

10 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Adverse impacts can be defined as short- and long-term effects relative to the construction and implementation of a specific use. Short-term impacts are usually construction-related impacts that would occur during the course of construction and cease upon completion of the project. Long-term impacts generally result from the implementation of the proposed project.

10.1 Short-term Effects

The proposed project would result in some unavoidable short-term impacts, as described below. These potential impacts are generally minor and would be further minimized through the implementation of BMPs.

10.1.1 Soils

Construction activities would result in unavoidable impacts to soils in the project area due to grading and excavation activities and due to the potential for localized contamination of soils from construction activities (i.e., accidental release of construction equipment fluids). Construction methods to preserve the integrity of existing facilities would be implemented and construction equipment would be maintained in good working condition to reduce the potential for accidental spills. In addition, erosion and sedimentation controls would be implemented to reduce impacts to the natural environment. Soil which is not immediately used for backfilling would be stockpiled and covered or otherwise protected to prevent erosion or sedimentation. In addition, temporary seeding and mulching may be used to minimize soil erosion and provide soil stabilization on slopes.

10.1.2 Groundwater

Construction activities could potentially impact groundwater if encountered during construction. Mitigation measures would be implemented during construction activities to preserve the integrity of existing infrastructure and keep construction equipment in good working condition to prevent accidental spills. Also, dewatering may be necessary for construction below the groundwater table, if necessary, and the construction contractor would be required to include provisions for dewatering. Appropriate BMPs, monitoring of groundwater and careful site preparation would be utilized to minimize adverse impacts. In addition, construction activities would result in the disturbance of more than one acre; therefore, a NPDES General Permit for Stormwater Discharges from Construction Activities would be required from the DOH Clean Water Branch (CWB). Proposed designs would comply with stormwater runoff requirements, pursuant to the Clean Water Act.

10.1.3 Wetlands

It is anticipated that the abandoned irrigation ditch located on the project site would need to be filled to construct the various site components in that location. All work would be performed in accordance with Federal, State, and CCH regulatory requirements including, but not limited to the Section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, if applicable. The project team would consult with the Army Corps of Engineers, U.S. Fish and Wildlife, DLNR Commission on Water Resource Management, CCH, and other regulatory agencies, as necessary, to determine whether filling the former irrigation ditch is jurisdictional under current regulations. If the ditch is determined to be jurisdictional by one or more agencies, then the project team would work with the appropriate agencies to determine acceptable mitigation options.

If the US ACE requires a CWA Section 404, or a RHA Section 10 permit, the project may also need to be evaluated against Federal Consistency requirements. The Office of Planning will be the lead State agency to conduct this evaluation.

10.1.4 Flora

Vegetation would need to be removed within the expansion property area for construction activities. Native Hawaiian plants are recommended for landscaping within the project area, including species such as: ko'olua'ula, kou, 'ilie'e, and 'a'ali'i to minimize unavoidable impacts to vegetation and trees.

10.1.5 Air Quality

Construction-related air quality impacts would result from site preparation and earth moving activities, the movement of construction vehicles on unpaved areas of the site, emissions from construction equipment, and construction of structures. The construction contractor is responsible for complying with DOH regulations which prohibit visible dust emissions at property boundaries. Although short-term air quality impacts are anticipated to be less than significant, the presence of nearby residences and buildings near most of the affected project sites suggest that open-air areas and naturally ventilated structures could be impacted by dust in spite of compliance with these regulations. BMPs to control dust emissions would be implemented to minimize visible fugitive dust emissions at the property line. The BMPs would include watering of active work areas, using wind screens, keeping adjacent paved roads clean, and covering open-bodied trucks. Measures to control construction emissions from equipment and vehicles can also be considered if necessary, such as using newer equipment and reducing on-site truck idling time. In addition, increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction personnel can be alleviated by moving construction materials and workers to the site during off-peak traffic hours.

10.1.6 Noise

Construction noise would be unavoidable during the duration of the respective project construction periods. Short-term increases in noise levels would result from construction activities, vehicles and equipment. The use of muffled equipment, noise barriers, and restrictions on construction hours, as well as adherence to DOH regulations on noise mitigation, would minimize construction and traffic-related noise. For construction work to be performed at night or on weekends and holidays, a Community Noise Variance permit from the DOH would be required if it exceeds regulatory noise levels.

10.1.7 Traffic

An unavoidable slight increase in entering and exiting proposed project traffic is anticipated in some areas during construction activities. Therefore, roadway improvements, including road widening, are recommended at the following five intersections, including intersections 7, 8, 12, 13, and 14 (as shown on Figure 5-7).

