Current Date: 05/30/2018 per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-7 for project period 06/01/2005 – 10/30/2020.

COH Project Manager: Dora Beck

EPA Project Officer: Kate Rao (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 7, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

Dates of violation: Ongoing during period of Grant Condition P1. from date of award 09/20/2005 through current Grant Period commencing 05/30/2018

EPA DISCRETIONARY ACTION IN VIOLATION OF ESA:

1) EPA FAILED TO TAKE EARLY HARD LOOK AT THE KAU PROJECTS AS REQUIRED BY NEPA AND CONSEQUENTLY FAILED TO COMPLY WITH ESA

In the original EPA-COH Grant Agreement Section P1 dated Sept. 20, 2005 (XP-96942401-0), EPA was first required to comply with NEPA "and other environmental cross-cutters" – including the ESA. Seven Grant Agreement revisions have resulted in splitting the original Naalehu and Pahala Projects, both requiring the EPA NEPA/cross-cutters ESA environmental review procedures, into two separate EPA WWTP Work Plans, only one of which will require ESA Section 7 consultation process. In the response to EPA from FWS, the need for a Naalehu ESA process, like what was occurring for Pahala, was expressed.

NEPA requires Federal agencies, including the EPA, to prepare a "detailed statement" prior to approving any "major federal action significantly affecting the quality of the human environment. 42 CFR 4332(2)(c). "The requirement to prepare an environmental impact statement creates a democratic decisionmaking process that assures that agency decisionmakers and the public review and carefully consider detailed information about environmental impacts before any decision is made. Agencies must '[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.'" 40 CFR 1500.2(d) as cited in *Dine CARE v. BIA, Complaint,* Case3:16 cv-08077-SPL Doc. 1 Page 19.

2) EPA HAS SEPARATED THE KAU LCC CLOSURE GRANT XP-96942401[As Amended 0 through 7] INTO TWO SEPARATE PROJECTS AND REFUSED TO FOLLOW NEPA/ESA PROCEDURES THAT EPA FOLLOWED FOR THE PAHALA PROJECT DEA AS FOR THE NAALEHU WWTP WORK PLAN

No NEPA environmental review procedures have been followed since the original project – the LCC conversion to septic for all of the illegal Kau LCCs – provided Notice of the FEA/FONSI in August 23, 2007 issue of *TEN.* The original 2007 FEA/FONSI for both the Pahala and Naalehu LCC closures has never had a Supplemental Notice published to account for the obvious changes to the original Kau Cesspool Project.

Further since this Naalehu/Pahala 2007 FEA/FONSI never been Supplemented or Withdrawn as Noticed in *TEN*, it is inappropriate to publish the *TEN* Pahala DEA/AFNSI Notice on September 23, 2018 as part of the NEPA/HEPA requisite procedural review.

"To make an informed decision about how or whether to proceed with the proposed projects and to comply with NEPA, an agency must identify their potential combined environmental impacts and make that information available to the public." *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

Therefore, I contend herein that the COHDEM proposed Naalehu WWS EA and the proposed Pahala WWS EIS/EID are legally inadequate because, being two separate studies and documents prepared at different points in time, fail to consider the aggregated and cumulative effects of the connected actions of the proposed wastewater sewage treatment projects on the human environment in the isolated and sparsely populated District of Ka'u.

CEQ regulations implementing NEPA "require that an agency consider 'connected actions' and 'cumulative actions' within a single *EA* or *EIS*." *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1118 (9th Cir. 2000) (emphasis added) (citing 40 CFR 1508.25). Further, under 1508.25, two or more agency actions must be discussed in the same impact statement when they are "connected' or "cumulative" action. 40 CFR 1508.25(a)(1),(2) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

A cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions .... Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR 1508.7.

For "connected" and "cumulative" actions, the agency is told it "should" analyze them in a single impact statement, which the 9th Circuit interpreted as a mandatory requirement. *See Eagle Island Institute v. USFS*, 351 F.3d 1291 (9th Cir. 2003) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

3) EPA HAS PUBLISHED NOTICE OF AVAILABILITY OF THE PAHALA DEA PUBLIC COMMENT PERIOD WITHOUT CONSIDERING THE CUMULATIVE EFFECTS OF THE AOC TWIN WWTP WORK PLANS WHICH SPECIFY BUILDING TWO SECONDARY SEWAGE TREATMENT PLANTS JUST 11 MILES APART IN REMOTE, RURAL KAU BEFORE APRIL 17, 2022

Despite Kate Rao approving EPA SAAP funding for the original Ka'u LCC to LCSS conversion projects, she has permitted the Naalehu Work Plan to be implemented in violation of NEPA, and failed to enact ESA Section 7 consultation with FWS, as she did with Pahala, designating ERG to do this ESA in the June 7, 2018 letter. By allowing avoidance of consideration of cumulative impacts and avoiding NEPA and ESA statutes, ~~Defendant~~ Rao has allowed the separation of the two Ka'u new-build WWTPs with no aggregation of impacts on the numerous affected endangered plants and wildlife and apparently intentionally avoiding any NEPA cumulative impact analysis. ("[T]he district court properly determined that the Forest Service violated the ESA when it decided not to reinitiate consultation after the FWS revised its critical habitat designation..." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015)).

In *Cottonwood*, the Forest Service contended that "[t]he EA or EIS on each action ... will document the cumulative impacts of that action and all previous actions." The Court believed "that consideration of cumulative impacts after the road has already been approved is insufficient to fulfill the mandate of NEPA. A central purpose of the EIS is to force the consideration of environmental impacts in the decisionmaking process. *See, e.g., Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975); *Lathan v. Brinegar*, 506 F.2d 677,693 (9th Cir. 1974) (*en banc)*;

Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971). That purpose requires that the NEPA process be integrated with agency planning 'at the earliest possible time,' 40 C.F.R. 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step is already taken." *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985).

Because the EPA has taken specific steps to change the EPA-COH Grant Assistance Amendments for XP-96942401, as demonstrated by the May 30, 2018 amendment #7, which result in effectively evading the same NEPA/ESA procedures on the Naalehu WWTP Project by simply moving the EPA statutory obligations 11 miles away to the twin Pahala WWTP Project, I hereby give Notice of a pending citizen suit under the ESA.

Herein I object to the EPA failure to implement the ESA Sec. 7 consultation for Naalehu as Kate Rao did for Pahala and request that before there is any decisions on either Project, that the EPA-COH be required to provide the same ESA Section 7 consultation and issuance of a Biological Opinion covering the cumulative actions that will "jeopardize the continued existence" of multiple Hawaiian endangered creatures and plants for both the Pahala and the Naalehu WWTP Projects.

I declare under penalty of perjury that the forgoing is true and correct.

Dated: September 24, 2018 at Naalehu, Hawaii

s/Sandra Demoruelle

SANDRA DEMORUELLE

Proposed Pahala WWTP Project

Community Outreach Program

First Stage

11.10.2017

E

Long-Term Program Objectives

- **Understand Pahala** in terms of history, feelings about other projects, relationship with DEM, internal relationships, influences, needs, strengths, challenges, etc.
- **Share information**
  - Technical (where is the project located, what is the schedule, what technology is planned?)
  - Policy- related (how much will this cost me? how much will it cost my neighbor? Do I have to pay for my own connection?)
- **Establish constructive rapport**
  - between project team (DEM + consultants) and residents
  - among various community interests
  - between community and public agencies
  - among public agencies
- **Provide solution-based forums**, small and large, in which participants are encouraged to answer the question HOW CAN WE MAKE THIS WORK?

Is there any impact on the ~~project~~ when there will be endless lawsuits based on violation of the NEPA HEPA procedural statutes for the two kau WWTP projects?

Submitted 10/10/18 by Sandra Demoruelle

First Stage

Target outcomes

Assure residents we are there to **listen**
Help residents **understand** what is being proposed
Establish a **point of departure** to move towards **future** actions and solutions
Meet EPA deadline of December 15 to hold initial public meeting

Approach

An **inclusive** process that:

- Focuses on **those most affected**
- Respects **existing community influences** (leaders and organizations)
- Provides **the rest of Pahala** an opportunity to join in the conversation

3 Tiers of Community Contacts

1. Property owners, or DEM bill payer on record (~199)
2. Community organizations and businesses– preliminary list
   a. O Kau Kakou (community volunteer group)
   b. Churches
      i. Pahala Holy Rosary Church

HILO — Costs have climbed for repair work on the Kealakehe Wastewater Treatment Plant, with the County Council voting Wednesday to add another $5 million to the $18 million estimated cost of the project.

(http://www.westhawaiitoday.com/2018/10/09/h news/no-charges-for-officer-suspected-of-stealing-drug-evidence/)

2 Gecko butt-dials 'bazillion' times from Kona monk seal hospital (http://www.westhawaiitoday.com/2018/10/09/f butt-dials-bazillion-times-from-kona-monk-seal-hospital/)

3 'Berlin Wall' plan splits Leilani homeowners (http://www.westhawaiitoday.com/2018/10/09/h news/berlin-wall-plan-splits-

F

#2 Since the Kealakehe WWTP is running so much over budget, why won't the Pahala project?

18/10/09/h

8/10/09/h

HILO — Costs have climbed for repair work on the Kealal Wastewater Treatment Plant, with the County Council vo Wednesday to add another $5 million to the $18 million estimated cost of the project.

The extra money, borrowed from the state water pollution control revolving fund, is needed to replace badly eroded liners several of the lagoons, county Environmental Management Director Bobby Jean Leithead Todd said.

The aeration upgrade and sludge removal project, which begar 2014, is anticipated to be completed later this year. All five lagoons will be undergoing aeration equipment upgrade and/o sludge removal. The project also involves upgrading the blower the equipment that supplies the air to the aeration equipment that is the backbone to the entire treatment system, by replacir them with energy efficient units that will reduce electrical costs the plant.

The contractor is working on one lagoon at a time to keep the plant operational to continue processing wastewater received from the Kona sewer system.

"This is the most important project in my district, even though i... not very glamorous," said North Kona Councilwoman Karen Eoff. "But it is serious."

#3 Since WWTP is the "most important" proj in Kona why isn't the Kau two WWTP projects treated as "important?

Submitted by Sandra Demoruelle

Oct 10, 2018 Pahala DEA meeting

Demonelle v. Beck et al. Exhibit 22

6.2.12 Drains, Sumps, and Dry Wells

No drains, sumps, or dry wells were observed on the target property during BC's site reconnaissance.

6.2.13 Stained Soil or Pavement

No stained soil or pavement was observed during BC's site reconnaissance.

6.2.14 Stressed Vegetation

No stressed vegetation was observed on the target property during BC's site reconnaissa

6.2.15 Oil and Gas Wells and Mine Shafts

No evidence of oil wells and gas wells, mine shafts, or related activities was observed c property during BC's site reconnaissance.

G

6.2.16 Structures

Three structures were observed on the target property. Table 6-4 lists the structures c property. Figure 1 shows the locations and orientation of these structures.

Table 6-4 List of Structures

Structure	Location	Purpose
One-story wooden building	Western portion of the target property	Single family residence
One-story wooden building with garage	Western portion of the target property	Single family residence
Vinyl Siding Trailer	Central portion of the target property	Storage

In addition to the list of structures, there was abandoned farm equipment, abandoned cars, and abandoned fencing on the central and western portions of the target property. There was no evidence of spills or leaks associated with

6.3 Area Reconnais

Since location has been such a problem in Naalehu, How far is the Pahala/Kau School's Border from Pahala WWTP?

An area reconnaissance was s of present or past activities that have or could h reconnaissance was conducted by automobile, ar lindings of the area reconnaissance are presented arget property.

6.3.1 North

The target property is bordered ch is pasture land and residential properties.

6.3.2 East

The target property is bordere

6.3.3 South

The target property is bordered to the south by

6.3.4 West

The target property is bordered to the west by Naalehu School and residential properties.

