

1.0 PROJECT DESCRIPTION

1.1 Background

Pursuant to the U.S. Environmental Protection Agency's (USEPA) regulations, 40 CFR 144-145, all large capacity cesspools (LCC) must be eliminated by April 5, 2005. Based on a preliminary evaluation, the County of Hawaii has approximately 97 facilities that utilize 110 large capacity cesspools (LCC) island wide. A current project is underway addressing the majority of these facilities with individual wastewater systems (IWS). These mainly consist of septic tanks and leach fields. However, where feasible, LCC properties that are within or adjacent to existing or proposed County sewers should be evaluated for possible connection.

The County of Hawaii, Department of Environmental Management (DEM), has contracted with M&E Pacific to prepare a Preliminary Engineering Report (PER) and Environmental Assessment (EA) that will recommend solutions for satisfying the new USEPA regulation. Due to the expiration of the USEPA deadline, the County has entered a consent agreement and final order with USEPA to complete the PER by February 2006. The recommendations of the PER and EA will result in the design and construction of the selected alternative

This report focuses on eliminating select County-owned and business-owned LCC facilities in the town of Honokaa. There are additional facilities with LCC that will require upgrade to an IWS. However, these are not being addressed in this report since they are under a different County contract. The County is considering the acceptance of ownership of the existing State's Wastewater Treatment Facility and expanding the Honokaa collection system to service facilities with LCC. Presently, the existing wastewater treatment system serves a nursing home facility, health clinic, and two churches. However, the exact number of properties served is unknown. The treatment plant is owned and operated by Hale Ho'ola Hamakua Health Care Center (HCC), which is owned by the State of Hawaii, Hawaii Health System Corporation (HHSC).

A location map of Honokaa town and the Project Area is shown in Figure 1-1 with the relative location of the existing treatment facility and the health care center. The town of Honokaa is approximately 40 miles north of Hilo and 20 miles southwest of Waimea. It is part of the County of Hawaii's Hamakua District and it lies within Tax Map Key (TMK) Division 3, Zone 4, and Section 5. The existing collection system and wastewater treatment plant (WWTP) is shown in Figure 1-2.

1.2 **Objective of Report**

Since the completion of the Honokaa Facilities Plan¹ in September 1990 by Park Engineering for the County of Hawaii (*hereinafter referred to as the 1990 Fac Plan*), social, economic, and institutional changes have occurred in the Honokaa area. One of the major changes is the aforementioned promulgation of federal regulations which requires the elimination of large capacity cesspools by April 5, 2005.

This PER will mainly focus on the development of alternatives for providing sewer service to unsewered areas of Honokaa, especially those areas with large capacity cesspools. Also, major effort will be directed to the expansion and upgrade of the the existing wastewater treatment and disposal facilities. As appropriate, effluent reuse will be evaluated. The Project Area for this PER will be limited to Tributary Areas 1 and 2, as shown in Figure 1-1 and as described in the 1990 Fac Plan.

The results of this PER shall propose a recommended solution for Honokaa Town and be the basis of an EA to support the funding, design and construction and bring the County in compliance with the USEPA.

1.3 **Scope of Work**

The scope of work is as follows:

1. Determine the feasibility of providing wastewater collection, treatment and disposal to owners of large capacity cesspools within Tributary Areas 1 and 2.
2. Evaluate the condition of the existing wastewater collection system and wastewater treatment plant.
3. Evaluate alternatives for collection, treatment, and disposal of wastewater in the Town of Honokaa.
4. Determine capital and life cycle cost for each evaluated alternative.
5. Recommend short and long term solutions.
6. Present the aforementioned information in a Prepare Preliminary Engineering Report.
7. Prepare Environmental Assessment Report (provided as a separate document).

1.4 **Definitions**

The following table defines acronyms that are utilized in this report.

¹ ParEn, Inc., 1990, "Honokaa Facilities Plan, Hamakua District, Honokaa, Hawaii", Sanitation Department, Department of Public Works, County of Hawaii.

Table 1-1: Acronyms

EA	Environmental Assessment	LCC	Large Capacity Cesspools
USEPA	Unites States Environmental Protection Agency	M&E	M&E Pacific, Inc.
IWS	Individual Wastewater System	gpm	Gallons per minute
ADWF	Average Dry Weather Flow	PWWF	Peak Wet Weather Flow
DOH	State Department of Health, Wastewater Branch	gpd	Gallons per day
mg/L	Milligrams per liter	mgd	Million gallons per day
TMK	Tax Map Key	WWTP	Wastewater treatment plant
WWPS	Wastewater pump station	PER	Preliminary Engineering Report
gpcd	Gallons per capita per day	BOD	5-day biochemical oxygen demand

This PER will evaluate alternatives for areas with large capacity cesspools. Thus, cesspools serving residential lots are excluded from this PER. A cesspool is typically a "drywell" which sometimes has an open bottom and/or perforated sides, and receives untreated sanitary waste. The USEPA defines a large capacity cesspool when used by:

1. A multiple dwelling, community or regional system for the injection of waste (e.g., a townhouse complex or apartment building), or
2. Any non-residential cesspool that is used solely for the disposal of sanitary waste and serves 20 or more people per day (e.g., a rest stop or church).

Pacific Ocean



North

EXISTING WASTEWATER TREATMENT PLANT SITE

6" PVC STUB-OUT CONNECTION TO HAINA TOWN

8" PVC

EXISTING BOTTLENECK

UIC BOUNDARY

HAINA TOWN

8" PVC

EXISTING BOTTLENECK

ABANDONED LAVA TUBE

ORIGINAL SEWERS

8" VCP

6" PVC

HEALTH CARE CENTER START OF SEWER

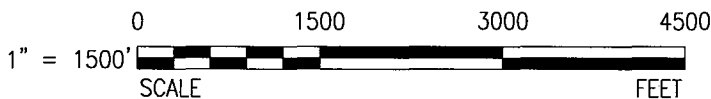
Mamane Street

Papa'ia Street

Mamalahoa Highway

EXISTING WASTEWATER SYSTEM

SCALE: 1"=1500'



M&E Pacific, Inc.

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DAVIES PACIFIC CTR, STE 1900 • 841 BISHOP ST, HONOLULU, HAWAII 96813

Figure 1-2 HONOKAA WASTEWATER PER EXISTING WASTEWATER SYSTEM

September 28, 2005

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