

AGENDA ITEM: IV-1 INTEGRATED WASTEWATER MANAGEMENT PLAN PRESENTATION

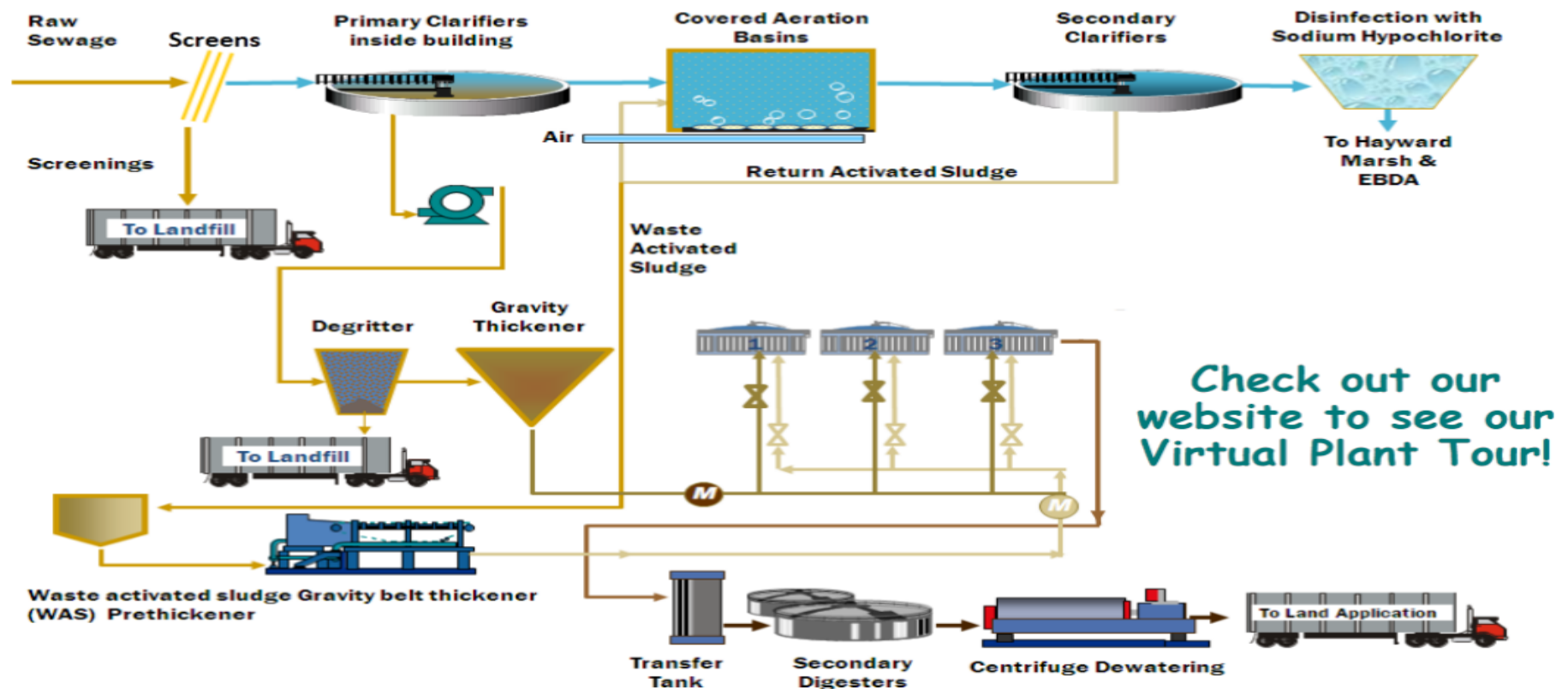
SUBJECT: APPROACH & LOGIC FOR BETTER UNDERSTANDING OF BEST PRACTICES WWTP FLOW CHART TO CLARIFY SCOPE, PROBLEMS AT HAND WITH EPA INFO GUIDE/POSSIBLE FUNDING & FLOW CHARTS OF NA'ALEHU SOLUTIONS/CHOICES & PRO'S/CON'S SITUATION NOW AT HAND AS TEMPLATE TO FOLLOW. PLEASE SEE SCREENS BELOW.

SUBMITTED BY: PAULETTE KA'ALA ROBERSON, RETIRED END OF 2019 AFTER 20 YEARS WITH CALIFORNIA PUBLIC UTILITY WASTEWATER TREATMENT/COLLECTIONS PLANT (CURRENT RESIDENT IN KEAUHOU, KONA)

Protecting Human Health and the Environment for Fremont, Newark, and Union City.