GIS - DISTANCE FROM WWTP TO SCHOOLS

SCHOOL	WWTP	DISTANCE BY FEET / MILE
Kealakehe High School	Kealakehe WWTP	7,670.9 feet / 1.45 miles
Kealakehe Intermediate	Kealakehe WWTP	11,437.9 feet / 2.17 mi.
Kealakehe Elem. School	Kealakehe WWTP	11,508.4 feet / 2.18 mi.
Kahakai Elem. School	Kealakehe WWTP	21,180.2 feet / 4.01 mi
Holualoa Elem. School	Kealakehe WWTP	26,126.6 feet / 4.95 mi.
Kealakehe High School	Kaloko WWTP	12,182.0 feet 2.31 mi.
Kealakehe Intermediate	Kaloko WWTP	13,050.1 feet 2.47 mi
Kealakehe Elem. School	Kaloko WWTP	13,588.2 feet 2.57 mi
Honokaa Elem School	Honokaa WWTP	7,854.4 feet 1.49 mi
Honokaa Inter/High School	Honokaa WWTP	8042.9 feet 1.52 mi
Paauilo School	Honokaa WWTP	38,880.6 feet 7.36 mi
Waimea School	Honokaa WWTP	75,651.9 feet 14.33 mi
Laupahoehoe Charter School	Kapehu WWTP	8,637.1 feet 1.64 mi
Paauilo School	Kapehu WWTP	61,717.5 feet 11.69 mi
Kalanianaole School	Kulaimano WWTP	15164.1 feet 2.87 mi
Haaheo School	Kulaimano WWTP	31,364.9 feet 5.94 mi
Kalanianaole School	Papaikou WWTP	2,746.8 feet .52 or ½ mile
Haaheo School	Papaikou WWTP	14,386.3 feet 2.72 mi

FLOW RATE gld or mgld

5.3 mgd

.016 mgd 16,000 gld

500,000 gld

350,000 gld

closest

Kaumana School	Papaikou WWTP	39,060.3 feet
Desilva School	Papaikou WWTP	28,073.6 feet
Hilo High School	Papaikou WWTP	22,969.1 feet
Hilo Inter. School	Papaikou WWTP	23,356.1 feet
Hilo Union School	Papaikou WWTP	23,064.2 feet
Kapiolani Elem. School	Papaikou WWTP	25,419.6 feet
HCC	Papaikou WWTP	29,177.2 feet
UHH	Papaikou WWTP	29,775.6 feet
Waiakea High	Papaikou WWTP	30, 726.3 feet
Waiakea Inter	Papaikou WWTP	32,460.5 feet
Waiakea Elem	Papaikou WWTP	32,443.4 feet
Waiakeawaena Elem	Hilo WWTP	19934. 5 feet
Waiakea Elem	Hilo WWTP	19753.8 feet
Waiakea Inter	Hilo WWTP	20,761.0 feet
Waiakea High	Hilo WWTP	20,214.5 feet
UHH	Hilo WWTP	21,459.1 feet
HCC	Hilo WWTP	17,652.6 feet
Kaumana School	Hilo WWTP	41,221.9 feet
Kapiolani School	Hilo WWTP	20,263.7 feet
DeSilva School	Hilo WWTP	31, 807.4 feet
Hilo Union	Hilo WWTP	26,528.3 feet
Hilo Inter	Hilo WWTP	26,792.5 feet
Hilo High	Hilo WWTP	24,737.2 feet

5 miles = 26,400 feet

Haaheo School	Hilo WWTP	27,143.6 feet
Keaau Elem	Hilo WWTP	35,468.1 feet
Keaau Inter	Hilo WWTP	32,370.3 feet
Keaau High	Hilo WWTP	37,386.6 feet
Mt. view	Hilo WWTP	65,595.3 feet
Keonepoko	Hilo WWTP	79,170.2 feet
Pahoa Elem	Hilo WWTP	85,646.4 feet
Pahoa Inter/High	Hilo WWTP	86,678.3 feet

DRAFT

justification EIS, something that will justify their site selection, justify these plants. We're not getting a hard look up front. That's what we're complaining about. And what Jerry has been talking about is that the people in Nā'ālehu have since what—2010?—been paying for the sewer system because it was transferred over to the County from C. Brewer. So now they're faced with going to jail if they don't pay their fees and don't—well in his case, he didn't provide information the court wanted for his bank account so that they could seize his bank account—so that's why he was facing jail. But other people in the town—we're such a tiny little town. We have no money. I do not understand why anyone would want to put a $20 million facility there. That's what's really got me puzzled. And that's what we want to hear. We have had nobody come down to town to talk to us. According to the law—and that's why I filed the lawsuit, because I happen to have some expertise in environmental law—and we have had none of the, none of triggered an EIS.

Commissioner Fritz: *When did they plan to put this out to bid? far, Mr. Director?*

Director Kucharski: *No.*

Commissioner Fritz: *No. So it's just really kind of a rumor—*

Ms. Demoruelle: *There are contracts out on it, though, for development of it. You haven't done anything—you're still moving forward. As far as what I can understand from the EPA and from what your letters say, you're moving forward with two wastewater treatment plants and then the one conversion. That's what was in your—I can get it, I have your—*

Director Kucharski: *That's correct.*

[Naalehu Elementary School]

Commissioner Osborne: *So is the school off the table, then, is the school site off the table or it still being considered?*

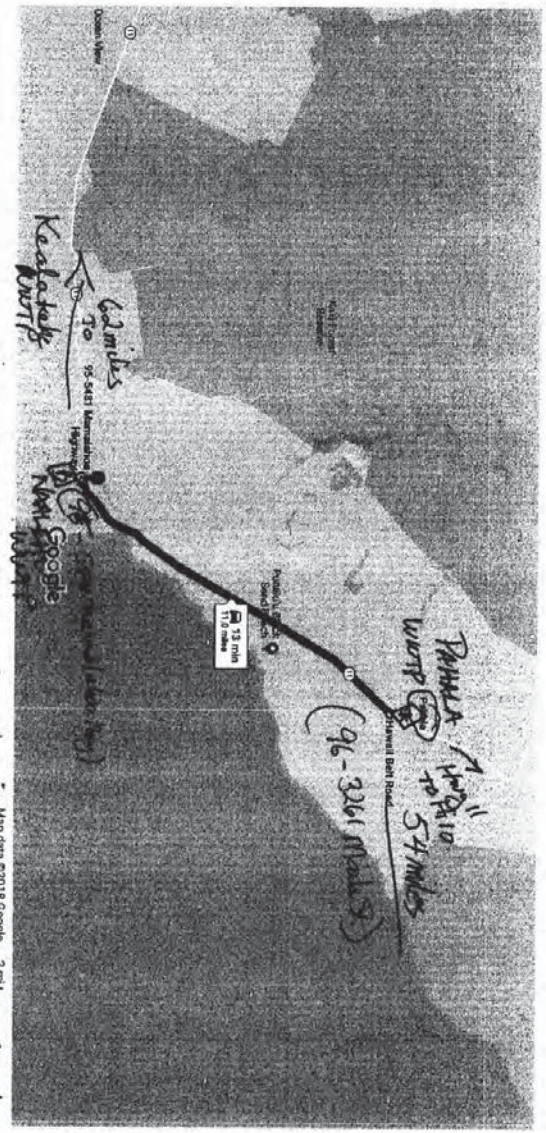
Director Kucharski: *When you do an EIS or an EA, you need to provide alternative sites for the process, whatever it is you're looking to do. So until the EA, the EIS, has started for this final location, completed, and a draft is put out, nothing is off the table. I'm not going to say this would not happen. Alternatives are being looked at still, and so until we have alternative sites that are sufficient to do an EA, we're not doing it. The first part of the EA is the opening of getting comments and soliciting comments from the community. That has taken place.*

Ms. Demoruelle: *No sir, it has not. You have to file notice.*

Commissioner Osborne: *So I'd just like to make a comment to that, that being with the consideration next to the school in Nā'ālehu. I did speak to Superintendent Chad*

NAALEHU SCHOOL STILL ON TABLE (

Google Maps Hawaii Belt Rd, Pahala, HI 96777 to 95-5481 Mamalahoa Hwy, Hilo, HI 96720 Drive 11.0 miles, 13 min



via HI-11

Fastest route, the usual traffic

A. Pahala DEA project site per Att. A

B. NAALEHU WWTP site per Att. B

11 miles apart

11.0 miles

An official website of the United States government.

We've made some changes to EPA.gov. If the information you are looking for is not here, you may be al
EPA Web Archive or the January 19, 2017 Web Snapshot.

I

EPA United States Environmental Protection Agency

Decentralized System Partners

EPA's Decentralized Wastewater Management Memorandum of Understanding (MOU) Partnership

EPA and 18 partner organizations are joined by an MOU to work collaboratively at the national level to improve decentralized performance and protect the nation's public health and water resources. EPA initiated this MOU partnership in 2005 through an MOU with eight public and private sector organizations. The MOU has expanded over the 12 years, comprised of 18 partners as of November 2017.

2017 Decentralized Wastewater Management MOU

The 2017 MOU renewed the commitment of EPA and its partner organizations to work together to encourage proper management of decentralized systems and increase collaboration among EPA, state and local governments, and decentralized system practitioners and providers.

2017 MOU Signing Event

At the MOU signing event, 18 public and private sector organizations expressed their intent to work together to improve management of decentralized wastewater.

Jim Bell (NOWRA President) signs the Decentralized MOU Agreement, November 14, 2017 (photo credit: Eric Vance, U.S. EPA)

2017 Decentralized MOU Renewal Press Releases

View press releases by partners to the 2017 Decentralized MOU renewal reaffirming their commitment to work collaboratively with EPA and other partners to improve decentralized performance and protect public health and water resources:

- International Association of Plumbing and Mechanical Officials (IAPMO) (PDF) (1 pg, 104 K, About PDF) EXIT
- Water Environment & Reuse Foundation (WE&RF) EXIT
- Association of State Drinking Water Administrators (ASDWA) EXIT

Papers by the Decentralized Wastewater Management MOU Partnership

View four position papers prepared by the MOU Partnership for state, local, and tribal government officials, and interested stakeholders. These materials include information on the uses and benefits of decentralized wastewater treatment and examples of where it has played an effective role in a community's wastewater treatment infrastructure.

- Introduction to Decentralized Wastewater Treatment: A Sensible Solution
- Decentralized Wastewater Treatment Can Be Cost Effective and Economical
- Decentralized Wastewater Treatment Can Be Green and Sustainable
- Decentralized Wastewater Treatment Can Protect the Environment, Public Health, and Water Quality

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Close

EPA United States Environmental Protection Agency

Funding for Septic Systems

- Federal Funding Sources
- State Funding Sources
- Funding Targeted for Tribal Communities

Federal Funding Sources

EPA Clean Water State Revolving Fund (CWSRF)

The CWSRF funds water quality protection projects for wastewater treatment, control of nonpoint sources of pollution, decentralized wastewater treatment, and watershed and estuary management through low interest loans to a variety of borrowers.

EPA Nonpoint Source Section 319 Grants

Under section 319 of the Clean Water Act, EPA provides grants to states to control nonpoint sources of pollution, such as agricultural runoff, mining activities, and malfunctioning onsite septic systems. Depending on the state's nonpoint source management program, grants may be used to construct, upgrade, or repair onsite systems. For more information, contact your state's nonpoint source coordinator.

EPA Environmental Finance Center Network

EPA grant funding started 10 university-based environmental finance centers, the Environmental Finance Center Network, which work together with the public and private sectors to fund environmental programs.

U.S. Department of Agriculture, Rural Development

Funding covers repair and maintenance of onsite systems.

U.S. Department of Housing and Urban Development (HUD)

HUD provides funds to states through community development block grants. The grants fund various projects, including rehabilitation of residential and nonresidential structures, construction of public facilities, and improvement of water and sewer facilities.

U.S. Economic Development Administration (EDA)

EDA administers various funding programs to promote collaborative regional innovation, public/private partnerships, national strategic priorities, global competitiveness, and environmentally sustainable development.

Catalog of Federal Funding Sources for Watershed Protection

A searchable database of financial assistance sources (grants, loans, cost-sharing) available to fund a variety of watershed protection projects.

State Funding Sources

Catskill Watershed Corporation Septic System Rehabilitation and Replacement Program EXIT

Reimburses residents of the New York City Watershed in Delaware, Greene, Schoharie, Sullivan, or Ulster Counties for eligible costs to repair or replace failed septic systems.

Kentucky PRIDE Homeowner Septic System Grant Program EXIT

Provides support to low-income homeowners to replace straight pipes, outhouses, or failing septic systems with sanitary wastewater treatment systems.

Massachusetts Community Septic Management Program EXIT

Provides loans through the Massachusetts Water Pollution Abatement Trust to homeowners to fix failing septic systems. Three programs assist on-site septic system owners with wastewater management problems: the Community Septic Management Program, the Homeowner Septic Loan Program, and a tax credit program.

Pennsylvania Infrastructure Investment Authority (PENNVEST): Community Septic Management Program EXIT

PENNVEST, the Pennsylvania Housing Finance Agency, and the Pennsylvania Department of Environmental Protection offers low-interest loans to homeowners to repair or replace their individual on-lot sewage disposal system.

