

**DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU**

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IN REPLY REFER TO
WEC PE 28-024

February 25, 2026

Ms. Mary Alice Evans, Director
State of Hawai'i
Office of Planning and Sustainable Development
P.O. Box 2359
Honolulu, Hawai'i 96804

Dear Ms. Evans:

**SUBJECT: Environmental Impact Statement Preparation Notice for
Sand Island Wastewater Treatment Plant Secondary Treatment
Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005, 022 (POR), 351**

With this letter, the City and County of Honolulu, Department of Environmental Services (ENV), transmits the Environmental Impact Statement Preparation Notice for the Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 ("project") for review and publication in the March 8, 2026, edition of The Environmental Notice, in accordance with Hawai'i Revised Statutes, Chapter 343 and Hawai'i Administrative Rules (HAR), Chapter 11-200.1.23.

The Environmental Impact Statement Preparation Notice (EISPN) was originally published in The Environmental Notice on January 23, 2026, and a public scoping meeting was scheduled during the 30-day public comment period in accordance with HAR, Chapter 11-200.1.23. Due to severe weather conditions that affected the State from February 7 through February 10, 2026, the ENV cancelled the public scoping meeting. The ENV is republishing the EISPN in The Environmental Notice to ensure that the public is properly notified of the rescheduled public scoping meeting. Comments previously submitted per the initial January 23, 2026, EISPN publication will be addressed in the Draft EIS for the proposed project.

In addition to this letter, you will find the online Environmental Review Program (ERP) Publication Form that has been submitted through the ERP website. The online submittal includes one electronic copy of the Environmental Impact Statement Preparation Notice as an Adobe Acrobat PDF file.

Mary Alice Evans, Director
February 25, 2026
Page 2

Should you have any questions, please contact the project's planning consultant below.

R.M. Towill Corporation
Attention: Jim Niermann
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819
Email: SIWWTP-EIS@rmtowill.com

Sincerely,



Roger Babcock, Jr., Ph.D., P.E.
Director

From: dbedt.opsd.erp@hawaii.gov
To: [DBEDT OPSD Environmental Review Program](#)
Subject: New online submission for The Environmental Notice
Date: Thursday, February 26, 2026 10:48:22 AM

Action Name

Republished Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2

Type of Document/Determination

Environmental impact statement preparation notice (EISPN)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Honolulu, O'ahu

Tax Map Key(s) (TMK(s))

(1) 1-5-041: 005, 022 por., 351

Action type

Agency

Other required permits and approvals

Special Management Area Use Permit Major, Zoning Height Waiver, National Pollutant Discharge Elimination System Permits for construction (construction stormwater, hydrotesting, construction dewatering), Building and Construction Permits (electrical, plumbing, grading, trenching, stockpiling), Modifications to Covered Source and Non-Covered Source Air Quality Permits, Noise Variance

Proposing/determining agency

Department of Environmental Services

Agency jurisdiction

City and County of Honolulu

Agency contact name

Trudy Hamic

Agency contact email (for info about the action)

thamic@honolulu.gov

Email address for receiving comments

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Agency contact phone

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Agency address

1000 Uluohia Street
Suite 308

Kapolei, Hawaii 96707
United States
[Map It](#)

Public Scoping Meeting information

3/19/2026, 6:00 p.m. Mission Memorial Building, 550 South King Street, Honolulu, Hawai'i 96813

Accepting authority

Department of Environmental Services City and County of Honolulu, as authorized by the Mayor of the City and County of Honolulu

Accepting authority contact name

Roger Babcock

Accepting authority contact email or URL

ENV@honolulu.gov

Accepting authority contact phone

(808) 768-3486

Accepting authority address

1000 Ulu'ohia Street
Suite 308
Kapolei, Hawaii 96707
United States
[Map It](#)

Is there a consultant for this action?

Yes

Consultant

R. M. Towill Corporation

Consultant contact name

Jim Niermann

Consultant contact email

SIWWTP-EIS@rmtowill.com

Consultant contact phone

(808) 842-1133

Consultant address

2024 North King Street
Suite 200
Honolulu, HI 96819
United States
[Map It](#)

Action summary

The City and County of Honolulu (CCH), Department of Environmental Services proposes to undertake the Sand Island Wastewater Treatment Plant (SIWWTP) Secondary Treatment Phase 2 ("project") to

expand and upgrade the existing SIWWTP facility to provide secondary treatment and to upgrade and develop various non-process support facilities on an approximately 74-acre parcel identified by Tax Map Keys (1) 1-5-041: 005, 022 por., 351 on Sand Island in Honolulu, Island of O'ahu, Hawai'i. The proposed action is required to comply with the 2010 Consent Decree Civil No. 94-00765DAE-KSC between the CCH, State of Hawai'i, Department of Health, and the U.S. Environmental Protection Agency, which requires the CCH to upgrade municipal wastewater treatment plants to meet secondary treatment water quality standards. The purpose of the project is to protect human and ecological health from waterborne diseases through the development and maintenance of municipal wastewater treatment facilities. The EISPN was originally published in The Environmental Notice on January 23, 2026, and a public scoping meeting was scheduled during the 30-day public comment period. Due to severe weather conditions that affected the State from February 7 through February 10, 2026, the ENV cancelled the public scoping meeting. The ENV is republishing the EISPN in The Environmental Notice to ensure that the public is properly notified of the rescheduled public scoping meeting.

Attached documents (signed agency letter & EA/EIS)

- [DRAFT-EISPN_SIWWTP-PH2_2601213.pdf](#)
- [260225_ENV-WEC-PE-26-024_TRANSMITTAL-LTR-TO-ERP2.pdf](#)

Action location map

- [SIWWTP_PRJBOUNDARY3.zip](#)

Compliance certification (HRS §368-1.5):

The authorized individual listed below certifies that documents submitted are unlocked, searchable, and compliant with the Hawaii Electronic Information Technology Disability Access Standards (including, but not limited to transcripts, captions, and other descriptions accompanying audio/video files). The individual acknowledges that the submitter retains the responsibility for compliance after documents have been published and any compliance queries will be directed back to the agency and/or applicant.

Authorized individual

Jim Niermann

Authorized individual email

JIMN@RMTOWILL.COM

Authorized individual phone

(808) 842-1133

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

Prepared in accordance with Chapter 343, Hawai'i Revised Statutes and
Section 11-200.1, Hawai'i Administrative Rules



Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2

Honolulu, Island of O'ahu, State of Hawai'i
Tax Map Keys: (1) 1-5-041: 005, 022 por., 351

January 2026



Prepared for:
City and County of Honolulu
Department of Environmental Services
1000 Uluohia Street, Suite 308
Kapolei, Hawai'i 96707

Prepared by:



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- Consultation Request Letter
- Consultation Distribution List
- Comments Received and Written Response

Abbreviations and Acronyms

Acronym	Meaning
AASI	Aqua-Aerobics Systems Inc.
AD	Anaerobic digestion
AGC	Aerated grit chambers
AGS	Aerobic granular sludge
AIS	Archaeological Inventory Survey
BFE	Base flood elevations
bgs	Below ground surface
BT	Blend tanks
BWS	City and County of Honolulu, Board of Water Supply
CCH	City and County of Honolulu
CCSR	City and County of Honolulu, Office of Climate Change, Sustainability and Resiliency
CEPT	Chemically enhanced primary treatment
cfm	Cubic feet per minute
CFR	Code of Federal Regulations
CHP	Combined heat and power
CHEX	Cooling heat exchanger
CIA	Cultural Impact Assessment
CMF	Effluent cloth media filtration
CUP/JDA	Conditional Use Permit/Joint Development Agreement
CWB	State of Hawai‘i, Department of Health, Clean Water Branch
CWRM	State of Hawai‘i, Commission on Water Resource Management
CY	Cubic yards
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
DAAF	Design annual average flow
DBEDT	State of Hawai‘i, Department of Business, Economic Development and Tourism
DEIS	Draft Environmental Impact Statement
DEM	City and County of Honolulu, Department of Emergency Management
DG	Digester gas
DLNR	State of Hawai‘i, Department of Land and Natural Resources
DMMF	Design maximum month flow
DNL	Decibel noise level
DOH	State of Hawai‘i, Department of Health
DOT	U.S. Department of Transportation
DPP	City and County of Honolulu, Department of Planning and Permitting
DSP	State of Hawai‘i, Department of Land and Natural Resources, Division of State Parks
DSST	Digested sludge storage tank
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice

ENV	Department of Environmental Services
EPS	Effluent pump station
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESD	Egg-shaped digester
FAA	U.S. Department of Transportation, Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FL	Fill land, mixed
FRP	Fiber reinforced plastic
GAC	Granular Activated Carbon
GBT	Gravity bell thickener
GHG	Greenhouse gases
GP	City and County of Honolulu, General Plan
GT	Gravity thickeners
HAR	Hawai'i Administrative Rules
HDOT	State of Hawai'i, Department of Transportation
HE	Hawaiian Electric
HFD	Honolulu Fire Department
HICRIS	Hawaii Cultural Resource Information System
HPD	Honolulu Police Department
HRS	Hawai'i Revised Statutes
I-3	Waterfront industrial zoning district
IBC	International Building Code
ICFB	Inorganic chemical feed building
IPS	Intermediate pump station
JaC	Jaucus sand
JDA	Joint Development Agreement
kV	Kilovolts
lf	Linear feet
LUO	Land Use Ordinance
MBR	Membrane bio reactor
mgd	Million gallons per day
MLS	Makai Lift Station
NGPC	Notice of General Permit Coverage
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NSP	Non-covered source permit
OCS	Odor control system
OHV	Off-highway vehicle
O&M	Operation and maintenance
P-2	Preservation general zoning district
PC	Primary clarifier
PCB	Polychlorinated biphenyls
PEPS	Primary effluent pump station
ppmV	Parts per million by volume

Pre-THP	Pre-thermal hydrolysis process
PTWC	Pacific Tsunami Warning Center
PUC-DP	City and County of Honolulu, Primary Urban Center Development Plan
RDSS	Remedial design soil stockpile
RFPS	Return Flow Pump Station
ROH	Revised Ordinances of Honolulu
SBT	Sludge blend tanks
SDC	Seismic design categories
SHPD	State of Hawai'i, Department of Land and Natural Resources, State Historic Preservation Division
SIA	Socioeconomic Impact Assessment
SIHP	State Inventory of Historic Places
SISB	Sand Island Sewer Basin
SISRA	Sand Island State Recreation Area
SIWWTP	Sand Island Wastewater Treatment Plant
SLR	Sea level rise
SLU	State Land Use
SMA	Special Management Area
SOEST	University of Hawai'i, School of Ocean and Earth Science and Technology
SRT	Solids retention time
SSO	Sanitary sewer overflows
SST	Digested sludge storage tanks
SUG	Seismic use group
SWW	Sludge wet well
TBSL	Combined thickened blended sludge
T/d	Dry tons per day
THP	Thermal hydrolysis process
TMK	Tax Map Key
TPS	Thickened primary sludge
USACE	U.S. Army Corps of Engineers
UV	Ultraviolet
UVT	Ultraviolet transmittance
WLC	Water level correction
WSST	Wet sludge storage tanks
WTD	Wastewater treatment and disposal
WWPS	Wastewater pump station
WWTP	Wastewater treatment plant

Section 1. Introduction

1.1 Project Overview

The City and County of Honolulu (CCH), Department of Environmental Services (ENV) (“Applicant”) proposes to undertake the “Sand Island Wastewater Treatment Plant (SIWWTP) Secondary Treatment Phase 2 Project” (“project”), to expand and upgrade the existing SIWWTP facility to provide secondary treatment and to upgrade and develop various non-process support facilities. The existing SIWWTP is located on a 50-acre parcel of land identified by Tax Map Key (TMK) (1) 1-5-041:005, which is owned by the State of Hawai‘i and granted to the CCH for SIWWTP use by Executive Order (EO) No. 3939 issued in 2002, and a 13.949-acre portion of the adjacent TMK parcel 022, which is also owned by the State of Hawai‘i and granted to the CCH for SIWWTP use by EO No. 4498 issued in 2016. The SIWWTP facility is owned and operated by the CCH, ENV. An additional, contiguous 9.6-acre area on the northwest end of parcel 022, identified by TMK parcel 351 and owned by the State of Hawai‘i and under the jurisdiction of the State Department of Transportation, Harbors Division (DOT-H), is being considered for temporary use for project construction staging and stockpiling. See **Figure 1.1 – Project Location** and **Figure 1.2 – Neighboring Land Use and Ownership**.

In 2010, the CCH, State of Hawai‘i, Department of Health (DOH), and the U. S. Environmental Protection Agency (EPA) entered into the Consent Decree Civil No. 94-00765DAE-KSC (“2010 Consent Decree”, Amended in 2012), which requires the CCH to upgrade the municipal wastewater collection system to address sanitary sewer overflows (SSO) and upgrade the Wastewater Treatment Plants (WWTPs) to provide secondary treatment. The 2010 Consent Decree requires the CCH to complete construction of the SIWWTP secondary treatment facilities by the compliance milestone of December 31, 2035. Under certain conditions, the CCH may submit a request to extend the deadline to December 31, 2038. As listed in the 2010 Consent Decree, Amended in 2012, VII. Compliance Requirements: Wastewater Treatment Plants, the compliance milestones are as follows:

31. Sand Island Wastewater Treatment Plant. No later than 30 Days after the Effective Date of the Consent Decree, CCH shall withdraw any pending appeals of EPA's denial of its application for a permit pursuant to section 301(h) of the CWA for the Sand Island WWTP. Unless the schedule is extended pursuant to Paragraph 31.d., CCH shall Complete Construction of facilities necessary to comply with secondary treatment standards of the Act, as defined by 40 C.F.R. Part 133, for wastewater discharges from the Sand Island WWTP by the compliance milestone of December 31, 2035, in accordance with the schedule set forth in subparagraphs a.-c.

a. As an interim compliance milestone, by January 1, 2019, CCH shall execute a design contract and issue a notice to proceed with the design of treatment process facilities needed to comply with secondary treatment standards

for wastewater discharges from the Sand Island WWTP. The scope of the design contract may reflect phasing of necessary upgrades to the Sand Island WWTP, and may not include the detailed designs of all process facilities necessary to comply with secondary treatment standards.

b. By January 1, 2022, CCH shall execute a construction contract and issue a notice to proceed with construction of facilities that are part of its design to upgrade the Sand Island WWTP, in relation to compliance with secondary treatment standards. The scope of the construction contract may reflect phasing of necessary upgrades to the Sand Island WWTRP, and may not include all process facilities necessary to comply with secondary treatment standards.

c. If the notice to proceed required by subparagraph b. did not authorize construction of all secondary treatment process facilities necessary to comply with secondary treatment standards for wastewater discharges from the Sand Island WWTP, as an interim compliance milestone, by January 1, 2030, CCH shall execute a construction contract (or contracts) and issue a notice (or notices) to proceed with construction of all secondary treatment process facilities necessary to comply with secondary treatment standards for wastewater discharges from the Sand Island WWTP.

d. No earlier than January 1, 2024, and no later than December 31, 2025, CCH may submit to the Parties a report with a proposal to extend the Deadline to Complete Construction of facilities necessary to comply with Secondary treatment standards of the Act, as defined by 40 C.F.R. Part 133, for Wastewater discharges from the Sand Island WWTP. The proposal shall, in no event, seek to extend this compliance milestone to a date later than December 31, 2038. The report submitted pursuant to this subparagraph shall, at a minimum, contain the following elements:

i. CCH's proposed schedule to Complete Construction of secondary treatment facilities, including any proposed modifications to the schedule in subparagraphs a.-c. above.

ii. An analysis of the technical, logistical, and financial impacts of constructing secondary treatment facilities at Sand Island under: (1) the 2035 schedule set forth in Paragraph 31 and subparagraphs a.-c. above; and (2) CCH's proposed schedule.

iii. A comparison of the impacts to CCH of the two construction schedules. In this report, CCH shall present detailed information on the costs it has incurred and anticipates it will incur in complying with the Consent Decree and operating and maintaining its Wastewater Collection System and Wastewater Treatment Plants, including but not necessarily limited to:

- CCH's actual expenditures on its Wastewater Collection System from Year One through Year Ten.
 - CCH's actual expenditures on its Wastewater Collection System following Year Ten. If any of these costs were incurred to complete work required by Section VI (Compliance Requirements: Wastewater Collection System) of the Decree, these costs shall be specifically itemized.
 - CCH may include projected capital improvements to the Wastewater Collection System in this analysis, and shall indicate whether the costs are: (1) included in its Capital Improvements Plan; and (2) likely to be incurred.
 - CCH's projected budget for operation and maintenance of its Wastewater Collection System through Termination of the Consent Decree, along with the basis for the projections and supporting information.
 - The most complete information available on the costs of construction of secondary treatment facilities at the Honouliuli WWTP.
 - CCH's estimate of the projected construction costs of secondary treatment facilities at the Sand Island WWTP based on CCH's planning and design for all secondary treatment alternatives considered for the WWTP.
 - CCH's actual expenditures in operating and maintaining its Wastewater Treatment Plants and sludge facilities through the end of the fiscal year prior to submittal of the report and CCH's estimate of changes to these operation and maintenance costs once secondary treatment operation commences at Sand Island.
 - Actual and projected expenditures as a result of additional or more stringent legislative or regulatory mandates regarding air quality, water quality and treatment standards applicable to CCH's Wastewater Collection System and Wastewater Treatment Plants.
- iv. A discussion of the rate structure that CCH has implemented to finance the Wastewater Collection System and Wastewater Treatment Plant improvements it has constructed pursuant to the Consent Decree. This shall include a discussion of how CCH adjusted sewer rates to finance existing and expected costs during the implementation of the work required by the Consent Decree, along with EPA and/or industry guidelines regarding affordability, and sewer fees in jurisdictions of comparable size and population.

- v. *A comparison of the rate structure that CCH projects would be appropriate to finance completion of construction of secondary treatment facilities at Sand Island by December 31, 2035, with the compliance deadline proposed by CCH. Specifically, CCH shall present its rationale for why requiring compliance by an earlier deadline than that proposed by CCH would result in undue financial hardship, which may include consideration of factors such as the cost of regulatory and statutory mandates, and other financial and socio-economic indicators relevant to evaluating the financial capability of CCH and its ratepayers.*
- vi. *If CCH uses any models as part of its analysis in the report, CCH shall provide the Parties access to those models as well as all inputs to the models, and an explanation of the models' operation.*
- vii. *Nothing set forth in subparagraph d. above shall limit the information or contentions that CCH may include in its report, or that any of the Parties may present to the Court, in support of its position.*
- e. *After receiving CCH's report, the Parties shall meet and confer to discuss the report and shall use their best efforts to negotiate a schedule for construction of secondary treatment facilities at Sand Island. Any such schedule shall include a compliance milestone to Complete Construction of secondary treatment facilities at Sand Island by no later than December 31, 2038, and adjustments to interim compliance milestones in this Paragraph consistent with achieving this compliance milestone.*
- f. *If the Governments and CCH reach an agreement regarding the construction schedule for secondary treatment facilities at the Sand Island WWTP, they shall submit the schedule to the Court for approval as a major modification pursuant to Section XIX (Modification) of the Consent Decree.*
- g. *If the Governments and CCH cannot reach agreement regarding the construction schedule for secondary treatment facilities, they shall submit a joint motion to the Court requesting judicial resolution of the dispute. The joint motion shall contain a written statement of: (1) CCH's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and the requested construction schedule, as presented to the Governments pursuant to subparagraph d.; and (2) the Governments' response to CCH's position, including a proposed construction schedule. Within 15 Days after the joint motions is filed, Intervenors may file a statement of position proposing a construction schedule that includes, at a minimum, the elements set forth in subparagraph e. above.*
- h. *CCH shall bear the burden of demonstrating by a preponderance of the evidence that CCH's position should prevail over the Governments' position. Should the Court determined that the schedule proposed by the Governments is*

either technically infeasible or would result in undue financial hardship, the Court shall adopt the schedule proposed by CCH; provided that the schedule selected by the Court shall not require completion of construction of secondary treatment facilities at Sand Island any earlier than December 31, 2035, or later than December 31, 2038.

In accordance with the consent decree, the City is in the process of upgrading the SIWWTP facility in two phases to meet secondary treatment water quality standards. The Secondary Treatment Phase 1 Project (Phase 1) is currently under construction and will provide treatment for a maximum monthly flow (MMF) of 20 million gallons per day (MGD) using membrane bioreactor (MBR) technology. The current project that is the subject of this EIS Preparation Notice is for secondary treatment facility improvements and related plant upgrades to treat the remainder of the MMF (70 MGD) as part of the Secondary Treatment Phase 2 Project (Phase 2).

1.2 Project Purpose and Need

The purpose of the project is to:

- Protect public and environmental health and safety through the development and maintenance of municipal wastewater treatment facilities;
- Meet secondary treatment requirements set by the EPA under the Clean Water Act, in accordance with the 2010 Consent Decree, Amended in 2012;
- Accommodate projected wastewater flows from the Sand Island Sewer Basin through 2055;
- Upgrade existing process and non-process facilities to meet wastewater management needs; and
- Implement certain requirements of federal and state permits and mandates.

1.3 Basis for Environmental Impact Statement

In accordance with Hawai‘i Revised Statutes (HRS) Chapter 343, Section 5, this project involves the following actions that require the preparation of an Environmental Impact Statement (EIS):

- (1) *Propose the use of state or county lands or the use of state or county funds;*

This EIS Preparation Notice (EISPN) has been prepared by the proposing agency, the CCH ENV, in accordance with HRS Chapter 343 and Hawai‘i Administrative Rules (HAR) Title 11, Chapter 200.1, adopted by the Governor on July 30, 2019. In addition, the project is located within the CCH-designated Special Management Area (SMA) and will need a Major SMA Permit which requires that the EIS also be prepared pursuant to Revised Ordinances of Honolulu (ROH) Chapter 25.

HAR §11-200.1-14 allows an agency to determine that an EIS is required, thereby choosing not to prepare an environmental assessment and instead to proceed directly to the preparation of an EIS, beginning with an EISPN. In accordance with HAR §11-200.1-23, the EISPN shall indicate in a concise manner:

- (1) identification of the proposing agency;
- (2) identification of the accepting authority;
- (3) list of all required permits and approvals;
- (4) the determination to prepare an EIS;
- (5) reasons supporting the determination to prepare an EIS;
- (6) a description of the proposed action;
- (7) a description of the affected environment;
- (8) possible alternatives to the proposed action;
- (9) the proposing agency's scoping process, including where any EIS public scoping meetings will be held; and
- (10) the name, address and phone number of contact person for further information.

ENV's determination to prepare an EIS is supported by the potential for significant project-related impacts due to the overall project scope and scale, socio-economic impacts related to increased sewer fees, impacts related to the project's location in an environmentally sensitive coastal area and within the tsunami zone, potential for increases in energy consumption and production of greenhouse gas (GHG).

