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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Attachment A

July 23, 2021

Mr. Jelani Shareem
EPA Region 9 Compliance Officer
75 Hawthorne Street
San Francisco, CA 94105-3901
(Via E-mail: shareem.jelani@epa.gov)

Ms. Kate Rao
EPA Region 9 LCC Project Coordinator
75 Hawthorne Street
San Francisco, CA 94105-3901
(Via E-mail: rao.kate@epa.gov)

SUBJECT: Wastewater Treatment Plant - Design
Federal Administrative Order on Consent
EPA Docket No. SDWA-UIC-AOC-2017-0002
Pāhala Large Capacity Cesspools (LCC)

Dear Mr. Shareem and Ms. Rao:

The County of Hawai‘i Department of Environmental Management (County) is revisiting the intended treatment processes at the Pāhala Wastewater Treatment Plant (WWTP) from the aerated lagoons and constructed wetland outlined in the preliminary engineering report (PER) to a mechanical secondary treatment process. This report is intended to provide a preliminary overview of the proposed changes and an initial comparison of environmental impacts to those presented in the project’s final environmental assessment (FEA) for discussion with the United States Environmental Protection Agency Region 9 (EPA). This report is not intended or adequate to file with the Office of Environmental Quality Control (OEQC) to support filing a notice of determination in accordance with Hawai‘i Administrative Rules (HAR) 11-200.1. Additional assessment effort will be required to support an OEQC filing.

Project History

On March 8, 2020, the Joint Final Environmental Assessment/Finding of No Significant Impact (FEA/FONSI) for the Pāhala Large Capacity Cesspool (LCC) Replacement Project (EPA Grant XP-96942401) was published in the Office of Environmental Quality Control *The*

Environmental Notice. The FEA stated the purpose of the project was to provide an industry-standard wastewater collection system and a secondary treatment and disposal facility and to eliminate underground injection from large capacity cesspools (LCCs) operated by the County to help protect underground drinking water sources. Further, the FEA indicated a new sewer collection system would be constructed in the Pāhala community and would replace the existing system of substandard gravity lines that convey sewage to the two LCCs and connect it to the proposed wastewater treatment and disposal facility. The new collection system would be routed almost entirely within the public right of way (ROW) of eight public streets in the Pāhala community.

The Pāhala LCC Replacement project was awarded a U.S. Environmental Protection Agency (EPA) Special Appropriations Act Project (SAAP) grant. The FEA stated the project may also be funded by the State of Hawai‘i Department of Health (DOH) Clean Water State Revolving Fund (CWSRF) Program. Under the CWSRF program, the project consists of two parts: Pāhala Large Capacity Cesspool Conversion and Pāhala Wastewater Collection System. The Pāhala LCC Replacement Project will be constructed by the County of Hawai‘i Department of Environmental Management (DEM) using County funds.

Need for Change

Topographic survey information obtained after PER development has escalated the construction cost for the aerated lagoons. More significantly, geophysical and geotechnical investigations have identified and confirmed the presence of a potential network of lava tubes under the intended WWTP location and identified a large void below one of the four lagoons. With cultural resources known to exist in lava tubes elsewhere in Pāhala, the lava tubes create schedule and cost risks to the County project by introducing both unknown construction and cultural mitigation measures to the construction project. In response, the County desires to change the WWTP process to one that will reduce theseproject risks and provide similar or greater benefits to the community while maintaining or reducing the environmental impacts of the intended project.

Hawai‘i Administrative Rules §11-200 Considerations

Chapter 343, HRS establishes a system of environmental review at the state and county levels which ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations. HAR 11-200.1 Environmental Impact Statement rules require state and local governmental agencies under-taking projects utilizing state or county lands or funds to consider the potential environmental impacts of a proposed project by preparing environmental review documentation.

HAR §11-200.1-11 establishes rules for using a prior FONSI to satisfy Chapter 343 requirements:

§11-200.1-11 Use of prior exemptions, findings of no significant impact, or accepted environmental impact statements to satisfy chapter 343, HRS, for proposed actions.