Texas Commission on Environmental Quality (CEQ) Nonpoint Source Program EXIT

Texas CEQ's Nonpoint Source Program plans and implements activities that prevent or abate urban and other nonagricultural nonpoint source pollution in Texas waters.

Funding Targeted for Tribal Communities

EPA Clean Water Indian Set-Aside (CWISA) Grant Program

Provides funding for wastewater infrastructure to Indian tribes and Alaska Native Villages. EPA administers this program in cooperation with the Indian Health Service (HIS). Tribes must identify their wastewater needs to the IHS Sanitation Deficiency System to receive funding.

EPA Environmental Protection in Indian Country - Grants

Provides information for tribes about EPA and other federal grant resources and regulations and policies for applying for assistance.

U.S. Department of Housing and Urban Development - Resources for Native Americans

The Indian Housing Block Grant Program is a formula grant that funds various activities, include housing development, assistance to housing developed under the Indian Housing Program, housing services to eligible families and individuals, crime prevention and safety, and model approaches to solving affordable housing problems.

U.S. Department of Health and Human Services: Administration for Native Americans Environmental Regulatory Enhancement

Provides financial assistance to tribes and Native American nonprofit organizations for projects that address environmental regulatory enhancement, including formulating ordinances, implementing laws, and training community members to manage natural resources.

LAST UPDATED ON APRIL 14, 2017

An official website of the United States government.

We've made some changes to EPA.gov. If the information you are looking for is not here, you may be able to find it on the EPA Web Archive or the January 19, 2017 Web Snapshot.

Close

EPA United States Environmental Protection Agency

Funding Sources for Small and Rural Wastewater Systems

EPA and other organizations provide funding to improve water and wastewater systems in small and rural communities.

- Funding for All Communities
- Funding for Tribal Communities
- Funding for U.S.-Mexico Border Communities

Funding for All Communities

EPA Funding Sources

- Clean Water State Revolving Fund (CWSRF)
  Funds water quality protection projects for centralized and decentralized wastewater treatment, nonpoint source pollution control, and watershed and estuary management. The CWSRF uses federal, state, and other program funds to provide low-interest loans to communities for water quality projects. States may customize loan terms to meet the needs of small, disadvantaged communities, which typically have fewer financing options.
- Drinking Water State Revolving Fund (DWSRF)
  Funds infrastructure improvements in drinking water systems. The DWSRF emphasizes funding to small and economically disadvantaged communities and other programs that encourage preventing pollution to drinking water.
- Environmental Justice Grants and Cooperative Agreements
  Provide financial assistance to eligible organizations to develop collaborative partnerships, identify environmental and public health issues, and develop projects.
- Nonpoint Source Grants Program (Section 319 of the Clean Water Act)
  Provides grants for activities that prevent water pollution from nonpoint sources, including education, training, technical and financial assistance, technology transfer, demonstration projects, and monitoring nonpoint source implementation projects. Eligible projects include decentralized wastewater systems.
- Public Water System Supervision (PWSS) Grant Program
  Assists states, territories, and tribes to develop and implement PWSS programs to enforce the requirements of the Safe Drinking Water Act.

- Water Pollution Control Grants Program (Section 106 of the Clean Water Act)
  Provides federal assistance to states, territories, the District of Columbia, Indian tribes, and interstate agencies to establish and implement ongoing water pollution control programs.

Non-EPA Funding Sources

- Appalachian Regional Commission EXIT
  A federal-state partnership that promotes sustainable communities and economic development in Appalachia.
- U.S. Department of Agriculture, Rural Development, Water and Environmental Programs
  Provide loans, grants, and loan guarantees for drinking water, sanitary sewer, and storm drainage facilities in rural areas, cities, and towns with populations of 10,000 or less. Public bodies, non-profit organizations, and recognized Indian tribes may qualify for assistance.
- U.S. Department of Housing and Urban Development, Community Development Block Grants
  Provide funds for long-term community needs, including rehabilitation, construction, or purchase of public facilities and infrastructure for water treatment and centralized and decentralized wastewater systems.
- Additional Resources for Watershed Protection
  On-line compendium created by EPA consisting of EPA and non-EPA tools, databases, and information about funding to practitioners and funders that protect watersheds.
  - Resources for Nonprofit Organizations
  - Resources for State and Local Governments
  - Resources for Funders
  - Sustainable Finance Tools
  - Federal Funding Programs
  - Funding Databases
- Catalog of Federal Funding Sources for Watershed Protection
  A searchable database of financial assistance sources (grants, loans, and cost-sharing) to fund a variety of watershed protection projects. To select funding programs for wastewater projects, select "wastewater" under "keywords."
- Catalog of Federal Domestic Assistance
  Lists federal programs available to state and local governments (including the District of Columbia); federally-recognized Indian tribal governments; territories and possessions of the United States; domestic public, quasi- public, and private profit and nonprofit organizations and institutions; specialized groups; and individuals.

Funding for Tribal Communities

EPA Tribal Funding Sources

- Alaska Native Villages and Rural Communities Grant Program
  Assists Alaska Native Villages and Alaska's rural communities to construct new or improve existing drinking water and wastewater systems. Funds training and technical assistance to operate and maintain these systems. EPA provides grants to the Alaska Department of Environmental Conservation, which administers the funds through its Village Safe Water Program.
- Clean Water Indian Set-Aside (CWISA) Program
  Provides funds for wastewater infrastructure to Indian tribes and Alaska Native Villages. The CWISA Program is administered in cooperation with the Indian Health Service (IHS). To be considered for CWISA funding, tribes must identify their wastewater needs through the IHS Sanitation Deficiency System.

- Indian Environmental General Assistance Program
  Provides grants to federally recognized tribes and tribal consortia to develop and implement wastewater and other programs on tribal lands.
- Tribal Public Water System Supervision Support Grants
  Assist tribes implement water system supervision programs to ensure their water systems comply with Safe Drinking Water Act requirements and standards.
- Tribal Water Pollution Control Program Grants (Section 106 of the Clean Water Act)
  Assist Indian tribes implement effective water pollution control programs.

Non-EPA Tribal Funding Sources

- Alaska Native Tribal Health Consortium (ANTHC) EXIT
  Plans, designs, and constructs drinking water and wastewater treatment facilities for Alaska Native communities.
- U.S. Department of Agriculture, Rural Development, Native American Tribes
  Works with public and nonprofit organizations to provide funding options to communities in rural America including water and wastewater loans and grants.
- U.S. Department of Health and Human Services, Administration for Native Americans, Environmental Regulatory Enhancement Grants
  Provide tribes with resources to develop legal, technical and organizational capacities, and protect their natural environments.
- U.S. Department of Health and Human Services, Indian Health Service, Sanitation Facilities Construction Program
  Provides technical and financial assistance to Indian tribes and Alaska Native communities for the cooperative development and continuing operation of safe water, wastewater, and solid waste systems, and related support facilities.
- U.S. Department of Housing and Urban Development, Indian Community Development Block Grant Program
  Provides direct grants to develop viable Indian and Alaska Native communities, including decent housing, a suitable living environment, economic opportunities, and water and sewer facilities, primarily for low and moderate income persons.
- U.S. Department of Interior, Bureau of Indian Affairs
  Provides services through contracts, grants, and compacts to American Indians and Alaska Natives to enhance quality of life, promote economic opportunity, and protect and improve environmental assets.
- U.S. Department of Interior, Bureau of Reclamation, Native American Affairs Technical Assistance Program
  Provides technical assistance to Indian Tribes to develop, manage, and protect water and related resources. Activities include water needs assessments, improved water management studies, water quality data collection and assessments, and water measurement studies.

Funding for U.S.-Mexico Border Communities

- U.S.-Mexico Border Water Infrastructure Grant Program
  Provides grant assistance to communities along the U.S.-Mexico border for planning, designing, and constructing drinking water and wastewater infrastructure. The U.S.-Mexico border region is defined as 100 kilometers (62 miles) north and 100 kilometers south of the

U.S.-Mexico border. EPA's grant program supports the Project Development Assistance Program, administered by the Border Environment Cooperation Commission, and the Border Environmental Infrastructure Fund, administered by the North American Development Bank.

- U.S.-Mexico Border 2020 Program
  The latest environmental program implemented under the 1983 La Paz Agreement. The program emphasizes regional, bottom-up approaches for decision-making, priority setting, and project implementation to address environmental and public health problems in the border region. The program encourages participation from communities and local stakeholders.

To: 'Rao, Kate[Rao.kate@epa.gov]; Curtis, Jamelya[Curtis.Jamelya@epa.gov]; Josephs, Frances[josephs.frances@epa.gov]; Goralczyk, Michael[Goralczyk.Michael@epa.gov]; Beck, Dora[Dora.Beck@hawaiicounty.gov]; Hirota, Lyle[Lyle.Hirota@hawaiicounty.gov]; John Sakaguchi[jsakaguchi@wilsonokamoto.com]; Earl Matsukawa[ematsukawa@wilsonokamoto.com]; Craig Lekven[CLekven@BrwnCald.com]; Irina Constantinescu[IConstantinescu@BrwnCald.com]
Cc: Kim Wagoner[Kim.Wagoner@erg.com]; Braden Rosenberg[Braden.Rosenberg@erg.com]
From: Patrick Goodwin
Sent: Mon 5/14/2018 10:09:53 PM
Subject: U.S. EPA Grant Environmental Review, County of Hawaii [XPS96942401] - Notes from 5/10/18 Call

Hi everyone,

Please see below for a summary of our team update call on the Pahala project from last Thursday. Please let me know by COB Wednesday if you have any comments.

Thanks!
-Patrick

Participants:

- Kate Rao (EPA R9)
- Dora Beck and Lyle Hirota (County of Hawaii)
- Patrick Goodwin and Kim Wagoner (ERG)
- John Sakaguchi and Earl Matsukawa (Wilson Okamoto)
- Craig Lekven and Irina Constantinescu (Brown & Caldwell)

Status of preconsultations:

- Responses received from 18 of 47 recipients (response deadline was April 14) – no responses from any of the contacted native Hawaiian organizations
- Many responses are typical/expected and in some cases are form letters
- The group discussed several of the specific preconsultation responses but did not discuss any comments of significant concern

Status of Section 7 FWS consultation:

- B&C had no concerns with the requested/recommended mitigation measures from FWS
- EPA R9 will prepare a designation letter for ERG – however, ERG will wait until biological survey is complete before initiating Section 7 consultation with FWS and finalizing mitigation measures

Status of field surveys:

- Biological surveys are scheduled for June but are awaiting updates to the site plan (see below)

EID Batch 1:

- Preliminary Engineering Report (PER) is being expanded and updated – will include discussion of alternatives considered
- B&C is revisiting the site plan to expand the treatment plant capacity while keeping the site acreage under 15 acres so that the special land use permit can be issued by County of Hawaii instead of through the land use commission (much longer process) – hopes to have that revised concept plan by Friday 5/11
- B&C will send a working version of the updated PER to ERG during the week of 5/14 for use in preparing the EA Description of Proposed Action and Alternatives (DOPAA)

Ongoing Kilauea eruption:

- No concerns regarding potential impacts to project or schedule

Schedule:

- ERG will update the schedule to reflect a) potential delay in DOPAA schedule based on the extended PER schedule, and b)

§205-6 Special permit. (a) Subject to this section, the county planning commission may permit certain unusual and reasonable uses within agricultural and rural districts other than those for which the district is classified. Any person who desires to use the person's land within an agricultural or rural district other than for an agricultural or rural use, as the case may be, may petition the planning commission of the county within which the person's land is located for permission to use the person's land in the manner desired. Each county may establish the appropriate fee for processing the special permit petition. Copies of the special permit petition shall be forwarded to the land use commission, the office of planning, and the department of agriculture for their review and comment.

(b) The planning commission, upon consultation with the central coordinating agency, except in counties where the planning commission is advisory only in which case the central coordinating agency, shall establish by rule or regulation, the time within which the hearing and action on petition for special permit shall occur. The county planning commission shall notify the land use commission and such persons and agencies that may have an interest in the subject matter of the time and place of the hearing.

(c) The county planning commission may, under such protective restrictions as may be deemed necessary, permit the desired use, but only when the use would promote the effectiveness and objectives of this chapter; provided that a use proposed for designated important agricultural lands shall not conflict with any part of this chapter. A decision in favor of the applicant shall require a majority vote of the total membership of the county planning commission.

(d) Special permits for land the area of which is greater than fifteen acres or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant.

