

Pāhala and Nā'ālehu Large Capacity Cesspool Closures

County of Hawai'i

August 24, 2023

Nā'ālehu Community Center

A photograph of a tree with green leaves and a prominent red flower, likely a Pōhaku, set against a blue sky. The image is used as a background for the slide.

Agenda

- Pule and introductions
- Ground rules and purpose
- Brief Historical background
- Maps identifying properties within the project areas
- Wastewater treatment terminology
- Progress update since February 2023 meeting in Pāhala
- Cesspool closure milestones for Pāhala and Nā'ālehu
- Semi-Annual Report Progress for January-June 2023
- Treatment options being considered
- What can we expect for the Nā'ālehu PER?
- Next Steps
- Questions & answers

Pule and Introductions

- Welcome our kūpuna - E pule kākou
- Community members and leaders
- County of Hawai'i personnel
- U.S. Environmental Protection Agency via Zoom
- Opening public comments (2 minutes per person) – more opportunities to provide oral and written comment will be available during and after this meeting

Ground rules

- Please be respectful.
- Place cell phones on mute/vibrate.
- The facilitator will recognize one person to speak at a time.
- Pāhala and Nā'ālehu impacted community members will be given the opportunity to ask questions first and others to follow as time permits. All will be able to provide written comments and questions.
- Questions should be held to 2 minutes.
- Profanity or abusive language will not be tolerated.