This EISPN serves as a formal notice that an EIS is being prepared for the proposed action. The intent of this EISPN is to inform interested parties of the project, and to seek agency and public input on relevant environmental, social, and technical issues and resources related to the SIWWTP Secondary Treatment Phase 2 Project that should be evaluated as part of the alternatives development and environmental analysis. Input received as a result of this EISPN, in combination with responses to agency pre-consultation requests, input from community organizations and other public stakeholders; and other input received to date, will be considered in the preparation of the Draft EIS document.

The EIS will present the proposed action and range of reasonable alternatives and will address the potential for direct, indirect and cumulative effects on the natural and human environment; and will identify mitigation measures to avoid or minimize the potential for adverse effects from the project. In considering the significance of potential environmental effects, the proposing agency shall consider the sum of effects on the quality of the environment according to significance criteria set forth in HAR §11-200.1-13.

1.4 Proposing Agency and Accepting Authority

In accordance with HAR §11-200.1-2, the “applicant”, is any person who, pursuant to statute, ordinance, or rule, officially requests approval from an agency for a proposed action; an “agency” is any department, office, board or commission of the state or county government which is part of the executive branch of that government; and an “accepting authority” is the final official or agency that determines the acceptability of the EIS document. In accordance with HAR §11-200.1-7 for actions proposing the use of county lands or county funds, the mayor or the mayor’s authorized representative shall have final authority to accept the EIS. Therefore, the proposing agency, or Applicant, for this proposed action is the CCH, ENV and the accepting authority for this proposed action is the Mayor of the City and County of Honolulu. The Mayor’s letter delegating authority to ENV is provided in **Appendix A**.

1.5 Environmental Impact Statement Process and Timeline

HRS Chapter 343 and HAR 11-200.1 establish the legal framework and process for preparing State of Hawai‘i EIS documents. In Hawai‘i, an EIS is primarily a disclosure document that provides information about potential environmental effects of a proposed action. It is not a decision-making document; rather, it is used to inform project proponents and the public about the environmental considerations that must be addressed when undertaking a project. The EIS must be prepared in compliance with statutory requirements and is intended to ensure that the environmental effects of a project are adequately addressed before undertaking the proposed action. Public participation in the identification of environmental concerns and development of mitigation measures to reduce, minimize or eliminate project impacts is a key part of the EIS process.

The EIS process generally proceeds according to the following steps:

- Pre-Consultation – The pre-consultation step involves inviting government agencies, citizen groups and concerned individuals who might be affected by a project to provide early input on issues that should be evaluated during the EIS process. Pre-consultation correspondence conducted prior to the publication of this EISPN is provided in Appendix C.
- EISPN – This EISPN is a scoping document. It provides information about the proposed action, possible alternatives to the action, and the effected environment. It is intended to inform the public about the project proponent’s intention to prepare an EIS for an undertaking and provide an opportunity for the public to identify environmental concerns that should be evaluated in the Draft EIS. The EISPN is published in the State Environmental Review Program (ERP) Environmental Notice for a 30-day review period during which agencies and the public have the opportunity to provide comments regarding the environmental effects of the proposed action.

- Draft EIS – The Draft EIS assesses and fully describes the proposed action and the environmental implications, including reasonable and foreseeable consequences, of the proposed action, as well as proposed measures to mitigate project impacts to the natural, social and built environment. The Draft EIS must be supported by data, analyses, special studies, reports and other information commensurate with the importance of the potential project impacts. The Draft EIS will be published in the ERP Environmental Notice for a 45-day public review and comment period.
- Final EIS – The Final EIS is the last step in the EIS process. The Final EIS documents comments received on the Draft EIS and the project proponent’s responses to substantive comments. It includes updated analyses, as required, based on new information or ongoing consultation with agencies and civic organizations between the Draft and Final EIS, and a summary of refinements to the project resulting from the assessment of environmental impacts. Importantly, the Final EIS includes a statement of mitigation commitments that will be undertaken by the project proponent to reduce, minimize or eliminate environmental impacts of the project. Following acceptance of the Final EIS by the Accepting Authority, in compliance with HAR 11-200.1-28, the Final EIS and notice of acceptance will be published in the ERP Environmental Notice.

The SIWWTP Secondary Treatment Phase 2 project anticipates conducting the EIS process according to the following approximate timeline:

4th quarter 2025 – Conduct pre-EISPN consultation

1st quarter 2026 – Publish EISPN and conduct first public meeting

3rd quarter 2026 – Publish Draft EIS and conduct second public meeting

1st quarter 2027 – Publish Final EIS and Notice of Acceptance



Figure 1.1 – Project Location



Figure 1.2 – Neighboring Land Use and Ownership

Section 2. Project Description and Alternatives

2.1 Existing Facility

The SIWWTP began operations in 1978 as an advanced primary treatment WWTP with a capacity of 82 million gallons per day (mgd). The SIWWTP treats all of the wastewater flows generated in the Sand Island Sewer Basin (SISB) service area, which extends from Niu Valley in the east, to Salt Lake/Aliamanu in the west. The wastewater facilities in the SISB service area include one major wastewater treatment plant, the SIWWTP, 17 Wastewater Pump Stations (WWPSs), and a network of gravity sewer lines and force mains. The SIWWTP has undergone a number of major modifications in the past decade, including programmed modifications, permit-related modifications and plant expansion work. As a result of these projects, the SIWWTP capacity was expanded to an average daily flow rate of 90 mgd and peak wet weather hydraulic capacity of 240 mgd.

2.1.1 Existing Liquid and Solid Processes

The following is a description of the existing major liquid effluent stream facilities and processes:

Liquid Stream Treatment Facilities

- *Headworks:* This facility was placed in operation in 2005. An influent receiving area receives flows from the Ala Moana WWPS, Hart Street WWPS, Sand Island Parkway WWPS, the Fort Shafter WWPS, and Makai Lift Station FM. The majority of the influent flow comes from the Ala Moana WWPS (181 mgd) via two 78-inch FMs and from the Hart Street WWPS (81 mgd) via two 48-inch FMs. The headworks facility contains six (6) bar screens with associated screenings washers and compactors for screenings removal, six (6) Parshall flumes for flow measurement and four (4) aerated grit chambers for grit removal. Screenings and grit are conveyed and discharged into a dump truck for disposal at the Waimānalo Gulch landfill.
- *Primary Clarifiers:* The SIWWTP consists of eight (8) primary clarifiers. The original SIWWTP had six (6) flotator clarifiers to provide advanced primary treatment. The flotator clarifiers were originally designed to utilize dissolved air flotation to "float" the solids to the surface where surface skimmers remove the solids. The original flotator clarifiers have since been converted to gravity mode as traditional primary clarifiers. Primary Clarifiers 7 and 8 were added to increase the capacity of the clarification system to an average daily flow of 90 mgd. These primary clarifiers were designed as gravity-type primary clarifiers. Four (4) clarifiers are used under normal operations, typically including primary clarifiers 7 and 8 and two (2) of the original six (6) clarifiers.

- *Intermediate Pump Station (IPS)* – The IPS is being constructed as part of Phase 1 (operational by 2026) to pump primary effluent from the existing Effluent Junction Structure to the Phase 1 fine screening facility. The Phase 1 IPS includes three horizontal dry pit submersible pumps (two duty, one standby). The IPS is housed in an enclosed structure containing several rooms with other purposes such as a blower room, electrical room, storage room, control room, workstations, toilet/showers, and a process laboratory. The IPS is adjacent to the membrane bioreactors. The IPS is proposed to be modified and renamed to *Primary Effluent Pump Station* in the Phase 2 project. See Section 2.2.1.
- *Existing Secondary Treatment – Phase 1 Membrane Bio Reactor (MBR)* – Phase 1 Secondary Treatment using MBR treatment technology was designed to add 20 mgd (MMF) of treatment capacity and ancillary facilities to support the MBR operation. The following are major improvements that are being constructed as part of Phase 1 and are anticipated to be operational by 2026:
 - *Primary Effluent Flow Routing* – Diverts primary effluent from the Effluent Junction Structure to the Phase 1 and Phase 2 secondary treatment processes.
 - *IPS and Support Building*. Provides intermediate pumping required to transfer primary effluent from the existing facilities to the Phase 1 MBR facilities with provisions for the Phase 2 secondary treatment process. The support building will house blowers and electrical equipment to support the Phase 1 MBR operation and include space for Phase 2 equipment.
 - *Fine Screening, Bioreactors and MBR facility* – Provides a fine screening facility upstream of the Phase 1 MBR to protect the membranes from latent debris. Process reactors and membrane tanks provide secondary treatment. Solids extracted from the fine screens and MBR process are directed to the WAS Thickening and Sludge Storage. See **Section 2.1.1** for description of existing solids process facilities.
 - *Secondary Effluent Flow Routing* – Conveys MBR permeate from the Phase 1 MBR facilities to the UV Disinfection Facility. The Phase 1 improvements include construction of facilities to accommodate the additional flows that will be generated from Secondary Treatment Phase 2.
- *Inorganic Chemical Feed Building (ICFB)*: The ICFB allows the injection of chemicals used for chemically enhanced primary treatment (CEPT). Currently iron chloride (FeCl_3 ,

ferric chloride) is being utilized for advanced primary treatment and odor control. Polymer is also being used for flocculation.

- *Ultraviolet (UV) Disinfection Facility*: The UV disinfection facility consists of three (3) effluent screens, six (6) UV disinfection channels and an effluent WWPS. The (6) six UV disinfection channels utilize UV lamps. The UV system has room for expansion from the current six (6) UV disinfection channels to ten. Four (4) channels are used under normal operations.
- *Effluent Pump Station (EPS)*: During high flow conditions, the EPS is used to provide additional pumping head to discharge the treated primary effluent through the 84-inch diameter ocean outfall pipeline. At low flow conditions, effluent can be discharged through the 84-inch ocean outfall pipeline by gravity.
- *Ocean Outfall*: Effluent is discharged through an 84-inch diameter ocean outfall extending nearly two (2.0) miles offshore to a depth of over 220 feet. The total length of the outfall is approximately 14,000 linear feet (lf). The wastewater is diffused through the final approximately 3,400 lf of the outfall pipe.

Solids Stream Treatment Facilities

The solids treatment process includes facilities owned and operated by ENV. A solids bioconversion facility, including the anaerobic digester operations, sludge dewatering drying and pelletizing system, and biogas and heat exchange systems are owned by the CCH and operated by Synagro WWT, Inc. (Synagro) under an Operation and Maintenance contract until 2027. Synagro is currently undertaking a stand-alone *SIWWTP Bioconversion Facility Upgrades Project* that will be completed and operational by 2028. Synagro's Bioconversion Facility Upgrades Project was the subject of a separate HRS 343 Environmental Assessment and Finding of No Significant Impact (ENV, 2022). The following is a description of the existing major solid effluent stream facilities and processes, and current upgrades to the existing solids stream process facilities that are either part of the Secondary Treatment Phase 1 project or Synagro's *Bioconversion Facility Upgrades Project*:

- *Gravity Thickeners (GT)*: Primary sludge from the flotator clarifiers and primary clarifiers is pumped to two (2) of the four (4) GTs where chlorine is added to control odors and assist in thickening.
- *Sludge Wet Well (SWW, Phase 1)*: The SWW was constructed as part of the Secondary Treatment Phase 1 improvements to allow for co-thickening of sludge from the MBR Secondary Treatment process and primary sludge from the GT. The combined sludge in

the SWW is conveyed to Gravity Belt Thickeners prior to the Wet Sludge Storage Tanks / Sludge Blend Tanks.

- *Gravity Belt Thickener (GBT, Phase 1):* The GBT was constructed as part of the Secondary Treatment Phase 1 improvements to thicken sludge generated from the MBR process and, as an option, to thicken primary sludge in combination with MBR sludge.
- *Wet Sludge Storage Tanks (WSST) / Sludge Blend Tanks:* Thickened sludge from the GTs and GBTs from the MBR Secondary Treatment, and primary scum from the clarifiers are pumped to the four (4) existing WSSTs. During the Synagro *Bioconversion Facility Upgrades* project, the WSST's and digester feed pumps will be abandoned in place and the existing GT pumps will pump the sludge directly to three (3) new sludge blend tanks (SBT) constructed as part of the Secondary Treatment Phase 1 improvements. The SBTs are equipped with vertical shaft-mounted propeller mixer to prevent settling. Blended sludge is pumped to the anaerobic digesters for digestion.
- *Anaerobic Digester:* The anaerobic digester involves a continuous feed process from the WSSTs/SBTs into two (2) existing Egg-Shaped Digesters (ESD). Two new silo-type digesters will be constructed as part of the Synagro *Bioconversion Facility Upgrades Project* to accommodate additional solids loading associated with Phase 1 improvements. These two new digesters will be operated along with the two existing egg-shaped digesters. One of the four digesters will be able to serve as a redundant digester. The anaerobic digesters reduce solids and produce energy in the form of methane. The methane or biogas is used as a fuel source for the sludge heat drying system. A biogas holding tank, hydrogen sulfide scrubber, and associated auxiliary equipment (i.e., piping, valves) and controls are a part of the anaerobic digestion process. After completion of the digestion process, the liquid digested biosolids are pumped to the sludge dewatering drying and pelletizing system.
- *Digested Sludge Storage Tank (DSST) –* Digested sludge is stored in DSSTs prior to being dewatered, dried and pelletized for reuse or disposal. Two (2) circular steel DSSTs were originally constructed in 2007 and 2016, respectively. Two (2) additional concrete DSSTs will be constructed as part of the Synagro *Bioconversion Facility Upgrades Project*.
- *Sludge Dewatering Drying and Pelletizing System:* The system consists of digested sludge containment in a small sludge day tank, centrifuges and final drying and pelletizing. Pelletized sludge is available for use as fertilizer. The pellets produced at this facility are beneficially reused as fertilizer for land applications at agricultural farms, golf

courses and parks. Residual pellet material not suitable for marketing is disposed of at the Waimānalo Gulch landfill.

- *Boiler & Heat Exchange System:* There are two heat exchange systems in the solids processing facilities at SIWWTP. The primary heat exchange system recovers heat from the dryers. The second system generates heat from low-pressure boilers. As part of the *Synagro Bioconversion Facility Upgrades Project*, the existing boiler will be replaced with two new low pressure hot water boilers to provide heating for both the existing and new digesters. The main hot water loop will be designed to convey hot water from the new boiler to each of the secondary hot water loops dedicated to each digester (egg-shaped and silo-type). A secondary hot water loop will be integrated into the new and existing heat exchangers which will run separately and in association with the main hot water loop for heating the digester sludge.
- *Waste Gas Burners:* There are two existing waste gas burning flare; a 6-in. Candlestick Varec 244W (Existing Waste Gas Burner 1) and an enclosed burner Varec Model 244 E (Existing Waste Gas Burner 2). As part of the *Synagro Bioconversion Facility Upgrades Project*, both existing waste gas burners will be replaced by two new flares. One (1) new flare is required to meet requirements for increased gas production for Phase 1 loading conditions through 2035.

Phase 2 upgrade of the secondary treatment processes will generate a new waste solids stream, requiring further enhancement of the existing solids handling system. See **Section 2.2.4** for a description of planned improvements to the solids handling system being constructed as part of the Secondary Treatment facilities.

2.1.2 Odor Control System (OCS)

SIWWTP is required by the State to monitor hydrogen sulfide (H₂S) levels along its fence line to safeguard the surrounding public from potential hazards. SIWWTP treats foul air and odorous compounds across the site to meet the State requirements of the DOH Non-Covered Source Permit No. 0216-05-N and DOH Covered Source Permit (CSP) No. 0216-06-C. A summary of the existing OCS systems and concentration limits for each permit and property line are provided in **Table 2-1**.

Table 2.1 – Existing Odor Control Systems

OCS	Foul Air Source	System Type	Total Capacity ¹	H ₂ S Permit Limit ²
<i>Non-Covered Source Permit No. 0216-05-N</i>				
Headworks	Influent Receiving area, Screening Channels,	Four (4) Bio-trickling Filters followed by three (3) granular activated carbon (GACs)	40,000 cfm	3 ppmV

OCS	Foul Air Source	System Type	Total Capacity ¹	H ₂ S Permit Limit ²
	Aerated Grit Chambers, Screen Hoppers, Grit Hopper, Truck Bay Area			
Primary Clarifier	Clarifier Launderers, Influent & Effluent Channels	Five (5) Biotrickling filters followed by four (4) GACs	50,000 cfm	3 ppmV
Solids	Gravity Thickeners, WSSTs, Return Flow Pump Station, Sludge Division Box, Makai Lift Station	Four (4) Biotrickling Filters followed by three (3) GACs	30,000 cfm	3 ppmV
UV/EPS	UV Screens, UV Channels, EPS Wetwell, Scum Collection Pit	GAC	18,000 cfm	Pending permit modification
Covered Source Permit No. 0216-06-C				
Biosolids Handling	Solids Handling Building	One (1) chemical odor control scrubber	25,000 cfm	0.61 & 50.3 ppmV ammonia limit
Hawai'i Administrative Rules Chapter 11-59				
Property Line	Uncaptured Odors	N/A	N/A	0.025 ppmV
Notes: (1) cfm = cubic feet per minute (2) ppmV = parts per million by volume				

The four existing odor control systems (OCS) at the plant use bio-trickling filters and granular activated carbon (GAC) vessels. Bio-trickling filters use a biological treatment method to remove high concentrations of hydrogen sulfide from foul air.

Two additional OCS are operated by Synagro to treat foul air from the thermal drying room and centrifuge dewatering room. The Synagro Solids Handling Building OCS is a 25,000 cfm two-stage wet chemical scrubber. Synagro also operates a Venturi/regenerative thermal oxidizer to treat the dryer exhaust.

Two new OCS facilities are being constructed as part of the current Phase 1 improvements. The new Secondary Treatment OCS will treat foul air from the new Phase 1 Primary Effluent Pump Station, Fine Screening Facility, and the Process Reactor inlet channel. The Secondary OCS will include GAC vessels with a firm capacity of 3,200 cfm. The new Thickener Building OCS will treat foul air from the Phase 1 Sludge Thickening Building. The Thickener Building OCS will

use a two-stage treatment process with bio-trickling filters and GAC vessels with a firm capacity of 3,600 cfm.

The Phase 1 Secondary Treatment OCS pad was sized to accommodate for future expansion during Phase 2 secondary treatment upgrades. Space is provided for one additional GAC vessel and three biotrickling filter units.

2.1.3 Electrical Power

Electrical power on Sand Island is provided by two HE 46 kilovolts (kV) transmission lines – Iwilei 1 and Iwilei 2 – which are stepped down to 11.5 kV for distribution via the Sand Island Substation (SIS) and the Mokuone Substation (MS). The SIS has two circuits and MS has one circuit that runs overhead via power poles along the northern boundary of the facility and transitions to underground duct banks into the SIWWTP. The purpose of having separate circuits from separate substations is to increase electrical service reliability to the SIWWTP.

The onsite electrical service at the SIWWTP is a decentralized system distributed through a medium voltage backbone system consisting of underground duct banks, manholes, and pad-mounted switchgears and transformers. The HE 11.5kV backbone distribution system feeds the following six service locations that are separately metered:

- Primary Switchgear Vault Building
- Headworks Building
- Solids Electrical Building
- Primary Clarifier Odor Control Electrical Building
- Primary Clarifier 7 and 8 Electrical Room
- Disinfection Facility

Phase 2 secondary treatment improvements will generate loads that exceed the capacity of the existing HE services. A detailed Electrical Master Plan has been prepared concurrently with the Phase 2 Planning efforts to evaluate current and future needs for HE services. See **Section 2.2.5** for a description of proposed improvements to the electrical power distribution system.

2.1.4 Water

Water is provided to the SIWWTP through a 12-inch water main which is connected to a Board of Water Supply (BWS) 16-inch water main located along Sand Island Parkway. The SIWWTP also provides primary effluent water to Synagro for “moisture conditioning” of the dryer exhaust that is returned to the front of the dryer.

2.2 Proposed Phase 2 Project Improvements And Treatment Alternatives

Proposed secondary treatment facilities are described in the following sections organized by liquid and solid waste streams. Alternative treatment technologies that have been evaluated for

Phase 2 liquid streams and solids stream improvements are summarized in their respective sections.

The following figures are provided for reference at the end of **Section 2**:

- **Figure 2-4 - Phase 2 Liquids Stream Treatment Process Flow Diagram**
- **Figure 2-5 - Phase 2 Solids Stream Treatment Process Flow Diagram**
- **Figure 2-6 - Conceptual Site Plan – SIWWTP Secondary Treatment Phase 2**
- **Figure 2.7 Conceptual Site Plan – Phase 2 Solids Stream Treatment Process Facilities**

2.2.1 Alternatives Secondary Treatment Facilities – Liquid Stream

Previous studies, facility plans, and Phase 2 planning efforts evaluated a wide variety of secondary treatment technologies applicable to the SIWWTP. The basis of planning for Secondary Treatment Phase 2 alternatives included flows and loads, regulatory requirements, site constraints, and climate change resiliency factors. The secondary treatment evaluation for Phase 2 used information from previous studies, process modeling and vendor proposals, site visits, and workshops to shortlist technologies and then understand how each shortlisted treatment technology applies to SIWWTP. The evaluation criteria were developed by the City and the evaluation eventually included applying the evaluation criteria to each technology. (ENV, 2023).

Through these efforts, three alternative technologies were short-listed and evaluated for the Phase 2 secondary treatment of liquid streams to treat the remainder of flows (70 mgd MMF) through the SIWWTP that are not treated by the Phase 1 MBR secondary treatment facilities (20 mgd MMF). The treatment technology alternatives that were considered for Phase 2 are:

1. Aerobic Granular Sludge,
2. Expansion of the Phase 1 MBR facilities, and
3. Biological Aerated Filters.

The following provides a description of each of three alternative technologies and the basis for selection and rejection:

Alternative 1 – Aerobic Granular Sludge (AGS)

The AGS technology has been used successfully for more than 12 years in full-scale wastewater treatment facilities, with more than 50 plants currently in operation or under design and construction. At present, the only commercially available granular sludge technology is the AquaNereda® AGS system.

AGS is a biological treatment process that involves cultivating microbial aggregates, or granules, in a wastewater environment. These granules are composed of various bacterial species, each playing a specific role in removing pollutants like nitrogen, phosphorus, and organic matter. The

AGS process forms dense granules rather than light flocs generally formed in conventional activated sludge. Granular sludge is compact and settles rapidly, which results in an increased capacity for a given volume. Granules consist of layers of specialized bacteria in aerobic, anoxic, and anaerobic zones, which allows nitrification, denitrification, and enhanced biological phosphorus reduction processes to occur simultaneously.

AGS is a relatively new process, and new methods for creating and sustaining granular sludge are continuously under development. Currently, most AGS processes rely on selectively wasting less-compact sludge and creating conditions that favor granule-forming biomass, such as using a batch reactor operation where all treatment (organics removal, nutrient reduction, and solids settling) takes place in one tank. In AGS systems, the batch reactor configuration helps stratify and select biomass into granules, which allows for carbon, nitrogen, and phosphorus removal to occur within a compact footprint that is reported to be smaller than that of activated sludge systems.