(e) A copy of the decision, together with the complete record of the proceeding before the county planning commission on all special permit requests involving a land area greater than fifteen acres or for lands designated as important agricultural lands, shall be transmitted to the land use commission within sixty days after the decision is rendered.

Within forty-five days after receipt of the complete record from the county planning commission, the land use commission shall act to approve, approve with modification, or deny the petition. A denial either by the county planning commission or by the land use commission, or a modification by the land use commission, as the case may be, of the desired use shall be appealable to the circuit court of the circuit in which the land is situated and shall be made pursuant to the Hawaii rules of civil procedure.

(http://luc.hawaii.gov)

State of Hawaii
Land Use Commission (http://luc.hawaii.gov)

Home (http://luc.hawaii.gov/) » Contact Us

CONTACT US

State of Hawai`i Land Use Commission
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, Hawai`i 96804-2359
Telephone: (808) 587-3822
Fax: (808) 587-3827
Email: dbedt.luc.web@hawaii.gov

Office Location:
State Office Tower
Leiopapa A Kamehameha
235 South Beretania Street, Room 406
Honolulu, Hawai`i 96804-2359

NOTICE THAT PAHALA DEA MEETINGS ARE IN VIOLATION OF NEPA

woc oct27-2018

Notice is provided that the Pahala Draft Environmental Assessment (DEA) meetings, October 8 through 10, 2018, held by the County of Hawaii Department of Environmental Management (COHDEM) through its Contractors are held in violation of Federal NEPA Statutes, The proposed Naalehu Wastewater System (WWS) EA and the proposed Pahala Wastewater System DEA are legally inadequate because, being two separate studies and documents prepared at different points in time, fail to consider the aggregated and cumulative effects of the connected actions of the proposed wastewater sewage treatment projects on the human environment in the isolated and sparsely populated District of Ka'u.

CEQ regulations implementing NEPA "require that an agency consider 'connected actions' and 'cumulative actions' within a single *EA* or *EIS*." *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1118 (9th Cir. 2000) (emphasis added) (citing 40 CFR 1508.25). Under 1508.25, two or more agency actions must be discussed in the same impact statement when they are "connected' or "cumulative" action. 40 CFR 1508.25(a)(1),(2) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004). A cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions …. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR 1508.7.

For "connected" and "cumulative" actions, the agency is told it "should" analyze them in a single impact statement, which the 9th Circuit interpreted as a mandatory requirement. *See Eagle Island Institute v. USFS*, 351 F.3d 1291 (9th Cir. 2003) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

Dated October 8, 2018, at Naalehu, Hawaii

s/ Sandra Demoruelle
SANDRA DEMORUELLE

RECEIVED
OCT 25 2018

SANDRA L. DEMORUELLE
94-1513 Kaalualu Road
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

September 21, 2018

Kate Rao
EPA Project Officer
75 Hawthorne Street, WTR-3-2
San Francisco, CA 94105

Dora Beck
Project Manager
Wastewater Division Chief
County of Hawaii Department of Environmental Management
25 Aupuni Street
Hilo, Hawaii 96720

Re: Request for Consulting Party Status
Kau District Cesspool Replacement Project
Assistance ID Number (now FAIN): XP 96942401-7

Dear Ms. Rao

I am a homeowner and 38 year resident of Naalehu in the historic district of Ka'u. I raised two children here who graduated from Naalehu Elementary School (NES) and, currently, my 7 year old great-grandson attends first grade there. I serve as the Parent Representative on the NES School Community Council.

The Naalehu Elementary School is listed on the National Register of Historic Places so I have an active interest in the Naalehu Work Plan receiving NHPA Section 106 consultation, as is being done for the Pahala Work Plan.

Therefore, under 36 CFR 800.2(c)(5), I request Consulting Party Status for the Kau District Cesspool Replacement Project, EPA Assistance ID Number (now FAIN) XP 96942401-7.

The EPA and County are making an irrevocable commitment of resources to place two full-sized, new-build secondary wastewater treatment plants to service about 300 homes in remote, rural Ka'u. This is a commitment of resources our community holds sacred – as Nohea Kaawa testified, her family says that "sacred is anything that cannot be replaced." (*County Council* testimony on Res. 650-18).

To demonstrate my interest in this EPA undertaking, I would point to my attentive participation through testimony to relevant County authorities:

County of Hawaii Council

May 9, 2018 REGARDING BILL142: LONO KONA SEWAGE PROJECT BONDS (3 Pages).

May 22, 2018 [Special Budget Hearing] REGARDING BULL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.

June 6, 2018 [Special Budget Hearing] REGARDING BULL 111: NAALEHU AND PAHALA WASTEWATER SYSTEMS COHDEM CIP 2018-19 BUDGET PRIORITIES #2 AND #3 TOTALLING $41,051,000.

County of Hawaii Council Finance Committee

August 7, 2018 [REGARDING FAILURE TO PLACE KA'U COMMUNITY REQUEST FOR AUDIT OF LCC CLOSURE PROJECTS FROM NOVEMBER 5, 2004 TO PRESENT].

August 21, 2018 REGARDING RES. 654-18: GRANT FOR FORMER NAALEHU SEWAGE TREATMENT SITE.

County of Hawaii Environmental Management Commission

April 25, 2018 "Lots of Pork, Little Sewage at the Two Ka'u Sewage Plants" (2 Pages).

May 23, 2018 Provided Commissioners with copies of 1) the Naalehu WWTP CWSRF Funding Form showing 33 points making it Priority #1; 2) the DEM CIP Budget changes 2005 to 2019; 3) AOC, Naalehu Work Plan Attachment B, and EPA Reponse to community comments; 4) Demoruelle v. EPA et al., CV 18-00172 JMS-RSC Complaint; 5) *Ka'u Calendar* dated May 2018 article; 6) County records demonstrating Souza family ownership of Naalehu property since 1968.

June 27, 2018 Complaining of the lack of environmental review and the Naalehu EA is still Step #8 – to be done AFTER the COHDEM has decided on the treatment plant site, and the COHDEM has not been transparent and has withheld requests for the two Ka'u DEAs, PERs and ESA Phase I.

July 27, 2018 RE: ITEM (1) DIRECTOR'S INFORMATIONAL UPDATE – *Status of the proposed Naalehu WWTP (*(Provided Commissioners with copies of the COHDEM Extension Compliance Request letter dated June 14, 2018 to EPA; article about Ka'u Royal Hawaiian Coffee and Tea LP and its land manager, John Cross.

July 27, 2018 RE: ITEM 5.A. Policy on commenting on environmental review.

Therefore, I am formally requesting "consulting party" status under NEPA, HEPA, and all cross-cutting statutes including ESA and NHPA, and to be consulted and informed of all EPA and COH historic property identification and determination of effect for the Naalehu Work Plan project, and for the remaining environmental review actions and decisions on mitigation measures for the Pahala Work Plan project.

Sincerely,

/s Sandra Demoruelle
SANDRA DEMORUELLE

Cc: Wilson Okamoto, Brown and Caldwell

SANDRA L. DEMORUELLE
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

July 27, 2018

Dora Beck
Wastewater Division Chief
County of Hawaii Department of Environmental Management
25 Aupuni Street
Hilo, Hawaii 96720

Re: Request for Consulted Party Status for the Naalehu and Pahala Wastewater Treatment Plant Projects for HRS 343 HEPA and NEPA EA/EIS/EID

Dear Ms. Beck,

While I am contesting your failure to do a timely EIS on the Ka'u Wastewater Treatment Plant (WWTP) Projects (which are agency proposals for actions described in the AOC Attachments for the Naalehu and Pahala WWTP work plans), Mr. Kucharski stated that the Naalehu WWTP EA was going to **start** in "late fall," presumably in 2018. (*see* Environmental Management Committee meeting minutes of July 26, 2018).

Therefore, I am requesting that at any point in time the COHDEM starts or continues any HEPA/NEPA environmental review for either of these WWTP projects, I am formally requesting "consulted party" status and to be consulted and informed of all COHDEM environmental review actions and decisions.

Sincerely,

Sandra Demoruelle

Sandra Demoruelle

cc: William Kucharski, Mayor Kim, Kate Rao, Kathleen Johnson, Tessa Berman, Simi Bhat, Tom Helper, Berna Cabacunga

Subject: NOTICE OF CITIZEN SUIT FOR VIOLATION OF ESA (Notice attached)

From: naalehutheatre@yahoo.com

To: rao.kate@epa.gov; simi.bhat@usdoj.gov; berman.tessa@epa.gov; pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; albright.david@epa.gov; clekven@brwncald.com; eplan1@aol.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com

Cc: kaena.horowitz@hawaiicounty.gov; dora.beck@hawaiicounty.gov

Bcc: kaucalendarnews@gmail.com; kaucalendarblog@gmail.com; nclauer@gmail.com; mail@environment-hawaii.org; lindainhawaii65@gmail.com; bmartin@naalehu.org; c.tuttle0@gmail.com; shannonkona@gmail.com; repcreagan@capitol.hawaii.gov; senruderman@capitol.hawaii.gov; hirono.outgoing.mail@hirono.senate.gov; casework@schatz.senate.gov; congresswoman.gabbard@capitolenews.com; maile.david@hawaiicounty.gov

Date: Monday, September 24, 2018 01:21:05 PM HST

This was sent out today.

Best, Sandra Demoruelle

Zinke_ESA_SUIT_NOTICE_9_24_2018.docx
12.4kB

NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT.docx
21.6kB

Daniel_April_12_2018_IMG_20180412_180142.jpg
2.4MB

Consulting_party_EPA_2018.docx
15.1kB

SANDRA L. DEMORUELLE
Post Office Box 588
Naalehu, Hawaii 96772
Email: naalehutheatre@yahoo.com

September 24, 2018

The Honorable Ryan Zinke
Secretary, Department of Interior
1849 C Street NW
Washington DC 20240
Fax: 703/358-1930

RE: NOTICE OF IMPENDING CITIZEN SUIT UNDER ESA 16 USC 1540(g)(1)(A) and (2)(A)(i)

Dear Secretary,

Attached is my Notice of impending citizen suit. Thank you for your attention to my grave concerns which are causing me concrete injuries.

Sincerely,

/s Sandra Demoruelle
SANDRA DEMORUELLE

NOTICE OF CITIZEN SUIT UNDER THE ENDANGERED SPECIES ACT, 16 U.S.C. 1540 (g)(1)(A) and (2)(A)(i)

PERSON GIVING NOTICE:

Sandra Demoruelle,

Physical address: 94-1513 Kaalualu Road, Naalehu HI 96772

Mailing address: PO Box 588, Naalehu HI 96772-0588

Telephone: 1-808-929-9244

Email: naalehutheatre@yahoo.com

NOTICE:

Location: Naalehu and Pahala, District of Kau, County of Hawaii, State of Hawaii, U.S.A.

Date of commencement of ongoing ESA Sec. 7 consultation violation:

Date: **September 20, 2005** per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-0 for project period 06/01/2005 – 12/31/2007.

COH Project Manager: Dora Beck

EPA Project Officer: Laura Bose (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 5, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

> *The recipient [County of Hawaii] agrees not to bill or request reimbursement from EPA for any costs associated with the design or construction of the project [Kau Cesspool Replacement Project for Naalehu and Pahala in Kau] funded by this grant ...* ***until EPA has complied with the National Environmental Policy Act and other environmental cross-cutters (see 40 CFR 6.300 et seq) applicable to this project. (Id. Section P1.)***

Current Date: 05/30/2018 per U.S. Environmental Protection Agency Grant Agreement with County of Hawaii, Assistance ID Number XP-96942401-7 for project period 06/01/2005 – 10/30/2020.

COH Project Manager: Dora Beck

EPA Project Officer: Kate Rao (Responsible Official 40 C.F.R. 6.203(a)(5))

(*See* Exhibit 7, Case 1:18-cv-00172-JMS-KSC Document 25-9 Filed 09/14/2018 Pages 1 to 7).

Dates of violation: Ongoing during period of Grant Condition P1. from date of award 09/20/2005 through current Grant Period commencing 05/30/2018

EPA DISCRETIONARY ACTION IN VIOLATION OF ESA:

1) EPA FAILED TO TAKE EARLY HARD LOOK AT THE KAU PROJECTS AS REQUIRED BY NEPA AND CONSEQUENTLY FAILED TO COMPLY WITH ESA

In the original EPA-COH Grant Agreement Section P1 dated Sept. 20, 2005 (XP-96942401-0), EPA was first required to comply with NEPA "and other environmental cross-cutters" – including the ESA. Seven Grant Agreement revisions have resulted in splitting the original Naalehu and Pahala Projects, both requiring the EPA NEPA/cross-cutters ESA environmental review procedures, into two separate EPA WWTP Work Plans, only one of which will require ESA Section 7 consultation process. In the response to EPA from FWS, the need for a Naalehu ESA process, like what was occurring for Pahala, was expressed.

