

**DIRECTOR'S INFORMATIONAL REPORT
TO THE ENVIRONMENTAL MANAGEMENT COMMISSION**

**April 27, 2022
Agenda item 7**

a. LEGISLATIVE UPDATE

a. County Council (Since last report posted on 1/20/22)

ITEM	DESCRIPTION	CURRENT STATUS
<i>Completed items</i>		
Bill 117, Draft 2	Transfers \$72K from Fund Balance to Solid Waste Fund for DEM Admin expenses	2/9, 2/23: Approved by Council Ord. 22-21
Bill 118	Transfers \$410K from Fund Balance to Solid Waste Fund for DEM landfill expenses.	2/9, 2/23: Approved by Council Ord. 22-25
Res. 318-22	Authorizes 5-year lease for one roll-off trailer and one dewatering bin for WWD.	2/23: Council postpones. 3/9: Approved by Council
Res. 319-22	Authorizes 5-year lease for one semi-tractor and two trailer-mounted bins for WWD.	2/23: Approved by Council
Res. 320-22	Authorizes 5-year lease for three semi-tractors for SWD.	2/23: Council postpones. 3/9: Approved by Council
Res. 321-22	Authorizes 5-year lease for four walking floor trailers for SWD.	2/23: Approved by Council
Res. 322-22	Authorizes 5-year lease for three boom trucks for SWD.	2/23: Approved by Council
Res. 323-22	Authorizes 5-year lease for four 48-foot compacting refuse trailers for SWD.	2/23: Approved by Council
Bill 131	Amends Capital Budget to add \$13M for Hilo WWTP Upgrades-Phase I	3/9: Finance Committee Fav Rec 3/23, 4/6: Approved by Council
Bill 132	Authorizes General Obligation bonds for WWD: \$12M Design for Hilo WWTP; \$25.5M for WIFIA loan match; \$62.5M for construction & emergency measures. Also authorizes \$3M for SWD repairs and maintenance	3/9: Finance Committee Fav Rec 3/23, 4/6: Approved by Council
<i>Active items</i>		
Bill 126 & 127	Operating and Capital Budgets for FY 22-23	4/14: Finance Committee hearings on DEM budget and program reviews. See attached slides.
Bill 145, 146, 147	Transfers funds from General Fund, Fund Balance, to Sewer Fund, Salaries & Wages (\$55K), and to Solid Waste Fund, Landfill S&W (\$106K)	3/17: Finance Committee Fav Rec 4/6, 4/20: Approved by Council

b. Legislature (Since last report posted on 1/20/22)
 DEM continues to track the following bills that are active as of 4/21/22.

<p>SB 3004 SD1 HD1</p>	<p>Establishes and appropriates funds for a compost reimbursement program within the Department of Agriculture and for one full-time permanent compost reimbursement program manager position. Requires an annual progress report to the Legislature prior to each regular session. Effective 7/1/2050. (HD1)</p>
<p>HB 1411 HD2 SD1</p>	<p>Requires that the transferee's and transferor's address be provided on the certificate of ownership when the title to a motor vehicle is transferred. Clarifies that the signature of the transferee and signature of the transferor each serve as an attestation by that respective party as to the validity of the information on the certificate of ownership. Imposes a fine on a party who provides false or fraudulent information. Takes effect 7/1/2023. (SD1)</p>
<p>HB 1412 HD2 SD1</p>	<p>Requires the counties to provide a minimum distance a vehicle must be moved within a specified timeframe after a vehicle is initially inspected for abandonment to avoid an official classification of abandonment. Requires that, before a vehicle can be classified as being abandoned, notice be provided that the vehicle must be moved the specified distance within the specified timeframe or be subject to removal. Effective 7/30/2075. (SD1)</p>
<p>HB 1413 HD2 SD1</p>	<p>Allows the director of finance of a county to require payment of outstanding charges and fines owed to the county relating to the disposition of an abandoned vehicle within the county by the registered owner of the abandoned vehicle before issuing a certificate of registration or completing a transfer of ownership, except under certain circumstances. Requires the county directors of finance to notify the appropriate county examiner of drivers of individuals who have outstanding charges and fines owed to the county relating to the disposition of an abandoned vehicle for the purposes of suspending, revoking, or prohibiting the renewal of their driver's licenses. Effective 7/30/2075. (SD1)</p>
<p>HB 1414 HD1 SD1</p>	<p>Makes a person who is the registered owner of a vehicle that was deemed abandoned or derelict subject to a tiered fine system. Effective 7/1/2050. (SD1)</p>
<p>HB 1640 HD2 SD1</p>	<p>Changes the Electronic Waste and Television Recycling and Recovery Act to the Electronic Device Recycling and Recovery Act. Establishes electronic device reporting requirements for manufacturers and collectors. Establishes the electronic device recycling working group. Effective 1/1/2050. (SD1)</p>

<p>HB 1644 HD1 SD1</p>	<p>Bans the manufacture, sale, or distribution for sale or use of wraps and liners, plates, food boats, pizza boxes, and firefighting foams that contain perfluoroalkyl and polyfluoroalkyl substances, in certain circumstances. Effective 7/1/2100. (SD1)</p>
<p>HB 1806 HD2 SD1</p>	<p>Requires cesspools in the State to be upgraded or converted to a wastewater system approved by the Director of Health before 1/1/2050. (SD1)</p>
<p>HB 1992 HD2 SD1</p>	<p>Permits composting and co-composting operations in agricultural districts, under certain conditions. Establishes and appropriates funds for an environmental health specialist IV position in the solid and hazardous waste branch of the Department of Health. Effective 7/1/2051. (SD1)</p>
<p>HB 2147 HD1</p>	<p>Reinstates the Department of Health's authority to permit federal municipal solid waste landfills. (HD1)</p>
<p>HB 2195 HD2 SD1</p>	<p>Establishes a cesspool compliance pilot grant project to assist low- and moderate-income property owners, including lessees on Hawaiian home lands, with the costs of upgrading, converting, or connecting cesspools. Applies to cesspools identified by the Department of Health as failing. Appropriates funds. Effective 7/1/2100. Sunsets on . (SD1)</p>
<p>HB 2399 HD1 SD1</p>	<p>Establishes an Extended Producer Responsibility Program. Requires certain producers of fast-moving consumer goods to register with the Department of Health and pay an annual fee based on the amount of packaging volume the covered producer places on the market each calendar year. Provides for the deposit of fees into an Extended Producer Responsibility Special Fund. Provides for the expenditure of moneys from the Extended Producer Responsibility Special Fund for the creation of a report that assesses the resources needed to reduce the volume of packaging waste sent to landfills or power plants that burn municipal solid waste as a fuel by fifty per cent and eighty per cent by a date to be determined by rule. Appropriates moneys. Effective 7/1/2100. (SD1)</p>
<p>SB 2998 SD1</p>	<p>Requires the Department of Health to implement the Auditor's recommendations for the Deposit Beverage Container program, including developing a risk-based selection process to select reports submitted by certain distributors and redemption centers for audit. (SD1)</p>