The AGS reactor operates in a batch cycle consisting of a fill/draw phase

- *Simultaneous Fill/Draw Phase* – During this phase, influent flow is introduced into the bottom of the reactor. Previously treated and clarified water is displaced by the influent and is transferred to secondary effluent channels. No air is added during this stage, resulting in anoxic and anaerobic conditions which provide biomass conditioning and phosphorus release.
- *React Phase* – This phase is the longest of the cycle, whereby the reactor contents are continuously aerated. In this phase the biomass is exposed to aerobic and anoxic condition to create conditions for automated nitrification, denitrification, phosphorus uptake and carbon metabolization processes. This phase is automatically controlled by various online instruments, located at the top of the reactor. The instruments continuously monitor reactor performance and control the duration of this phase. The automated control of the process allows energy savings and process optimization.
- *Settling Phase* – During the settling phase, aeration is stopped, and the biomass in the reactor is left to settle to the bottom of the reactor. The relatively large size and density of the granules accelerates the settling process and facilitates solids/liquid separation inside the same reactor. Excess sludge is conveyed to a sludge buffer tank where it is gravity thickened prior to the solids handling processes. Excess granule sludge can also be used to maintain a desired biomass concentration in the reactor as part of the treatment process. Finally, the process is ready for a new Fill/Draw cycle where influent enters the reactor and treated water is decanted

As a batch reactor process, multiple reactors are integrated to provide continuous treatment capacity. During the feed phase, the reactor is made available to receive influent flow for treatment. During subsequent phases, the reactor is not available to treat incoming flow. The

cycles of all the reactors are staggered to ensure continuous treatment can be achieved when more than three reactors are provided.

A typical AGS reactor consists of a series of tanks equipped with pipes for influent, secondary effluent and waste. The influent pipe enters the AGS reactor at the bottom of the tank to transfer the wastewater into the AGS reactor. The secondary effluent pipe transfers the treated water to the secondary effluent channel. The waste pipe has two functions: it can be used to discharge excess sludge to a sludge buffer tank, or it can be used to send decant untreated water (Water Level Correction) from the AGS reactor to the beginning of the process.

Additional infrastructure includes the sludge buffer tank. The purpose of the sludge buffer tank is to allow the free-floating sludge to further settle and thicken prior to entering the solids handling processes.

AGS - Conceptual Implementation at SIWWTP

Conceptual implementation of the AGS treatment facilities at SIWWTP is described as follows: All influent wastewater enters SIWWTP at the existing headworks and will be conveyed to the existing primary clarifiers. Primary effluent from all clarifiers will be combined at the existing Primary Effluent Junction Structure. The Phase 1 IPS will be upgraded with larger pumps and will be used to pump primary effluent to the Phase 1 MBR and Phase 2 AGS. Phase 2 flows will be treated through AGS bioreactors. Secondary effluent from the AGS reactors will be conveyed to tertiary filters (optional). Phase 2 effluent will be blended with Phase 1 effluent prior to UV disinfection. Disinfected plant effluent will be discharged to the ocean outfall. The sludge buffer tank will receive gravity thickened WAS, discharge the thickened WAS to the future solids handling facilities, and return the supernatant from the sludge buffer tank to the primary effluent junction structure.

AGS Alternative – Conceptual Site Layout

The conceptual site layout for AGS is shown in **Figure 2-1**. The new AGS system would be constructed to the east of the Phase 1 MBR on the northeast side of the facility. The IPS pumps will be upgraded to convey primary effluent to both Phase 1 and Phase 2. The Phase 2 influent connection is near the Phase 1 fine screening facility. Influent, effluent, wasting, aeration and water level correction piping for each reactor will be conveyed within the pipe right of way. Automated valves are provided for each reactor to control the influent and effluent flow, process air, water level correction, and sludge wasting and are also located within the pipe right of way. The AGS reactors include an aeration grid with diffusers and analytical instruments for each reactor. The sludge buffer tanks and associated pumps are adjacent to the respective AGS reactors. If tertiary filters are required, the effluent filtration facility will be located adjacent to the AGS basins along the southern plant boundary. Following the effluent filtration facility, Phase 2 effluent will connect to the Phase 1 effluent channel.

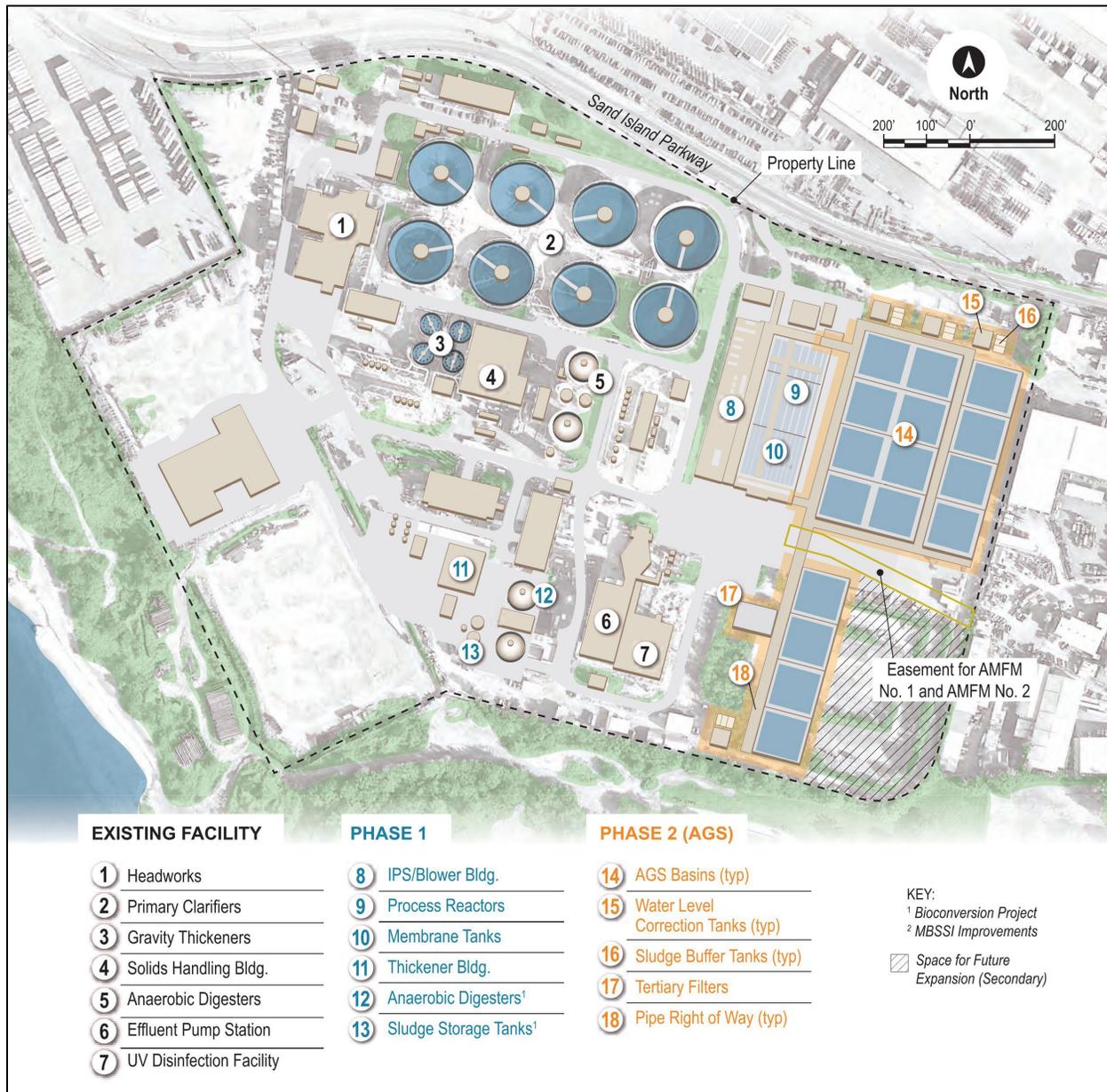


Figure 2.1 – Preliminary Conceptual Site Layout for AGS Alternative
 (See Figure 2.6 for the preferred liquid stream site layout based on AGS)

Alternative 2 – Biological Aerated Filter (BAF)

BAF process was developed in Europe in late 1980s as a low-cost alternative to the conventional biological treatment systems and used throughout the world at WWTPs with similar and much larger treatment flows compared to SIWWTP. This process can achieve high degree of organics removal and nitrification in a compact surface area. BAF technology combines biological treatment and physical filtration in a single reactor by promoting the growth of a biofilm on the surface of the filtration media. BAF systems can be designed to have either downflow

(countercurrent) or upflow (co-current) configurations. The two configurations are differentiated by direction of liquid and air flow as they are introduced into the system. Downflow systems introduce primary effluent at the top of the filter with air introduced at the bottom, and upflow systems introduce primary effluent and air at the bottom of the filter. There are two types of media typically used in BAF systems: floating media and sinking media. Floating media is generally made of synthetic materials, such as polystyrene, polypropylene, or plastic, and can only be utilized in upflow systems. Sinking media is generally made of naturally occurring materials, such as clay or anthracite, and can be used for both upflow and downflow filters.

BAFs can be configured in stages depending on the degree of treatment required: a single-stage BAF can be used to target BOD removal and/or nitrification, and a two-stage BAF can be implemented with the first stage optimized for BOD removal and the second stage optimized for nitrification. A third anoxic stage can be added if denitrification is required. Backwashing occurs as needed to avoid clogging (typically daily) and can be automated.

In a typical BAF installation, influent wastewater enters the BAF cell (tank) at the bottom through a feed pipe and conveyed to a cell feed channel. From there, wastewater flows upward through the BAF media. The BAF media is retained in the cell by a pre-cast concrete nozzle deck located above the media. The nozzle deck contains nozzle-type strainers that allow water and air to pass through the cell. Treated water leaves the BAF cell at the top of the filter through a secondary effluent channel. An aeration grid and underdrain are installed at the bottom of the BAF cell. A common aeration grid and blowers are used for process aeration and air scour. When a BAF cell is in service, the process airflow can be controlled based on a target airflow rate, DO concentration and/or nitrogen-based aeration control. When a BAF cell is backwashed, an airflow setpoint is defined to scour and release the solids concentrated in the media. The aeration blowers can be used for both process air and air scour. The backwash flow is a counter-current flow, that is counter to the treatment flow. Gravity assists in removing stored solids as the media bed expands during backwash – thus not requiring dedicated pumps, piping, valves, blowers or controls for backwashing. All wasted backwash water is discharged to a mudwell through the backwash header.

BAF - Conceptual Implementation at SIWWTP

Conceptual implementation of the BAF treatment facilities at SIWWTP is described as follows: All influent wastewater enters SIWWTP at the existing headworks and is conveyed to the existing primary clarifiers. Primary effluent from all clarifiers will be combined at the existing Primary Effluent Junction Structure. The Phase 1 IPS will be upgraded with larger pumps and will be used to pump primary effluent to the Phase 1 MBR and Phase 2 BAF. Primary effluent will be treated through the single-stage BAF for BOD removal and will be blended with Phase 1 effluent prior to UV disinfection. Disinfected plant effluent will be discharged to the ocean outfall. Backwash water from the BAF will be transferred to the sludge mudwell and treated

through a high-rate clarifier. Clarified backwash water will be returned to the primary effluent junction structure or the primary clarifiers. The thickened solids will be conveyed to the future solids handling facilities.

BAF – Conceptual Site Layout

The conceptual layout for BAF is shown in **Figure 2-2**. The new BAF system would be constructed to the east of the Phase 1 MBR on the northeast side of the facility. The IPS pumps will be upgraded to convey primary effluent to both Phase 1 and Phase 2. The Phase 2 influent connection is near the Phase 1 fine screen facility. Influent, effluent, aeration, and backwash waste will be conveyed within the pipe right of way. Automated valves are provided for each BAF cell to control the influent flow, air supply, and backwashing and are located within the pipe right of way. The layout includes twenty-four (24) BAF cells split into two trains, each containing twelve (12) cells. The backwash mudwell, high-rate clarifier tanks, and supporting equipment are located to the north of the BAF cells and will tie into future solids handling facility. The tertiary filter system is located downstream of the BAF cells, and the secondary effluent leaving the tertiary filters connects to the Phase 1 effluent channel.

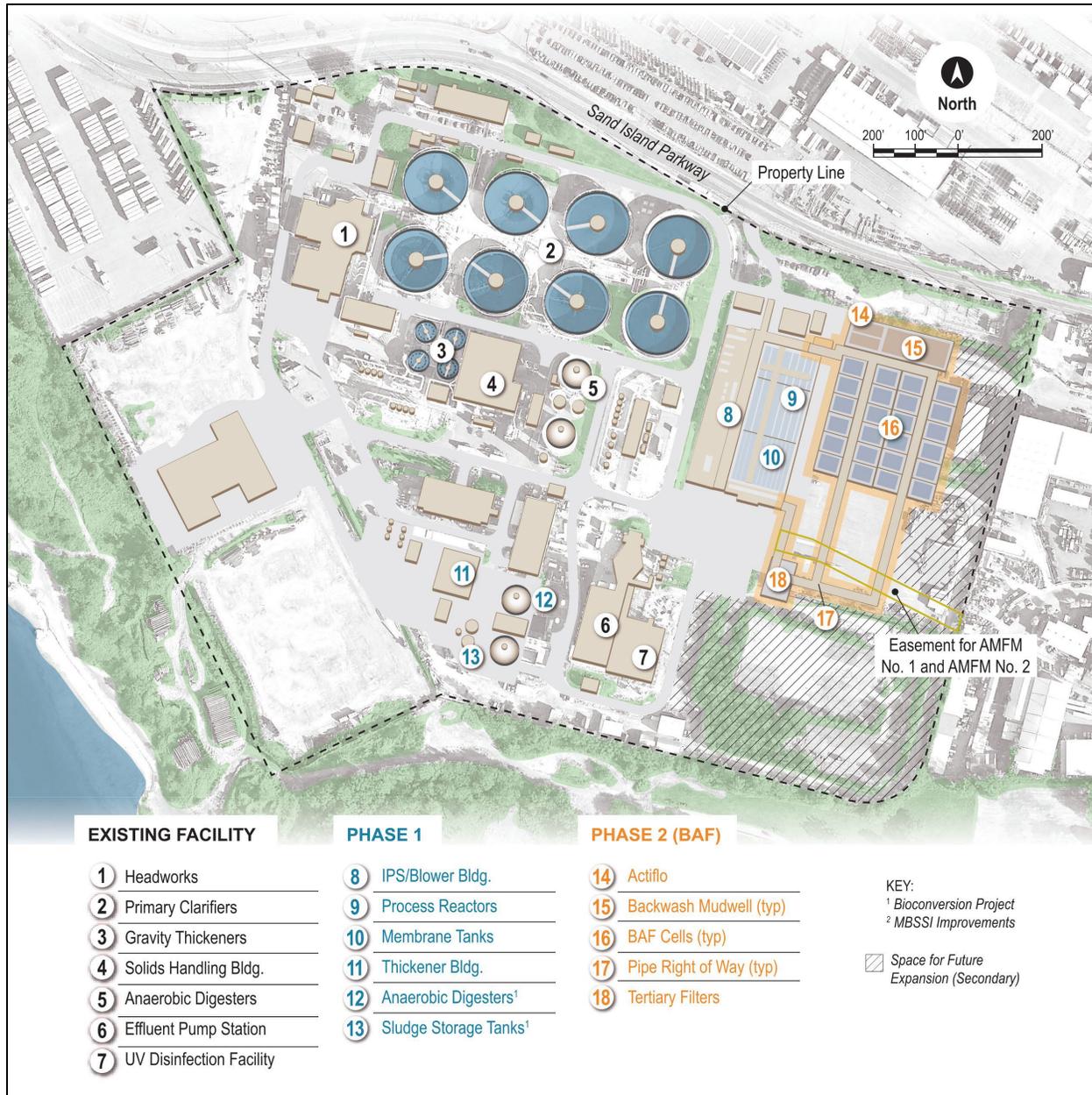


Figure 2.2 – Conceptual Site Layout for the BAF Alternative

Alternative 3 – Expansion of Phase 1 MBR Facilities:

MBR is an established technology which has been successfully implemented to treat wastewater flows ranging from less than 1 to greater than 100 mgd worldwide for more than 20 years. Historically, membranes have been used for smaller-flow systems due to the high capital cost of the equipment and high O&M costs. However, the application of membrane technology for large-scale plants has increased in the past 15 years due to increased concrete costs and when limited footprint is available for new and/or existing facilities.

The MBR is an intensified wastewater treatment process which combines a biological reactor with suspended biomass and membrane filtration for liquid-solids separation. The biological reactor uses activated sludge for organics and nutrient removal, and membrane filtration uses hollow-fiber or flat sheet membranes to provide liquids-solids separation. In general, MBR technology is used to reduce the overall footprint by eliminating secondary clarifiers and operating at concentrations much higher than conventional activated sludge. The MBR produces a high-quality effluent due to complete suspended solids capture across the membrane. However, the process is energy intensive, and typically requires more maintenance compared to providing solids separation using traditional clarifiers.

In a typical MBR system wastewater enters the system at the bioreactor tanks, flows into membrane tanks for filtration, and treated water is separated from sludge using a membrane filter. The filtered water, or permeate, is pumped from the membranes to downstream processes using a vacuum across the filters. MBR systems also include return activated sludge pumps to return the concentrated mixed liquor from the membrane tank to the bioreactor. WAS pumps are used to pump waste sludge from the membrane basins to control the solids retention time in the entire biological system. Air scour blowers are used to scour the surface of the membrane fibers to reduce membrane fouling between back pulse and cleaning cycles. Additional ancillary equipment for MBR technology includes back pulse pumps which are designed to pump permeate backwards through the membranes to remove accumulated solids on the surface of the membranes without chemicals, and chemical clean-in-place pumping and storage facilities used to routinely clean the membranes. The chemicals used include sodium hypochlorite and citric acid.

MBR - Conceptual Implementation at SIWWTP

Conceptual implementation of the MBR treatment facilities at SIWWTP is described as follows: All influent wastewater enters SIWWTP at the existing headworks and will be conveyed to the existing primary clarifiers. Primary effluent from all clarifiers will be combined at the existing Primary Effluent Junction Structure. The Phase 1 IPS will be upgraded with larger pumps and will be used to pump primary effluent to the MBR process, which will include fine screening, bioreactors, and membrane tanks. The screens are located upstream of the bioreactors to remove debris and solids that could damage the membranes. The bioreactor configuration which uses an unaerated (anoxic) zone for alkalinity recovery followed by an aerated (aerobic) zone for nitrification. RAS will be returned to the beginning of the bioreactor at the anoxic zone. MBR permeate will be pumped to UV disinfection before it is discharged to the ocean outfall.

MBR – Conceptual Site Layout

The conceptual layout for MBR is shown in **Figure 2-3**. The new MBR system would be constructed to the east of the Phase 1 MBR on the northeast side of the facility. Additional fine screens are installed adjacent to the Phase 1 fine screens on the north side of the Phase 2 MBR.

The fine screens provide the influent connection to the Phase 2 MBR. Influent, effluent, aeration, wasting, and return activated sludge piping will be conveyed within the pipe right of way. The pipe right of way is also equipped with automated valves for aeration. Mixed liquor from the bioreactors enters the membrane tanks via an MBR influent channel. Membrane air scour blowers, turbidimeters, RAS pumps, permeate pumps, and chemicals for the membrane cleaning will be located in the MBR service building. Automated valves for air scour, permeate, and back pulse would also be located in the MBR service building. The secondary effluent from Phase 2 MBR would connect to the Phase 1 effluent channel.



Figure 2.3 – Conceptual Site Layout for the MBR Alternative

Alternatives Evaluation – Liquid Stream Secondary Treatment Technologies

The three technologies were evaluated and compared based on eleven weighted criteria described in **Table 2-2**.

Table 2.2 – Secondary Treatment Evaluation Criteria

Category	Description	Weight
Operation and maintenance (O&M) complexity	Operational complexity for the alternative, including start-up, preventative maintenance, shutdown, and specialized skillsets required. Considers the level of automation and ability for manual operation. Considers the complexity of operating the alternative alongside the Phase 1 technology (MBR).	9
Access to Equipment and Vendor Support	Assess whether the alternative’s process technology/replacement parts can be easily procured and delivered to the site or if special procurement and delivery requirements are anticipated.	9
Process Robustness	Assess how quickly the process can recover from a failure or process upset and if the processes can withstand loading shocks such as unusual levels of organics/solids loading, FOG, etc. Ability of the alternative to manage typical diurnal flow and load patterns and wet weather flow peaks.	8
Process Integration	Impact on other plant processes as a result of implementing secondary technology (screening requirement, impact on primary treatment, impact on solids production and biogas generation, etc.)	8
Supports Sustainability	Assess the extent to which the alternative helps the City achieve wider sustainability and climate change goals.	7
Constructability	Assess whether the alternative is anticipated to require complicated construction phasing that would place the project at risk for higher-than-expected costs and longer-than-anticipated construction duration. Consider if specialized labor is required.	7
Footprint Requirements	Considers the ability of the alternative to physically fit on the site and the ability to preserve space for future expansion beyond the design horizon.	6
Energy Demands	Estimates the extent to which expansion of HE infrastructure or existing site infrastructure is required to meet ultimate power demands.	6
O&M Cost	Average power, chemical and labor, calculated annually and provided as a 30-year NPV.	5
Capital Cost	Direct measure of planning level opinions of probable construction costs, including equipment, materials, labor, and escalation.	5
Process Adaptability	Adaptability of the process to accommodate future nutrient removal requirements, future contaminants, and/or future treatment process modifications.	4

Note: (1) Weights are based on a scale of 1 to 10, 1 being the least important to 10 being most important.

Each alternative was rated according to each criterion using a low, moderate and high methodology, where a low rating is represented by a single red dot (●) if the disadvantages outweighed the advantages; a moderate rating is represented with two orange dots (●●) if the disadvantages and advantages were comparable; and a high rating is represented with three blue dots (●●●) if the advantages outweighed the disadvantages. Table 2-2 presents a summary of the evaluation outcomes.

Table 2.3 – Summary of Evaluation

Criteria ¹	Weight ²	AGS	BAF	MBR
O&M Complexity	9	●●●	●	●●
Access to Equipment & Vendor Support	9	●●●	●●	●●
Process Robustness	8	●●	●●	●●
Process Integration	8	●●	●●	●●●
Supports Sustainability Goals	7	●●●	●	●●
Constructability	7	●●	●	●●
Footprint Requirements	6	●	●●●	●●
Energy Demand	6	●●	●●●	●
O&M Cost	5	●●●	●●●	●
Capital Cost	5	●	●●●	●●
Process Adaptability	4	●●●	●	●●●
Alternative Ranking³	-	1	3	2

Notes: (1) Weights are based on a scale of 1 to 10, 1 being the least important, to 10 being most important.
 (2) The overall rating represents the relative evaluation of the three alternatives. The relative rating considers the weight of each criteria and the criteria rating (low, moderate, high).