NEPA requires Federal agencies, including the EPA, to prepare a "detailed statement" prior to approving any "major federal action significantly affecting the quality of the human environment. 42 CFR 4332(2)(c). "The requirement to prepare an environmental impact statement creates a democratic decisionmaking process that assures that agency decisionmakers and the public review and carefully consider detailed information about environmental impacts before any decision is made. Agencies must '[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment.'" 40 CFR 1500.2(d) as cited in *Dine CARE v. BIA, Complaint,* Case3:16 cv-08077-SPL Doc. 1 Page 19.

2) EPA HAS SEPARATED THE KAU LCC CLOSURE GRANT XP-96942401[As Amended 0 through 7] INTO TWO SEPARATE PROJECTS AND REFUSED TO FOLLOW NEPA/ESA PROCEDURES THAT EPA FOLLOWED FOR THE PAHALA PROJECT DEA AS FOR THE NAALEHU WWTP WORK PLAN

No NEPA environmental review procedures have been followed since the original project – the LCC conversion to septic for all of the illegal Kau LCCs – provided Notice of the FEA/FONSI in August 23, 2007 issue of *TEN.* The original 2007 FEA/FONSI for both the Pahala and Naalehu LCC closures has never had a Supplemental Notice published to account for the obvious changes to the original Kau Cesspool Project.

Further since this Naalehu/Pahala 2007 FEA/FONSI never been Supplemented or Withdrawn as Noticed in *TEN*, it is inappropriate to publish the *TEN* Pahala DEA/AFNSI Notice on September 23, 2018 as part of the NEPA/HEPA requisite procedural review.

"To make an informed decision about how or whether to proceed with the proposed projects and to comply with NEPA, an agency must identify their potential combined environmental impacts and make that information available to the public." *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

Therefore, I contend herein that the COHDEM proposed Naalehu WWS EA and the proposed Pahala WWS EIS/EID are legally inadequate because, being two separate studies and documents prepared at different points in time, fail to consider the aggregated and cumulative effects of the connected actions of the proposed wastewater sewage treatment projects on the human environment in the isolated and sparsely populated District of Ka'u.

CEQ regulations implementing NEPA "require that an agency consider 'connected actions' and 'cumulative actions' within a single *EA* or *EIS*." *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1118 (9th Cir. 2000) (emphasis added) (citing 40 CFR 1508.25). Further, under 1508.25, two or more agency actions must be discussed in the same impact statement when they are "connected' or "cumulative" action. 40 CFR 1508.25(a)(1),(2) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

A cumulative impact is defined in NEPA's implementing regulations as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions .... Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR 1508.7.

For "connected" and "cumulative" actions, the agency is told it "should" analyze them in a single impact statement, which the 9th Circuit interpreted as a mandatory requirement. *See Eagle Island Institute v. USFS*, 351 F.3d 1291 (9th Cir. 2003) as cited in *Klamath-Siskiyou v. Bureau of Land Management*, 387 F.3d 989 (9th Cir. 2004).

3) EPA HAS PUBLISHED NOTICE OF AVAILABILITY OF THE PAHALA DEA PUBLIC COMMENT PERIOD WITHOUT CONSIDERING THE CUMULATIVE EFFECTS OF THE AOC TWIN WWTP WORK PLANS WHICH SPECIFY BUILDING TWO SECONDARY SEWAGE TREATMENT PLANTS JUST 11 MILES APART IN REMOTE, RURAL KAU BEFORE APRIL 17, 2022

Despite Kate Rao approving EPA SAAP funding for the original Ka'u LCC to LCSS conversion projects, she has permitted the Naalehu Work Plan to be implemented in violation of NEPA, and failed to enact ESA Section 7 consultation with FWS, as she did with Pahala, designating ERG to do this ESA in the June 7, 2018 letter. By allowing avoidance of consideration of cumulative impacts and avoiding NEPA and ESA statutes, Ms. Rao has allowed the separation of the two Ka'u new-build WWTPs with no aggregation of impacts on the numerous affected endangered plants and wildlife and apparently intentionally avoiding any NEPA cumulative impact analysis. ("[T]he district court properly determined that the Forest Service violated the ESA when it decided not to reinitiate consultation after the FWS revised its critical habitat designation..." *Cottonwood Environmental Law Center v. U.S. Forest Service*, 789 F.3d 1075 (9th Cir. 2015)).

In *Cottonwood*, the Forest Service contended that "[t]he EA or EIS on each action ... will document the cumulative impacts of that action and all previous actions." The Court believed "that consideration of cumulative impacts after the road has already been approved is insufficient to fulfill the mandate of NEPA. A central purpose of the EIS is to force the consideration of environmental impacts in the decisionmaking process. *See, e.g., Columbia Basin Land Protection Ass'n v. Schlesinger*, 643 F.2d *585* (9th Cir. 1981); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975); *Lathan v. Brinegar*, 506 F.2d 677,693 (9th Cir. 1974) (*en banc)*;

Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1113-1114 (D.C.Cir. 1971). That purpose requires that the NEPA process be integrated with agency planning 'at the earliest possible time,' 40 C.F.R. 1501.2, and the purpose cannot be fully served if consideration of the cumulative effects of successive, interdependent steps is delayed until the first step is already taken." *Thomas v. Peterson*, 753 F.2d 754, 760 (9th Cir. 1985).

Because the EPA has taken specific steps to change the EPA-COH Grant Assistance Amendments for XP-96942401, as demonstrated by the May 30, 2018 amendment #7, which result in effectively evading the same NEPA/ESA procedures on the Naalehu WWTP Project by simply moving the EPA statutory obligations 11 miles away to the twin Pahala WWTP Project, I hereby give Notice of a pending citizen suit under the ESA.

Herein I object to the EPA failure to implement the ESA Sec. 7 consultation for Naalehu as Kate Rao did for Pahala and request that before there is any decisions on either Project, that the EPA-COH be required to provide the same ESA Section 7 consultation and issuance of a Biological Opinion covering the cumulative actions that will "jeopardize the continued existence" of multiple Hawaiian endangered creatures and plants for both the Pahala and the Naalehu WWTP Projects.

I declare under penalty of perjury that the forgoing is true and correct.

Dated: September 24, 2018 at Naalehu, Hawaii

s/Sandra Demoruelle

SANDRA DEMORUELLE

Subject: Fw: FW: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pāhala Community Outreach Plan and Naalehu Community Outreach Plan [#123]

From: naalehutheatre@yahoo.com
To: PahalaEA@wilsonokamoto.com
Cc: sandy.shore@hawaiicounty.gov; kaena.horowitz@hawaiicounty.gov; simi.bhat@usdoj.gov
Bcc: kaucalendarnews@gmail.com; kaucalendarblog@gmail.com; nclauer@gmail.com; mail@environment-hawaii.org
Date: Monday, September 24, 2018 08:56:48 AM HST

Comment # 1

The County of Hawaii Department of Environmental Management ("COHDEM") is currently in a second violation of the HEPA (HRS 343 et seq.) and UIPA statutes [first suit is Hi. Third Cir. 18-1-00206 - Nakamura) requiring the disclosure of the August 15, 2018 requested environmental assessment record[s] as no written notice has been provided, nor the record[s] requested provided to date (September 24, 2018).

This de facto denial will require another UIPA lawsuit, apparently.

Comment #2

On May 30, 2018, the EPA transferred grant funding [XP-96942401-7] first awarded September 20, 2005 to the "design and construction of wastewater improvements in Naalehu and Pahala in the Kau district of the Big Island of Hawaii" called the "Kau Cesspool Replacement Project" to provide Federal funds "will be allocated only to the 'Construction - Wastewater Treatment and Disposal System' task in the approved Pahala Community Large Capacity Cesspools Replacement Project work plan."

You evaded Hawaii County Land Use Commission scrutiny of this Pahala project by claiming it was "only" 14.9 acres per your ERG-EPA-B&C-Wilson Okamoto (hereafter called "the Contractors)May meeting minutes, which stated LUC overview at 15 acres [the under 15 acres claim will be challenged by measurement of the actual footprint you present].

Similarly, are you trying to evade the NEPA requirement of considering the cumulative impacts of the two new-build secondary sewage treatment plants, at rapidly expanding costs in a limited County economy that is losing its property tax base to lava and hurricanes, when the two expensive plants are 11 miles apart and only serve 109 and 163 households on LCCs?

Comment #3

Because you (EPA-COHDEM-Contractors) are conspiring to avoid NEPA/HEPA statutes to consider the Environmental Species Act Sec 7 (initiated by EPA for the Pahala Project under NEPA crosscutting statutes by letter to Fish and Wildlife dated June 7, 2018) for the Naalehu Project by only producing the environmental assessments, today I am filing the Notice that I am receiving concrete injuries by this illegal act and will be filing a citizen suit in 60 days.

Comment #4

I am having to go to the Naalehu Library today to review the DEA because it will not download on my computer. Although I have requested Consulting Party status at both the County and Federal level, no document has been provided to me upon my request.

/s Sandra Demoruelle
SANDRA DEMORUELLE

----- Forwarded Message -----
From: Shore, Sandy <Sandy.Shore@hawaiicounty.gov>
To: request+65ce2upva9@foi.uipa.org <request+65ce2upva9@foi.uipa.org>; Naalehu Theatre <naalehutheatre@yahoo.com>
Cc: cohdem <cohdem@hawaiicounty.gov>
Sent: Friday, August 31, 2018 12:38:27 PM HST
Subject: FW: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pāhala Community Outreach Plan and Naalehu Community Outreach Plan [#123]

Requestor Sandra Demorulle,

Pursuant to the attached Acknowledgement to Requester dated August 21, 2018 and, of which you acknowledged on August 21, 2018: Pursuant to and in accordance with section 2-71-13, Hawai'i Administrative Rules ("HAR") extenuating circumstances exists. Due to these extenuating circumstances, DEM shall send you written notice as required by section 2-71-17, HAR within a reasonable time not to exceed twenty business days following DEM received your requests (August 15, 2018 - 11:01 AM, 11:10 AM, 11:30 AM & 3:05 PM).

Furthermore and in response to your email below. Clarification regarding the information that you are requesting was provided to you on July 31, 2018 (contracts c.006231 & c.007030) and on August 6, 2018 (contracts c.006265 & c.006765); whereby the General Terms and Conditions referenced and attached to the provided contracts note under Section 5, Subsection 5.5: Subcontracting or Assignment of Contract (see attached). The Director provided his consent when he signed the contracts.

Thank you.

Sandy C. Shore

Contracts Clerk

County of Hawai'i

Department of Environmental Management

345 Kekūanāo'a St., Ste 41

Hilo, HI 96720

808-961-8421 ~ Telephone

808-961-8086 ~ Facsimile

www.hawaiizerowaste.org

Confidentiality Statement

This email message and any accompanying attachments may contain information that is confidential and subject to legal privilege. If you are not the intended recipient, do not read, use, disseminate, distribute or copy this message or attachment.

-----Original Message-----

From: Sandra Demoruelle [mailto:request+65ce2upva9@foi.uipa.org]

Sent: Friday, August 31, 2018 8:59 AM

To: cohdem <cohdem@hawaiicounty.gov>

Subject: Records Request for Hawaii County Department of Environmental Management: Request for Consultant approved Pahala Community Outreach Plan and Naalehu Community Outreach Plan [#123]

Aloha,

My UIPA request "Request for Consultant approved Pahala Community Outreach Plan and Naalehu Community Outreach Plan" (08/14/2018) was not answered in the time defined by HAR 2-71-13.

Please update me on the status of my request as soon as possible.

If you do not promptly provide these reports, I will sue you for them.

Mahalo,

08-21-18 S. Demourelle Acknow-to-Requester-Rev-5.14 (1).pdf
180.9kB

20180831125856647.pdf
756.1kB

Subject: Attached: Sandra Demoruelle Comment #5 PAHALA DEA/AFNSI and hard time opening on my computer so please send my Pahala DEA copy!