Union Sanitary District's Wastewater Treatment Process



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United States
Environmental Protection
Agency

Office of Enforcement and
Compliance Assurance (2224A)

EPA 305-B-05-002

www.epa.gov

January 2005

GUIDE FOR EVALUATING CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE (CMOM) PROGRAMS AT SANITARY SEWER COLLECTION SYSTEMS

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File Uploads: 2

File Names: USD-Union Sanitary District Flow Logic Chart.pdf, EPA SEWER WWTP CMOM Program.pdf

Capacity, Management, Operations and Maintenance

CHAPTER 1. INTRODUCTION

1.1 Purpose of this Guide

This guide identifies some of the criteria used by EPA to evaluate a collection system's management, operation, and maintenance (CMOM) program activities. The guide is intended for use by EPA and state inspectors as well as the regulated community – owners or operators of sewer systems collecting domestic sewage as well as consultants or other third-party evaluators or compliance assistance providers. Collection system owners or operators can review their own systems by following the checklist in Chapter 3 to reduce the occurrence of sewer overflows and improve or maintain compliance. The guidance herein may also be taken a step further. If a federal or state reviewer observes a practice that does not effectively meet the elements of a CMOM program, he or she may make recommendations to educate the operator, inspector, case developer, or those involved in a settlement agreement. Additionally, having key board members (policy makers) read this guide will also allow them to better understand the benefits of investing in good CMOM programs.

The guide is applicable to small, medium, and large systems; both publicly and privately owned systems; and both regional and satellite collection systems. Regardless of size, each owner or operator will have an organization and practices unique to its collection system. While these specific characteristics will vary among systems, the CMOM concepts and best management practices are likely to apply to all types of systems. Where appropriate, this document provides guidance on the differences.

Capacity, Management, Operations and Maintenance programs are a best practice for collections system owners and operators. Both comprehensive and holistic, a CMOM program is an information-based program to effectively run a collections system and help lower the risk of National Pollutant Discharge Elimination System permit violations and discharge violations. As the EPA notes in their Asset Management for Sewer Collection System fact sheet: "Lacking adequate focus on operations and maintenance, many collections system utilities have slipped into a reactive mode, with most of the operational resources allocated to emergency response and rehabilitation or replacement of failed components." Instead, a proactive and even predictive approach is encouraged by following a CMOM program.

In 2005, the EPA published a guide to evaluating and structuring a Capacity, Management, Operation and Maintenance program. The CMOM approach is not enforced by regulatory authorities, nor is it legally binding, but can be mandated as a response to consent decrees. CMOM program documentation and subsequent audits may also be required when submitting applications for an NPDES permit. The ultimate goal of the CMOM process is to assure that discharges from treatment facilities are free from pollutants. Therefore, preventing sanitary sewer overflows, which are illegal under the Clean Water Act, is also a priority.

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Nā'ālehu Large Capacity Cesspool Closure

Environmental
Information Document
and Preliminary
Engineering Report
Follow up

County of Hawai'i

November 16, 2023

Nā'ālehu Community Center

TONIGHT'S AGENDA

- Purpose of this meeting
- Cesspool closure milestones for Nā'ālehu
- Recapping Treatment Alternative Options
- Feedback the different treatment alternative options described with Preliminary Engineering Report (PER).
- Overview of Environmental Information Document
- Next Steps
- Questions & Answers
- Closing and Survey