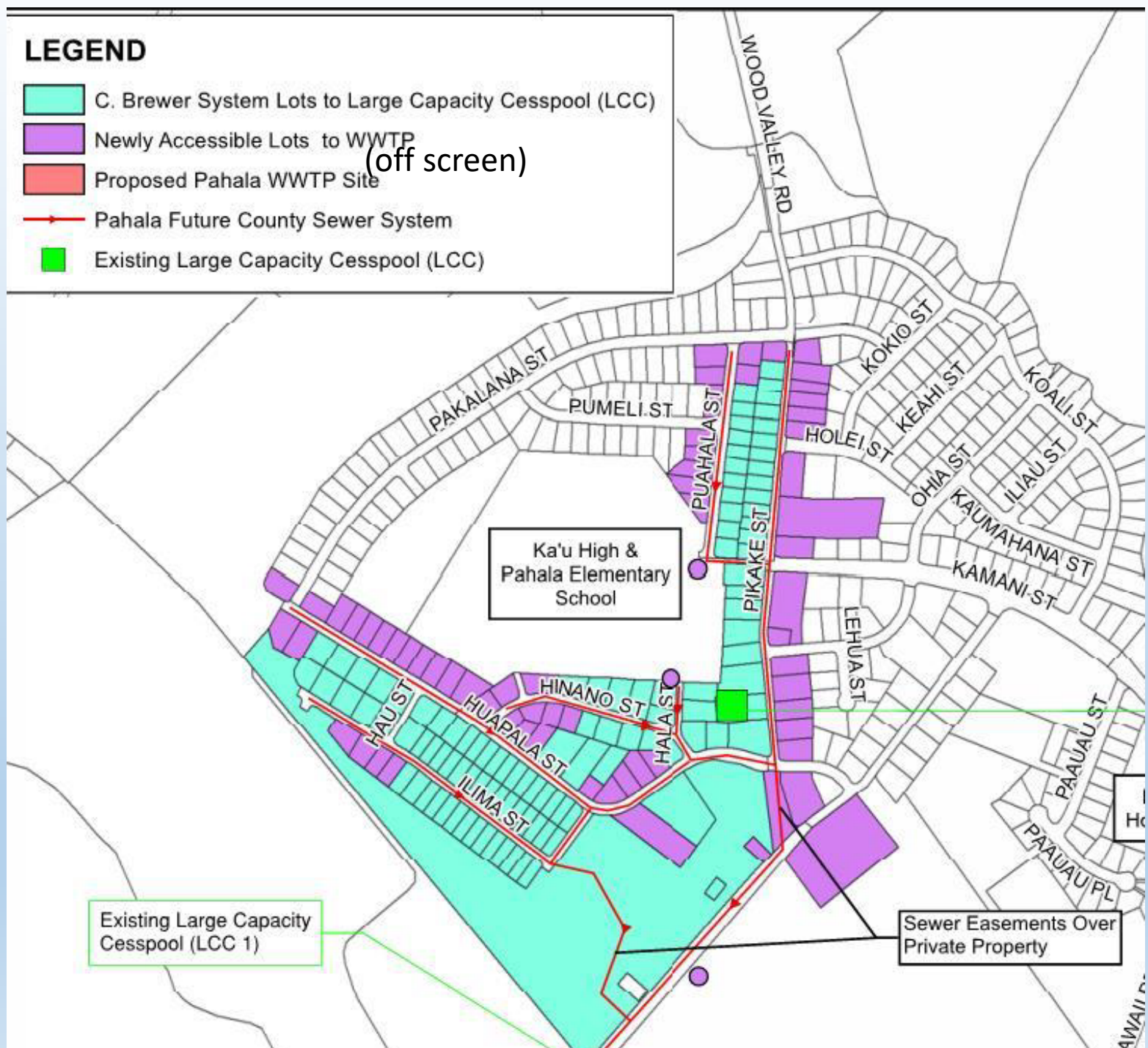
Purpose of this meeting

- Present the findings of the Pāhala Preliminary Engineering Report, and give the status of the Nā'ālehu Preliminary Engineering Report
- Seek full participation with community members impacted by the AOC about the status of the large capacity (gang) cesspool closure projects within Pāhala and Nā'ālehu.
- Reinforce the County's commitment to comply with the revised AOC to arrive at a community-based solution to close the large capacity cesspools.

Brief historical background

- The County of Hawai‘i inherited ownership of plantation-era large capacity cesspools in Pāhala and Nā‘ālehu from C. Brewer.
- The federal Safe Drinking Water Act (SDWA) and the Clean Water Act require the closure of these large capacity cesspools.
- Under a revised 2022 consent order, the County agrees to close these large capacity cesspools in Pāhala and in Nā‘ālehu to avoid significant penalties and to comply with federal law.
- The County is responsible for identifying and providing approved wastewater treatment for 174 properties in Pāhala and 194 properties in Nā‘ālehu as specified in the AOC.

Pāhala lots



Nā'ālehu lots



Wastewater treatment terminology

- AOC: Administrative Order on Consent. Legally binding agreement approved in June 2017 between EPA and County; revised in August 2022.
- Package plant: Pre-manufactured, self-contained treatment facilities used to treat wastewater in small communities.
- Collection system: The public sewer system that collects wastewater from individual parcels and conveys it to a treatment plant.
- SDWA: Safe Drinking Water Act
- CWA: Clean Water Act
- DOH: Hawai'i Department of Health
- Individual wastewater system (IWS): A decentralized system for treating wastewater on a parcel's property. Allowed by DOH when a parcel is considered inaccessible to a wastewater collection system. Examples include septic systems and aerobic treatment units (ATU).