b. REQUESTS FOR UPDATES

a. Actions discussed at EPA Region 9 April meeting(s)

- i. EPA call regarding Administrative Order on Consent for closure of large capacity cesspools in Pāhala and Nā‘ālehu on April 1.

This April 1 discussion followed a public informational meeting held in Pāhala on the evening of March 16, 2022, where Hawai‘i County DEM, Finance, Corporation Counsel, and Managing Director presented the case for amending the existing AOC away from the previously agreed upon secondary treatment method of aerated concrete lagoons and instead would allow for an option such as Individual Wastewater Systems meeting the approval of the Department of Health. (See attached slides.) DEM noted the positive response of those in attendance and reported this to EPA. EPA indicated its willingness to revise the AOC, the details of which are currently being worked out. This is a positive step that moves past what DEM has considered to be a prior unworkable solution. DEM restates its intent to comply with the closure of the large capacity cesspools and to work in good faith with the provisions of the revised AOC.

- ii. EPA site visits to Hilo WWTP and Kealakehe WWTP on April 6.

A delegation led by EPA Region 9 Administrator Martha Guzman visited the Hilo Wastewater Treatment Plant, had a working lunch meeting with Mayor Roth and certain Cabinet members, and then visited the Kealakehe Wastewater Treatment Plant. During this meeting DEM and EPA discussed upcoming Wastewater Division projects and its plans to extend sewer connections to communities and areas mostly served by cesspools, as well as the need to regulate the functional equivalent of discharges into navigable waters.

b. What is the cost for the County for a resident to:

- i. Dispose of solid waste and hazardous waste.
- ii. Recycle materials accepted at Solid Waste Division facilities.
- iii. Sewer and treat wastewater.

ii. Status and timeline of the North Kona Sewage Pumping Station (Gaffney) Wastewater Division (WWD) reports it is still working on a Draft Environmental Assessment. WWD is waiting for the DLNR State Historic Preservation Division’s (SHPD) approval of the Archaeological Inventory Survey. The anticipated acceptance completion date of the AIS is expected no sooner than December 2022. This will need to be followed by a Final EA and Finding of No Significant Impact and federal level NEPA documents prior to the start of design to be followed by construction.

- iii. Expected budget shortfalls and impacts in FY 22-23

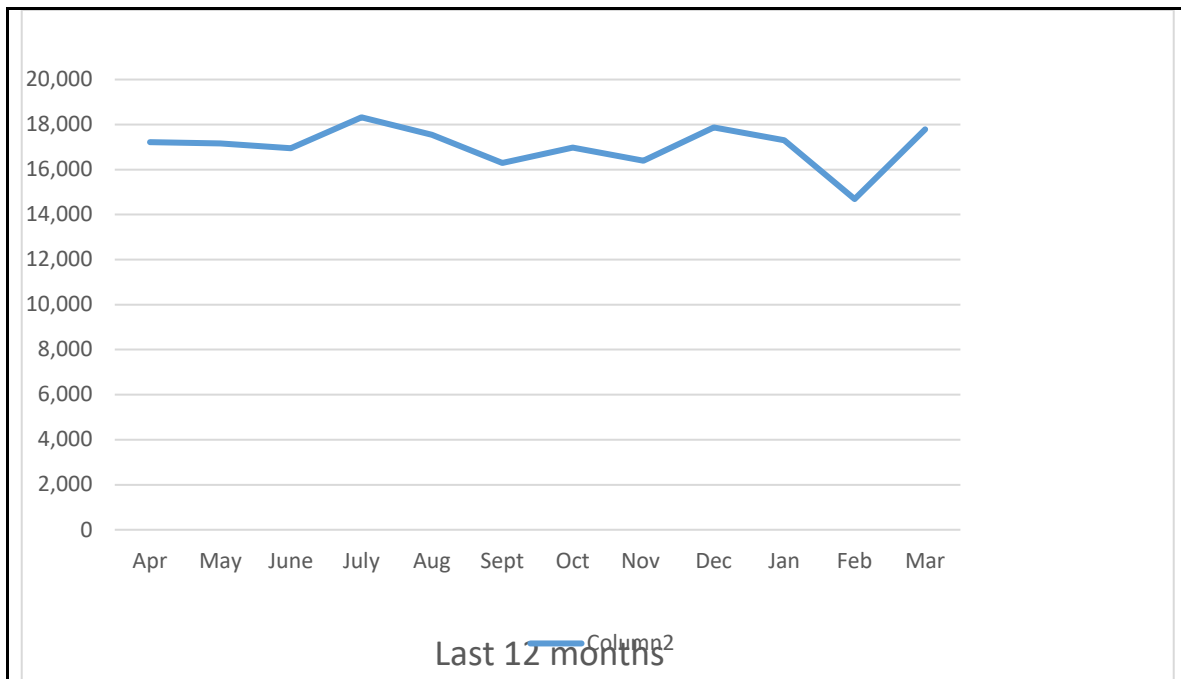
c. SOLID WASTE DIVISION

RELOAD FACILITY UPDATE (new data shaded in gray)

Month/Year	Total Tons Taken to Sort Station
Apr 2021	4,341.20
May 2021	4,477.45
Jun 2021	4,563.52
Jul 2021	4,578.32
Aug 2021	4,445.18
Sep 2021	3,777.50
Oct 2021	4,274.84
Nov 2021	4,110.58
Dec 2021	4,412.64
Jan 2022	4,119.67
Feb 2022	3,910.66
Mar 2022	4,312.99
Totals	

When time permits, SWD staff removes the corrugated cardboard from the trash and places it in a roll-off for recycling.