(a) When an agency is considering whether a prior exemption, FONSI, or an accepted EIS satisfies Chapter 343, HRS, for a proposed action, the agency may determine that

additional environmental review is not required because:

(1) The proposed action was a component of, or is substantially similar to, an action that received an exemption, FONSI, or an accepted EIS (for example, a project that was analyzed in a program EIS);
(2) The proposed action is anticipated to have direct, indirect, and cumulative effects similar to those analyzed in a prior exemption, final EA, or accepted EIS; and
(3) In the case of a final EA or an accepted EIS, the proposed action was analyzed within the range of alternatives.

(b) When an agency determines that a prior exemption, FONSI, or an accepted EIS satisfies Chapter 343, HRS, for a proposed action, the agency may submit a brief written determination explaining its rationale to the office for publication pursuant to section 11-200.1-4 and the proposed action may proceed without further chapter 343, HRS, environmental review.

Summary of Project Changes

Project changes are briefly described below. A site plan for the project is attached which reflects the proposed changes.

Project elements that will remain the same

The following is a discussion of project elements that will remain the same as outlined in the FEA.

1. Collection system: The collection system will remain unchanged.
2. Large capacity cesspool (LCC) closure: The two LCCs will be closed as described in the FEA.
3. WWTP site: The WWTP will be located on the same ±14.9-acre parcel. The location of the WWTP process area will remain in the north corner of the parcel.
4. Capacity: The WWTP will be designed to provide the same capacity as described in the FEA; however, see below for discussion of a phased implementation approach.
5. Effluent quality: The mechanical treatment processes will be designed to provide similar or better effluent quality as the aerated lagoons and subsurface flow constructed wetland. Specifically, 5-day biochemical oxygen demand (BOD5) and total suspended solids (TSS) will be 30 milligrams per liter (mg/L) or better, total nitrogen will be less than 10 mg/L. The preferred MBR process will produce effluent of the highest quality, and in addition to the above will consistently provide effluent turbidity values of less than 2 nephelometric turbidity units (NTU).
6. Effluent disposal method: Effluent disposal will be accomplished via slow rate land treatment within the ±14.9-acre parcel as described in the FEA. However, see below for changes to the intended effluent distribution method and trees within the slow rate land treatment system.
7. Emergency power: An emergency generator and bulk fuel tank will be provided as described in the FEA.
8. Utility building: The WWTP will have a building to house the electrical and other necessary systems as described in the FEA.

Project Elements that will Change

The proposed approach will include the following minor changes.

1. Phased capacity implementation: The mechanical treatment approach will allow a phased capacity implementation approach to reduce the initial capital cost. The initial capacity will be sufficient to provide service to the developed parcels within the service area, and a modest amount of growth. The initial WWTP capacity needs will be developed using historic potable water use data from the developed parcels. The WWTP will be designed to be readily expandable to the full capacity as described in the FEA (i.e., 190,000 gallons per day average dry weather flow) when needed to accommodate additional community connection or growth.
2. Preliminary treatment: Preliminary treatment within a headworks will be needed upstream of the mechanical treatment processes, an additional grit removal process that is not required upstream of aerated lagoons. The proposed headworks will have one fewer automatic screen than described in the FEA to compensate for the footprint added by the grit removal process.
3. Secondary treatment: As described above, the preferred MBR process will produce a higher quality effluent than the aerated lagoon/subsurface flow constructed wetland process described in the FEA. A mechanical plant will have a significantly smaller footprint than the aerated lagoon/subsurface flow constructed wetland, requiring less site footprint than one of the aerated lagoons. The tanks will also be shallower than the aerated lagoons, requiring less excavation. The net benefit of the change is significantly reduced risk of construction delays and costs associated with subsurface voids and cultural resources that may be contained within. In addition, it will allow more of the site to be used for effluent disposal purposes. Mechanical treatment technology was evaluated in the PER for the project, which was included in the final EA as an appendix.
4. Effluent disposal: While the method of effluent disposal will remain as slow rate land treatment, the application method and intended vegetation will change. Subsurface drip irrigation will be used to apply water to the existing macadamia nut orchard, rather than grading the site into basins for surface irrigation of native trees. The benefit of this change is significant reduction of the number of macadamia nut trees that will require removal for the project, and significantly less ground disturbance as a result of the reduced need for grading at the site.