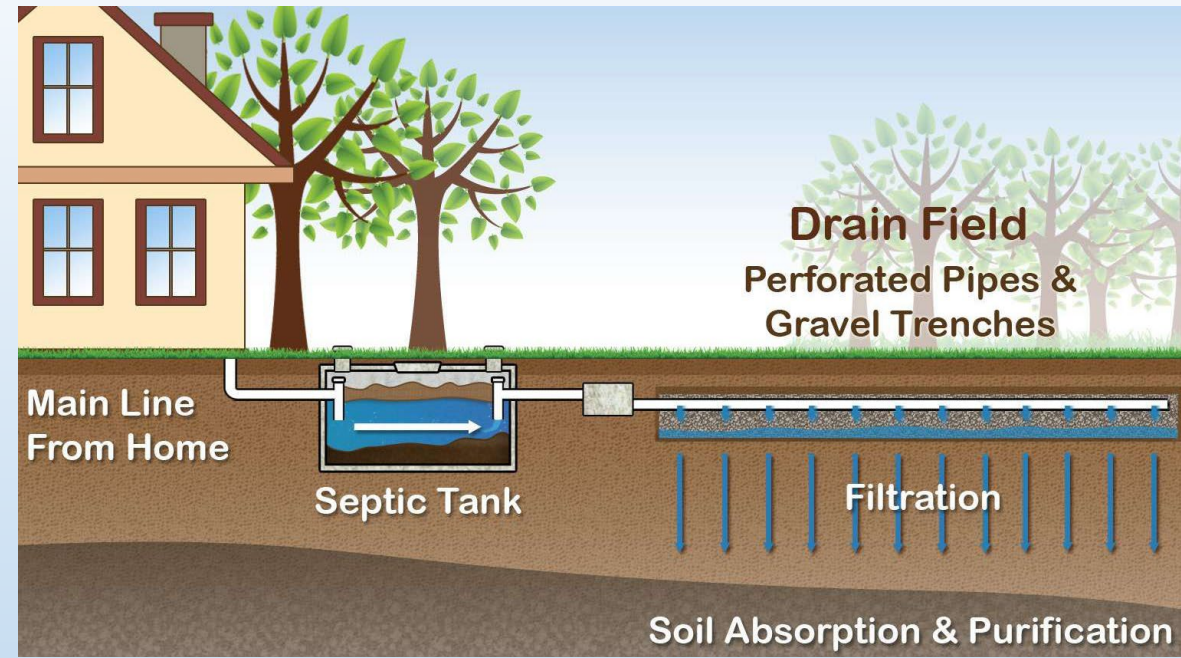
A **package plant** is a small centralized wastewater treatment plant. Unlike the Individual Wastewater Systems shown on the next slide, wastewater is conveyed to a package plant through sewer laterals and mains.

*The images on this slide and the next slide are for illustration only. The County has not made any decisions regarding the merits of one option or another.



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

IWS can be designed to fit different sizes of lots.



- Above left: Septic system for a small lot (the tank and seepage pit will be buried)
- Above right: Conventional septic system & leach field
- Right: An aerobic treatment unit (ATU), is a type of individual wastewater system designed for small developments not accessible to a centralized sewer system.



Progress since February 2023 public meeting

- February 23, 2023 – Public meeting in Pāhala
- April 19: Pāhala Preliminary Engineering Report (PER) submitted to U.S. Environmental Protection Agency
- July 31: Environmental Protection Agency accepts the data in the Pāhala PER and requires robust community input
- Preliminary Engineering Report is being prepared for Nā'ālehu
- Environmental Information Document is being prepared for Pāhala

Pāhala cesspool closure milestones

- ✓ Launch webpage – 30 days after 8-22-22 (Aug. 12, 2022)
- ✓ Initial public meeting – 45 days after 8-22-22 (Aug. 31, 2022)
- ✓ Feasibility Evaluation Report (FER) – 60 days after 8-22-22 (Oct. 21, 2022)
- ✓ Preliminary Engineering Report – 180 days after approval of FER
 - Submitted April 2023; approved July 31, 2023 (EPA letter available on COH website)
- Environmental Information Document – 180 days after approval of PER
 - Due January 27, 2024
- Implementation Plan – 30 days after approval of EID
- **Large Capacity Cesspool closure – No later than July 21, 2026**

Nā'ālehu cesspool closure milestones

- ✓ Launch webpage – 30 days after 8-22-22 (Aug. 12, 2022)
- ✓ Initial public meeting – 45 days after 8-22-22 (Aug. 31, 2022)
- ✓ Feasibility Evaluation Report – 60 days after 8-22-22 (Oct. 21, 2022)
- Preliminary Engineering Report – 180 days after approval of FER
 - Due September 3, 2023
- Environmental Information Document – 365 days after approval of PER
- Implementation Plan – 60 days after approval of EID
- **Large Capacity Cesspool closure – No later than Dec. 31, 2027**

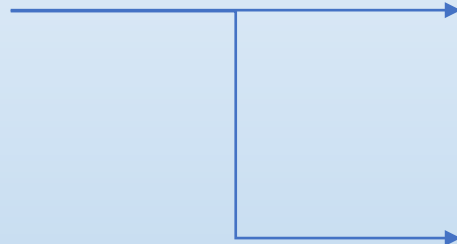
Semi-Annual Report Progress for Jan-June 2023