WHSL MONTHLY LANDFILL TONNAGES



Apr 2021	17,222.15
May 2021	17,163.90
Jun 2021	16,952.91
Jul 2021	18,321.07
Aug 2021	17,538.62
Sep 2021	16,293.25
Oct 2021	16,974.05
Nov 2021	16,392.27
Dec 2021	17,782.47
Jan 2022	17,301.02
Feb 2022	14,689.88
Mar 2022	17,780.90
Totals	204,502.49

MONTHLY TRANSFER STATION TONNAGES

Month/Year	EHRSS	WHSL
Apr 2021	3,567.61	8,588.27
May 2021	3,712.92	8,789.57
Jun 2021	3,724.73	8,615.02
Jul 2021	3,721.32	8,705.29
Aug 2021	3,616.26	8,567.02
Sep 2021	2,950.22	8,225.86
Oct 2021	3,456.17	8,716.66
Nov 2021	3,274.30	8,102.67
Dec 2021	3,446.27	9,097.38
Jan 2021	3,276.92	9,312.59
Feb 2021	3,086.50	7,125.42
Mar 2021	3,376.69	8,878.20
Totals	41,209.91	102,723.95

The above table is to include data on the waste disposed in the landfill (not the greenwaste or recycling data).

d. WASTEWATER DIVISION

- i. Pretreatment code draft proposal status

The draft ordinance is undergoing legal and Department of Health review.



Pāhala Community Wastewater Treatment & Cesspool Closure Informational Meeting

March 16, 2022

County of Hawai'i

Department of Environmental Management

Jana Kaniho photo

Agenda

- E pule kākou and Introductions
- Purpose and Ground Rules
- Brief overview of Pāhala and Nā'ālehu wastewater treatment history
- Current Administrative Order on Consent (AOC) signed by County of Hawai'i and the U.S. Environmental Protection Agency (EPA)
- County's current proposal to EPA
- Questions & Answers

Pule and Introductions

- Our kūpuna
- Jessie Marques, Facilitator
- County Council Chair Maile David
- Lee Lord, Managing Director, representing Mayor Roth
- Department of Environmental Management
- Office of the Corporation Counsel – Betsy Strance and Malia Kekai
- Department of Finance – Deanna Sako
- Department of Health – Mark Tomomitsu
- Engineering Partners Inc.

Purpose and Ground Rules

- Purpose:
 - To keep the community informed and to seek your input as we go before the EPA and decide on next steps.
- Ground rules

Brief overview of Pāhala and Nā'ālehu wastewater treatment - history and evolution

- Large capacity cesspools were constructed by C. Brewer & Co. Ltd
- 1999: EPA rule under Title 40 CFR §144.88 prohibits new large capacity cesspools (LCC) & requires the closure of all existing LCCs in 2005.
- 2006: County agrees to assume ownership of the existing C. Brewer sewer system and to construct and maintain a new system.
- Interim: County obtains SRF funding, executes contracts with vendors, et cetera
- June 2017: The County enters an Administrative Order on Consent with EPA to close the large capacity cesspools serving Pāhala by June 2021.
- September 2019: EPA accepted the County's request to extend the Pāhala LCC closure date to April 2023.

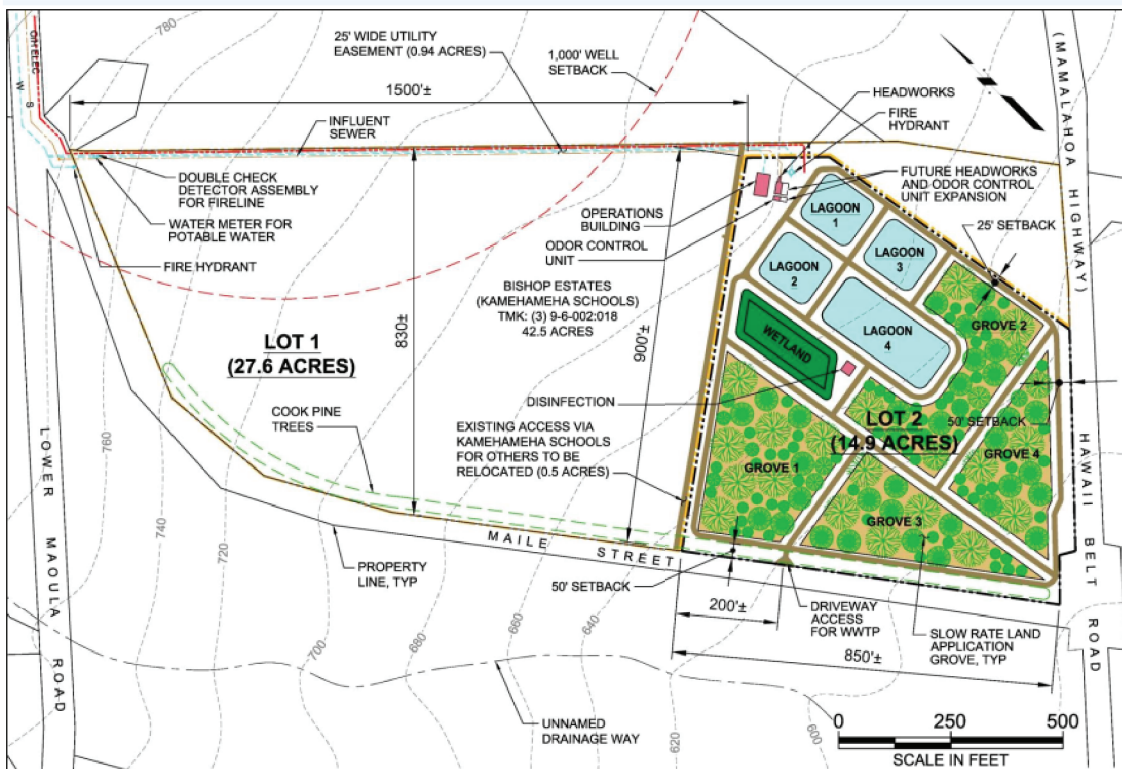
Brief overview of Pāhala and Nā'ālehu wastewater treatment - history and evolution