From: naalehutheatre@yahoo.com
To: ematsukawa@wilsonokamoto.com; pahalaea@wilsonokamoto.com; clekven@brwncald.com
Cc: rao.kate@epa.gov; berman.tessa@epa.gov; albright.david@epa.gov; dora.beck@hawaiicounty.gov; kaena.horowitz@hawaiicounty.gov
Date: Monday, September 24, 2018 10:26:11 AM HST

Aloha Wilson Okamoto and Friends,

I hope the DEA is at the libraries because I will be upset if not, since I am eagerly awaiting the explanation of how this is not in violation of so very many laws.

Sincerely, Sandra Demoruelle, PO Box 588, Naalehu HI 96772

----- Forwarded Message -----
From: Naalehu Theatre <naalehutheatre@yahoo.com>
To: HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov>
Sent: Monday, September 24, 2018 10:18:25 AM HST
Subject: Re: RE: The September 23, 2018 Issue of The Environmental Notice is available (with corrected link in photo) PAHALA DEA/AFNSI

Its my computer. I am an analog person anyway, so will go to the Naalehu Library shortly to review it in print hard copy.

Thanks for your assistance with my problem! Sandra Demoruelle

On Monday, September 24, 2018 09:59:05 AM HST, HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov> wrote:

Sorry to hear of your difficulties with downloading the Draft EA file. It's not particularly large (~54MB), and downloads quickly onto our computers from where it is located on the server.

Perhaps this direct link will download easier to your computer:

http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-23-HA-DEA-Pahala-Community-Large-Capacity-Cesspool-Replacement.pdf

Sincerely,

Tom Eisen, Planner

Office of Environmental Quality Control

State of Hawai'i

(808) 586-4185

NOTE: OEQC's primary role is to facilitate Hawai'i's environmental review process by providing relevant advice to agencies, applicants, consultants and the public. OEQC is not authorized to make determinations on Environmental Assessments, Environmental Impact Statements or exemptions. Pursuant to Chapter 343, Hawai'i Revised Statutes, all such determinations are made by appropriate State or county agencies, county Mayors or the Governor.

From: Naalehu Theatre <naalehutheatre@yahoo.com>
Sent: Monday, September 24, 2018 9:38 AM
To: HI Office of Environmental Quality Control <HIOfficeofEnvironmentalQ@doh.hawaii.gov>
Subject: Re: The September 23, 2018 Issue of The Environmental Notice is available (with corrected link in photo) PAHALA DEA/AFNSI

Aloha,

I am having trouble - even after waiting half an hour - downloading the EPA/COH Pahala DEA/AFNSI.

Is it me or is it just such a large file that it takes longer than that to download?

I have not had any trouble downloading another bulky archived FEA/FONSI for this self-same project dated August 23, 2007, which, oddly, has been neither Supplemented nor Withdrawn.

Thank you for your help. Sincerely, Sandra Demoruelle

On Sunday, September 23, 2018 10:29:12 AM HST, State Office of Environmental Quality Control <oeqchawaii@doh.hawaii.gov> wrote:

Aloha,

The September 23, 2018 issue of *The Environmental Notice* is now available online for your review. This email includes the correct link from the photo to the current issue of *The Environmental Notice*.

Regards,

Office of Environmental Quality Control
(808) 586-4185
http://health.hawaii.gov/oeqc/

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Thank you for subscribing to The Environmental Notice.

Our mailing address is:

Office of Environmental Quality Control

235 S. Beretania St., Suite 702

Honolulu, Hi 96813

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PAHALA DEA_Comment_5_EIS_REQUIRED.docx
12.9kB

Daniel_April_12_2018_IMG_20180412_180142.jpg
2.4MB

Subject: Sandra Demoruelle Comment #6 attached - Facility too large for actual effluent flow

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com
Cc: rao.kate@epa.gov; dora.beck@hawaiicounty.gov; clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com
Date: Tuesday, September 25, 2018 08:32:17 AM HST

PAHALA DEA_Comment_6_EH_Quote_too_large_plant.docx
13.5kB

PAHALA DEA/AFNSI SANDRA DEMORUELLE COMMENT #6

COMMENT #6 – The Pahala WWTP is built to handle 380,000 gal/day while actual flow reported for a larger population base in 2007 FEA was 80,000 g/d so the facility design is too large.

To paraphrase Pat Tummons in her ***Environment Hawaii*** environmental newsletter (Vol. 1, No. 5 Nov. 1990): (*EH* **quoted material in bold type)**

Lots of Pork, Little Sewage at the Two Ka'u Sewage Plants

"Serious problems exist" according to the results of "talk-story" meetings held by County of Hawaii Department of Environmental Management contractor Brown and Caldwell. B&C held meetings April 10th – 12th in Naalehu as Task 3.2 of the *Naalehu Community Large Capacity Cesspool (LCC) Replacement Project*.

The COHDEM plans to locate a full-size Wastewater Treatment Plant, featuring four open sewage lagoons, on property next to the Naalehu Elementary School.

To demonstrate how serious the COHDEM is to put this sewage plant next to a school, last November, the County started condemning private property and acquire a family-owned ranch by June 2018.

The problems identified by the community **can be placed generally in two categories: cost of the new facility and capacity (the planned sewage plant outstrips any demand likely to develop** in Naalehu **for the life of the new facilities).**

The Clean Wallet Act

If all the County had wanted was compliance with clean-water requirements, and with the least distress to the taxpayer and payer of sewage-system user fees, it probably would have explored alternative means of sewage treatment -- methods, such as constructed wetlands, that generally are less capital – and labor – intensive than traditional treatment plants. At the very least, it would have brought the planned treatment plant's size more in line with realistic demand projections and would have developed a timetable for construction to minimize the Naalehu LCC problem.

Once again, as with the Hilo sewage plant in 1989, **none of these courses was pursued. When citizens suggested alternative treatment methods, the letters and accompanying information were** ignored in the *EPA's RESPONSES TO PUBLIC COMMENTS* on the AOC Attachment B. **No record of any further discussion of this proposal** will be provided upon request of Naalehu resident Sandra Demoruelle without EPA requiring a payment of $1232 in FOIA fees.

The *Environment Hawaii* article goes on to explain the problems of a sewage plant that is too large for the amount of wastewater requiring treatment:

The problem of too large a size plant is "**underutilization (plants do not function well if routinely operated at a fraction of their capacity**..." Underutilized sewage plants can become a "**negative removal efficiency" – meaning "what the plant pumped out was more contaminated that what went in.**"

Subject: Re: Sandra Demoruelle Comment #7 - LUC Rule 205-6 (d) Special Permit requires state LUC approval over 15 ac. OR FOR LANDS DESIGNATED IMP. AG. LAND

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com
Cc: rao.kate@epa.gov; dora.beck@hawaiicounty.gov; clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com
Date: Tuesday, September 25, 2018 09:38:47 AM HST

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Subject: Re: Sandra Demoruelle Comment #8 - Inadequacy of Responsible Official outreach to the local Hawaiian community

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; rao.kate@epa.gov; dora.beck@hawaiicounty.gov
Cc: clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com; repcreagan@capitol.hawaii.gov
Bcc: okoapottery@yahoo.com; info@okaukakou.org; hoomalukau@gmail.com; dpvierra@yahoo.com; kilaueatutu@gmail.com; friendskaul@gmail.com; gailandgreg@mac.com; kahakai.cleanups@gmail.com; office@hoveroad.com; hawaiianranchos4U@gmail.com; info@honuapopark.org; settlage@hawaii.edu; kauhcf@gmail.com; krhcai@yahoo.com; cliff56@hawaii.rr.com; ho.hoku@gmail.com; honuapokau@yahoo.com; lschubert@tnc.org; katbrady@hotmail.com
Date: Tuesday, September 25, 2018 12:28:03 PM HST

The EPA Responsible Official failed to reach out to local Hawaiian organizations, choosing to poll instead the non-responsive Oahu organizations.

Suggested affected Hawaiian organizations would include:

O Ka'u Kakou
Aha Moku Council
Kau Agro-Forestry
Big Island Community Coalition
Hawaiian Civic Club of Ka'u (President Blossom DeSilva)
Ho'omalu Ka'u
Hui Malama Ola Na Oiwi
Hula Halau O'Leionalani (Kumu hula Debbie Ryder)
Ka Ohana O Honuapo
Ka'u Multicultural Society
Ka'u Preservation
Life of the Land
Malama I Ka Nani

Other affected community organizations would include:

Pacific Quest
[Naalehu & Pahala] Boys and Girls Club
Conservation Council for Hawaii
Cooper Center Council
Discovery Harbour Community Assn.
Friends of the Hawaii Volcanoes National Park
Friends of Kahuku Park
Friends of the Ka'u Libraries
Hawaii Farmers Union United
Hawaiian Ranchos Community Assn.
Ka'u 4-H
Ka'u Agricultural Water Cooperative
Ka'u Chamber of Commerce
Ka'u Coffee Growers Assn.

Ka'u Farm Bureau
Ka'u Food Pantry
Ka'u High School Alumni
Ka'u ILWU Pensioners Club
Ka'u hospital Charitable Foundation
Ka'u Preservation
Ka'u Roping and Riding Assn.
Ka'u Rural Health Community Assn.
Ka'u Scenic Byways Committee
Ka'u Soil and Water Conservation District
Ocean View Community Assn.
Ocean View Community Development Corporation
Pahala Filipino Assn.
Pahala Karate Dojo
Sierra Club - Moku Loa Group
The Nature Conservancy
Tutu and Me Traveling Preschool
Volcano Community Assn.
Volcano Rotary Club

s/ Sandra Demoruelle Dated September 25, 2018 in Naalehu Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Subject: Re: Sandra Demoruelle Comment #9 - Hawaii County Council Distrct 6 member's name is Maile Medeiros David [not Maile Medeiro]

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; rao.kate@epa.gov; dora.beck@hawaiicounty.gov
Cc: clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com; maile.david@hawaiicounty.gov; repcreagan@capitol.hawaii.gov
Date: Tuesday, September 25, 2018 12:39:08 PM HST

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17, so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Subject: Re: Meeting in Pahala for DEA - on Oct. 10, 2018 - will police be there to arrest us?

From: naalehutheatre@yahoo.com

To: eplan1@aol.com; berman.tessa@epa.gov; ematsukawa@wilsonokamoto.com; pahalaea@wilsonokamoto.com; clekven@brwncald.com; simi.bhat@usdoj.gov; rao.kate@epa.gov; dora.beck@hawaiicounty.gov; kaena.horowitz@hawaiicounty.gov

Cc: maile.david@hawaiicounty.gov; lindainhawaii65@gmail.com; albright.david@epa.gov; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com; bmartin@naalehu.org; kaucalendarnews@gmail.com; kaucalendarblog@gmail.com; repcreagan@capitol.hawaii.gov; nclauer@gmail.com; shannonkona@gmail.com; senruderman@capitol.hawaii.gov; mail@environment-hawaii.org; casework@schatz.senate.gov; hirono.outgoing.mail@hirono.senate.gov; joe.kamelamela@hawaiicounty.gov; william.kucharski@hawaiicounty.gov; cohdem@hawaiicounty.gov; mpoffice@earthjustice.org; congresswoman.gabbard@capitolenews.com; c.tuttle0@gmail.com; labford@turquoise.net

Date: Friday, September 28, 2018 01:21:11 PM HST

Are you planning to have police present to arrest us for speaking on this tremendously controversial "municipal" sewage treatment plant?

Please answer or I will take it as a firm yes!

Sincerely, Sandra Demoruelle

On Friday, September 28, 2018 11:51:51 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Sorry I used the educational term "ESL" - the correct regulatory requirement is Title VI - LEP, Public Participation and Affirmative Compliance Obligation: EPA 21.3.1 "you are required by Title VI of the Civil Rights Act to provide meaningful access to LEP individuals..." Having given Berna, B&C and W-O adequate notice herein, I will be present to observe that such LEP access is adequately provided at all EPA/COH DEA meetings, and I will need to report any violation to OCR- San Francisco.

In any case, except to exclude many meaningful comments, why wouldn't you take ORAL comments at the only DEA community meeting? Anyone who wanted to provide WRITTEN comments, such as myself, will do so. I do not need to go to a public meeting to hear written comments from extremely limited English language persons, LEP, as found in Pahala.

If any one of you cared at all, you would HEAR the various languages of LEP plantation workers most frequently spoken instead of English, as I do at the bank or post office.

But since none of you care about me, or Naalehu or Pahala, I will just keep on suing and suing and letting OCR know what you do to us at your DEA meetings.