- Pāhala Preliminary Engineering Report
 - Submitted to EPA in April; information approved July 31, 2023
- Nā'ālehu Preliminary Engineering Report:
 - In progress – will be submitted to EPA by September deadline.
- Environmental Information Document Preparation:
 - In progress for Pāhala; future action for Nā'ālehu
- Implementation Plan:
 - Pending completion of EID process
- County website:
 - Updated monthly (website address at end of presentation)

Treatment options being considered for both communities under the AOC

(In no particular order)

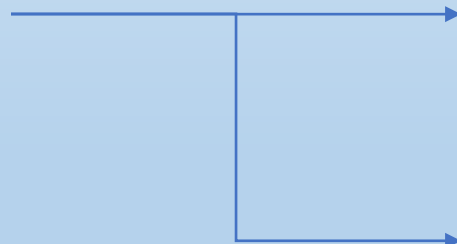
Centralized
package plant



I. New sewer collection

II. Existing sewer collection

Individual
Wastewater
System



III. Maintenance Contract

IV. Operating Permit

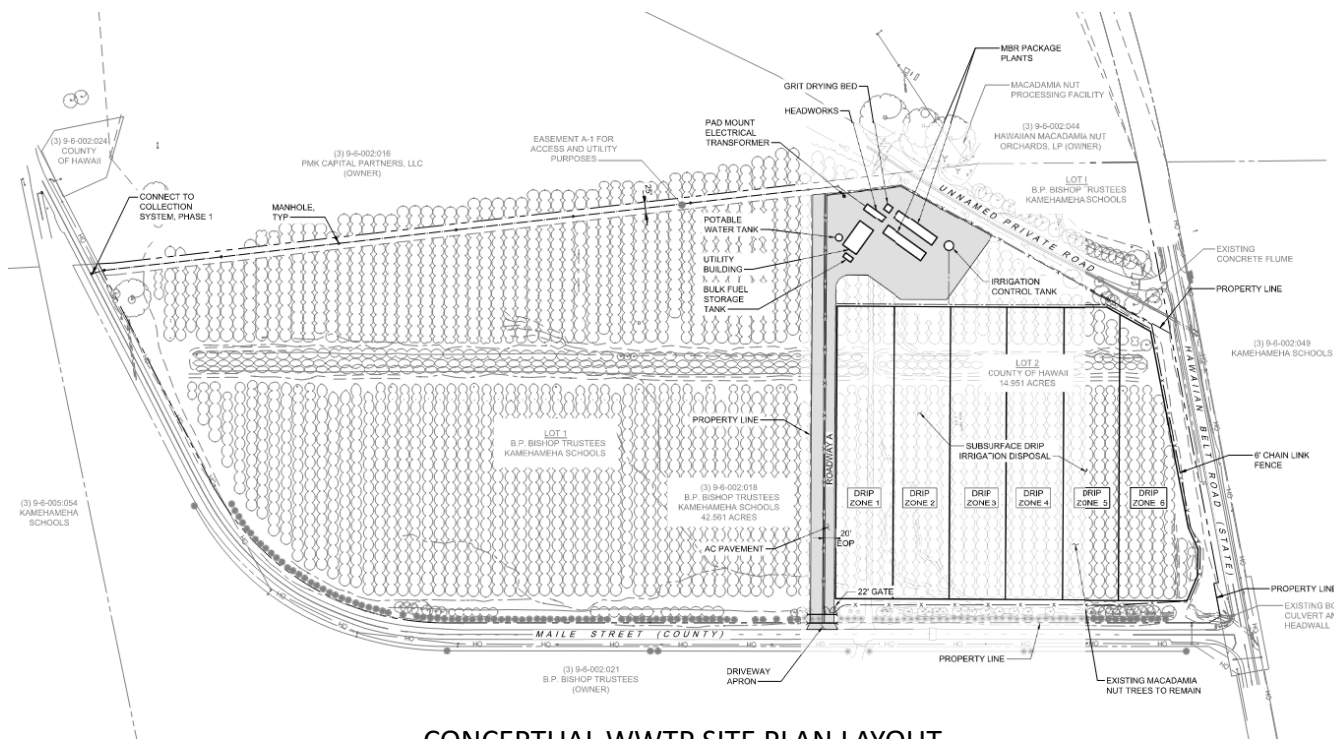
“No action”



(This option must be evaluated to develop a baseline for impacts compared to the other four options)