- February 2020: Environmental Assessment determines Finding of No Significant Impact (FONSI)
- May 2021: Draft geotechnical survey report identifies subsurface voids at wastewater treatment plant site.
- August 2021: After County submits a design-build proposal for Pāhala WWTP, EPA issues a notice of noncompliance.
- October 2021: County requests withdrawal of FONSI.
- November 2021: EPA delegation travels to Hilo and Ka'ū for site visits and in-person meetings
- February 2022: County submitted IWS proposal to EPA

Current actions required by AOC

- Complete construction of the Pāhala Secondary Wastewater Treatment Facility (Lagoons were preferred alternative in EA)
- Connect the existing wastewater collection system to the PSWTF
- Close the Pāhala community large capacity cesspools
- Replace the wastewater collection system serving the 109 properties connected to the cesspools and connect the new collection system to the PSWTF.
- Require connections of at least 65 homes to a newly accessible sewer collection.

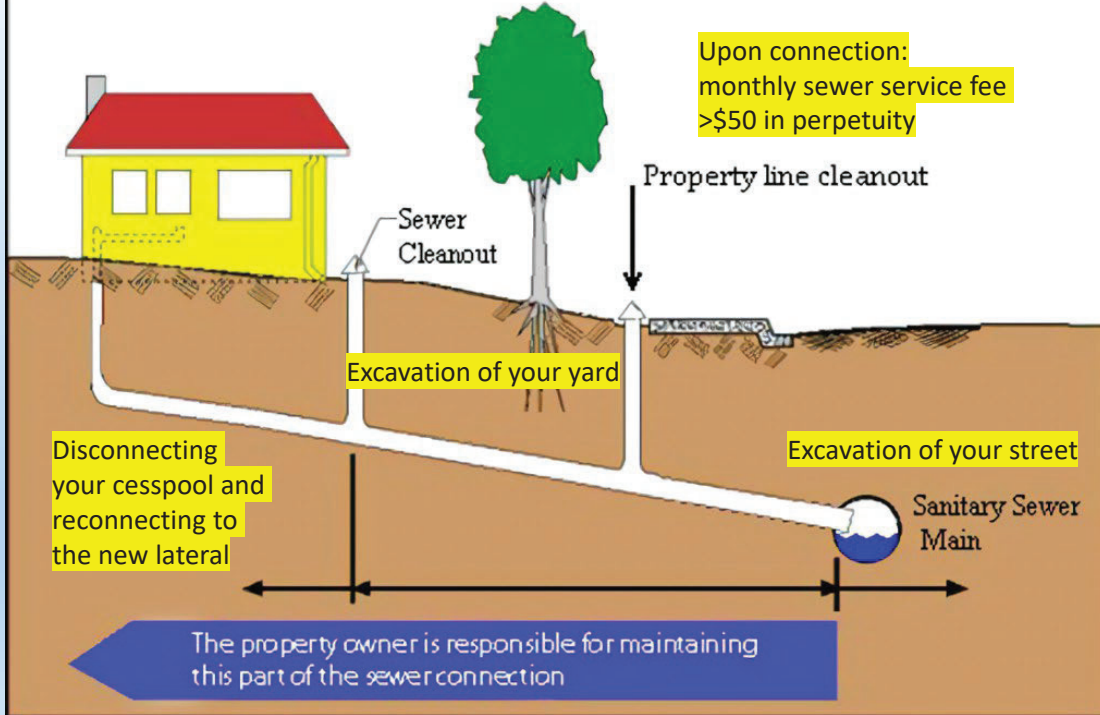
Preferred option identified in the EA



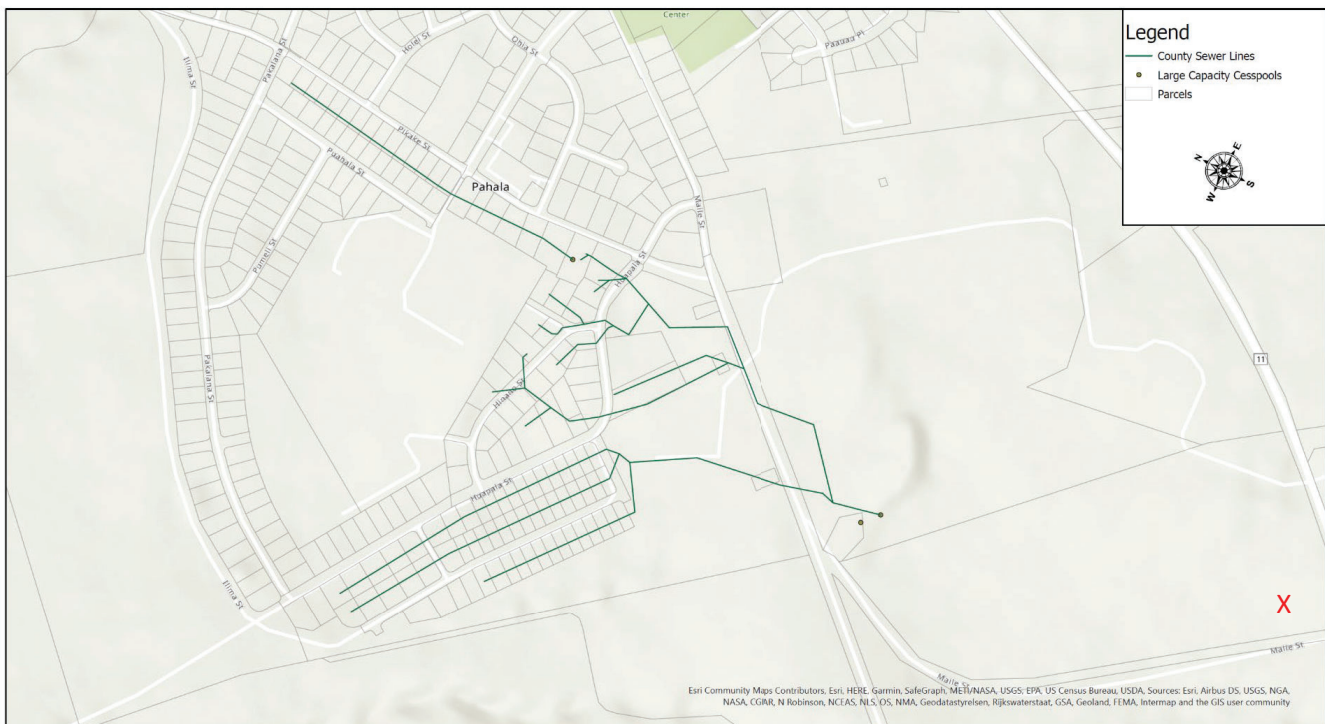
Since the AOC was negotiated, geotechnical (*lava tubes and existing ground conditions*) and economic factors (*approx. \$250K per connection*) have made this option unfeasible.



Typical House Sewer Connection



Pāhala Sewer Network



County's current proposal to EPA

- Modify or enter into a new AOC, due to technical and economic considerations, to install Individual Wastewater Systems (IWS) in Pāhala as approved by the Department of Health (DOH).
- The next four slides will provide IWS examples.

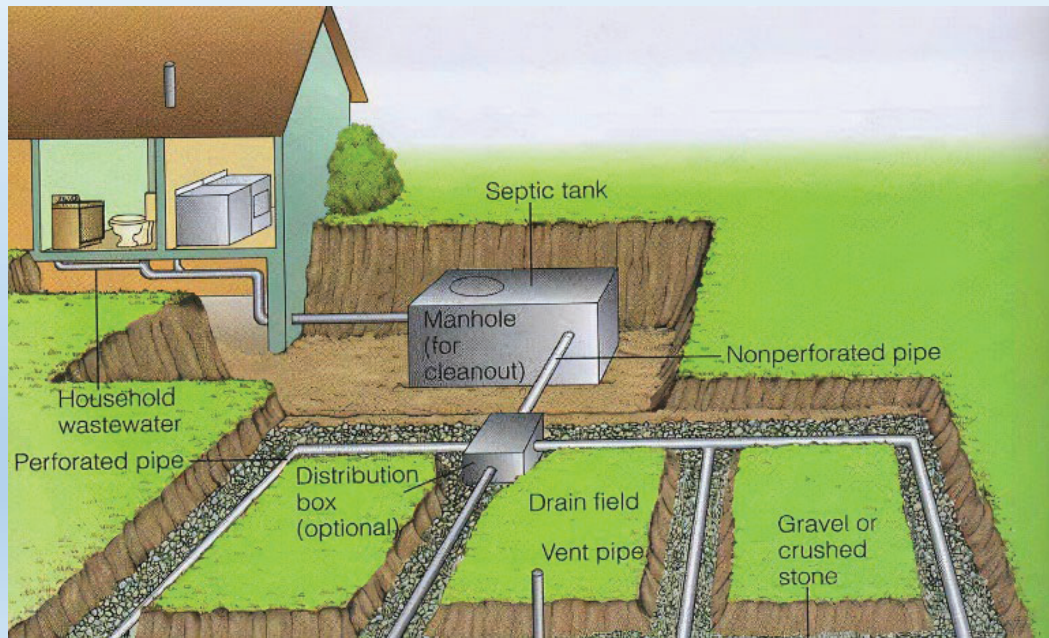