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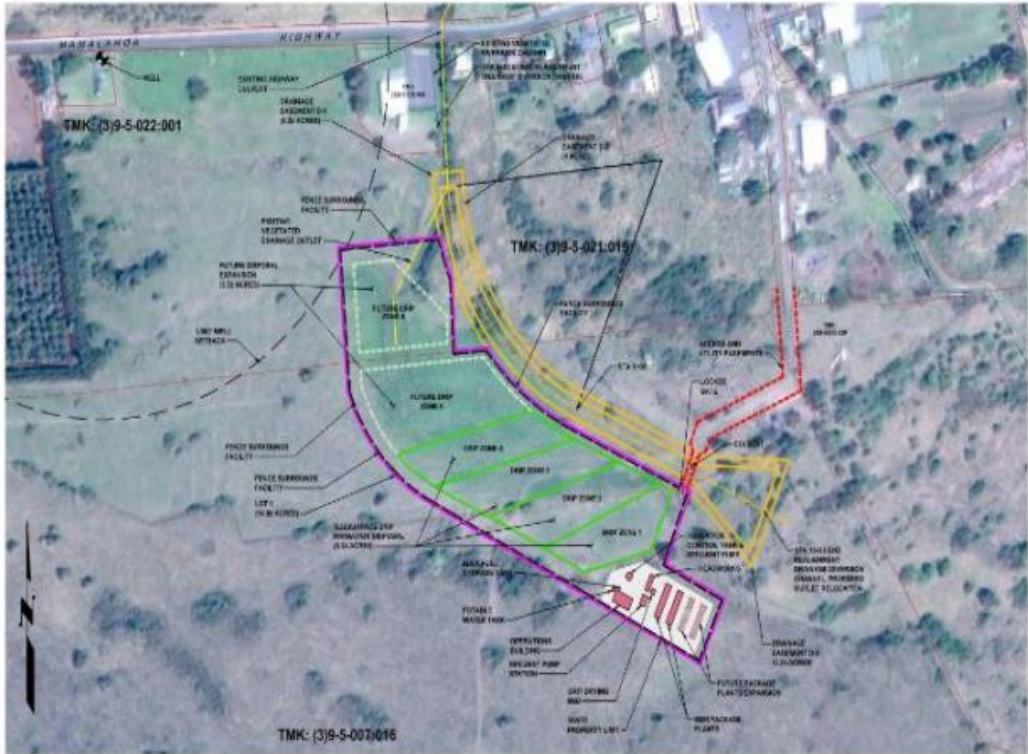
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NĀ'ĀLEHU CESSPOOL CLOSURE MILESTONES

2022 AOC revision

- ✓ Feasibility Evaluation Report (FER) – 60 days after AOC execution date of August 22, 2022
- ✓ Preliminary Engineering Report – 300 days after FER approval
- (We are here) Environmental Information Document – 365 days after PER approval. Clock started October 23, 2023
 - Due October 22, 2024
- Implementation Plan – Due 30 days after approval of EID
- **Large Capacity Cesspool closure – No later than December 31, 2027**