Preliminary Comparison of Environmental Impact

Table 1 is a preliminary comparison of the environmental impacts of the proposed approach compared to the project as defined in the FEA. As shown in the table, the minor project changes are anticipated to result in reduced or similar environmental impacts to the project as defined in the FEA, and no greater impacts. Additional environmental assessment will be required to support a use of prior exemption filing with OEQC.

Table 1.
Preliminary Comparison of Environmental Impacts of Current Project Concept Compared to Project as Defined in the FEA

Item	FEA Section	Environmental Impact Comparison			Notes
		Less	Similar	Greater	
Climate	3.1		✓		
Topography	3.2	✓			Reduced grading.
Geology	3.3	✓			Reduced grading and excavation.
Seismic Hazard	3.4		✓		
Volcanic Hazard	3.5		✓		
Soils	3.6		✓		
Surface Water	3.7		✓		
Groundwater	3.8		✓		
Flood Risk	3.9		✓		
Agricultural Lands	3.10	✓			Significantly fewer macadamia nut trees will be removed.
Solid and Hazardous Waste	3.11		✓		
Flora	3.12	✓			Reduced ground disturbance. Reduced clearing and grubbing of existing macadamia nut trees.
Fauna	3.13	✓			Birds will not be attracted to the mechanical WWTP. Reduced ground disturbance.
Air Quality	3.14		✓		
Archaeological and Cultural Resources	3.15	✓			Reduced grading and excavation.
Socioeconomic Characteristics	3.16		✓		
Traffic	3.17		✓		
Noise	3.18		✓		
Visual Considerations and Light Pollution	3.19	✓			The existing macadamia trees will screen the WWTP from public view.
Public Services – Police Protection	3.20		✓		
Public Services – Fire Protection	3.21		✓		
Infrastructure – Water System	3.22		✓		
Infrastructure – Drainage System	3.23		✓		
Infrastructure – Electrical and Communications Systems	3.24		✓		
Cumulative Effects	4		✓		

Final EA Alternatives

The FEA analyzed a total of three potential treatment and disposal site alternatives. The proposed project will remain within the same 14.9-acre project site that the FEA ultimately recommended as the preferred alternative.

HAR §11-200.1-11 Conclusions

Based on the above preliminary evaluations, we believe the proposed project changes will fit within the provisions of HAR §11-200.1-11 and a written determination for use of prior exemption can be filed with OEQC to satisfy the HRS 343 environmental review requirements. Additional effort will be required to prepare a more comprehensive justification for the OEQC filing; this letter is a preliminary review only.

Section 7 Considerations

The FEA discussed the impacts on related species listed under the Endangered Species Act (ESA). As required by Section 7 of the ESA, consultation was conducted with the US Fish and Wildlife Service (FWS). At that time, there was concern that the lagoons and constructed wetlands could attract various species of waterbirds, including the listed Hawaiian coot (*Fulica alai*), the endemic subspecies of the Hawaiian stilt (*Himantopus mexicanus knudseni*), and Hawaiian goose (*Branta sandvicensis*). The proposed treatment and disposal facility does not include open lagoons and constructed wetlands. Thus, the potential impacts to the listed waterbird species would no longer occur.

Section 106 Considerations

Since collection system work described in the FEA would remain with no changes, the findings of the previous determination by the State Historic Preservation Division (SHPD) concurrence to consultation under Section 106 of the National Historic Preservation Act would not change. Similarly, the determination under Hawai‘i Revised Statutes Chapter 6E would remain with no changes.

We hope that this information is helpful in explaining the County’s current direction with this Pāhala LCC project. Please contact Eric Takamura (808) 961-8333 eric.takamura@hawaiicounty.gov or me at (808) 961-8099 ramzi.mansour@hawaiicounty.gov should you have any questions.

Sincerely,

Ramzi Mansour, Director

CC: Brenda Iokepa-Moses, Deputy Director
Eric Takamura, Wastewater Division Deputy Chief
Malia Hall, Deputy Corporation Counsel