Septic tank with seepage pit for small lots (will be underground upon completion)



Orencia 1,500-gallon tank and block-lined seepage pit



Septic tank systems with standard leach field for larger lots (10,000 sf and up)



Layered Soil Treatment Systems

Wastewater is pumped from a septic tank to a leach field.

Instead of gravel, a “layer cake” leach field will have a sawdust and sand base layer, beneath another layer of sand, both which are underground.

A modified leach field allows for superior nitrogen and bacteria removal at minimal maintenance costs.

LAYERED SOIL TREATMENT (“LAYER CAKE”) SYSTEMS



The **layered soil treatment system**, fondly known as the “**layer cake**,” is a passive, non-proprietary technique that layers sand over a mix of sand and wood cellulose (commonly known as sawdust) in the leach field. Layer cake systems most closely resembles a conventional Title 5 septic system: All wastewater from a house is sent to a typical 1,500-gallon septic tank, with no interior plumbing change required. A pump chamber then sends the wastewater to the modified leach field, where it is evenly distributed over the layered system. For homes that required a completely new septic systems, the simplicity and low maintenance of the layer cake was very popular.

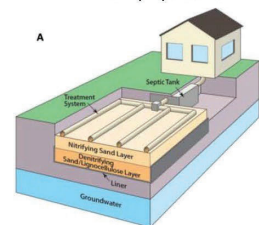
How Layer Cake Systems Remove Nitrogen

As opposed to using treatment tanks like the three other technologies used in this project, layer cakes treat nitrogen in the leach field by passing wastewater through a sand layer (where oxygen converts it to nitrate) and then through a sand/sawdust layer (where there is no oxygen and the nitrate converts to nitrogen gas).