OPTION 1: CENTRALIZE PACKAGE PLANT WITH NEW SEWER COLLECTION SYSTEM

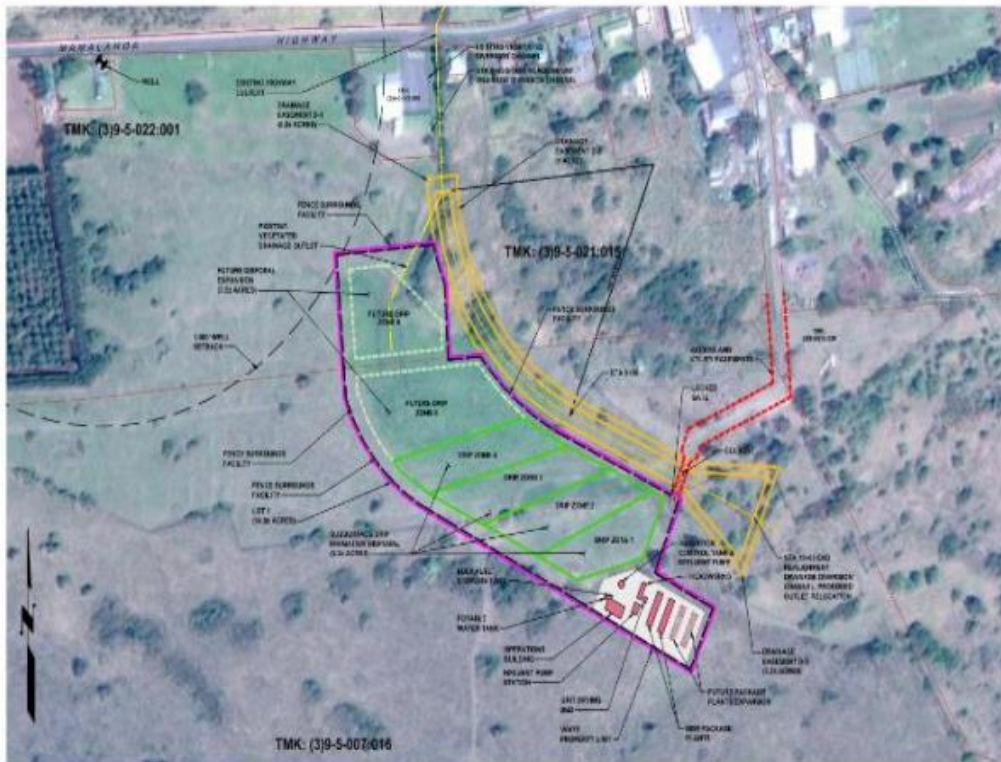


CONCEPTUAL WWTP SITE PLAN LAYOUT



CONCEPTUAL NEW COLLECTION SYSTEM LAYOUT

OPTION 2: CENTRALIZE PACKAGE PLANT WITH EXISTING SEWER COLLECTION SYSTEM

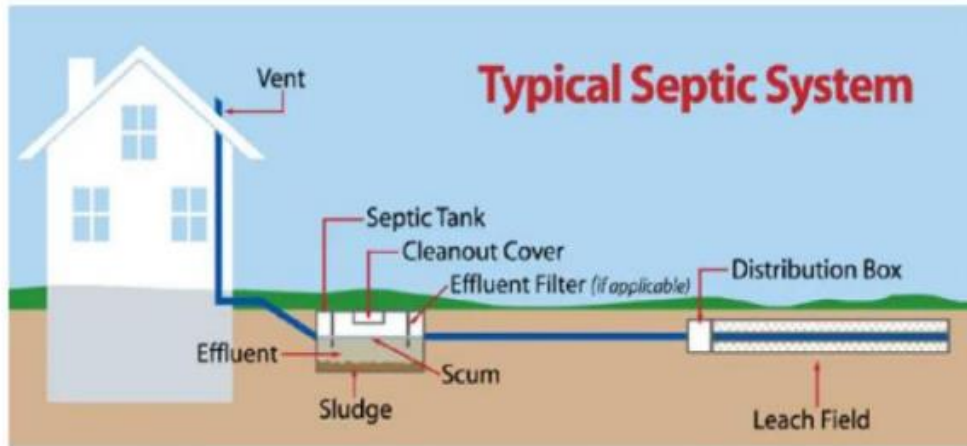


CONCEPTUAL WWTP SITE PLAN LAYOUT



EXISTING COLLECTION SYSTEM

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.



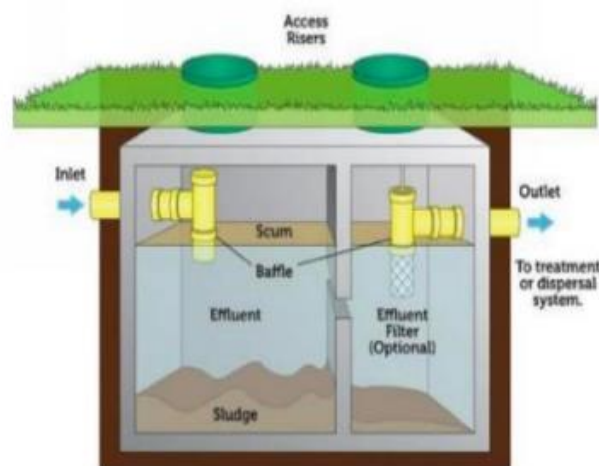
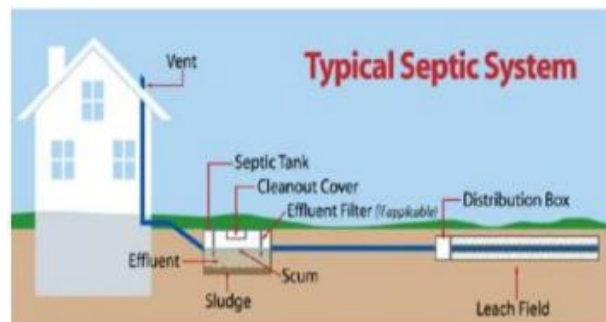
OPTION 4a: INDIVIDUAL WASTEWATER
SYSTEM - OPERATING PERMIT
(COUNTY PROJECT)

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

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

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

- 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.



- 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

1-CENTRAL WWTP 2- WWTP w/Existing Sys 3-IND w/County 4a-IND w/Permit 4b-IND w/Voucher

ADVANTAGES OF NAALEHU TREATMENT OPTIONS

	Option 1	Option 2	Option 3	Option 4a	Option 4b
Meets the requirement to close the large capacity cesspools	✓	✓	✓	✓	✓
Meets the requirement to be protective of human health and the environment	✓	✓	✓	✓	✓
Lower Capital Cost			✓	✓	✓
Least disruption to existing homes connected to LCC		✓			
Probability of meeting Implementation Deadline			✓	✓	✓
Reliability for years to come	✓		✓	✓	✓
County responsible for Operation and Maintenance	✓	✓	✓		
County will restore disturbed areas due to construction activities	✓	✓	✓	✓	
No monthly sewer fees to County				✓	✓

BENEFITS

DISADVANTAGES OF NAALEHU TREATMENT OPTIONS

	Option 1	Option 2	Option 3	Option 4a	Option 4b
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.)	✓	✓	✓	✓	✓

DRAWBACKS