OPTION 1: CENTRALIZE PACKAGE PLANT WITH NEW SEWER COLLECTION SYSTEM

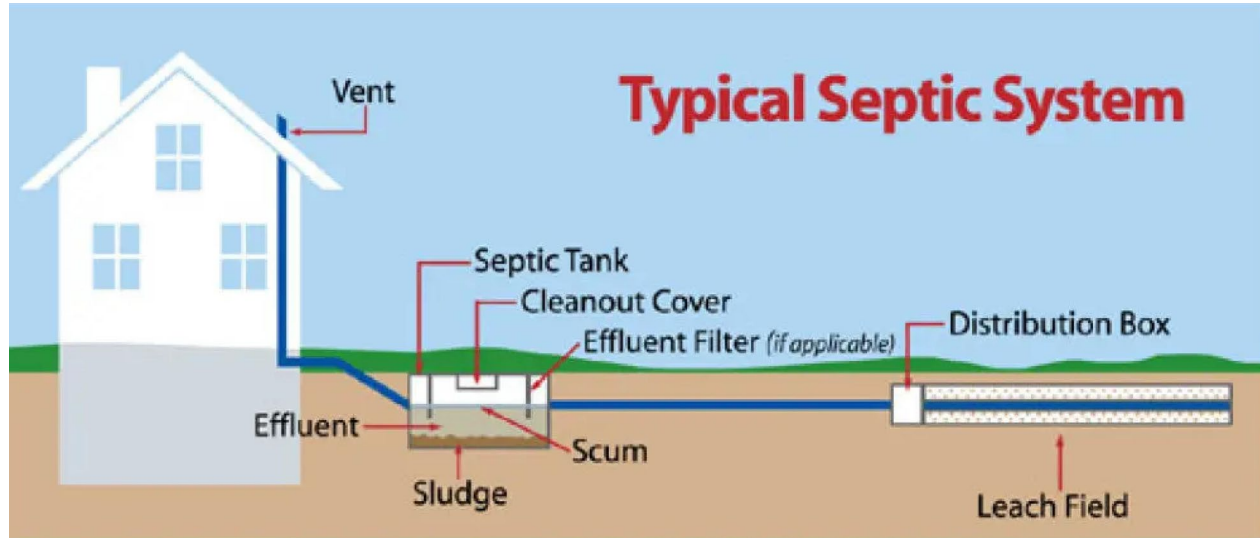
- Construct new collection system and construct new package Wastewater Treatment Plant



CONCEPTUAL WWTP SITE PLAN LAYOUT



OPTION 3: INDIVIDUAL WASTEWATER SYSTEM - COUNTY MAINTENANCE PROGRAM

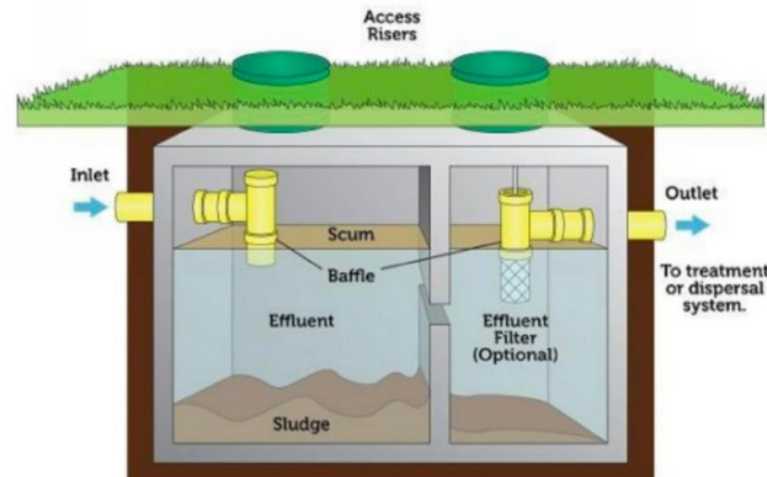
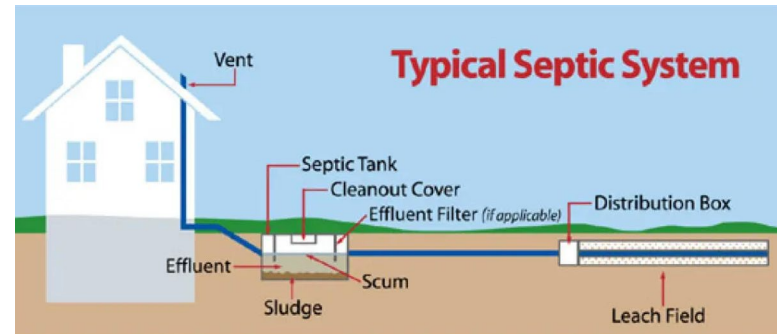