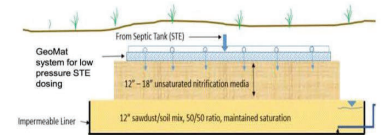
Operating and Maintaining Layer Cake Systems

One of the benefits of the layer cake system is the low operating and maintenance requirements. Other than annual maintenance of a simple pump, this system has no other components that require inspection. Estimated annual costs are \$300 or less.

“This is the least expensive solution to the cesspit problem!”



Unlike conventional septic systems, NRB’s remove most Nitrogen and bacteria to very low levels. Local mulch is used as a carbon and microbe source and local “blue rock sand” will bind up wastewater phosphorus.

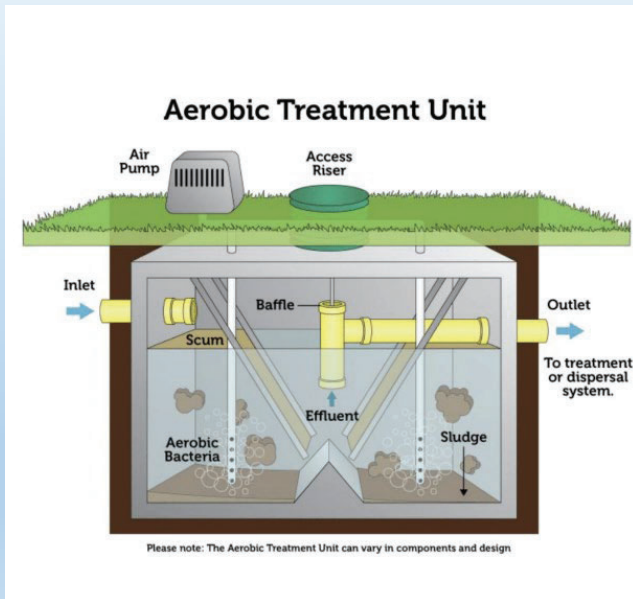


A septic tank is needed and a small tank and pump for timed pulsing the Geomat diffuser for a hydraulic loading rate of 0.6 gal/sf/d. The treated leachate is suitable for sump discharge.

HDOH HAS STATED INTENT TO APPROVE NBR’S.



Aerobic treatment units



An ATU pumps oxygen to accelerate the natural process of breaking down organic material.

Compare and contrast

Individual Wastewater Systems

- No connection fees
- Less disruptive to construct
- Septic systems are approved by DOH statewide
- Could be the model for similar communities
- Less labor intensive

Sewer treatment plant and collection

- Currently the only solution approved by EPA
- Higher quality effluent
- Very expensive
- Constructability challenging
- Very disruptive
- High operations and maintenance costs

Option 1: EPA accepts County proposal, and County pursues one of the paths below

County contractor-developed

- Department of Health will review and may approve the County to design-build IWS for the community and close out cesspools.
- Compliance with modified AOC is possible to start immediately.
- Details need to be finalized with DOH on the permitting process.

Homeowner-developed

- Department of Health approves IWS and homeowners to hire contractors to design and build.
- County is exploring possibility of vouchers to cover costs.
- Compliance with modified AOC is possible to start immediately.

Option 2: EPA rejects proposal, enforces order, requires PWWTF & sewer mains, assesses fines



Kanuku Street ('Aiea, O'ahu)

Waimalu Sewer
Rehabilitation/
Reconstruction Project
circa 2010-2011

Photo by Community Planning & Engineering Inc.

Next steps

- County and EPA are next scheduled to meet again April 1st.
- COH will keep the Pāhala and Nā'ālehu communities informed as to the status of the projects as new information becomes available.

Questions and Answers

cohdem@hawaiiicounty.gov

Department of Environmental Management FY 22-23 Budget and Programs

Presentation to the Special Finance Committee meeting
of the Hawai'i County Council

April 14, 2022



What we do

- Accept 480 million pounds per year of solid waste for disposal in the West Hawai'i Sanitary Landfill at one of 22 conveniently located SWD facilities
- Accept 1.86 billion gallons of wastewater for treatment per year
- Clean 106,000+ feet of sewer lines per year
- Video inspect 53,000+ feet of sewer lines per year
- Remove about 1,713 abandoned and derelict vehicles from public roads (FY 21-22 estimate: 2,500+)
- Accept 4.75 million pounds of cardboard for recycling per year
- Accept 2.56 million pounds of non HI-5 glass for recycling per year
- Accept 73.5 million pounds of greenwaste to convert into mulch per year
- Also: HI-5 redemption centers, eight Reuse Centers, appliance drop off sites, household hazardous waste collection events

Overall organization

- Administration & Business Services (General Fund and grant funding)
 - Director, Deputy, Secretary, Planner, Safety Coordinator, PIO, Accounting, HR, Payroll
 - The administrative expenses are reflected in the General Fund but are funded by charges to the three special funds.
- Solid Waste Division (Solid Waste Fund and Vehicle Disposal Fund)
 - SWD administration, operations, compliance, design, construction, recycling and landfill diversion, Derelict and Abandoned Vehicle Program
 - Tipping fees and the general fund cover staff and operations of the Solid Waste Division, except DAV
 - Vehicle disposal fees, towing charges, storage fees, and auctions fund staff and expenses of the DAV program (does not rely on the General Fund)
- Wastewater Division (Sewer Fund)
 - WWD administration, engineering, compliance, construction, wastewater collection, wastewater treatment
 - Sewer fees and the general fund cover staff and operations of the Wastewater Division

Funding efforts FY 21-22

- Prioritized funding for Hilo Wastewater Treatment Plant for repair and replacement of corroded assets
- Federal sources sought: Applied for Congressionally Directed Spending; Water Infrastructure Finance and Innovation Act; U.S. Bureau of Reclamation; USDA Rural Development; U.S. Economic Development Administration
- State sources sought: Seeking capital improvement funds from the Legislature; State Revolving Funds
- County: General obligation bonds

Staffing efforts FY 21-22

- Solid Waste Division Chief – Efforts are ongoing to recruit for this position. SWD leadership continues to manage the division in an interim capacity.
- DEM has continued operations throughout the global pandemic with only occasional unscheduled service interruptions.
- An informal work resource allocation study for Wastewater Division estimates that given the current number of WWD engineers, each engineer requires approximately 3.8 times the number of working hours in a shift to manage all projects adequately. Additional staffing is needed to prevent burnout.