Key: ●●● = High, ●● = Moderate, ● = Low

After an assessment of the relative advantages and disadvantages of each shortlisted technology, the City selected AGS technology for the Phase 2 secondary treatment process facility planning and design. The Draft EIS will provide a more detailed discussion of the rating process and comparisons among the three alternatives that supports the City’s selection of the AGS technology.

2.2.2 Proposed Secondary Treatment Facilities – Liquid Stream

The proposed secondary treatment facilities for liquid streams processing using AGS treatment technology include the following:

- *Preliminary Treatment System:* The preliminary treatment system currently consists of the headworks facilities, including the influent receiving area, screening channels, flow measurement, and grit removal. Improvements to the preliminary treatment system will include the construction of a new equalization basin, modifications to the influent receiving area to improve mixing, and replacement of the aerated grit chambers (AGC) to increase the efficiency of the grit removal system.
 - *Equalization Basin:* The SIWWTP Headworks Facility currently has a firm hydraulic capacity of 240 mgd with no upstream or inline equalization capacity to dampen peak wet weather flows. A new peak flow equalization basin will be constructed as part of the Phase 2 improvements to limit the design capacity of the Phase 2 secondary process to 240 mgd, matching the hydraulic capacity of the Headworks Facility. The storage basin will have a minimum working volume of 3.6 MG to equalize influent flows beyond 240 mgd. The new storage basin will be constructed in the southwest corner of the property and will be designed to store flows from Ala Moana FM No. 3 and/or No. 4. A new valve system will be used to divert flows between the FMs and the headworks influent receiving area, as necessary. The system capacity is designed so that wastewater temporarily stored in the equalization basin will be drained within an 8 hour period. The basin will not be covered and will need to be washed down using hydrants following use. No odor control system or redundant piping is required due to the intermittent use.
 - *Influent Receiving Area:* Collects flow from nine (9) FMs. These facilities originally included two mixer chopper pumps to mobilize settled grit, which have since been removed by CCH staff due to the damage and maintenance required to keep the pumps operational. As a result, grit accumulation has been observed in the Influent Receiving Area. Two dry pit pumps will be installed to improve mixing in the Influent Receiving Area.
 - *Influent Screening Facility:* The existing six (6) plate screen channels provide sufficient capacity to treat the projected Phase 2 equalized peak hourly flow of 240 mgd, therefore, no modifications to the influent screening facility are anticipated.
 - *Influent Flow Measurement:* No improvements to the existing influent flow measurement facilities are proposed as part of the Phase 2 improvements.

- *Grit Removal:* The existing SIWWTP grit removal system consists of four (4) parallel AGCs. Each channel is equipped with three (3) grit collection sump units, one dedicated blower, and one grit pump. The performance of the existing grit removal system is not sufficient to prevent grit accumulation in downstream processes. The existing AGCs will be retrofitted to add HeadCell™ units for improved grit removal efficiency as part of the Phase 2 improvements. HeadCell™ is a hydraulic induced vortex system manufactured by Hydro International. The existing blowers will be repurposed to aerate the HeadCell influent channels and keep grit in suspension prior to reaching the HeadCell units.
- *Primary Treatment System:* The primary treatment system will consist of the existing primary clarifiers, the primary sludge pumps, and the primary effluent pump station (PEPS). The PEPS is currently being constructed as part of Phase 1 but will be modified to meet Phase 2 requirements.
 - *Primary Clarifiers:* The existing primary treatment system has eight (8) primary clarifiers with ferric chloride and polymer addition for CEPT. The primary clarifiers will remain as the mode of primary treatment; however, the chemical dosing system will be stopped after the completion of the Phase 2 secondary treatment upgrades. The chemicals increase the chance of irreversible fouling in the MBR and can negatively affect the performance of the secondary processes. The existing primary treatment process has enough capacity to treat the Phase 2 design flows. Therefore, no improvements to the primary treatment are recommended under the Phase 2 project.
 - *Primary Sludge Pumping System:* The sixteen (16) existing rotary lobe pumps currently used for primary sludge pumping (2 pumps serving each primary clarifier tank) will be replaced under the Phase 2 project. Each primary clarifier will be provided with one duty pump and one standby pump.
 - *Primary Effluent Pump Station:* The PEPS is required to convey primary effluent from the existing Effluent Junction Structure to the Phase 1 and Phase 2 secondary treatment processes. The following modifications to the PEPS (originally referred to as the Intermediate Pump Station in Phase 1) will be completed as part of the Phase 2 project.
 - Increase Pumping Capacity. Replace the three (3) existing Phase 1 pumps with larger pumps and install three (3) additional pumps and associated piping, valves, and controls.

- Modify Phase 1 Pump Isolation and Discharge Valves. Manual butterfly valves on the pump suction and discharge lines installed as part of Phase 1 will be replaced by larger valves to match the pipe sizing and will be motor-operated.
 - Replace Level Measurement Instrumentation. Radar level sensors used for Phase 1 will be replaced with differential pressure transmitters (one duty and one standby for each wet well compartment) based on 2022 Division of Wastewater Treatment and Disposal (WTD) Design Guidelines. Emergency backup high-level floats will also be installed in each wet well chamber.
 - Increase the Suction and Discharge Pipe Size. Upsize the pump suction and discharge piping to limit the maximum pipe velocity in accordance with CCH design standards.
 - Extend the PEPS Conveyance Headers. The two 72-inch conveyance headers will be extended from the Fine Screen Structure to supply the new AGS secondary treatment system (Phase 2). One of the two headers will be outfitted with a new connection to continue feeding the MBR secondary treatment system (Phase 1).
 - Install flow meters and control valves. Magnetic flow meters and motorized control valves will be provided at each AGS basin to obtain the desired flow split between the Phase 1 and Phase 2 facilities.
- *Phase 2 Secondary Treatment System:* The secondary treatment system will consist of parallel treatment processes using MBR and AGS technologies. The Phase 1 MBR is currently in construction and will be fully operational by 2026 at which time it will handle a design flow of 20 mgd MMF. The Phase 2 AGS system will treat the remaining 70 mgd MMF based on the 2010 Consent Decree stipulated performance milestones. The proposed Phase 2 AGS secondary treatment facilities are described as follows:
 - *Aerobic Granular Sludge Reactors:* The proposed AGS reactor layout includes four (4) parallel treatment “trains”, each with four (4) AGS reactors (total of sixteen [16] reactors). Each AGS reactor is contained in a large, rectangular concrete tank structure approximately 133 ft long by 90 ft wide by 22 ft in depth, with an area of approximately 12,000 sf and a volume of 1.88 MG. Each AGS reactor is equipped with seven aeration blowers and a pipe diffuser system to generate proper dissolved oxygen levels in the effluent to facilitate the AGS treatment process. The Phase 2 aeration system will be used to supply air to only the Phase 2 AGS reactors and will not be used for the Phase 1 MBR facilities.

- *Sludge Buffer Tanks (SBT)* - Six (6) SBTs total are proposed to be shared between the four AGS trains. SBTs receive WAS from the AGS reactors during the settle phase of treatment and pre-thicken it by gravity settling prior to the solids handling processes. Pre-thickened WAS is removed from the SBT through an effluent manifold at the bottom of the tank and conveyed to the solids handling processes using a common WAS/decant pump. Each SBT is designed with an approximate surface area of 722 sf, tank depth of 15.4 ft and volume of 0.083 MG.
- The AGS process is a proprietary technology under the name of the AquaNereda® AGS, and therefore, the design of the AGS system is being developed in coordination with Aqua-Aerobics Systems Inc. (AASI), the technology provider within the United States. AASI will provide the design of the AGS reactor, internal AGS reactor components, SBTs, WLC tank, and cycle schedules. The aeration demand and blower capacity will be developed by the JV in coordination with AASI. Development of the diffuser system, total aeration demand, the number and type of blowers, and blower room layout alternatives are in progress.
- *Effluent Cloth Media Filtration (CMF) (Tertiary Filters)*: The secondary effluent from the AGS and MBR will be conveyed to CMF to provide an extra barrier of protection during peak flow conditions or process upsets and improve the effectiveness of UV disinfection. CMF includes three steps: filtration, backwash, and solids-wasting. Collected backwash water and any settled solids will be sent back to the PEPS. The filtered AGS effluent is then combined with MBR permeate before conveyance to UV disinfection.
- *UV Screens*: The existing UV screens are used to remove any large particles in the primary effluent which could diminish the effectiveness of UV disinfection or potentially harm the EPS pumps. Following the completion of Phase 2, the UV screening equipment will be decommissioned and abandoned in place.
- *UV Disinfection*: No modifications to the existing UV system are recommended as part of Phase 2, but the JV recommends observing patterns and changes in UV Transmittance (UVT), monitoring the operation of the UV system as water quality and system hydraulics are incrementally improved, and collecting and testing samples at each milestone change to understand the ability of the UV system to perform and the cost of UV treatment with the proposed secondary treatment improvements.

2.2.3 Secondary Treatment Facilities – Solid Stream Alternatives

Four (4) alternatives were evaluated for Phase 2 solids stream upgrades, these include:

- *Alternative 1: Conventional Anaerobic Digestion (AD) + Drying* – This alternative would continue operating the solids digestion using the current mesophilic anaerobic digestion (AD) process to produce Class A quality biosolids. One new anaerobic digester and a digester control building would be needed to meet 2045 solids projections while providing a minimum 20-day solids retention time (SRT) based on the City’s current operating requirement.

Alternative 1 has a sub-alternative, Alternative 1A, with a shorter minimum 15-day SRT recommendation. No additional digester or associated digester control building would be needed to meet the minimum 15-day SRT. This reduces the capital cost of the alternative by approximately \$60 to 70 million and reduces overall O&M by eliminating the O&M costs associated with a new digester and its ancillary equipment. However, the existing dryer equipment does not have the required capacity, and this alternative would require a new dryer to meet projected design capacity. An advantage of this alternative is solids operations staff are already familiar with all the equipment necessary.

Alternative 1 has the highest capital, annual O&M, and life cycle costs of all alternatives considered. Alternative 1A has higher capital and life cycle costs compared to Alternative 3 and 3A but has the second lowest annual O&M cost after Alternative 3.

- *Alternative 2: Thermal Hydrolysis Process (THP) +AD + Drying* – This alternative integrates a THP system into the solids stream. THP is a pre-digestion method that involves subjecting sludge to high temperatures and pressures to induce breakdown of cell membranes (“lysis”) prior to anaerobic digestion. When combined with the existing mesophilic anaerobic digestion, THP can produce Class A biosolids. In this alternative, the digested and dewatered Class A biosolids is further processed in a dryer to produce Class A biosolids pellets, similar to the dried pellets currently produced at SIWWTP. However, the existing dryer equipment does not have the required capacity, and this alternative would require a new dryer to meet projected capacity needs.

THP pre-treatment allows the plant to operate the anaerobic digesters at a higher solids and hydraulic loading rate, thereby reducing the number of digesters required to accommodate projected 2045 solids loads. The THP system requires additional equipment and facilities such as pre-THP sludge screening, dewatering, odor control, and post-THP heat exchangers/boilers. A potential drawback of the THP alternative is the existing plant solids operations staff are unfamiliar with the new THP and intensified anaerobic digestion process unless they have experience in operating the THP system

elsewhere. However, the City will have operating experience from the new THP system under construction at Honouliuli, and resources can be allocated towards providing training and support while transitioning operations staff to new technologies and mode of operation.

- *Alternative 3: THP +AD (No Dryer)* – This alternative also introduces THP into the solids treatment stream, but excludes the dryer facility. With the addition of THP, the facility will produce Class A biosolids without drying. In this option, there would be no dryer, pellet loadout, or pellet storage facility at SIWWTP. Instead, dewatered cake would be transported directly from the dewatering facility for beneficial reuse. Given the uncertainty of the biosolids product end-use and marketability, it was assumed that cake will be hauled for disposal to HPower. Further market research would be required to identify potential end users of the Class A dewatered cake product. Without a biosolids dryer, this alternative would result in excess digester gas (DG), which could be utilized for on-site heat and power production, used as off-site fuel, or disposed through flaring (burning). Under this alternative, two sub-alternatives, Alternative 3 and Alternative 3A were evaluated to compare the process sizing and costs with and without Combined Heat and Power (CHP).
- *Alternative 4: Thermophilic AD (No Dryer)* – Alternative 4 would generate Class A biosolids following AD and dewatering, using a batch thermophilic digestion step as part of the overall AD process. The most frequently adopted thermophilic AD configuration consists of batch thermophilic processing followed by a mesophilic phase to reduce dewatering odors and add heat recovery to reduce the heat demand of the digestion process. A thermophilic-mesophilic digestion process is known as a temperature-phased anaerobic digestion process (TPAD). A batch thermophilic TPAD process is what most utilities have implemented to meet the EPA Class A biosolids requirement using anaerobic digestion. To meet EPA time and temperature requirements for Class A biosolids treatment, every particle must be treated at a minimum temperature of 131°F for a minimum batch detention time of one day. Typically, at least three tanks are required to meet this requirement: one in fill, one in hold, and one in draw mode.

Solids Stream Alternatives Evaluation and Selection of Preferred Alternative

Comparative cost estimates for each alternative, including capital, O&M, and life cycle costs was a primary criteria for selection of the preferred solids treatment technology. Alternative 4 has the highest capital cost, annual O&M cost, and life cycle cost of all alternatives as it requires two new digesters for carrying out batch thermophilic digestion followed by mesophilic digestion. Alternative 1 has the second highest capital cost and life cycle cost compared to rest of the alternatives as it requires one new digester to meet city standard of 20-day digestion SRT and new and costly dryer equipment. Compared to Alternatives 1A, 3 and 3A, Alternative 2 has a

higher capital, annual O&M, and life cycle costs as it requires a new THP system and new, costly dryer equipment. Alternative 3 has the lowest O&M cost, and the second lowest capital cost and life cycle cost after Alternative 3A. Alternative 3A has the lowest capital cost and life cycle cost compared to all the alternatives as it excludes dryer operation and CHP. Alternative 3 is the only alternative that allows the City to recover digester gas (DG) for energy production, which supports the City's sustainability goals. The THP technology is also being used at Honouliuli WWTP, which will offer the benefit of shared operational resources and training.

Based on both financial and non-financial considerations, Alternative 3 (THP without dryer) was selected for the Phase 2 solids treatment facilities expansion to meet projected 2045 capacity needs. Additional information about the alternatives selection process will be included in the Draft EIS.

2.2.4 Proposed Secondary Treatment Facilities – Solids Stream

The solids treatment facilities receive sludge that is separated from the liquid process stream at different stages of treatment. Primary sludge from the primary clarifier is processed through gravity thickeners (GTs) to produce thickened primary sludge (TPS) which is then combined in sludge blend tanks (BTs) with thickened sludge from the secondary treatment process.

Secondary treatment Phase 1 solids, including sludge from the pre-MBR fine screens and WAS from the MBR treatment, along with secondary treatment Phase 2 solids, consisting of WAS from the AGS treatment, will be combined in a secondary sludge wet well then thickened in one of three (3) Gravity Belt Thickeners (GBTs) prior to mixing with the TPS in the sludge BTs. The sludge wet wells and the GBTs are being constructed as a part of Secondary Treatment Phase 1 Project and are sized to process solids from both Phase 1 and Phase 2 secondary treatment facilities. The combined thickened blended sludge (TBSL) will then be pumped to either the egg-shaped digesters (ESD) or silo-shaped digesters for further processing.

The proposed Secondary Treatment Phase 2 project improvements to solid stream treatment facilities include the following:

- *Gravity Thickeners:* Phase 2 project improvements to the four (4) existing GTs that are used to thicken primary sludge include removing and replacing all components which are nearing the end of their service life for all GTs as listed below:
 - Remove and replace all concrete joint sealant, protective coatings, and topping grout inside the GTs.
 - Remove and replace Center Drives, which include drive assembly, gear motor, chain guard, and waterproof drive control.
 - Remove and replace all other exterior mechanical components, including thickened primary sludge pumps.

- Remove and replace the fiber reinforced plastic (FRP) covers. City staff have shown interest in flat aluminum covers for ease of access and maintenance.
- *Secondary Sludge Thickening:* No additional GBTs or modifications to GBT sludge pumping are proposed as part of the Phase 2 project improvements.
- *Blend Tanks (BTs):* A new BT will be installed at the west end of the thickener building, during Phase 2, and will operate alongside the existing three (3) Phase 1 BTs. The new BT will be fed with thickened primary sludge (TPS) from the existing GTs and thickened WAS from the existing GBTs. Foul air will be extracted from the top of the new BT, where it will be treated by the existing thickener building odor control system. A new TBSL pump will be installed to carry the thickened sludge from the four BTs to the new pre-THP building. The existing TBSL piping extending to the silo-shaped digestors will remain to allow the sludge to bypass THP in the event the process is down. The existing thickened sludge feed pipes and blended sludge discharge header will be extended to the new BT. Discharge piping from the new TBSL feed pump will connect to the discharge header from the existing TBSL feed pumps. Sludge piping will be routed to avoid conflicts with the surrounding pipes.
- *Pre-THP Sludge Screening:* Phase 2 project improvements include four (4) solids screens and screening feed pumps to screen TPS and TWAS prior to pre-dewatering and THP. The solids screens will receive solids flow from the BTs (a mixture of TWAS and TPS with <1 day storage capacity). The TPS and TWAS mixture from the BTs will be pumped using progressive cavity pumps. Screening is a critical step prior to THP as it removes large solids which could potentially damage the equipment downstream. It also homogenizes the sludge for better process control and efficient operation.
- *Pre-THP Sludge Dewatering:* Phase 2 project improvements include three (3) pre-THP dewatering system to dewater the screened, thickened solids from the BTs to typically between 20% – 22% TS. Different dewatering equipment such as centrifuges, screw press, and belt filter presses are available. However, centrifuges are proposed for pre-THP sludge dewatering as centrifuges are currently used by the existing plant operations and have demonstrated to produce higher cake solids. Dewatered sludge cake will be stored in vertical cylindrical silos inside a separate enclosure located immediately adjacent to the Pre-THP Dewatering Building. The liquid discharge (centrate) will be sent to the plant drain and recirculated into the secondary treatment liquids stream process.
- *Pre-THP Sludge Polymer:* Pre-THP dewatering operation requires the use of polymer and an associated polymer handling system. SIWWTP currently uses dry polymer for dewatering operations. The pre-THP dewatering polymer system consists of neat polymer

tanks, polymer makedown units, polymer solution batch/feed tanks, and polymer solution feed pumps. It should be noted that SIWWTP currently dewateres only digested primary sludge. However, the Phase 2 pre-THP dewatering feed will be a mixture of undigested TPS and TWAS. Three (3) new polymer makedown units and three (3) new polymer feed pumps will be constructed in Phase 2.

- *Pre-THP Sludge Cake Loadout:* Dedicated cake transfer pumps associated with each dewatering equipment that pumps the dewatered cake to pre-THP dewatering cake storage bins/silos shall be provided. The pre-dewatered cake storage silos shall be designed to accommodate sludge with 20 – 22% TS. A standby silo is also provided, which can be operated in series or be out-of-service as THP system is expected to be processing sludge continuously. Three (3) new dewatered cake pumps and three (3) new silos will be constructed in Phase 2. Sludge will be diluted down to ~16.5 % TS (15-18% TS range) before feeding the THP system. Pre-THP cake storage silos will be equipped with a sliding frame system for discharging the cake from the silo bottom by means of screw auger to the THP feed pumps. Slide gate cake discharge will also be provided for each silo to unload cake into a trailer in the loadout area. High-pressure piping, valves, and appurtenances will be required because of the THP system requirements and high cake solids concentration. The piping bend radius should be a minimum of five times the radius of the pipe to reduce potential for pipe blockage. Piping and valving connected to the THP feed lines will be provided so that cake can be pumped to a truck loading bay to be deposited in a truck for landfill disposal in the event of THP system shutdown.
- *Thermal Hydrolysis Process (THP):* Cambi¹ THP uses high-temperature, high-pressure steam to breakdown (“lyse”) cellular biomass, resulting in a decrease in viscosity, an increase in rate of anaerobic biological reaction, and an increase in digester gas production. The diluted dewatered cake pump’s discharge piping will be connected to the THP facilities. The THP systems will consist of one (1) modular THP treatment train from Cambi designed for high-seismic zone applications. The treatment train is considered a “skid” and will have two (2) pulper tanks with two (2) pumps each for sludge recirculation and feeding to the reactors, four (4) reactor vessels, and two (2) flash tanks with two (2) shared pumps for flash tank discharge feeding to the digestion process. Cambi’s proposed modular treatment train for SIWWTP will be supplied with internal piping, steel structures and platforms designed for seismically active zones.
 - *Pulper Tanks, THP Reactor, and Flash Tanks:* Cake will discharge from the Pre-THP cake storage silos by to feed through the three (3) THP feed pumps. THP feed pumps will feed screened, dewatered, and diluted sludge in the two (2)

¹ “Cambi” is the name of the company that developed and patented the specific thermal hydrolysis (THP) process used at wastewater treatment plants. THP is a two-stage process involving heating material under pressure followed by rapid decompression.

pulper tanks to be preheated before it is conveyed to the THP reactors. Downstream of the pulper tank will be two (2) progressive cavity pumps dedicated to each pulper tank. During normal operation, one pump sends preheated sludge from the pulper to the reactors while the other recirculates preheated sludge from the pulper tank back to the top of the tank. If the reactor feed pump is out of service, the second pump will stop recirculating and take over as the reactor feed pump. In the four (4) reactor vessels, the sludge gets exposed to high pressure and temperature to be hydrolyzed and meet the Class A time-temperature requirements. Once the reactor vessels are pressurized and heated to the design temperature, the sludge is retained for a minimum of 20 minutes in the reactor tanks at a pressure greater than or equal to 87 psi. Once the required retention time is complete in the reactor tanks, the tanks are depressurized, and the sludge is conveyed to the flash tank. Two (2) flash tanks will be constructed in Phase 2. The hydrolyzed sludge is cooled down in the flash tank before it is sent to the digesters.

- *Backup Steam Boilers:* Steam is injected into the Cambi reactors by using steam injection lances. Two (2) steam boilers will be constructed for this purpose.
- *Cooling Heat Exchanger (CHEX) and Chillers / Cooling Towers:* The thermally hydrolyzed sludge (THS) from the THP process is mixed with recirculated sludge coming from the silo and egg-shaped digesters to reduce the viscosity before entering the cooling heat exchanger (CHEX). Before the sludge is introduced to each digester, it is diluted and cooled to approximately 100°F through the CHEX. The cooling heat exchanger sizing and cooling requirements will be determined during early detailed design progression.
- *Silo Digesters (No. 3 and No.4):* The capacity of the two (2) new silo-type digesters, under construction by Synagro under a separate project, is sufficient to handle the projected 2045 solids loading conditions. An ESD may be rehabilitated or a new fifth silo digester constructed and used as a standby digester in the event one of the existing silo digesters needs to be taken offline for maintenance. Modification to the existing silo digesters (No. 1 and No. 2) and equipment may be necessary with the THP process being added upstream and a new dewatering building downstream. Equipment and piping which may need replacement include the following:
 - Replacement of the fixed cover to allow more flexibility in the operating sludge level in the digesters.
 - Re-evaluation of the existing sludge transfer pump capacity to handle dewatering feed conditions and TS concentration.
 - Additional sludge transfer pump to provide a standby pump for each silo digester.
 - Addition of an overflow line to remove scum layer and sludge build-up above the operating level.