Best, Sandra Demoruelle

PS: Lest you even think your "congressional appropriation" designation for the grant "protects" you from any statutory requirements - they have a policy covering that pork-barrel practice for evading NEPA/cross-cutters: EO 13457, the aptly named **Protecting American Taxpayers from Government Spending on Wasteful Earmarks.**

On Friday, September 28, 2018 09:54:04 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Equity would allow for oral comments at the Oct 10 meeting.

Either written comments are required at all meetings r/t the DEA or not. Cite your statutory authority, please.

Best, Sandra Demoruelle

Subject: Re: Sandra Demoruelle Comment #10 - Pahala DEA fails to consider debt financing of the County share of the whole Pahala sewage line/municipal sewage treatment plant costs

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; rao.kate@epa.gov; dora.beck@hawaiicounty.gov
Cc: clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com; maile.david@hawaiicounty.gov; repcreagan@capitol.hawaii.gov
Date: Friday, September 28, 2018 01:42:46 PM HST

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 12:39:08 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Page 1-3 of the Pahala DEA lists as a consulted "Elected Official" **Councilmember Maile Medeiro, when her name is listed on the COH website as "Maile Medeiros David."**

/s Sandra Demoruelle Dated September 25, 2018 at Naalehu, Hawaii
SANDRA DEMORUELLE

On Tuesday, September 25, 2018 09:38:47 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

The transparent efforts of the Contractors-EPA-COHDEM to evade LUC approval by stating "14.9 acres" are for naught because the Site 7 is on LUPAG Designated Important Ag. Lands per Figure 6.1 Page 6-17,

so under 205-6(d) "Special permits or land the area of which is greater that 15 acres **or for lands designated as important agricultural lands shall be subject to approval by the land use commission. The land use commission may impose additional restrictions as may be necessary or appropriate in granting the approval, including the adherence to representations made by the applicant."**

Anyhow, anyone who can do geometry can see from the project footprint and the Scale in Feet, that the project covers a minimum of 667,500 sq.ft. [15.3 acres] plus the utility access must be considered as part of the project impacts no matter WHO will own it, so that is another 37,500 sq.ft., bring total acreage at Site 7 as 16.1 acres.

Your just saying it is 14.9 acres and will never affect a larger area is disingenuous and does not portend well for accuracy in the rest of the DEA information.

The COHDEM et al. would be well advised that they are going to have to "adhere to the representations" they make in the EA and Special Permit application, under LUC supervision. LUC may see through your purported factual information to the false claims that underlie claiming 14.9 acres, for instance.

Finally, your minutes from the joint May 2018 meeting talk about evading LUC scrutiny by keeping the project footprint under 15 acres.

/s Sandra Demoruelle
SANDRA DEMORUELLE Dated September 25, 2018 at Naalehu, Hawaii

On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Subject: Re: Sandra Demoruelle Comment #11 - In TEN Notice [9/23/18], HRS Trigger did not state it was 5(a)(9) - a "proposed wastewater system" which triggers an EIS

From: naalehutheatre@yahoo.com
To: pahalaea@wilsonokamoto.com; ematsukawa@wilsonokamoto.com; rao.kate@epa.gov; dora.beck@hawaiicounty.gov
Cc: clekven@brwncald.com; kim.wagoner@erg.com; patrick.goodwin@erg.com; braden.rosenberg@erg.com; maile.david@hawaiicounty.gov; repcreagan@capitol.hawaii.gov; iconstantinescu@brwncald.com; jsakaguchi@wilsonokamoto.com; simi.bhat@usdoj.gov; berman.tessa@epa.gov; eplan1@aol.com; kaena.horowitz@hawaiicounty.gov; joe.kamelamela@hawaiicounty.gov
Date: Monday, October 1, 2018 10:40:37 AM HST

All wastewater systems have had an EIS. Failure to do so means that EPA and COHDEM are intentionally evading an EIS process for the single project of the Kau LCC replacements.

Dated October 1, 2018 in Naalehu, Hawaii
S/ Sandra Demoruelle
SANDRA DEMORUELLE

On Friday, September 28, 2018 01:42:46 PM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Since almost all of the costs of both these municipal sewage treatment plant projects to close the Kau LCCs are going to be CWSRF loan funding, why wasn't any study done of the County of Hawaii borrowing provided as information in the DEA, especially in light of the diminishing COH tax base, as the primary source of funds for the projects.

In other words, the EPA Responsible Official has failed to assess even the single impact of the Pahala project on the COH credit capacity as it relates to sewer bond financing, already stressed by Lono Kona's expanding costs, let alone the cumulative impacts of financing the two Kau LCC closure projects with construction costs accrued with under one year of separation.

No indication is given in the DEA of consideration of the County's present and potential burden of debt financing for such purposes, which would identify if the County has the potential to become a "problem borrower" because of these two projects.

Also, why has no consideration been given to non-local financing like the Municipal Wastewater Construction Grant of EPA?

/s Sandra Demoruelle
SANDRA DEMORUELLE

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On Tuesday, September 25, 2018 08:32:17 AM HST, Naalehu Theatre <naalehutheatre@yahoo.com> wrote:

Image (2).jpg
226.6kB

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10349-01 ref (23a)
March 6, 2020

Ms. Sandra Demoruelle
P.O. Box 588
Naalehu, HI 96772

Subject: Draft Environmental Assessment (EA) for the
Pāhala Large Capacity Cesspool Replacement Project
District of Kaʻu, Hawaiʻi
Response to Comment – USPS October 23, 2018

Dear Ms. Demoruelle:

Thank you for your October 23, 2018 comments sent via the US Postal Service (USPS) regarding the County of Hawaiʻi Department of Environmental Management Draft Environmental Assessment (EA) for the Pāhala Large Capacity Cesspool Replacement project. Our responses follow (note that the page numbers referenced are "as received" with Page 1 being the first page of your comment submittal):

Pages 2-4:

The Draft EA Section 2.7 provides a the discussion of the criterion used to evaluate various sites for the treatment and disposal facility, including appropriate site characteristics, site accessibility as it relates to the various requirements of the Administrative Order on Consent, and environmental impacts. Further, the Draft EA Section 2.8 discusses the various site alternatives which were considered for the PER and then no longer considered as they contained "fatal flaws".

This information will be repeated in the Final EA.

Section 2.1.4 of the Draft EA provides a history of wastewater management for Pāhala. As stated, in 2003 C. Brewer requested assistance from the County to close their large capacity cesspools as required by the Environmental Protection Agency. Section 2.14 discussed that, around 2006, C. Brewer requested that the County construct and maintain a new and improved sewer system for the Pāhala community. A County Council Resolution approved the C. Brewer request. In anticipation of C. Brewer's dissolution, the company proposed, and the County agreed in April 2007, to enter into a formal agreement to construct and maintain a new and improved community sewer system or assume maintenance and required service of the existing systems by April 30, 2010. The Final EA will clarify that C. Brewer committed to complete the line (called a lateral) between the residences and the property line at the edge of the public right-of-way adjacent to the new collection system for specific private properties in Pāhala and

Nāʻālehu. It was agreed, if the County did not complete its' portion of the work by April 30, 2010, it would assume pending and unfinished obligations to connect the new laterals installed by C. Brewer to the residences and new collection system when complete. Thus, the project includes connecting these C. Brewer laterals, which may now need to be replaced.

As outlined in the Draft EA Section 2.1.3, the County has been discussing the need for a new collection system, treatment and disposal facility to replace the existing collection system and large capacity cesspools (LCCs), with the community since 2004.

On December 13, 2008 and April 25, 2010, community meetings sponsored by Councilman Guy Enriques were held at the Nāʻālehu and Pāhala Community Centers, respectively, to discuss the Nāʻālehu and Pāhala Large Capacity Cesspool Replacement project. As part of the meetings, an informational handout prepared by the County Wastewater Division, provided a history of the project documenting that, in 2004, Mayor Kim's office used a ballot system to get input from property owners regarding different wastewater treatment/disposal alternatives for those property owners connected to the LCCs who would no longer be served by the C. Brewer system after LCC closure. As reported in the Draft EA Section 2.1.4, 87 percent of the returned ballots were in favor of the installation of a new sewer collection system and a treatment and disposal system to be operated and maintained by the County. The handouts indicated that Mayor Kim's office advised the property owners the County would move forward with a new system for Nāʻālehu and Pāhala on November 5, 2004. Additionally, the handouts stated that public meetings were held in both Nāʻālehu and Pāhala in November 2006 to discuss the wastewater system alternatives and the biggest challenge to date had been finding suitable land for siting a wastewater treatment/disposal facility in Pāhala. The handouts also stated that all properties that become accessible to the new sewer system would be required to connect in accordance with Hawaiʻi County Code Chapter 21.

This information will be included in the Final EA.

The Draft EA Sections 4.1.1 Past, Present, and Reasonably Foreseeable Actions, 4.1.2 Actions Considered but Excluded from Analysis, 6.2.2 Kaʻū Community Development Plan, and 7 Public Participation, references the Kaʻū Community Development Plan (CDP) as considered in the preparation of the Draft EA.

The Kaʻū CDP Policy 90 states "Implement protocols for receiving community input at meetings in Kaʻū during capital project siting and design.

Notwithstanding that the Kaʻū Community Development Plan was adopted in October 2017 (Ordinance No. 2017-66), the information above shows the County presented information to and received input from the Pāhala Community at meetings in Kaʻū during project siting and conceptual design.

Pages 4-6

The Nāʻālehu WWTP and Lono Kona project comments are not pertinent to the content of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Page 7:
There is no requirement to publish notices of public meetings like the “talk story” sessions you mentioned in the Office of Environmental Quality Control (OEQC) *The Environmental Notice*. OEQC may publish such notices on a space available basis.

Page 8-9:
Hawaiʻi Revised Statutes (HRS) Section 343-5 Applicability and requirements states under item (c) (4) “A(n environmental impact) statement shall be required if the agency finds that the proposed action may have a significant effect on the environment…” The criteria by which the proposing agency makes the significance determination is provided in Hawaiʻi Administrative Rules (HAR) Title 11 Section 200-12 (a) and (b) which states: “(a) In considering the significance of potential environmental effects, agencies shall consider the sum of the effects on the quality of the environment, and shall evaluate the overall and cumulative effects of an action. (b) In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences,… and the…effects of the action.”

HAR Section 11-200-10 Contents of an environmental assessment includes “(9) Findings and reasons supporting the agency determination or anticipated determination…” The Draft EA provides this in Chapter 8 Findings and Determination. Neither HRS Chapter 343 nor HAR Title 11, Chapter 200 contain any requirement that all proposed wastewater systems require an Environmental Impact Statement (EIS).

The Nāʻālehu WWTP comments are not pertinent to the content of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

See EPA response to comment section.

Retained to address EA required for CIP.

HRS §343-5-1 states (a) Except as otherwise provided, an environmental assessment shall be required for actions that: (1) Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects that the agency has not approved, adopted, or funded. The CIP program reviewed annually by the County Council is not yet funded when passed.

HAR 11-200-2 definition states: "Action" means any program or project to be initiated by an agency or applicant. Further, HAR 11-200 states "Agency" means any department, office, board, or commission of the state or county government which is part of the executive branch of that government. The County Council is part of the legislative, not the executive, branch of the County.

Page 10:
On March 15, 2018, the County mailed a letter stating a Draft EA is being prepared for the County the Pāhala Large Capacity Cesspool Replacement project along with Pre-Assessment documents to a total of 47 agencies, elected officials and utilities requesting comments prior to preparation of the Draft EA. In addition, on March 29, 2018, the County mailed Pre-Assessment documents to 14 Native Hawaiʻi an Organizations requesting comments prior to preparation of the Draft EA. The Draft EA Summary shows the list of those consulted prior to preparation of the Draft EA. The Draft EA Section 10 shows those agencies, elected officials, utilities and Native Hawaiʻi an Organizations that provided comments. Finally, the Draft EA Appendix A includes reproductions of the comments and responses to those making comments.

In addition, the County submitted required information and documents to the OEQC related to the Draft EA. Based on the County provided information, on September 23, 2018, notice of availability of the Draft EA was published in the Office of Environmental Quality Control *The Environmental Notice*. Subsequently, on September 26, 2018, a public notice was published in the *Hawaiʻi Tribune Herald*, *West Hawaiʻi Today* newspapers, and the online *Kaʻū News Brief.* The public notice was to announce the October 10, 2018 public information meeting to be conducted by the County in Pāhala to discuss the availability of the Draft EA and process for submitting comments. The notice stated that the second part of the October 10th meeting was to address Section 106 of the National Historic Preservation Act (NHPA) involving consultation with Native Hawaiʻian Organizations (NHOs) and Native Hawaiʻian descendants with ancestral lineal or cultural ties or cultural knowledge or concerns, or religious attachment to the proposed project area. During the October 10th meeting attendees were invited to provide information about the proposed project area.