New positions in the (March 1) budget

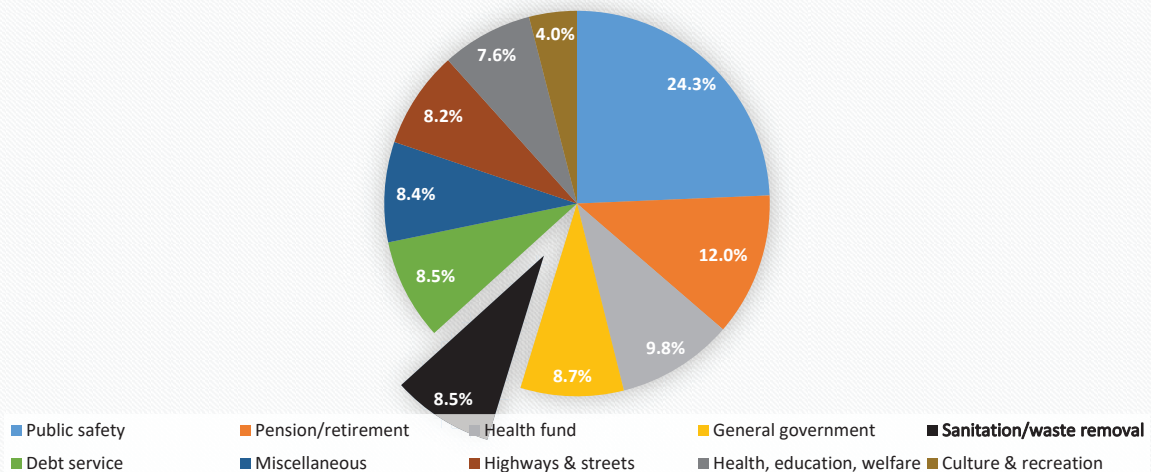
- Admin
 - Safety & Driver Improvement Supervisor
 - Information & Education Specialist II
- Business Services
 - Clerk III
 - Accountant III
- Solid Waste Division
 - Program Support Technician
 - Supervising Scale Attendant
- Wastewater Division
 - Environmental Compliance Manager
 - Wastewater Pretreatment Coordinator
 - WWTP Operator IV (x2)
 - Civil Engineer IV (x3)

Regulatory progress

- Working with EPA and DOH to revise the Administrative Order on Consent to close the large capacity (gang) cesspools in Pāhala and Nā'ālehu, and to use treatment(s) other than aerated lagoons.
 - Would result in substantial savings on project costs and helps to avoid penalties.
- County has entered an AOC with the Department of Health and will be required to develop a pretreatment program for industrial users of the public sewer system. Bill is undergoing legal review.

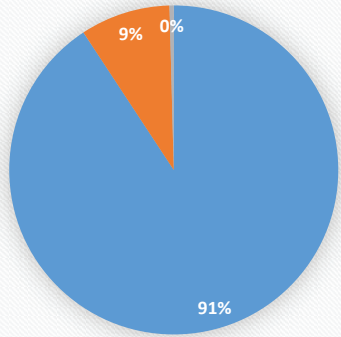
8.5% of the County's operating budget goes to sanitation and waste removal (same as FY 21-22)

FY 22-23 Operating budget by category



DEM Admin budget: \$1,693,016

Expenditures

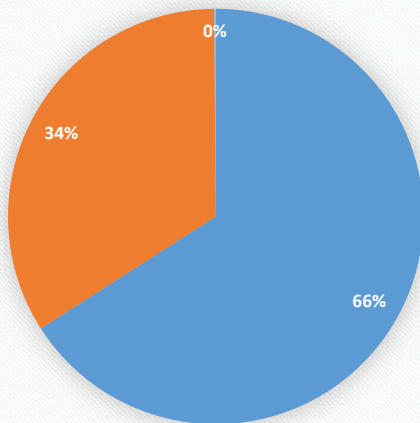


- Salaries and wages
- Other current expenses
- Office & computer equipment

- Salaries and wages: \$1,340,838
- OCE: \$149,710
- Equipment: \$6,970

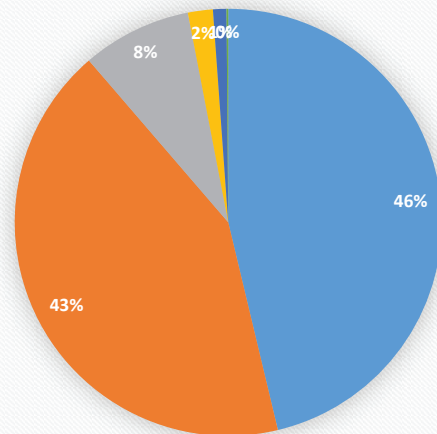
Vehicle Disposal Fund budget: \$7,071,039