- Re-routing the sludge recirculation line to control the temperatures in the digesters.
- Re-routing of the digested sludge lines to the new dewatering building.

The existing dual TBSL lines will remain and provide an option to feed the existing silo digesters and bypass the THP process. Bypassing the THP process should only occur in the event of an emergency. Class A biosolids would not be achieved if the THP process is bypassed.

- *Egg-Shaped Digesters (ESDs) No. 1 and No.2:* The City will determine whether to move forward with the design to repair or replace at least one. Phase 2 will include the THP process upstream of the digesters, only one of the ESDs would be needed as a standby. In order to utilize the ESD with the hydrolyzed sludge, the following modifications to the mechanical equipment are required.
 - Removal of the dual zone jet pump mixing and the draft tubes.
 - Replace the existing Wemco Screw Centrifugal pumps with new pumped mixing system.
 - Replace the sludge recirculation pumps to handle the digested sludge. The existing pump life expectancy will also be exceeded by 2035.
 - Replace the existing sludge transfer pumps to convey digested sludge flows to the new dewatering building and equipment of the two ESDs.
- *Digested Sludge Storage Tanks (SSTs) No.3 and No.4:* SSTs No.3 and No.4 will be constructed as a part of the current Synagro Project and will have the capacity to provide up to five days of sludge storage under 2045 conditions. If additional storage is needed beyond five days, one of the steel SSTs may be rehabilitated and allow a tank to be taken out of service for maintenance. Phase 2 improvements include possible modification or replacement of the fixed cover for the existing concrete SSTs.
- *Rehabilitated Digested Sludge Storage Tanks No.1 and No.2:* For either SST No. 1 or No. 2, under the Phase 2 project, if additional days of storage or a standby tank is required, one of the steel tanks may be repaired. Highlighted below are equipment which should be replaced in order for the steel tanks to be used for storage in Phase 2:
 - Replace the existing Wemco Screw Centrifugal pumps with new pumped mixing system.
 - Replace the sludge transfer pumps which would be used to drain the sludge from the egg-digester to the SST.
 - Remove any bypass piping to the other steel SST.
 - Route digested sludge piping to the new dewatering building.

- *Post-THP Dewatering:* In addition to pre-THP dewatering, there is a final post-THP dewatering step which takes place downstream of the digesters, which is the mesophilic anaerobic digestion (AD) dewatering process which dewateres the THP solids to over 25%. THP helps in enhancing the dewaterability of solids by changing the water distribution characteristics. The polymer system for post-THP dewatering operation is the same as pre-THP dewatering. Two (2) new dewatering feed pumps, two (2) new polymer makedown units, and three (3) new polymer solution feed pumps will be constructed for post-THP dewatering facilities in Phase 2.
- *Cake Loadout:* A dedicated cake transfer pump associated with each dewatering equipment that pumps the dewatered cake to temporary post-THP dewatering cake storage silos shall be provided. The post-THP dewatered cake storage silo shall be designed to store 23-30% TS cake. Post-THP cake storage silos will discharge from the bottom by means of a screw auger (“live bottom” design) with two slide-gate discharge points to distribute the cake into trailers in the truck loadout area. Other mechanisms of unloading will be evaluated during design progression. A standby silo is also provided, which can be operated in series or be out-of-service. A total of two (2) new post-THP dewatered cake pumps and two (2) new silos will be constructed for Phase 2.
- *Extended Cake Storage:* Extended dewatered solids cake storage shall be provided in case of prolonged periods of interruption of off-site biosolids distribution options as encountered during periods of inclement weather. This extended cake storage will serve as a temporary storage for off-site transfer of dewatered cake while logistic accommodations are made to find appropriate distribution or disposal alternatives for final dewatered cake solids during periods of interruption to the normal operation of the dryer facility or cake off-site distribution. This process area will typically consist of enclosed buildings, similar to high-ceiling warehouses, with no central support columns in order to allow front-end loaders to move and stack solids cake in the extended storage building.
- *Digester Gas (DG) Management:* The DG storage and conditioning facilities will be designed to safely handle all the DG produced from the anaerobic digesters and SSTs, to feed a new CHP energy recovery system. When the CHP operation is shutdown, a portion of the treated DG will be utilized by backup steam boilers for THP operation. Untreated DG will be combusted in the waste gas burners if CHP or backup steam boiler operation cannot use the full DG production. One (1) DG storage and DG conditioning system will be constructed as part of the Phase 2 project.
- *Waste Gas Burners:* Waste gas burner capacity needs to be provided for environmental and safety considerations. Untreated DG will be combusted in the waste gas burners if

CHP or backup steam boiler operation cannot use the full DG production. One (1) new waste gas burner will be constructed for Phase 2.

- *Combined Heat and Power (CHP):* The CHP system will use treated DG to generate electricity to offset SIWWTP onsite power demand and high-grade/low-grade heat will be recovered for steam generation. The CHP system is not intended to operate as backup power to the treatment facility. The CHP system installed as part of Phase 2 improvements will consist of:
 - Three (3) (two duty, one standby) DG fueled engine generator systems in sound-attenuated, weatherproof, marine-grade containerized enclosure.
 - It is assumed the CHP will only operate on DG and will not have the ability to operate on any other fuel.
 - High-grade and Low-grade heat recovery systems.
 - The high-grade heat recovery system will be comprised of a heat exchanger, economizers, pumps, valves, and excess heat radiators.
 - The low-grade heat recovery system will be comprised of a heat exchanger at the CHP, additional heat exchangers at the respective process areas, pumps, valves, and excess heat radiators.
 - Paralleling switchgear and controls will be installed as part of Phase 2 project improvements to interface to the plant electrical grid. Power generation and distribution components related to the CHP include step-up transformer, medium-voltage switch gear, protective relays, housing for CHP equipment, and gas safety system.
- *Phase 2 Odor Control Systems:* Two OCS facilities are currently being constructed as part of the Phase 1 improvements to treat foul air from the new secondary treatment processes and new solids handling facilities. Foul air from the Phase 1 compartment of the PEPS, Fine Screening Facility, and the Process Reactor inlet channel will be treated through the new Secondary Treatment OCS, and foul air from the new Thickener Building will be treated through the Thickener Building OCS. The Secondary Treatment OCS being constructed under Phase 1 consists of single stage activated carbon vessels. The existing Thickener Building OCS consists of a two-stage treatment process of bio-trickling filters followed by activated carbon vessels.

The Phase 1 design of the Secondary Treatment OCS includes space for future equipment required to treat foul air from the Phase 2 PEPS expansion. While the PEPS wet well will be constructed during Phase 1, it has two wet well compartments that are connected by a manual gate; only one wet well compartment is used under Phase 1. Once the Phase 2 system is operational, both compartments will be in use and foul air from the entire PEPS will be treated via the Secondary Treatment OCS. The Phase 1 Secondary Treatment

OCS was designed to treat a maximum airflow of 3,200 cfm (firm capacity). The additional airflow from the second wet well compartment is expected to be approximately 1,300 cfm, which exceeds the Phase 1 design criteria and requires installation of an additional OCS facility to treat the maximum airflow from the full secondary treatment process.

2.2.5 Proposed Power Distribution Improvements

The Phase 2 liquids and solids stream treatment facilities will require a new power generation and distribution system to provide for increased power demand and to distribute energy recapture by the liquids and solids treatment processes. The design of the power distribution system is in progress, dependent on the final process design and site layout of the Phase 2 liquids and solids treatment facilities. Key components of the Phase 2 power distribution are described below. (ENV, 2025).

- *Hawaiian Electric power* – The design proposes two (2) new 11.5kV HE circuits be supplied from the Sand Island and Mokuone Substations, subject to HE’s service design, in order to provide redundancy for projected Phase 2 loads. The HE primary meter switchgears will be installed within a dedicated room of the Main Electrical Building. The project will include new underground duct banks, manholes, and appurtenances due to the raising of the site elevation to meet the +16 feet Designed Flood Elevation.
- *Main Electrical System* - Dedicated electrical and generator buildings will be provided to support the Phase 2 liquids and solids treatment facilities.
 - The new Main Electrical Building will include a medium-voltage room designed to accommodate the main 11.5kV switchgears, switchgear batteries, and provisions to accommodate the future 11.5kV HE meter consolidation switchgears. Additionally, a low-voltage room will be provided to house the power distribution equipment.
 - The new generator building will be constructed adjacent to the Main Electrical Building to support the standby power generation system. Separate rooms will be provided within the building for the generators, switchgear, and low voltage equipment ensuring an organized layout, operational efficiency, and ease of maintenance. Outdoor above-ground diesel fuel storage tanks and diesel fuel day tanks will be installed adjacent to the new Generator Building to supply fuel to the standby generators. The tanks will be sized for 5-days average and 2-days peak flow conditions.

HE

- *Photovoltaic Systems (PV)* – The SIWWTP Phase 2 Secondary Treatment project will incorporate PV systems into the design. The PV systems are planned to be installed on the roof of the Electrical Building, Generator Building, Tertiary Building, and other feasible roof top structures.
- *Combined Heat and Power (CHP)* – A new CHP system will be provided to generate power using biogas produced in digesters through the anaerobic digestion of secondary sludge. The CHP system will include (2) 3MW power generators, , and distribution equipment, which shall be installed in a dedicated CHP building. The Phase 2 Secondary Treatment's main switchgear will be designed with provisions to allow connection of the CHP circuits, ensuring seamless integration with the facility's energy infrastructure. The CHP generators will be designed to operate in conjunction with HE power and shut-off on loss of HE power. This will allow the SIWWTP to offset a portion of the Phase 2 energy costs from HE.
- *AGS System* – The AGS system loads, with the exception of the aeration blowers, will be powered by new power distribution equipment to be installed in the AGS Electrical Building. The power distribution equipment supporting the AGS system includes 480V switchboards, 480V motor control center (MCC), stand-alone variable frequency drives (VFD), 480V power panels, 120/208V panelboards and dry-type step-down transformers. To support the AGS aeration blowers and the upsized primary effluent pumps (PEPS), a new electrical building will be provided adjacent to the Phase 1 building. This building will house required switchgear equipment and electrical panels. A separate building will be provided for the standby generators.
- *Peak Flow Equalization Basin* - The equalization system is comprised of drainage pumps, valves, and miscellaneous equipment to monitor and control the basin's level and pumped flows. Power to the basin will be served from the new Phase 2 Thickener Building expansion.
- *Effluent Cloth Media Filtration (Tertiary Filters)* - A cloth media filtration (CMF) system will be provided as an extra barrier of protection during peak flows conditions or process upsets, and to improve the transmissivity and effectiveness of UV disinfection. Power for the filter system will be provided from the Main Electrical Building.
- *Biosolids Stream Treatment Facilities* - Dedicated electrical and generator buildings will be provided to supply power to the biosolids treatment facility. The electrical building will be fed from the Phase 2 11.5kV main switchgear. The system will include two (2) outdoor pad-mounted 11.5kV - 480V step-down transformers, switchboards, MCCs, and miscellaneous power distribution equipment.

- *Odor Control Systems* – Upgrades will be made to the existing Secondary Treatment Odor Control System to accommodate the additional foul air flow of Phase 2’s PEPS expansion. Additionally, new OCS units are being proposed for the Phase 2 solids handling facilities, including the Pre-THP units and the dewatering facility. Upgrades to existing and new power distribution equipment will be provided to support the new OCS systems loads.
- *Existing Influent Receiving and Headworks Facilities* – The existing influent and headworks facilities will be upgraded to support the Phase 2 system. It is anticipated that the existing electrical system’s capacity will be able to support the upgrades.

2.2.6 Lighting and Miscellaneous Systems Improvements

- *Lighting* – Phase 2 facility improvements will include new lighting to support plant operations, safety, and emergencies.
 - Indoor lighting will be LED energy-saving luminaires. The luminaire type and wattage will be selected depending on room size, height characteristics, and suitability for the expected environment. Lighting controls will be utilized where appropriate.
 - Outdoor luminaires will match the existing style in the plant, but will be LED type.
 - Emergency lighting will be designed to provide an average one foot-candle level along egress paths and at exit points during a power failure. Emergency lighting will be LED, self-contained units with battery, charger and seal-beam lamps.
 - LED exit lights will be provided with backup batteries and battery chargers.
- *Miscellaneous Systems* – The Phase 2 project will also include various additional systems, including electrical grounding, lightning protection, fire alarms, telephone, security and CCTV systems. These systems will require the installation of various wiring, conduit pull-boxes, sensors and detectors, audio/visual devices, control panels and other appurtenant equipment and enclosures integrated with the existing SIWWTP plant facilities.

2.3 Project Schedule

Planned secondary treatment Phase 2 facility upgrades will be undertaken in compliance with the 2010 Consent Decree stipulated milestone dates:

- January 1, 2019 – CCH shall execute a design contract and issue a notice to proceed (NTP) for the design of secondary treatment facilities at SIWWTP;

- January 1, 2030 – CCH shall execute a construction contract and issue NTP for construction of all secondary treatment Phase 2 facilities necessary to comply with secondary treatment standards for wastewater discharges from SIWWTP.
- December 31, 2035 – CCH shall complete construction of SIWWTP secondary treatment facilities. Under certain conditions, the CCH may submit a request to extend the deadline to December 31, 2038.

2.4 Project Cost

The estimated project cost for secondary treatment Phase 2 project improvements is \$1.8 billion dollars.

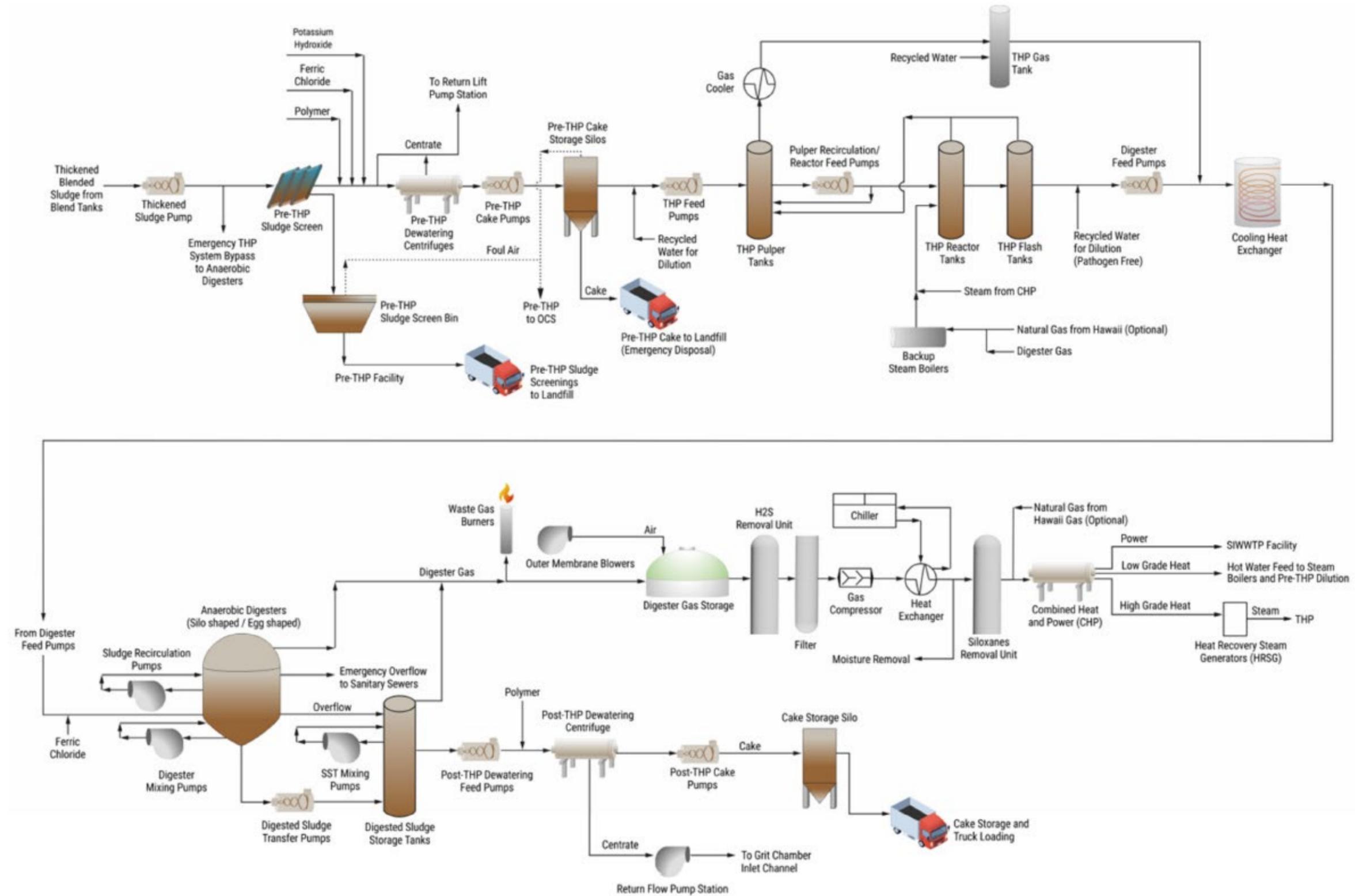


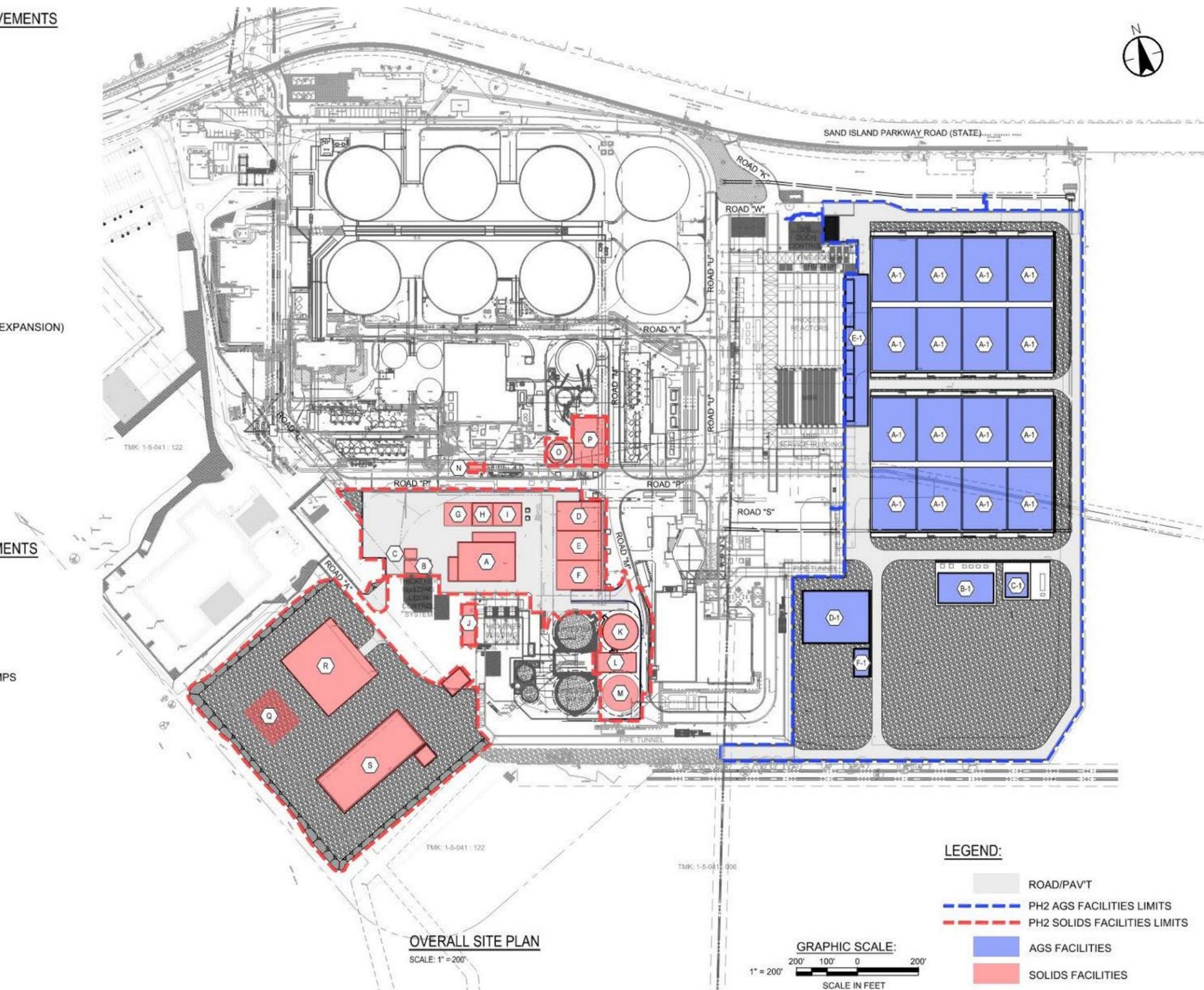
Figure 2.5 – Phase 2 Solids Stream Treatment Process Flow Diagram

SOLIDS FACILITIES IMPROVEMENTS

- A DEWATERING BUILDING
- B PRE-THP OCS
- C PRE-THP OCS FANS
- D CHP BUILDING
- E HEX/CHILLER
- F THP
- G FUEL TANK YARD
- H GENERATOR ROOM
- I SOLIDS ELECTRICAL ROOM
- J BLEND TANKS
- K DIGESTER NO.5
- L DIGESTER CONTROL BUILDING (EXPANSION)
- M FUTURE DIGESTER NO.6
- N WASTE GAS BURNER
- O GAS STORAGE
- P GAS CONDITIONING AREA
- Q OPTIONAL STOCKPILE AREA
- R CAKE STORAGE
- S EQ VAULT

AGS FACILITIES IMPROVEMENTS

- A-1 AGS REACTOR
- B-1 ELECTRICAL BUILDING
- C-1 GENERATOR BUILDING
- D-1 CLOTH FILTER BUILDING
- E-1 SLUDGE BUFFER TANK AND PUMPS
- F-1 PLANT WATER PUMP STATION



OVERALL SITE PLAN
SCALE: 1" = 200'

LEGEND:

- ROAD/PAV'T
- PH2 AGS FACILITIES LIMITS
- PH2 SOLIDS FACILITIES LIMITS
- AGS FACILITIES
- SOLIDS FACILITIES

Figure 2.6 – Conceptual Site Plan – SIWWTP Secondary Treatment Phase 2

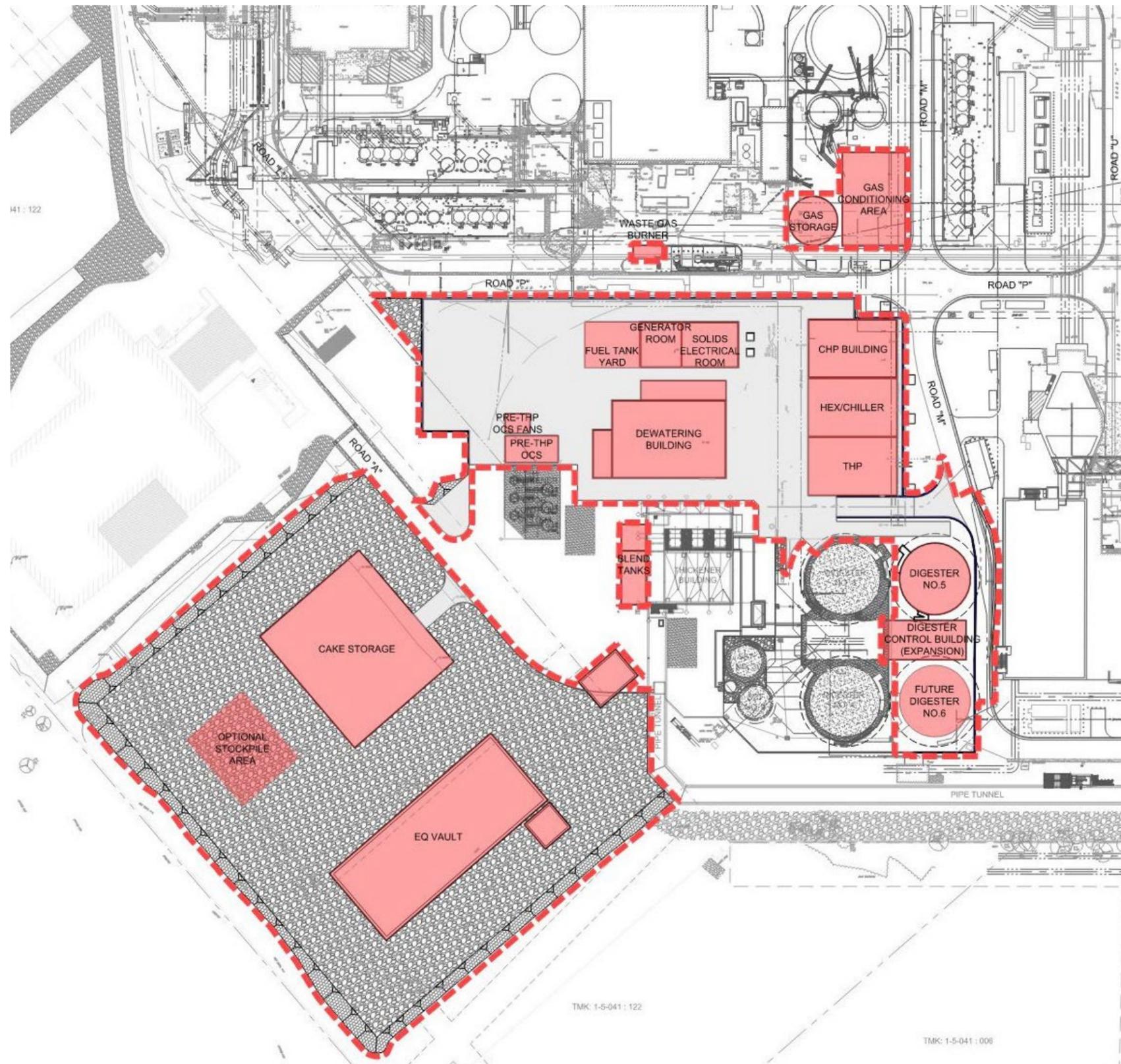


Figure 2.7 – Conceptual Site Plan – Phase 2 Solids Stream Treatment Process Facilities

Section 3. Natural Environment

3.1 Climate and Climate Change

The project is located at Sand Island within an industrialized sector of urban Honolulu on the south shore of O‘ahu. Temperatures range from mid-70s°F (degrees Fahrenheit) to the upper 80s°F with occasional reaches into the 90s°F range (Atlas of Hawai‘i, 1998). The average annual temperature recorded at nearby Honolulu International Airport is 78.1°F. Winds are primarily northeasterly trade winds. Occasionally, during the winter months, storms are accompanied by winds from the south. Average wind speeds for Honolulu range from approximately 10 to 15 miles per hour with occasional gusts of 40+ miles per hour (Hawai‘i State Data Book, 2009). Rainfall for the Honolulu area ranges from approximately 4 to 5 inches monthly from November through January to less than 1 inch during the drier summer months. Annual rainfall averages approximately 15 to 20 inches throughout the remainder of the year. Average relative humidity in Honolulu has historically ranged from a high of 77.2% during January, to a low of 64.8% which is typically reached in June. The average annual humidity level is approximately 69 to 70% (UH Department of Geology, 1973).

Climate change threatens all coastal areas. Climate change and global warming are the outcome of human-generated global GHG emissions. Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts to ecosystems, people, infrastructure, and communities. Climate change impacts include the increase in the frequency and intensity of climate and weather extremes (e.g., hot extremes on land and in the ocean, heavy precipitation events, drought and fire weather). Climate impacts from slow-onset processes include sea level rise, regional decreases in precipitation, and ocean acidification (IPCC, 2022). Rising sea levels and increased intensity of storms will make developed areas near coastal areas more vulnerable to flooding, coastal erosion and sea water inundation. Chronic coastal flooding is occurring now, and over the next 30 to 70 years the flooding is expected to increase with sea level rise (SLR), impacting infrastructure and land uses located near the shoreline, including within the project area.

The City Charter established the Office of Climate Change, Sustainability and Resiliency (CCSR) in 2016. Led by a mayor-appointed executive director, CCSR tracks climate science, coordinates City policy, supports preparedness, protects the economy and coastal areas, and promotes resilient infrastructure. The office also integrates environmental values into City plans and policies. Further consultation with CCSR and an analysis of alternatives, climate risks, policy conformance, and mitigation will be included in the project’s Draft Environmental Impact Statement (DEIS).

Due to climate change, increased flooding risks have prompted initiatives to improve infrastructure resiliency, particularly for low-lying, critical facilities like the Sand Island Wastewater Treatment Plant (SIWWTP). A key guidance document for future facility planning includes the Hawai‘i Sea Level Rise Vulnerability and Adaptation Report (adopted in 2017 [“2017 SLR Report”]; updated in 2022 [“2022 SLR Report”]) which provides a state-wide assessment of Hawai‘i’s vulnerability to SLR and recommendations to adapt and reduce risks associated with SLR. The 2017 and 2022 SLR Reports establish the state-wide SLR vulnerability zone (referred to as the sea level rise exposure area [SLR-XA]) based on multiple coastal flood hazards including passive flooding, annual high wave flooding, and coastal erosion. The SLR-XA identifies a future “intermediate mid-range” and “intermediate high” measure of anticipated SLR increase (in feet), that is used for planning and design purposes by government agencies and serves as the basis for the State’s SLR policy.

The 2022 SLR Report recommends that the State set a planning and policy benchmark of 4 ft of SLR by 2100 as the minimum scenario for all planning and design, and a benchmark of 6 ft of SLR by 2100 for the planning and design of critical public infrastructure, such as the SIWWTP, and other projects with low tolerance for risk. ²

The City and County of Honolulu Actions to Address Climate Change and Sea Level Rise Mayor’s Directive No. 18-2; dated July 16, 2018, establishes policies to adapt and minimize risks from climate change and SLR in accordance with the most current versions of the City Climate Change Commission’s SLR Guidance Document, Climate Change Brief, and State SLR Report. The SLR Guidance Document (adopted 2018; updated 2022) recommends the City utilize the 5.8 ft of SLR by 2100 scenario as the planning and policy benchmark for all planning and design of public infrastructure and other projects with low tolerance for risk.

The project area is located approximately 300 ft from the shoreline at the nearest location (proposed EQ basin site on parcel 022). A relatively small area of the 3.2 ft SLR-XA exposure area encroaches into the south east boundary of the SIWWTP boundary (parcel 005). See **Figure 3.1 – 3.2 ft of Sea Level Rise Exposure Area**. The SLR-XA viewer also shows 3.2 ft SLR-XA exposure at the primary clarifier tanks and the location of a drainage channel located east of the clarifier tanks. The drainage channel is being replaced by a concrete box drain as part of the Phase 1 project improvements currently underway. The indication of 3.2 ft exposure at the clarifier tanks and drainage channel is likely a false outcome of the SLR model based on the bottom elevation of those features.

² The 2022 SLR Report recommendations are based on the 2022 NOAA Interagency Report: *Global and Regional Sea Level Rise Scenarios for the United States*, which establishes an intermediate SLR scenario of 3.9 feet and an intermediate-high SLR scenario of 5.9 feet for Hawai‘i by 2100. (Sweet, et al., 2022)

The Mayor's Directive in particular provides technical guidance to the City for wastewater resiliency planning around sea level rise (SLR) and other climate change considerations. It recommends setting a planning benchmark of up to 6 feet of SLR by year 2100 for critical infrastructure, which includes wastewater treatment and collection facilities, such as the SIWWTP, that have long expected lifespans and low risk tolerance.

Using the Mayor's Directive as guidance, Phase 1 structures were designed with a flood surface water elevation of 16 feet above mean sea level. This number is based on the current Federal Emergency Management Agency flood elevation of 8 feet, plus 6 feet of SLR recommended by the Mayor's Directive, plus 2 feet of freeboard, due to the criticality of the facility.

In 2024, the City's *Climate Change Design Guidelines* (version 1) (CCDG) was developed to improve the resilience of City buildings and infrastructure and reduce GHG emissions from City operations. The CCDG are spreadsheet-based tools that provide a three-step process for evaluating and scoping climate-related hazards exposure for City projects: 1. Climate Exposure Screening Tool ("CCDG Screening Tool"); 2. Climate Change Design Guidelines Document ("CCDG Guidelines"); and 3. Climate Change Planning, Design, and Strategy Checklist Tool ("CCDG Checklist Tool"). In future years, all projects managed by City agencies will use the CCDG Screening Tool, and if determined necessary, will also complete the CCDG Checklist Tool.

Phase 2 structures will also be designed to be protected from flooding up to an elevation of 16 feet above mean sea level to align with the Mayor's Directive and Phase 1. Development and evaluation of secondary treatment process alternatives presented in this report are based on this assumption, but climate change guidance will be monitored for updates as Phase 2 planning and design progresses. Additionally, the CCDG Screening Tool will be used to evaluate the proposed action. In addition, the design team will analyze potential effects of climate change and SLR and incorporate mitigation measures into the Secondary Treatment Phase 2 project improvements to respond to projected SLR conditions and improve facility resiliency.



Figure 3.1 – 3.2 ft of Sea Level Rise Exposure Area

3.2 Topography and Soils

The project site is virtually flat with ground elevation of approximately 8 feet above mean sea level (msl). Planned improvements will be constructed primarily within the existing SIWWTP parcel 1-5-041:005 and on the 13.949-acre expansion area on parcel 022 (por.). These areas are primarily comprised of dredged Fill Land, mixed (FL), as classified by the U.S. Soil Conservation Service (USDA, 1972). Fill land, mixed soils occur mostly near Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources. This land type is used for urban development including airports, housing areas and industrial facilities (USDA, 1972). A portion of the existing SIWWTP property along the mauka side adjacent to Sand Island Parkway consists of Jaucus sand (JaC). Jaucus soils are excessively drained, calcareous soils on coastal plains adjacent to the ocean. Jaucus sand (JaC) has slopes generally under 7 percent. Permeability is rapid, and runoff is very slow to slow. Although the water erosion hazard is slight, wind erosion is a severe hazard where vegetation has been removed. The Jaucus sand area corresponds with the original land form of Kamoku‘ākulikuli Island. See **Figure 3.2 – Soil Types**.

A geotechnical analysis was performed in 2019 and observed that SIWWTP generally is underlain by a surface fill layer consisting of medium-dense silty sands and stiff clayey silts extending to depths of about 3 to 9 feet below ground surface (bgs). Below the near-surface fill layer, lagoonal deposits consisting of loose to very loose silty sands and gravel and soft sandy and gravelly clays are present to approximately 23 to 40 feet bgs. Below the compressible lagoonal deposits, medium-hard to hard coral and sandstone formation interbedded with medium dense coralline detritus are present to depths exceeding 100 feet bgs.

3.2.1 Soil Contaminants

Identification and handling of contaminated soils that could present endangerment to public health or the environment are regulated by the DOH Hazard Evaluation and Emergency Response (HEER) office in accordance with HRS Chapter 128D and HAR §11-451, and by the EPA under the Toxic Substances Control Act (TSCA) of 1976 as amended by the Lautenberg Chemical Safety Act of 2016. In accordance with regulatory requirements, environmental investigations including soils testing have been performed at SIWWTP since 1999. Soils testing for chemicals of potential concern (COPC) has been based on site history (land use, hazardous materials use and records of spills/releases). The primary

An approximately 9-acre portion of the land on the east side of the SIWWTP parcel is designated as a remedial design soil stockpile (RDSS) (previously identified as the Soil Management Area). This area, constructed in 2007, is a semi-permanent containment structure designed to facilitate on-site storage of soils impacted by low-level polychlorinated biphenyls (PCB) and other

contaminants that have been excavated from various areas of the SIWWTP. Ground excavations from past improvement projects which contain PCB concentrations less than 25 mg/Kg are stored in the RDSS. The SIWWTP RDSS is surrounded by a concrete reinforced geomembrane wall and contains approximately 80,000 cubic yards (CY) of contaminated soils. Portions of the area have been capped with asphalt or gravel cover and are 10 to 12 feet higher in elevation than the rest of the SIWWTP. The Phase 2 project is expected to make use of the majority of these soils as fill material to raise finish grades for Phase 2 facility improvements to meet SLR design parameters. All soils recovered from ground excavations for this project will stay on-site; no soils will be removed or disposed of off-site.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on topography, soils, soil contaminants and appropriate mitigation measures, including hazardous materials management, will be included in the DEIS for this project.

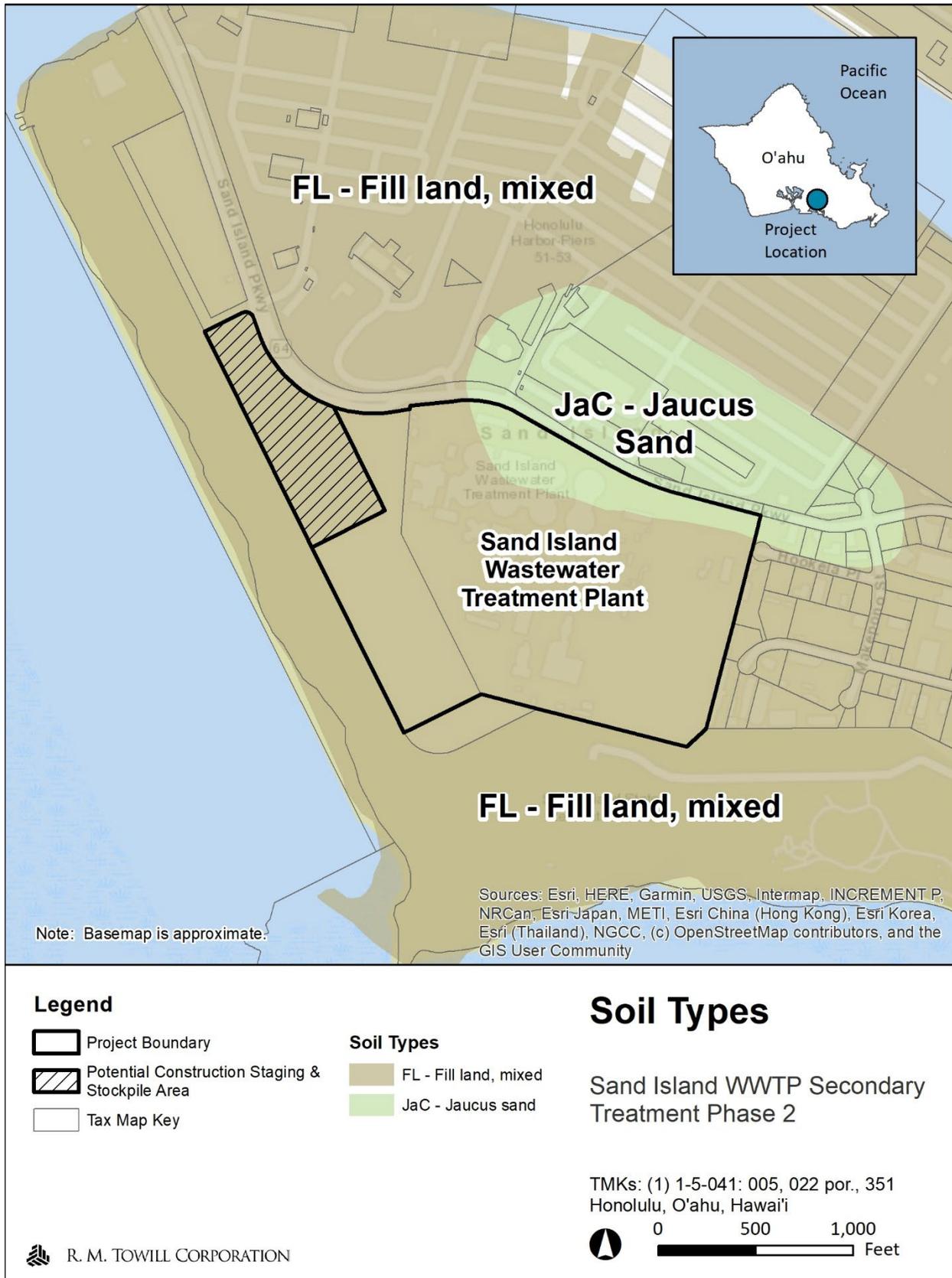


Figure 3.2 – Soil Types

3.3 Ground, Surface, and Marine Waters

3.3.1 Ground Waters

The project site is located above the caprock in the coastal plain within the Honolulu Aquifer Sector of the Southern O‘ahu Groundwater Area. The Honolulu Sector Aquifer is one of six major groundwater areas defined by the State Commission on Water Resource Management (CWRM) based on geologic and hydrologic differences. It is comprised of five aquifer subsystems: Pālolo System, Nu‘uanu System, Kalihi System, Moanalua System, and Wai‘alae System. Sand Island is located at the makai end of the Kalihi and Nu‘uanu subsystems. Groundwater is expected to be encountered at depths ranging from about 5 to 8 ft below the existing ground and/or pavement surfaces, at approximately -1.2 to 2.4 feet msl. Groundwater levels are subject to change due to rainfall, tidal conditions, time of year, seasonal precipitation, surface water runoff, and other factors.

The SIWWTP site is located below/makai of the Underground Injection Control (UIC) Line established by HAR §11-23 to delineate and protect underground drinking water sources. Areas makai of the UIC line are not considered to be sources of drinking water, generally due to the brackish water quality in the underlying aquifer in those locations.

The DEIS will include further discussion of groundwater conditions and related facility design based on the Phase 2 Geotechnical Engineering Report.

3.3.2 Surface Waters

Other than surrounding marine waters, there are no surface water bodies within the SIWWTP facility boundary or nearby areas. See below for description of marine waters. A 1,000-ft long, man-made drainage channel that was located within the SIWWTP property east of the primary clarifier tanks contained standing water under normal conditions. The drainage channel is being replaced by a concrete box drain as part of the Phase 1 project improvements currently underway. The new box drain follows the original drainage channel alignment, extending eastward from near the existing Flotation Clarifier Nos. 5 and 6, approximately 700 feet to the edge of the treatment plant property and connects to a 6-foot by 8-foot box culvert that passes under the Sand Island Parkway and Matson cargo container yard and discharges to Honolulu Harbor.

3.3.3 Marine Waters

Marine waters within the project area’s coastline are classified under HAR §11-54 as either “Class A marine waters” or “Class A embayments”. They include:

- Māmala Bay – Sand Island Offshore (Class A marine water). This site is not listed as an impaired water body.

- Honolulu Harbor (Class A embayment) is listed as a CWA 303d impaired water for turbidity, nitrogen, trash, suspended solids, metals, pathogens, enterococci, and chlorophyll.

HAR §11-54-3 states: “*It is the objective of Class A [marine] waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class. No new sewage discharges shall be permitted within embayments. No New industrial discharges shall be permitted within embayments, (with exceptions as noted by rule).*”

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on ground, surface and marine waters, and appropriate mitigation measures, will be included in the DEIS for this project.

3.4 Flora and Fauna

The proposed project is located within an existing wastewater treatment facility and adjacent, vacant lands that have been subject to significant alteration. No rare, threatened or endangered flora or fauna species have been observed to occupy the project site. Species most commonly observed at the project site are typical of urbanized areas and consist of common, introduced flora and fauna. Several introduced fauna including the common Indian mynah (*acridotheres tristis*), house sparrow (*passer domesticus*), spotted or lace-necked dove (*streptopelia chinensis*), zebra dove (*geopelia striata*), and cardinal (*cardinalis cardinalis*) have been observed at the project location. Mammals such as stray cats, rats and mice have also been observed in the vicinity. Vegetation at the project site is limited to sparse, opportunistic growth of introduced weeds and grasses, including centipede grass (*eremochloa ophiuroides*) and bermuda grass (*cynodon dactylon*). No other landscape plantings or natural vegetation occurs in the project vicinity. Some migratory seabirds and native waterfowl are known to visit areas within the wider coastal region. Endangered native species such as the Hawaiian hoary bat (*lasiurus cinereus semotus*) and short-eared owl or pueo (*asio flammeus sandwichensis*) do occur on rare occasions in the lowlands of O‘ahu, but due to the high level of development and human activity are highly unlikely to visit areas where project activities will occur.

The Biological Survey prepared for the Phase 1 project will be updated for Phase 2. Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on endangered or listed flora and fauna, and appropriate mitigation measures, will be included in the subsequent DEIS for this project.

3.5 Air Quality

Hawai‘i lies within the Northern Hemisphere Hadley Cell, which is responsible for persistent northeast trade winds. Consequently, air quality is relatively good with the exception of occasional Kona or leeward storms that produce a low pressure system that brings southerly winds and precipitation. The Sand Island area is located within an industrial area that generally receives favorable trades.

The DOH maintains an air quality monitoring station along Sand Island Access Road, near the entrance to the Sand Island State Recreation Area (SRA). The station monitors for ozone (O₃), and PM_{2.5} (particulate matter 2.5 micron size or smaller), as well as wind speed and direction. Monitoring at this station consistently shows readings well in compliance with State and Federal air quality standards for the measured parameters. The most recently published summary of State air quality data, covering the years 2021 to 2023, reports a single instance in which measurements at this station exceeded air quality standards. The 24-hour average concentration of PM_{2.5} reached 42 µg/m³ surpassing the standard limit of 35 µg/m³ in January due to New Year’s fireworks celebration (DOH, 2024).