- County funds and manages project of the construction of IWS. IWS typically consist of a septic tank, disposal systems (leach field or seepage pit), and interconnecting piping between IWS and existing dwelling.
- County will administer and manage a maintenance program for IWS. Maintenance program will establish rules and regulations, for monthly fees/ penalties, County monitoring and reporting, and IWS educational information for homeowners.



OPTION 4a: INDIVIDUAL WASTEWATER SYSTEM - OPERATING PERMIT (COUNTY PROJECT)
































































- County funds and manages project for the construction of IWS. IWS typically consist of a septic tank, disposal systems (leach field or seepage pit), and interconnecting piping between IWS and existing dwelling.
- County will administer an operating permit program to IWS homeowners, which homeowners will be responsible for the operating and maintenance, monitoring and record keeping of their own IWS. This would include homeowners being responsible for hiring service providers for trouble calls, conducting repairs, and periodic pumping of septic tank.



OPTION 4b: INDIVIDUAL WASTEWATER SYSTEM - OPERATING PERMIT (VOUCHER PROGRAM)

- County will administer a voucher program which will grant homeowners with funding to hire Professional Engineer to design new IWS and hire Contractor to construct IWS.
- Homeowner will be responsible to hire and coordinate with Professional engineer for placement of IWS and overall design of IWS.
- Homeowner will be responsible for hiring contractor to construct IWS.
- County will administer an operating permit program to IWS homeowners, which homeowners will be responsible for the operating and maintenance, monitoring and record keeping of their own IWS. This would include homeowners being responsible for hiring service providers for trouble calls, conducting repairs, and periodic pumping of septic tank

PĀHALA TREATMENT OPTIONS: RESPONSIBILITIES OF PARTIES

	Option 1	Option 2	Option 3	Option 4a	Option 4b
Funds Project					
Manages Project					 
Coordinate with Homeowners throughout the project					 
Public outreach and education					
Long-Term operation and maintenance					
Renewal of DOH IWS Variance Applications (As Applicable)					 
Participates and provide Right-of-Way Access throughout project					
Restoration of Properties Due to Construction Activities (But: Footprint of IWS will need to remain clear of permanent structures)					 
Cooperate with all involved parties	 	 	 	 	 
Pay Monthly Sewer Fees*					
Adhere to HAR 11-62 rules for IWS setbacks from vegetation and structures					
Provides property access to maintenance personnel for system maintenance					

DISADVANTAGES OF PĀHALA TREATMENT OPTIONS – (CORRECTED)

		Option 1	Option 2	Option 3	Option 4a	Option 4b
DRAWBACKS	Existing system surpasses life expectancy, requiring continuous repairs and rehabilitation		✓			
	High Capital Cost	✓	✓			
	High Operational and Maintenance	✓	✓			
	Lack of Capacity for system expansion		✓			
	Probability of not meeting Implementation Deadline	✓	✓			
	Continuous access for County maintenance personnel onto private properties		✓	✓		
	Disruption to residents' roads and properties due to construction activities	✓	✓	✓	✓	✓
	Legal and Compliance issues	✓	✓			
	Homeowner to maintain IWS setbacks from roots and structures			✓	✓	✓
	Homeowner responsible for system maintenance, routine monitoring, and reporting to County				✓	✓
	Increased maintenance activities (vehicle traffic, pumping, operational noises, maintenance personnel presence, etc.)	✓	✓	✓	✓	✓

* An incorrect version of this slide was presented on 8/24. This slide has been corrected.