Revenue



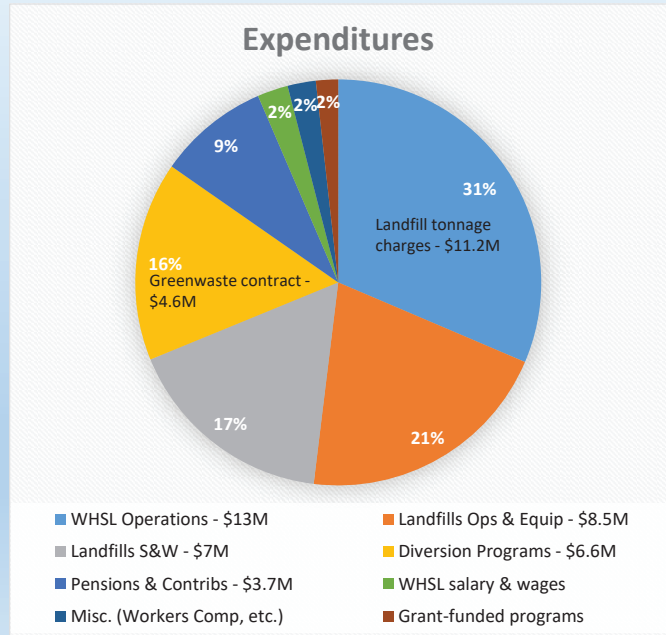
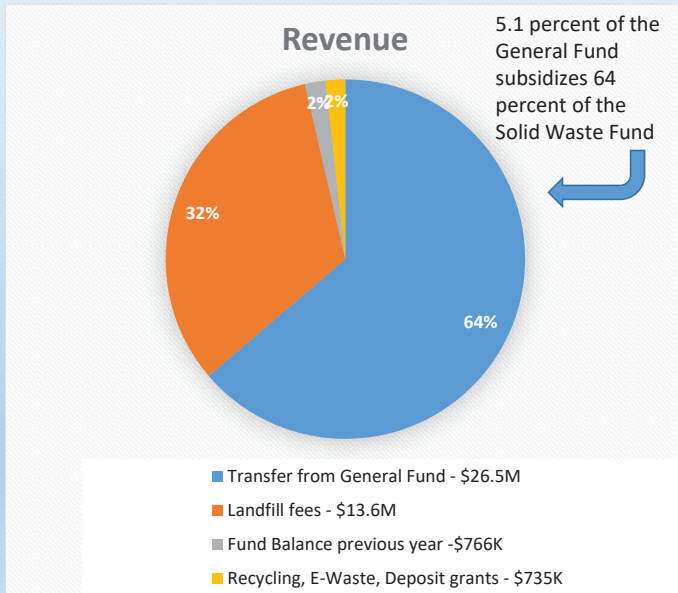
- Fund Balance previous year - \$4.6M
- Vehicle Disposal Fee - \$2.4M
- Storage fees & misc. - \$8.5K

Expenditures

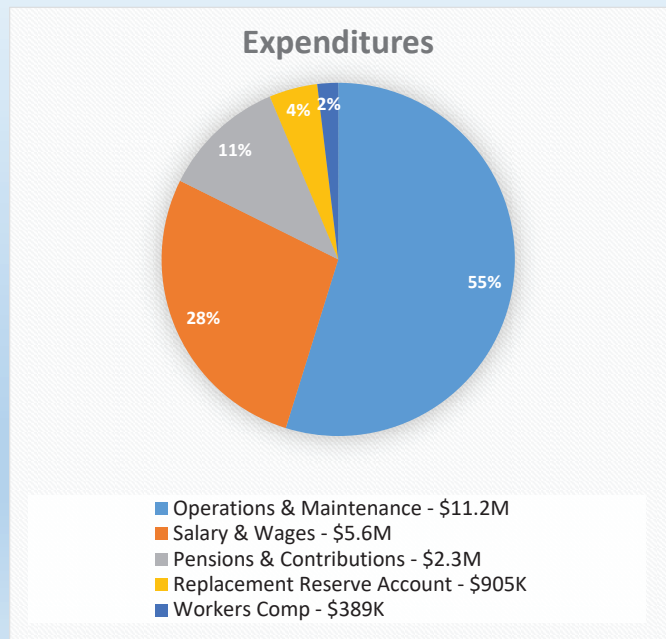
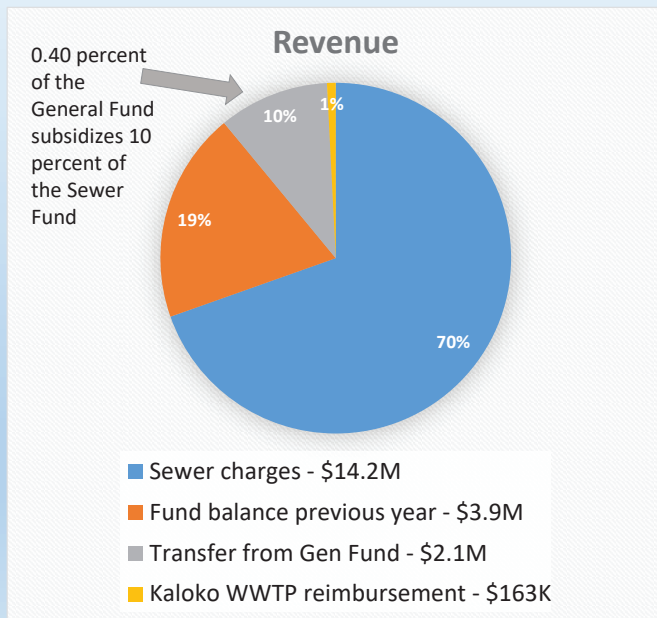


- Operations - \$3.3M
- Cap budget trans - \$3M
- Debt service trans - \$585K
- Pensions & contributions
- Salary & wages
- Workers Comp

Solid Waste Fund budget: \$41,565,092



Sewer Fund budget: \$20,452,914



Increasing equipment & facility maintenance

Wastewater	FY 21-22 Budget	FY 22-23 Estimate
Equipment Repair & Maintenance	\$465,003	\$267,700
Facility Repair	\$265,800	\$911,000
Equipment Parts/Supplies	\$671,300	\$778,300
Solid Waste	FY 21-22 Budget	FY 22-23 Estimate
Landfills Equipment R&M	\$769,200	\$1,413,000
Landfills Facility Repair	\$210,000	\$525,000
Landfills - Equipment Parts/Supplies	\$750,000	\$870,000
WHSL – Equipment R&M	\$230,000	\$230,000
WHSL – Facility Repair	\$190,000	\$190,000
WHSL - Equipment Parts/Supplies	\$240,000	\$240,000
Diversion Program – Eqpt R&M	\$500	\$500
Landfills Equipment R&M	\$769,200	\$1,413,000
Total	\$3,791,803	\$5,425,500



Mahalo

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