- Geiger Road at its intersection with Honouliuli Driveways 1, 2 and 3 (intersections 7, 8, and 12)
- Roosevelt Avenue/Honouliuli Driveway 4 Intersection (intersection 13)
- Renton Road/Honouliuli Driveway 5 Intersection (intersection 14)

10.1.8 Visual and Aesthetic Resources

During construction activities, the presence of cranes and other heavy construction equipment would alter a portion of the viewshed from nearby buildings within the WWTP site. In addition, the proposed improvements would alter the viewshed of the surrounding area by adding new three-dimensional, man-made features. During construction, fencing surrounding the construction site may be provided as needed to provide a visual screen. Any construction impacts regarding visual aesthetics are expected to be short-term and would cease after construction.

10.2 Long-Term Effects

The following unavoidable long-term impacts may result from development of the proposed wastewater facility improvements.

10.2.1 Soils

Following upgrades to the existing WWTP, the potential would still remain for wastewater spills to occur which could result in soil contamination. Soils stability inspections in the vicinity of the foundations of proposed facilities would need to be conducted periodically.

10.2.2 Groundwater

The stormwater detention/infiltration basins proposed at several locations within the project area may have an effect on the local groundwater table. However, these basins would be designed as part of a larger stormwater BMP system and are therefore anticipated to enhance the quality of stormwater recharge to groundwater. In addition, localized effects on groundwater levels may occur due to the potential reduction to local groundwater recharge.

10.2.3 Sludge

There will be an increase in the amount of sludge that is produced, handled, and disposed of due to the upgrade to secondary treatment.

10.2.4 Surface and Coastal Waters

There is a potential for future indirect impacts due to additional development allowed by sewerage areas, including an increase in wastewater flow to the Honouliuli WWTP and effluent discharged to Mamala Bay. However, operation of the proposed project is expected to provide for compliance with the consent decree. In addition, this project would minimize the potential of additional SSOs from the existing conveyance and treatment system.

10.2.5 Air Quality

The primary air quality concern associated with the proposed project could be potential odor nuisances. The proposed alternatives include odor control for some of the existing facilities and all new facilities. Compliance with all applicable ambient standards, including odor in terms of H₂S concentration levels, would be demonstrated 1) during the final design stage of the project when the air permit is modified for applicable criteria pollutants and 2) after the completion of construction with an ambient monitoring program for odor. There is potential to increase on-site stationary and mobile source emissions due to an increase in the plant operational capacity. However, the possibility of nuisance odor from the Honouliuli WWTP would likely be reduced by the upgrade to the odor control system, which would help minimize nuisance odor downwind of the Honouliuli WWTP. Operation of the plant under future proposed conditions would involve installation of new standby generators to provide expanded emergency power supply, which may cause potential short-term increase in combustion source emissions. However, given their emergency usage purposes, potential air quality impacts would be short in duration and would be unlikely to cause significant air quality impacts. Thus, mitigation measures in excess of odor control measures would unlikely be necessary during the operational period. If a CHP facility is incorporated at the Honouliuli WWTP, it would need to be permitted according to State and Federal air regulations, as operation of the facility has the potential to produce additional emissions over the long term. The potential air emissions from the facility cannot be defined at this time, since the design is currently conceptual, but would be specified in air quality permit applications.

10.2.6 Traffic

An unavoidable slight increase in entering/exiting project traffic is anticipated during peak hours as a result of the proposed project. Road improvements discussed in Section 10.1.7 are proposed to minimize long term local impacts to traffic.

10.2.7 Noise

The adverse noise impacts resulting from the proposed activity may include increased vehicular noise due to additional vehicles traveling to and from the facilities, and increased stationary noise resulting from new equipment at the facilities. During the operation of the project, compliance with the DOH property line noise limits for fixed machinery would also be required, and it is expected that the long-term noise impacts associated with the proposed improvements would be minimized by the adherence to the DOH rules regarding noise limits for fixed machinery. Mitigation measures include soundproofing or muffling equipment noise such that noise levels

remain below the maximum allowable levels. All CCH wastewater facilities must comply with the noise requirements of the DOH, pursuant to Chapter 46, Title 11, Community Noise Control, HAR.

10.2.8 Energy Consumption

Implementation of the proposed improvements would increase demand in energy consumption as all alternatives involve operation of new pumps, blowers, and other equipment required to convey and treat wastewater, which would require use of fuel and electricity. There is a potential for energy recovery from digester gas or by utilizing new emerging technology for gasification of sewage sludge. CCH is currently evaluating alternatives to use the digester gas for energy recovery.