If “No Action”

- County remains in violation of the federal Safe Drinking Water Act, which required closure of large capacity cesspools by April 5, 2005.
- Not protective of human health and the environment.
- Any violation of the AOC will result in the County paying escalating fines of \$300 to \$1,000 per day until the violation is cured.

Pāhala PER: Treatment options are protective of human health and the environment

Table 1. Protection of Human Health and the Environment

Feasible Option	Regulatory Authority	Variations	Protective?
i. Package plant and new collection system	HAR 11-62 Subchapter 2	Variance granted by DOH for WWTP flow capacity	Yes
ii. Package plant connected to the existing collection system	HAR 11-62 Subchapter 2	Variance granted by DOH for WWTP flow capacity	Yes
iii. A maintenance contract model IWS program	HAR 11-62 Subchapter 3	Variations may be required for some lots for setback distances, etc.	Yes
iv. An operating permit model IWS program	HAR 11-62 Subchapter 3	Variations may be required for some lots for setback distances, etc.	Yes

Pāhala PER capital cost comparison

Table 2. Capital Cost Comparison

Feasible Option	Capital Cost	Cost per Lot
i. Package plant and new collection system	\$37.3 million	\$214,000
ii. Package plant connected to the existing collection system	\$23.6 million	\$136,000
iii. A maintenance contract model IWS program	\$5.7 - \$17.4 million	\$33,000 - \$100,000
iv. An operating permit model IWS program	\$5.7 - \$17.4 million	\$33,000 - \$100,000

Estimated operations and maintenance costs paid by the homeowner as presented in Pāhala PER

- Option 1, Option 2, Option 3
- Homeowner will be assessed a sewer fee of \$52 per month currently
- Annual cost \$624

- Option 4a (Homeowner Operating Model)
- Potential pumping every 3-5 years depending on usage (\$800-\$1,200)

- Option 4b (Homeowner Operating Model - Voucher program)
- Potential pumping every 3-5 years depending on usage (\$800-\$1,200)