Air quality at SIWWTP is regulated at the federal and state level. The existing SIWWTP facility operates under Non-covered Source Permit (NSP) No. 0216-05-N. The non-covered source air permit regulates H₂S emissions from the outlets of the headworks, solids, and primary clarifier odor control systems at the plant as well as diesel emissions for four effluent pumps. Foul air emissions for Synagro administered operations at the SIWWTP solids treatment facilities, including the anaerobic digesters, gas holder, sludge storage, centrifuge, dryer, and the pelletizer, are governed by Covered Source Permit No. 0216-06-C, which regulates H₂S, ammonia (NH₃), and mercury emissions. Covered and Non-Covered Source Permits are administered by the DOH Clean Air Branch.

The Clean Air Act of 1970 and its amendments regulate air pollutants, including “hazardous air pollutants”, and sets national ambient air quality standards for ozone, atmospheric particulate matter, lead, carbon monoxide, sulfur oxides, and nitrogen oxides. The following federal regulations guide the control of air pollution and provide the DOH Clean Air Branch with the authority to administer and enforce air quality standards:

- 40 CFR Part 50, National Primary and Secondary Ambient Air Quality Standards.
- 40 CFR Part 51, Requirements for Preparation, Adoption, and Submittal of Implementation plans.
- 40 CFR Part 52.21, Prevention of Significant Deterioration of Air Quality.
- 40 CFR Part 53, Ambient Air Monitoring Reference and Equivalent Methods.
- 40 CFR Part 58, Ambient Air Quality Surveillance.
- 40 CFR Part 60, Standards of Performance for New Stationary Sources.

- 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants.
- 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories.
- 40 CFR Part 70, State Operating Permit Programs.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on air quality, and appropriate mitigation measures, will be included in the DEIS for this project.

3.6 Noise Quality

Noise is regulated by the DOH under HAR §11-46, *Community Noise Control*. The project is within Class C zone; the current allowable noise limits for Class C is 70 dBA during the day and 70 dBA during the night. The project site is subject to noise generated from the existing SIWWTP operations. Other existing sources of human generated noise include overflights of aircraft within the 70 DNL (decibel noise level) noise contour of Honolulu International Airport; industrial activities from light industrial parcels located east of the project site involving auto repair, metals recycling and recovery, and related activities; and traffic from the nearby Sand Island Parkway.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on noise quality, and appropriate mitigation measures, will be included in the DEIS for this project.

3.7 Visual and Scenic Resources

According to the CCH Primary Urban Center Development Plan (PUC-DP), there are two (2) recognized scenic vistas or view planes which are near the SIWWTP. The continuous views in which Sand Island is involved are designated as the view from Honolulu International Airport Runway, on Lagoon Drive, and from the west end of the Kaka‘ako Waterfront recreational park. The distance from Lagoon Drive to the project site is approximately 2.0 miles, and the distance from the recreational park to the project site is approximately 1.5 miles.

The SIWWTP is located in an industrial harbor area containing large commercial/industrial buildings, fuel tanks, and tall cranes used for container shipping operations. The WWTP facilities include several prominent structures, including clarifier tanks, gas tank (40 feet tall), incinerator building (80 feet tall), and the existing anaerobic digester towers (108 feet tall). These facilities are visible from the ocean, from Ke‘ehi Lagoon, from various vantages within urban Honolulu and the immediate surrounding properties, and from areas with elevations exceeding 100 feet above sea level, including Punchbowl, Diamond Head, and high-rise buildings along Ala Moana Boulevard and Nimitz Highway. Within view planes from the urban coastal areas

laterally down the shoreline or towards the sea, the SIWWTP facilities are subordinate to the much taller cargo facility loading cranes (approximately 250 feet in height) and are consistent in appearance with other industrial facilities on Sand Island. Proposed Phase 2 facilities will be similar in height and appearance to the existing SIWWTP facilities.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on visual and scenic resources, and appropriate mitigation measures, will be included in the DEIS for this project.

3.8 Natural Hazards

3.8.1 Tsunami

A tsunami involves the generation of a series of destructive ocean waves that can affect all shorelines. Tsunamis that affect Hawai‘i typically originate from distant, seismically active areas around the Pacific, or from local, shallow undersea earthquakes, primarily near the seismically active island of Hawai‘i. Tsunami waves can occur at any time with limited or no warning. The Pacific Tsunami Warning Center (PTWC) in Hawai‘i issues warnings when a potential tsunami is imminent (PTWC, n.d.). According to the Tsunami Evacuation Zone Map (Map 19, Inset 2, Airport to Waikīkī, dated April 2015) prepared by the Department of Emergency Management (DEM), the majority of the proposed project site is located within the tsunami evacuation zone in an area that would likely be subject to inundation by a tsunami. The remainder of the project area is located in the extreme tsunami evacuation zone. The total inundation elevation is 26-ft msl, including an additional 6-ft for sea level rise.

The facility will be designed for resiliency against tsunami inundation. The north side of the facility along Sand Island Parkway will be designed to resist the potential impact of shipping containers dislodged from the nearby Honolulu Harbor container cargo yard by tsunami wave surge and backwash. The tsunami inundation elevation at the project site is approximately 20-ft msl. Phase 1 and 2 facility improvements will be elevated above msl for additional resiliency.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential to create conditions that could exacerbate the effects of a tsunami, and appropriate mitigation measures will be included in the DEIS for this project.

3.8.2 Seismic Hazard

The Hawaiian Islands experiences thousands of earthquakes each year but most are so small that they can only be detected by instruments. Some are strong enough to be felt and a few cause minor to moderate damage. Most of Hawai‘i’s earthquakes are directly related to volcanic activity and are caused by magma moving beneath the earth's surface.

Seismic Design of all Phase 2 facilities constructed of concrete will be in accordance with the American Concrete Institute (ACI) Seismic Design of Liquid-Containing Concrete Structures and Commentary (ACI 350.3-20). Seismic loads for all structures will be based on ASCE 7-16 and ACI 350.3-20. Seismic analysis for liquid containing structural components will be in accordance with the equivalent lateral force method considering impulsive and convective components of the stored liquid, inertial forces of the structural components, and where applicable, the lateral forces due to lateral earth and groundwater pressures. Design will also comply with the 2024 International Building Code (IBC).

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential to create conditions that could exacerbate the effects of a seismic hazard, and appropriate mitigation measures will be included in the DEIS for this project.

3.8.3 Flood

As shown on Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) panel 15003C0361G, dated January 19, 2011, the majority of the project site is located within flood zone X, which designates areas outside of the 0.2 percent annual chance (500 year) floodplain. However, portions of the Phase 2 facility improvements within parcel 022 are located within flood zone 'AE', with base flood elevations (BFEs) of 7 to 8 feet above msl. Flood zone AE designates areas that are subject to inundation by the 1-percent-annual-chance flood event determined by BFEs. See **Figure 3.3, Flood Zones**.

A flood hazard variance will be necessary for Phase 2 improvements located within the FEMA flood zones. Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential to create conditions that could exacerbate the effects of flooding and its risk from flood impacts, and appropriate mitigation measures will be included in the DEIS for this project.

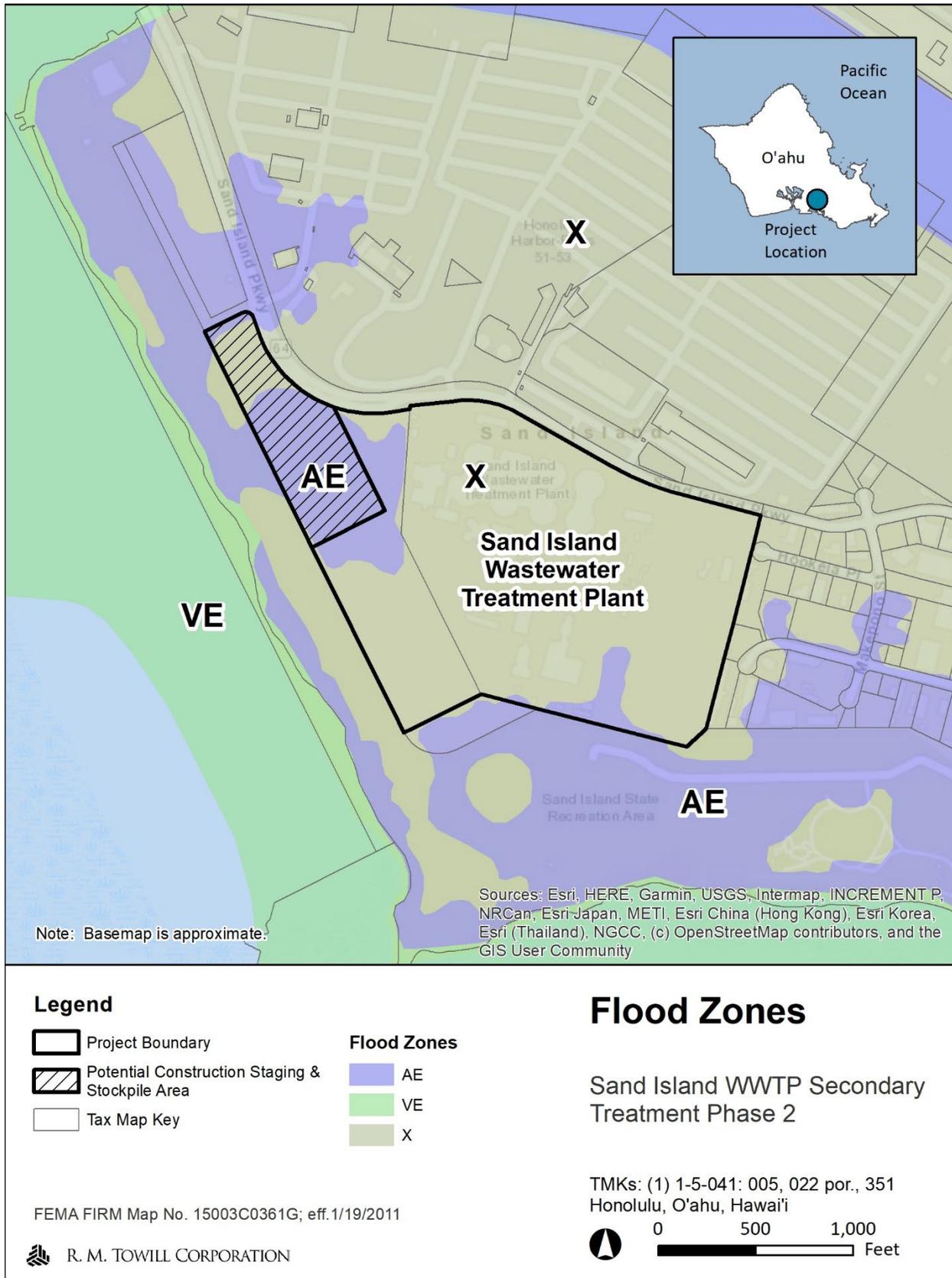


Figure 3.3 – Flood Zones

3.8.4 Hurricane and Wind

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. The State has been affected twice since 1982 by significant hurricanes, 'Iwa in 1982 and 'Iniki in 1992. During hurricanes and storm conditions, high winds cause strong uplift forces on structures, particularly on roofs. Wind-driven materials and debris can attain high velocity and cause devastating property damage and harm to life and limb. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The project area is, however, no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes. Phase 2 facilities will be designed to withstand wind loads in compliance with IBC 2024 standards.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential to create conditions that could exacerbate the effects of a hurricanes and strong winds, and appropriate mitigation measures will be included in the DEIS for this project.

Section 4. Public Services and Infrastructure

4.1 Wastewater System

The purpose of this project is to protect public and environmental health and safety through the development of secondary treatment facilities at the SIWWTP. The planned improvements include upgrading the existing facilities to provide secondary treatment in accordance with the 2010 Consent Decree (Amended in 2012), accommodating projected wastewater flows from the Sand Island Sewer Basin through 2055 and implementing requirements of federal and state permits and mandates.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, potential project effects, and appropriate mitigation measures, will be included in the subsequent DEIS for this project.

4.2 Traffic and Circulation

Sand Island Parkway Road (State Highway 64) is the major thoroughfare serving Sand Island. It is the continuation of Sand Island Access Road, which extends from Nimitz Highway to and across Bascule Bridge, which crosses the Kalihi Channel between Sand Island and Kalihi Kai. The majority of the traffic near the project site is generated by surrounding activities, including the transportation of shipping containers from Honolulu Harbor to other locations; the U.S. Coast Guard Station Honolulu; the Sand Island State Recreation Area; and a number of small businesses and industries located in the area.

The existing primary entrance/exit to the SIWWTP is located on Sand Island Parkway, approximately 0.5 miles southeast from the Kalihi Channel Bridge; this entrance/exit will either be converted to exit-only for traffic or to a secondary entrance/exit, serving the process facilities. An existing secondary entrance/exit to the SIWWTP is also on Sand Island Parkway, approximately 925 feet east of the primary entrance/exit; this entrance/exit may be converted a utility entrance/exit. A new proposed primary access point to the SIWWTP is being contemplated on Sand Island Parkway (within TMK parcel 022), approximately 220 feet west of the existing primary entrance/exit; this access point may either serve as a primary entrance/exit, or as an entrance-only. The new primary access point would provide access for a variety of facility users (employees, commercial haulers, operators), while allowing for more convenient and secure separation of facility uses (treatment processes, septage receiving station, maintenance and operations, offices). An existing secondary utility entrance/exit is located at the end of Ho'okela Place, and accessed through the Sand Island Industrial Park; this entrance/exit will continue to serve as a secondary utility access to the SIWWTP. See **Figure 4.1 – Project Site Access**.



Figure 4.1 – Project Site Access

A traffic study will be prepared to evaluate the suitability of the proposed new site entry location from Sand Island Parkway, and the project's impact on traffic conditions. Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on traffic and circulation in the surrounding area, and appropriate mitigation measures will be included in the DEIS for this project.

4.3 Potable Water System

Potable water is provided to the SIWWTP through an existing 12-inch water main which is connected to a BWS 16-inch water main located along Sand Island Parkway.

The potable water system that serves the existing SIWWTP facilities and the proposed Phase 2 facility improvements meets BWS standard pressure requirements for the peak hour demand factor. However, the system does not satisfy the BWS minimum standard pressure requirements for fire flows of 4,000 gpm at one hydrant or with the 4,000 gpm split evenly between two nearby hydrants. To achieve minimum fire flow pressure requirements, water system improvements consisting of a fire pump and/or upsizing of waterline pipes will be included in the Phase 2 design.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on the BWS potable water system, and appropriate mitigation measures, will be included in the DEIS for this project.

4.4 Drainage System

Rainfall and storm water runoff from the project site is directed to the SIWWTP's existing storm drain system consisting of catch basins and underground piping, which discharges into a new box drain being constructed as part of the Phase 1 project improvements. The box drain replaces a 1,000-ft long man-made drainage channel that extended eastward from the primary clarifier tanks to the edge of the treatment plant property and connects to a 6-foot by 8-foot box culvert that passes under the Sand Island Parkway and Matson cargo container yard, located north of the SIWWTP, and discharges to Honolulu Harbor. The new drain box will be equipped with a valve to isolate the drainage system. Phase 2 facility improvements will include drainage infrastructure improvements to comply with CCH on-site drainage retention requirements and DOH water quality standards.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on drainage patterns and the drainage system infrastructure, and appropriate mitigation measures, will be included in the DEIS for this project.

4.5 Solid Waste

Solid waste collection, transport and disposal operations are the responsibility of the CCH ENV, Refuse Division. Solid waste is collected and disposed of at either the Waimānalo Gulch Landfill in the ‘Ewa district, or the H-Power facility at Campbell Industrial Park. PVT Land Company operates a privately owned and operated, licensed solid waste facility for recovery of recyclable materials and disposal of construction and demolition materials. The PVT Landfill accepts waste on a pre-arranged basis from registered contractors. Waste loads are screened to remove recyclable materials, and the remaining wastes are landfilled.

Current annual average biosolids production at the SIWWTP is approximately 12.1 dry tons per day (DT/d). Generally speaking, this is the amount of treated biosolids material that leaves the facility. Of this amount, approximately 10 DT/d of pelletized biosolids is beneficially reused for land application (fertilizer). The remaining biosolids, consisting of digested waste cake and rejected pellet product, is directed to the Waimānalo Gulch Landfill. By 2035, annual average biosolids production is projected to increase to approximately 19.9 DT/d.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on solid waste disposal requirements during construction and operations of the SIWWTP secondary treatment and non-process facilities, and appropriate mitigation measures, will be included in the subsequent DEIS for this project.

4.6 Electrical Power and Communications

Electrical service for customers on Sand Island is provided by HE. Sand Island is served by two HE 46kV transmission lines, Iwilei 1 and 2. These two 46 kV circuits run overhead through Kalihi Kai, cross Kalihi Channel as submarine cables, and continue underground to the HE Sand Island Substation located near the east end of Bascule Bridge, adjacent to Kalihi Channel. The Sand Island Substation steps the 46 kV transmission voltage down to 11.5 kV for distribution on Sand Island. The 11.5 kV distribution feeders are designated Sand Island 1 and 2. The feeder lines are overhead lines supported on utility poles. The two 11.5 kV lines extend from the HE Sand Island Substation to the Mokuone Substation to support loads at the SIWWTP. Mokuone Substation steps the 46 kV transmission voltage down to 11.5 kV for distribution on Sand Island. The two 11.5 kV distribution feeders from the Mokuone Substation are designated as Mokuone 1 and 2.

Electrical power distribution systems at the SIWWTP consist of a combination of underground HE-owned and City-owned 11.5 kV, 3-phase systems serviced by the Mokuone 1, and Sand Island 1 and 2 feeder lines. The system is serviced by the Sand Island 1 and 2 11.5 kV feeders which connect to primary switch gear located in the Primary Switching Station Building along Sand Island Parkway. The main switchgear then feeds City-owned and maintained 11.5 kV

feeders, transformers, and primary distribution equipment within the SIWWTP. A single HE meter located within the primary switchgear is used to measure use. In the event of a utility power outage, a system of backup generators located throughout the SIWWTP automatically starts and provides power to the pumps and essential equipment.

The planned Phase 2 improvements will require the expansion of a power distribution facilities. ENV will coordinate with HE for new service to meet the new power requirements. Initial discussions suggest that two (2) new circuits will be supplied from two (2) new transformers to be installed at the Mokuone substation in order to provide necessary redundancy for projected Phase 2 power loads. See Section 2.2.5 for a description of electrical improvements that are anticipated to be required. Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on electrical power and communication systems, and appropriate mitigation measures, will be included in the DEIS for this project.

4.7 Fire, Police, and Medical Services

The nearest Honolulu Fire Department (HFD) fire station is in Kaka‘ako located at Queen Street approximately 1.0 mile from the project site. The nearest Honolulu Police Department (HPD) police station is located at 801 South Beretania Street, approximately 2.0 miles from the project site. The nearest hospital is The Queen’s Medical Center, located on 1301 Punchbowl Street, approximately 1.5 miles from the project site.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on HFD, HPD and medical services, and appropriate mitigation measures, will be included in the subsequent DEIS for this project.

4.8 Park Resources

The nearest park and recreational resource to the project site is the Sand Island State Recreation Area (SRA), an approximately 141-acre coastal recreational area managed by the Department of Land and Natural Resources (DLNR), Division of State Parks (DSP), located on Sand Island at the entrance to Honolulu Harbor. Approximately 97 acres of the SRA, at the east end of Sand Island adjacent to the Honolulu Harbor Channel, is existing developed park area. Facilities in this area include picnic tables, BBQs, campgrounds, open lawn passive recreation areas, baseball diamonds, exercise and play apparatus, multi-use paths, covered pavilions, shade trees, and comfort stations. The park provides a wide sand beach that is over a half-mile long. The remaining approximately 44 acres of the SRA extends along the south and southwest facing shores of Sand Island, and includes the lands makai of the SIWWTP. The area is relatively undeveloped. Existing facilities include a marine education and training center, boat ramp, canoe pavilion, and parking at the mouth of the Kapālama Basin Kalihi Channel. The remaining area, comprising approximately 30 acres, is currently used as an off-highway vehicle (OHV) recreation area under a pilot project managed by the DLNR Na Ala Hele program.

Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impacts on Sand Island SRA, and appropriate mitigation measures, will be included in the DEIS for this project.

Section 5. Socio-Economic and Cultural Environment

5.1 Socio-Economic Conditions

The service area for the existing SIWWTP is metropolitan Honolulu from Moanalua-Aliamano to Niu Valley-Paik Peninsula and includes the U.S. Army facilities at Fort Shafter and Tripler Army Medical Center. The facility serves a combined urban resident and visitor population of approximately 411,790 in 2023. From 2020 to 2023, the service area experienced a 5.9 percent growth in de facto population, compared to the rest of O‘ahu, which grew by 1.9 percent, and statewide, which grew by 1.9 percent. The median age among residents in the service area was 37.8, nearly 2.5 years younger than the countywide median age of 40.2. Households in the SIWWTP service area are somewhat smaller than households island-wide (2.53 compared with 2.82 persons per household, respectively). The number of housing units in the service area was 169,960, and increase of 2.5 percent between 2020 and 2023, reflecting the development of condominium towers in Kaka‘ako.

The SIWWTP service area contains the central business district, Waikīkī and numerous other tourist attractions, industrial areas at Sand Island, Kaka‘ako, and Mapunapuna, and is home to approximately three-quarters of jobs statewide. Waikīkī alone accounts for an estimated eight percent of Hawai‘i’s Gross State Product. This region also contains Honolulu Harbor and the Honolulu International Airport, which have relatively small work forces and total revenues, but together facilitate nearly all of the commercial activity in the State.

A socioeconomic study will be prepared for the proposed action and will describe potential short-, long-term, and indirect social and economic benefits and impacts including, but not limited to, environment benefits (e.g., improve water quality of effluent before discharge into the ocean, increase the SIWWTP facilities’ resiliency to SLR, tsunamis and/or other natural hazards) and economic impacts (e.g., expenditures for construction, increase in sewer fees for residents, increase in revenues to the CCH). The socioeconomic study will also discuss potential mitigation measures associated with the proposed action. Further consultation with appropriate agencies and a discussion, including an analysis of each alternative considered, its potential impact on socio-economic conditions, and appropriate mitigation measures, will be included in the DEIS for this project.

5.2 Cultural, Historic, and Archaeological Resources

The majority of the project site is situated within artificially created Fill Land, mixed (FL) which was entirely submerged by the ocean during pre- and post-contact periods until modern times, and was subject to extensive ground disturbance and modification during construction of the

existing SIWWTP. As a result, no archaeological sites or pre-contact cultural deposits are known or expected to be encountered in these areas, however historic-era resources may be present. In addition, a portion of the project site adjacent to the Sand Island Parkway occurs within the original land form of Kamoku‘ākulikuli Island within jaucus sand deposits where there is potential for encountering pre-contact archaeological or cultural resources, including human remains.