On November 6, 2018, 11 copies of the Draft EA were delivered to the public libraries in Pāhala and Nāʻālehu. Subsequently, notice of availability of the Draft EA was republished on November 8, 2018 and the comment period ended on December 10, 2018. The Final EA will include the comments received and responses provided in Appendices F and G.

This information will be included in the Final EA.

The Draft EA for the Nāʻālehu project is not the subject of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Page 11:
The County Clerk has confirmed that Resolution 412 was not voted on by the County Council.

The Draft EA for the Pāhala Large Capacity Cesspool Replacement project was jointly prepared by the US Environmental Protection Agency (EPA) and the County of Hawai‘i to address both the National Environmental Policy Act (NEPA) and Hawai‘i Environmental Policy Act (HEPA). Please refer to Appendix F for EPA's response. After the procedural requirements of Section 106 of the National Historic Preservation Act have been completed and comments to the Draft EA have been addressed, the EPA and the County will issue a Finding of No Significant Impact and Final EA.

See response to Page 8 above.

Page 12:
HAR 11-200-7 **Multiple or phased applicant or agency actions** states that "A group of actions proposed by an agency or an applicant shall be treated as a single action when (1) The component actions are phases or increments of a larger total undertaking, (2) An individual project is a necessary precedent for a larger project; (3) An individual project represents a commitment to a larger project; or (4) The actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole." The wastewater projects at Pāhala and Nā‘ālehu are not phases or increments of a larger total undertaking, are not precedents or commitments for a larger project, nor are they identical. Hence, there is no requirement to consider them in a single environmental review document.

See responses to Pages 2-4 and 10 above.
The Draft EA Section 7 also documents the 5 public meetings held in Pāhala December 12, 13 and 14, 2017 to discuss the Pāhala Large Capacity Cesspool Replacement project.

On September 10, 2018, letters containing information on the availability of the Draft EA, the comment period, and the October 10, 2018 meeting were mailed to property owners with C. Brewer lines and newly-accessible property owners. On October 26, 2018 letters were mailed to property owners with C. Brewer lines and newly-accessible property owners informing them of the extension of the public comment period to December 10, 2018.

This information will be included in the Final EA.

The Draft EA Section 7 will be revised to add that, on March 21, 2019, the County held another meeting in Pāhala which included a presentation to provide information on financing sources available to owners of parcels which would become accessible to the new County collection system. The purpose of the meeting was to fulfill a County commitment made in October, 2018

to research financing options available to the newly accessible residents of the Pāhala Community by March, 2019.
See also response to Page 4 above.

The Draft EA, Section 2.8.2(a), discusses use of a community septic tank.

Further details for the use of community septic tanks are also provided in the Draft EA, Appendix B, Section 7.5.1 and 7.5.2, including the need for a Department of Health (DOH) variance from HAR 11-62-23.1 requirements (which must be renewed every five years), and the need to provide for additional flow.

Page 13, A and attachment A Page 31:
HRS Chapter 343 Section 5 (a)(9)(A), states as follows: "(a) Except as otherwise provided, an environmental assessment (emphasis added) shall be required for actions that: ... (9) Propose any: (A) Wastewater treatment unit, except an individual wastewater system or a wastewater treatment unit serving fewer than fifty single-family dwellings or the equivalent…". HAR Title 11, Chapter 200, which implements HRS Chapter 343, however, differentiates between "agency actions" that utilize state or county lands or funds and "applicant actions" for which an applicant must seek agency approval. Since the proposed action will utilize county lands and funds, it is an "agency action" requiring compliance with HRS Chapter 343 and HAR Title 11, Chapter 200, pursuant to which an environmental assessment is being prepared and processed.

Thus, the project description published by the OEQC in the September 23, 2018 issue of *The Environmental Notice* OEQC was correct.

Page 13 B and Attachment B Pages 32-34:
HAR Title 11 Chapter 200-10 Contents of an environmental assessment does not include a requirement for evaluating the fiscal impacts of a project on a County's budget or ability to obtain funding.

Page 13 C and Attachment D Page 35:
The public outreach subcontractor did not prepare the Draft EA.

Page 13 D and Attachment D Pages 36-42:
This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project; the Draft EA Section 5 includes federal cross cutter analysis for both the Pāhala Large Capacity Cesspool Conversion and Pāhala Wastewater Collection System parts that may also be funded by the State of Hawai‘i DOH Clean Water State Revolving Fund (CWSRF).

Page 13 E and Attachment E Page 43:
This is not a comment pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

Page 14 F and Attachment F Page 44:
The Kealakehe Aeration Upgrade project is not a comment pertinent to the content requirements of the Draft EA for the Pāhala LCC Replacement project.

The Draft EA Appendix B is a Preliminary Engineering Report for the wastewater treatment plant. Table 5.3, Section 5.5 of Appendix B provides a conceptual planning level construction cost estimate of about $14.6 million for the secondary wastewater treatment and disposal facility only. Table 5.3 does not reflect the total cost of the Proposed Action and does not include planning, design, land acquisition, the collection system or past project costs. As stated in the Draft EA Section 2.1.2, the project may be funded by the State of Hawai‘i Department of Health Clean Water State Revolving Fund which authorizes low interest loans for the construction of publicly owned wastewater treatment works and an EPA Special Appropriation Grant. This information will be included in the Final EA.

The Final EA will include the Final PER and related construction cost estimates for the Pāhala LCC Replacement project.

See also responses to Pages 8-9, 12, 13 A and 13 D above.

Page 14 G and Attachment G Pages 45-48:
The Elementary School Complex, the portion of campus closest to the treatment and disposal facility within the Ka‘ū High and Pāhala Elementary School campus, lies more than ½ mile directly or about 1 miles away from the proposed treatment and disposal facility by road. From the school, one must travel on a portion of the school parcel and on 5 streets to reach the fenced wastewater treatment and disposal facility. The intervening streets access or abut residential parcels and other land uses. The distance and intervening land uses show the treatment and disposal facility is not located in close proximity to a school facility. This information will be included in the Final EA.

Page 14 H and Attachment H Pages 49-50: The Draft EA Section 4 discusses the Cumulative effects of the project.

The Nā‘ālehu WWTP and its’ proximity to the Nā‘ālehu school are not comments pertinent to the content requirements of the Draft EA for the Pāhala Large Capacity Cesspool Replacement project.

See response to Page 14 G above

Page 14 I and Attachment I Pages 51-59:
The Draft EA Section 2.8 discusses wastewater treatment alternatives. Effluent flows greater than 1,000 gallons per day are subject to Hawai‘i’s Underground Injection Control (UIC) rules. Use of a small capacity system to treat the wastewater generated by each privately-owned parcel in the community currently served by the County operated LCCs would likely necessitate siting multiple units within private property. As outlined in the Draft EA, Appendix B Section 7.5.4, issues associated with individual wastewater systems include:

- locating the treatment units within developed private parcels, many of which are small (less than 10,000 square feet) and significantly improved;
- insufficient land area within developed private parcels to effectively use/dispose of treated effluent without impacting adjacent parcels; and
- soil conditions and subsurface geology unsuitable for effluent disposal compliant with HAR 11-62-34 requirements, potentially necessitating import fill soils or elevated mound systems.

This information will be repeated in the Final EA.

Additional issues that would need to be addressed include: access for equipment, ownership of the units, and operation and maintenance of the units in this remote location.

This information will be added to the Final EA, Section 2.8.2.

The financial impact of the project on individual newly accessible property owners was raised by the community during the December 2017 public meetings as summarized in Section 7 of the Draft EA and again during the October 10, 2018 meeting. Although not required by HAR Title 11, Chapter 200, the Department of Environmental Management (DEM) voluntarily convened an additional public meeting on March 21, 2019 to gain further input from newly accessible property owners and fulfill a commitment made in October 2018 to research and provide financing options available for the newly accessible residents of the Pāhala Community to pursue.

Programs discussed included:

- US Department of Housing and Urban Development (HUD) with County of Hawai‘i Office of Housing and Community Development Residential Repair Program - Community Block Grant Program, and
- US Department of Agriculture - Rural Development (USDA-RDA) Program.

As noted during the presentation, these programs may change in the coming years, and additional options may be added to this preliminary list. Hawai‘i Legislature, Senate Bill 221 SD1, which could amend HRS Chapter §342D to establish a low interest loan program offering financial

assistance to cesspool owners to connect to wastewater treatment systems approved by the Department of Health was also discussed; however, this bill was subsequently not passed during the 2019 legislative session.

This information will be included in the Final EA.

Page 15 J and Attachment J Page 60:
The proposed Pāhala wastewater treatment plant (WWTP) 14.9-acre project site has been developed to provide the necessary land area for the facilities needed to treat the incoming flows and to dispose the treated effluent from the treatment processes. The proposed project site minimizes the use of the adjacent lands which contain a commercial macadamia orchard. A larger project site is not required. The special permit requirement applies to the proposed WWTP parcel only, not to the proposed utility easements. The Draft EA Section 2.10.1 states the County will apply for the required special permit through the Planning Commission.

Pages 17- 30: See response to Pages 2-15 above.

Page 31-62 (Marked A-J): These are duplicates of some of your other comments, attached as reference material supporting the comments provided on pages 13-15 and duplicated on pages 28-30, to which we've responded. Responses to each were sent to you under separate cover and will also be included in Appendix G of the Final EA.

For clarity:

Page 31 is Attachment A for both Pages 13 and 28: See response to Page 13 A above.

Pages 32-34 are Attachment B for both Pages 13 and 28: See response to Page 13 B above.

Page 35 is Attachment C for both Pages 13 and 28: See response to Page 13 C above.

Pages 36-42 are Attachment D for both Pages 13 and 28: See response to Page 13 D above.

Page 43 is Attachment E for both Pages 13 and 28: See response to Page 13 E above.

Page 44 is Attachment F for both Pages 14 and 29: See response to Page 14 F above.

Pages 45-48 is Attachment G for both Pages 14 and 29: See response to Page 14 G above.

Pages 49-50 are Attachment H for both Pages 14 and 29: See response to Page 14 H above.

Pages 51-59 are Attachment I for both Pages 14 and 29: See response to Page 14 I above.

Pages 60-62 are Attachment J for both Pages 15 and 30: See response to Page 15 J above.

Page 63: The Pāhala and Nāʻālehu communities are not a single community, but rather are two distinct communities that are located in different drainage basins. The Pāhala community is located about 11 miles north of the Nāʻālehu community. The US Geological Survey topographic maps show the two communities are separated by five drainage gulches: Hionamoa, Moaula, Punaluu, Nicole and Hulea. The topographic map shows these five gulches drain in a generally west to east direction. These same maps show the Alapai Gulch located adjacent to the western edge of the Nāʻālehu community drains from north to south. Thus, the distance, separation and topographic configuration of Hawaiʻi Island shows the two communities are not a single entity subject to a single project under federal and State environmental laws, including analysis of impacts.

The Pāhala and Nāʻālehu LCC Replacement Projects are not connected to each other and are physically separated by a distance of 11 miles. Separate EA processes are being conducted for each community's project. Cumulative impacts will be considered for connected projects as required by HRS 343.

Consultation and informational meetings such as the ones held regarding connected actions within appropriate geographic boundaries for this project on October 8 through 10, 2018 are not mandated by and do not violate NEPA.

Pages 64 to 66: On October 19, 2018, the US EPA replied to this request stating, there was no rationale provided why the request for "consulting party" status was appropriate for this project. As such, the request for "consulting party" status under the National Historic Preservation Act was denied. Further, the EPA stated the Nāʻālehu LCC replacement is a separate project that is not part of the proposed action currently subject to environmental review by EPA. Comments regarding the Nāʻālehu LCC Replacement project are not pertinent to the content requirements for the Pāhala LCC Replacement Project Draft EA.

Page 67: EPA has provided a response to your request under NEPA and the National Historic Preservation Act requirements. HRS 343 and HAR 11 200 have no requirements or definitions related to consulted party status for an EA.

Pages 68 to 96: These are duplicates of some of your other comments, to which we've responded. Responses to each were sent to you under separate cover and will also be included in Appendix E of the Final EA.

We appreciate your participation in the Draft EA process.

Sincerely,

Keola Cheng
Project Manager

cc: W. Kucharski, COH DEM
D. Beck, COH WWD
S. Mendonca, COH WWD
K. Rao, EPA
C. Lekven, BC
P. Goodwin, ERG