Pāhala PER 30-year lifespan cost comparison

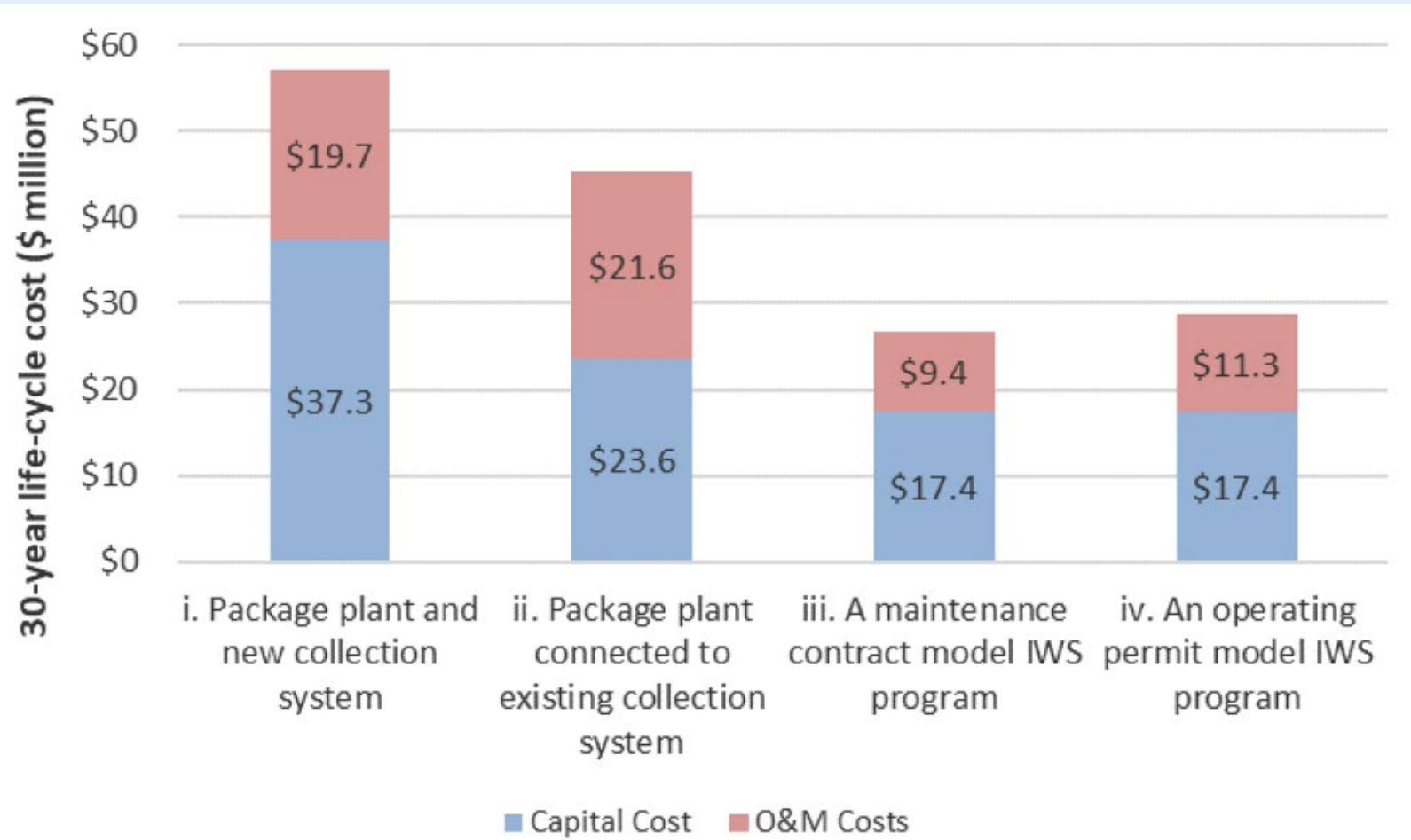


Figure 1. Life-Cycle Cost Comparison

Pāhala PER: Schedule for implementation

Table 4. Summary of Preliminary Implementation Schedule Assessments

Description	Feasible Options			
	i. Package Plant New Collection System	ii. Package Plant Existing Collection System	iii. Maintenance Contract Model IWS Program	iv. Operating Permit Model IWS Program
Entitlements and permitting	Q3 2024	Q3 2024	Q1 2024	Q1 2024
Design and construction	Q4 2027	Q4 2027	Q2 2026	Q2 2026
Estimated LCC closure	Q2 2027	Q2 2027	Q2 2026	Q2 2026
Revised AOC LCC closure milestone	July 21, 2026			
Risk of missing Revised AOC LCC closure milestone	High	High	Moderate	Moderate

Note: Q = quarter

What can we expect for the Nā'ālehu PER?

- Will describe the project details for each treatment option:
 - The planning area
 - The planning period
 - Construction phases
 - Owner and operator of the facility and/or system
 - Location of facility and/or system, including a map
 - Design parameters (e.g. processes, flow diagrams, pipe lengths)
 - Project costs
- We will submit to EPA for review
- We will post on the county website for your review and comment
- We will have a follow-up meeting in Nā'ālehu focused on this report

Next Steps – We need your participation

- Meeting in Pāhala to discuss the Pāhala PER
 - Date time, and location will be announced and notices given within 30 days
- Meeting in Nā'ālehu to discuss the Nā'ālehu PER
 - To be announced after submittal to EPA and posting on website
- Surveys will be provided and mailed to affected homeowners after each meeting
- District-wide meetings in February and August
 - Pāhala meeting in February 2024; Nā'ālehu meeting in August 2024
- We will be available for individual talk story sessions.
- Notices will be mailed and emailed to our current contact list, posted to newspapers, the DEM website, and the two community centers in Pāhala and Nā'ālehu.
- See our website for updates, video recordings, and documents.

Resources for More Information

- County website

- <https://www.hawaiicounty.gov/departments/environmental-management/pahala-naalehu/>

- DEM YouTube channel

- www.youtube.com/@cohenvironmentalmanagement

- EPA website

- <https://www.epa.gov/uic/closure-cesspools-pahala-and-naalehu-administrative-order-consent-county-hawaii>

Your input is valuable!

- If you have any questions, provide them to us tonight or email

cohdem@hawaiicounty.gov

- Reminder: Please sign in to ensure notification of future meetings

Mahalo for your participation in tonight's meeting – Questions?

Next meeting at Pāhala Community Center

<https://www.hawaiicounty.gov/departments/environmental-management/pahala-naalehu/>

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