The project site and surrounding SIWWTP facility are not currently used for traditional, customary, or cultural practices. Plants found at the project site are introduced grass and weed species not associated with cultural gathering or use activities. The artificial creation and developed condition of the site is not conducive to the presence of wahi pana (storied place) or other sites associated with cultural practices.

The ENV previously consulted with the DLNR, State Historic Preservation Division (SHPD) regarding the archaeological and historic resources at the SIWWTP facility as part of the 2019 EIS for the SIWWTP Facility Plan project for the secondary treatment Phase 1 improvements. As part of this consultation, an Archaeological Inventory Survey (AIS) was prepared and processed with SHPD for the entire SIWWTP facility in accordance with HAR §13-275, -276 and -284. Two historic properties were documented in the AIS: (1) a former World War 2 (WW2)-era meeting hall/ chapel (SIHP #50-80-14-8849) was evaluated and determined eligible for mitigation under HRS 6E-8, and (2) structural remnants from early 20th century improvements to “Quarantine Island” and WW2-era uses (SIHP #50-80-14-8848). SHPD concurred with the proposed mitigation for the chapel, prior to its demolition, in the form of a historic context study and accepted the subsequent document, *Thematic Historic Context Study: Post Chapel and Half-Way House, Sand Island, O‘ahu, HI* (MASON, September 2020). SHPD accepted the final AIS as fulfilling documentation requirements for the structural remnants. With the completion and acceptance of AIS and historic context study, no further archaeological work is required or proposed for the current project. A copy of SHPD’s HRS 6E-8 concurrence letter is provided in **Appendix B**.

Additionally, a Cultural Impact Assessment (CIA) was prepared in accordance with HRS Chapter 343 and OEQC guidelines, for inclusion in the 2019 SIWWTP Facility Plan EIS. The CIA consultation referenced the entire SIWWTP facility boundaries. The proposed secondary treatment Phase 2 improvements will occur entirely within the project boundary identified in the previous CIA. Since the project remains within the previously defined and consulted-upon boundaries and does not expand beyond SIWWTP, no further action to update the CIA is proposed. ENV will fulfill the mitigation commitments identified in the 2019 CIA to notify cultural and lineal descendants in the unlikely event that subsurface cultural deposits, including *iwi kūpuna*, are encountered during construction.

If further coordination is necessary, it will be addressed through the DEIS, which will include a discussion and analysis of alternatives, potential impacts on cultural, historic, and archaeological resources, and appropriate mitigation measures.

Section 6. Relationships to Land Use Plans and Policies

The following is a brief overview of the Federal, State and CCH level land use plans, policies and controls that are applicable to the project.

6.1 Federal

6.1.1 Federal Aviation Administration (FAA)

The U.S. Department of Transportation (DOT), Federal Aviation Administration (FAA) requires the filing and electronic submittal of a “FAA Form 7460-1 Notice of Proposed Construction or Alteration” form for construction or alteration to a structure that is more than 200 feet above ground level within the aircraft approach and departure flight path of a public-use airport, in compliance with Code of Federal Regulations (CFR) Title 14, Chapter I, Subchapter E, §77.7. FAA review assesses potential impacts to air navigation and aircraft safety from ground development based on structure height, finish colors and glare, and lighting. The DEIS will include an evaluation of the project’s compliance and consistency with FAA regulations. Following design of Phase 2 improvements, ENV will prepare and file FAA Form 7460-1 as required.

6.2 State of Hawai‘i

6.2.1 Hawai‘i State Plan

The Hawai‘i State Planning Act, adopted in 1978, and promulgated in HRS Chapter 226, resulted in the Hawai‘i State Plan, revised in 1986. The Hawai‘i State Plan provides goals, objectives, policies, and priority guidelines for growth, development and the allocation of resources throughout the state in various areas of state interest. The purpose of the Hawai‘i is to improve the planning process in the state; increase the effectiveness of government and private actions; improve coordination among different agencies and levels of government; provide for wise use of Hawaii’s resources and to guide the future development of the state.

In accordance with HRS §226-15, the proposed project is consistent with the objectives and policies of the Hawai‘i State Plan, as the project will provide additional capacity, flexibility, reliability and redundancy in the wastewater treatment process. A discussion of the project’s compliance and consistency with the objectives and policies of the Hawai‘i State Plan will be further assessed in the DEIS.

6.2.2 State Land Use

The Hawai'i state land use law, HRS Chapter 205, was adopted in 1961. The law is meant to preserve and protect the state's lands and encourage the uses to which the lands are best suited. All lands in Hawai'i fall under one of the four state land use (SLU) classifications: Urban, Rural, Agricultural or Conservation. The project site is located in the Urban District. Land uses within the Urban District are regulated through the CCH Land Use Ordinance (LUO), ROH Chapter 21. The development of WWTPs is an allowed use under HRS Chapter 205 and ROH Chapter 21. No action from the SLU Commission is required to implement the proposed project. See **Figure 6.1 – State Land Use Districts**.

6.2.3 Coastal Zones Management Act (CZMA)

The Coastal Zone Management Act (CZMA), enacted 1972, provides states with financial incentives for the development and implementation of CZM practices, and limited review power over federal actions affecting the State's coastal zone. The Coastal Zone Management (CZM) program is regulated under, HRS §205(A)-2, as amended. The purpose of the CZM program is to ensure effective management, beneficial use, protection, and development of the coastal zone management area – all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the United States territorial sea. A discussion of the project's compliance and consistency with the objectives and policies of the CZMP will be further assessed in the DEIS and as part of the SMA permit application review process.

6.3 City and County of Honolulu

6.3.1 CCH O'ahu General Plan

The O'ahu General Plan (GP), amended in 2021, is a written commitment by CCH to ensure a future for the Island of O'ahu that provides for the needs, values and priorities of O'ahu's residents. The GP is a statement of the long-range social, economic, environmental, and design objectives and broad policies. Wastewater facilities are considered utilities; therefore, the most relevant sections of the GP is Section V, *Transportation and Utilities*. Other sections are also relevant, including Section III, *Natural Environment and Resource Stewardship*. A discussion of the project's compliance and consistency with the objectives and policies of the GP will be further assessed in the DEIS.

6.3.2 CCH Zoning Districts and Development Standards

The existing SIWWTP facility is located on land in the CCH Waterfront Industrial (I-3) zoning district. TMK parcel 022 is located in the CCH Preservation-General (P-2) zoning district. See **Figure 6.2 – CCH Zoning Districts**. According to ROH Table 21-3, the existing and proposed SIWWTP facilities are permitted as “public uses and structures” in all CCH zoning districts.

Development standards for the I-3 and P-2 zoning districts are set forth in ROH §21.3 and summarized in the below **Table 6.1 – Zoning Development Standards**. If any of the proposed project facilities encroach into the required yard setbacks, exceed maximum height standards, or otherwise do not conform to the development standards for the underlying zoning district, then additional entitlements from the CCH Department of Planning and Permitting (DPP) may be required to bring the facility into conformance with the LUO. Such entitlements might include a zoning waiver and/or a zone change. A discussion of the project’s compliance and consistency with the development standards for the I-3 and P-2 zoning districts will be further assessed in the DEIS.

Table 6.1 – Zoning Development Standards

Development Standard		District	
		I-3	P-2
Minimum Lot Area		7,500 square feet	5 acres
Minimum Lot width and depth (ft)		60	200
Yards (ft)	Front	0	30
	Side and Rear	0 ²	15
Maximum building area (percent of zoning lot)		80 ³	5
Maximum Density (FAR)		2.5	N/A
Maximum Height (ft.)		per zoning map	15-25 ¹
Height setbacks		per Sec. 21-3.130-1(c)	per Sec. 21-3.40-1(e)
Notes:			
¹ Heights above the minima of the given range may require height setbacks or may be subject to other requirements. See the appropriate section for the zoning district for additional development standards concerning height.			
² Where the side or rear property line of a zoning lot adjoins the side or rear yard of a zoning lot in a residential, apartment, apartment mixed use or resort district, there shall be a side or rear yard which conforms to the side or rear yard requirements for dwelling use of the adjoining district. In the I-3 district only, this yard shall be not less than 15 feet. In addition, see Section 21-4.70-1 for landscaping and buffering requirements.			
³ However, the building area may be increased to include all of the buildable area of the zoning lot provided all structures beyond the designated 80 percent building area shall:			
a) Provide a minimum clear interior height of 18 feet;			
b) Contain no interior walls, except for those between a permitted use and a special accessory office; and			
c) Provide a minimum distance of 40 feet between interior columns and other structural features			

6.3.3 Primary Urban Center (PUC) Development Plan

The Primary Urban Center Development Plan (PUC-DP) most recently updated in 2025, implements the objectives and policies of the General Plan for the PUC. The PUC-DP area is described as the “cultural, governmental and economic center of both O‘ahu and the State,” and encompasses the coastal plain that extends along Oahu’s southern shore from Wai‘alae-Kahala in the east to Pearl City in the west. The provisions of the PUC-DP are not regulatory; rather, they are established with the explicit intent of providing a coherent vision to guide resource protection and land use within the PUC. The PUC-DP provides guidance for development for the PUC, public investment in infrastructure, zoning and other regulatory procedures, and the preparation of the CCH’s annual capital improvement program budget. The most relevant sections of the

PUC-DP are *Section 8, Sea Level Rise and Coastal Hazards Planning* and *Section 9, Water Resources*. A discussion of the project's compliance and consistency with the policies and goals of the PUC-DP will be further assessed in the DEIS.

6.3.4 Special Management Area (SMA)

The CCH has designated the shoreline and certain inland areas of O'ahu as being within the SMA. The SMA areas are designated sensitive environments that are protected in accordance with the State's CZM policies, as set forth in ROH Chapter 25. The project site is located within the SMA. See **Figure 6.3 – Special Management Area**. A discussion of the project's compliance and consistency with SMA guidelines, as cited in ROH §25-3.2, will be included in the DEIS. Upon completion of the Final EIS, ENV will process an application for a SMA Permit with the DPP and Honolulu City Council.

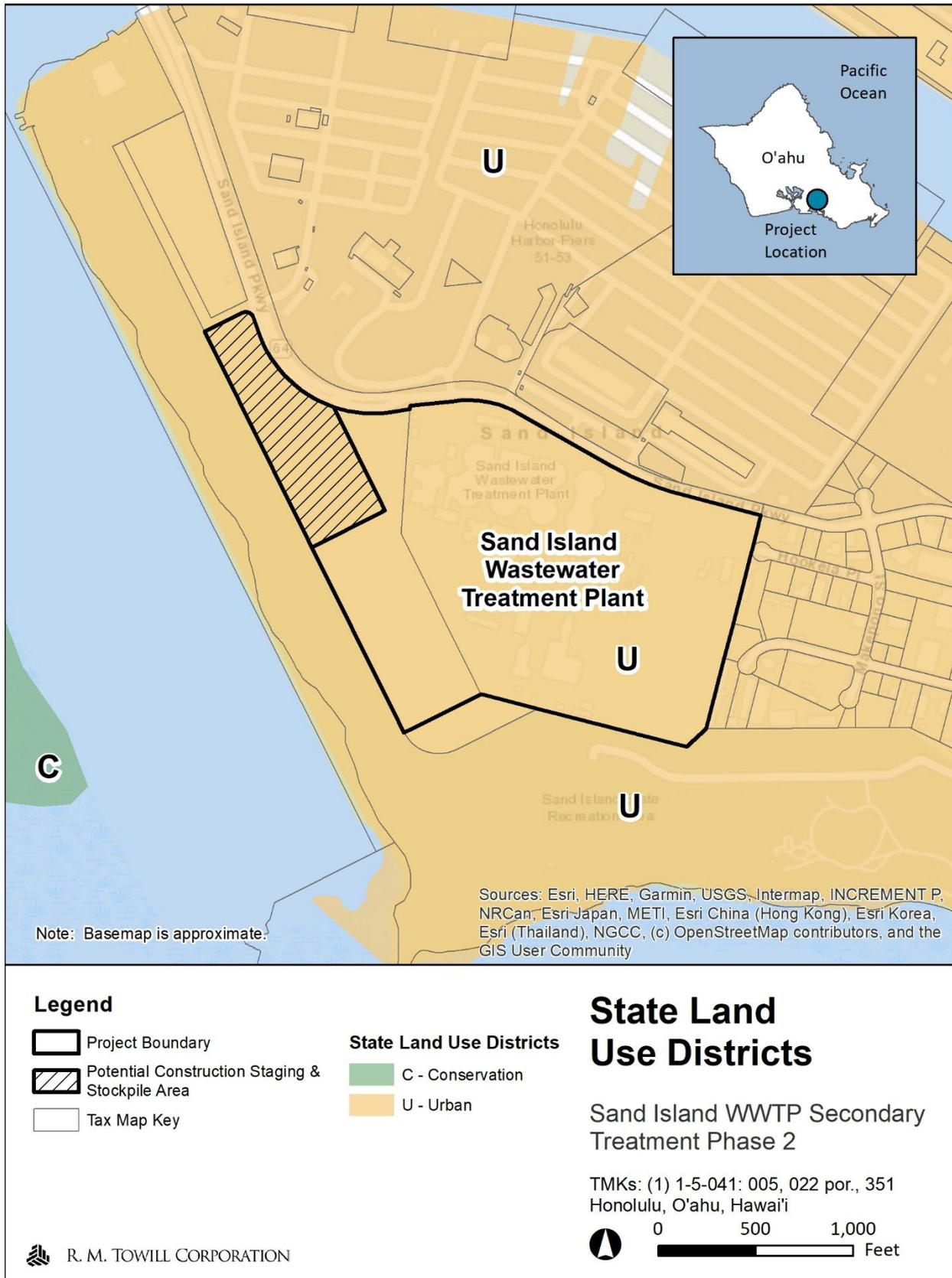


Figure 6.1 – State Land Use Districts



Figure 6.2 – CCH Zoning Districts



Figure 6.3 – Special Management Area

Section 7. Required Permits and Approvals

To complete Phase 2 design and construction, the following environmental approvals and permits are expected to be required prior to construction. The project approach to permitting will continue to be developed based on ongoing preliminary design activities that include geotechnical subsurface investigation, soils balance from mass grading, electrical supply requirements and possible HE meter consolidation, selection of solids unit processes, and evaluation of odor control.

7.1 Federal

- FAA
An FAA Form 7460-1 Notice of Proposed Construction or Alteration will be filed upon completion of 90% design and at least 45 days prior to construction. The project is located approximately 9,000 linear ft from the end of the Reef Runway (8-26) and within the flight approach and departure corridor for Honolulu International Airport. FAA review is required for construction of vertical structures within 20,000 ft of the nearest runway that might exceed flight approach/departure surfaces including permanent structures and temporary structures such as tower cranes. The FAA Form 7460-1 is submitted online. Content includes project descriptions, plans and elevations related to proposed structures, glare from PV systems, lighting and paint schemes.

7.2 State of Hawai'i

- Department of Health
 - Wastewater Branch
 - Construction Plan Review
 - Indoor and Radiological Branch
 - Noise Variance
 - Approval of a Variance from Community Noise Standards from DOH Noise and Radiation Branch will be required if construction activities are conducted outside the hours of 7 a.m. to 6 p.m. Monday through Friday, or 9 a.m. to 6 p.m. Saturday and/or during Sundays and Holidays or if noise from mechanical equipment will exceed 70 dBA during regular operation. If required, the Noise Variance application will be prepared in accordance with HAR Chapter 11-46 Community Noise Control.
 - Clean Air Branch
 - Modification to Covered Source Permit No. 0216-06-C, by Clean Air Branch

- During operations, AGS uses process air blowers and will emit Nitrous Oxide, which is a toxic fume and a greenhouse gas. Therefore, a general covered source permit will be necessary. Application forms S-1, S-5, C-1, and C-2 will be submitted to the DOH Clean Air Branch. Form S-1 is the general standard air pollution control permit application, Form S-5 is the application for a general covered source permit, Form C-1 is the compliance plan proposal, and Form C-2 is the compliance certification form. All four of these forms comprise the application package for the cover source permit.
 - Modification to Non-Covered Source Permit No. 0216-05-N to regulate non-covered source emissions from new secondary treatment Phase 2 and solids treatment facilities.
- Environmental Management Division
 - Construction plan Review
- Clean Water Branch
 - National Pollutant Discharge Elimination System (NPDES)
 - NPDES Notice of General Permit Coverage (NGPC) Notice of Intent (NOI) coverage from the State of Hawaii, DOH, Clean Water Branch (CWB) will be required for the following effluent discharges to waters of the state, as applicable to the project. The state receiving waters adjacent to Sand Island are classified by DOH-CWB as Class A Marine Waters, therefore project-related effluent discharges can be authorized under NGPC approvals.
 - HAR 11-55, Appendix C – NGPC NOI Form C is required for discharges of stormwater during construction. This applies to projects with a total land area, including staging and stockpile areas, greater than 1 acre in size. (Current NGPC NOI C authorization expires January 28, 2029.)
 - HAR 11-55, Appendix F – NGPC NOI Form F is required for discharges of hydrotesting effluent. This permit is not required if hydrotest effluent is discharged into the sewer system or otherwise reused in a manner that does not result in discharges to state waters. (Current NGPC NOI F authorization expires January 14, 2027.)
 - HAR 11-55, Appendix G – NGPC NOI Form G is required for discharges from construction dewatering of groundwater seepage. (Current NGPC NOI G authorization expires January 14, 2027.)
- Disability and Communication Access Board

- Construction plan review
- Department of Land and Natural Resources
 - State Historic Preservation Division
 - HRS 6E-8 State Historic Preservation Review
 - ENV will consult with SHPD to confirm that SHPD’s previously issued HRS 6E-8 effect determination concurrence letter (Project No. 2020PR34520, Log No. 2020.02413, Doc. No. 2011SCH02, dated January 6, 2021), including SHPD’s acceptance of the 2019 AIS for the SIWWTP facility and 2021 Historic Context Study for the WW2-era chapel, fulfills HRS 6E-8 requirements for the Phase 2 project. See **Appendix B**.
- Department of Transportation (HDOT)
 - Highways Division (HWY)
 - Permit to Discharge into State Highway Drainage System from HDOT-HWY - If discharging to Sand Island Access Road inlets.
 - Harbors Division (HAR)
 - Approval to use HDOT-HAR property for construction staging and stockpiling.

7.3 City and County of Honolulu

- Department of Environmental Services
 - Permission to Discharge into CCH Storm Drain System (Required For NPDES Permits)
 - Update to the SIWWTP Soil Management Area Maintenance and Monitoring Plan
- Department of Facility Maintenance
 - Construction Plan Review
- Department of Planning and Permitting
 - Special Management Area (SMA)
 - The Phase 2 improvements are located within the Special Management Area, as defined in HRS 205A. The Phase 2 improvements are not covered under the SMA Use Permit approved for Phase 1; therefore a new SMA Use Permit is required for Phase 2. The SMA Use Permit Application will be prepared in accordance with HRS 205A and Revised Ordinances of Honolulu (ROH) Chapter 25. The total valuation of Phase 2 “development” within the SMA exceeds \$500,000 dollars, therefore a Special Management Area Use (Major) Permit is required. The processing agency is the CCH DPP. The approving authority is the CCH City Council.

- Pre-requisites for filing the SMA Use Permit Application include consultation with DPP, completion of the HRS 343 Final EIS/EA, presentation to the Neighborhood Board(s) in the District in which the project is located and the Sand Island, and written notice of the Neighborhood Board presentation to all landowners adjoining the project. Presentation at the Sand Island Business Association is also recommended.
- SMA Use Permit Application processing by DPP includes application review, a public hearing; and preparation of a DPP Director's Report with recommendations to the City Council. The City Council approves the SMA Permit by Resolution, including hearings by the Zoning Committee and the full Council.
- Zoning Height Waiver
 - A Zoning Height Waiver application for buildings and other facility structures that exceed the maximum zoning height of 60 feet will be processed with the DPP. With an approved Zoning Waiver, site improvements will conform to the requirements of the LUO. Subject to the approval of the SMA Use Permit and Zoning Waiver, and fulfillment of related approval conditions, the site is suitable for planned facility improvements considering the size, shape, location, topography, infrastructure, and natural features associated with the site. Because the two SIWWTP parcels are in separate zoning districts (Parcel 005 is zoned I-3 Waterfront Industrial, and Parcel 022 is zoned P-2 Preservation), the parcels joined through the CUP/JDA will also be subject to ROH Chapter 21-4.50 *Lots in two zoning districts*, which reconciles differences in zoning standards between the two districts.
- Conditional Use Permit (CUP) / Joint Development Agreement (JDA)
 - A CUP/JDA was approved from DPP in accordance with LUO Section 21-5.380 under File No. 2020/CUP-11, to jointly develop TMK parcels (1) 1-5-41: 005 and 022. The CUP/JDA ensures that facility encroachments across lot boundaries conform with zoning regulations. The properties under the CUP/JDA shall be considered and regulated as one zoning lot for the purposes of zoning and development. The CUP/JDA are subject to the following conditions:
 - 1. Prior to submitting a building permit application, the Applicant shall: file the approved agreement with the Bureau of Conveyances and/or Assistant Registrar of the Land Court of the State of Hawaii. This condition is completed.

- 2. All lots or parcels identified in the exhibits of the approved Joint Development Agreement (JOA) shall be considered to be one zoning lot.
- 3. This application has only been reviewed and approved pursuant to the provisions of Section 21-5.380, and development shall comply with all other provisions of the Land Use Ordinance (LUO).
- 4. Approval of this CUP shall not be construed as approval of any building/sign permits applications; such applications are reviewed separately and shall comply with applicable codes and regulations.
- Flood Hazard Variance
 - Phase 2 improvements are in FEMA Flood Zone X; low to moderate flood hazard areas. Therefore, a flood hazard variance will be necessary.
- Building Permits and Construction permits – plumbing, electrical, grading, trenching, and stockpiling
 - The construction of the AGS system, tertiary filtration, solids improvements and ancillary improvements will require various building permits for the construction of buildings and structural facilities, and installation of sewer, water and electrical utilities. Building Permit Applications and construction drawings will be submitted to DPP for review and approval.
 - A grading permit will be required for construction activities that involve excavation or fill greater than 3 ft in height, greater than 50 cubic yards in volume, or result in redirecting surface run-off patterns on adjacent properties. The construction project will require a grading permit and a drainage study to be conducted to confirm whether surface run-off patterns are directed to adjacent properties. A grading permit application and grading plans will be submitted to DPP for review and approval.
- Department of Transportation Services
 - Construction Plan Review
- Honolulu Board of Water Supply
 - Construction Plan Review

7.4 Utility Companies

- Hawaiian Electric Company – Construction plan review for electrical utilities
- Hawaiian Telcom Inc. – Construction plan review for telecommunications utilities

Section 8. EIS Scoping and Consultation

The proposed scoping process for project EIS is being undertaken in compliance with HAR §11-200.1-23. Consultation prior to and during the preparation of the EIS is required to help identify potential issues and provide guidance ranging from the scope of studies to the analysis and evaluation of potential environmental impacts and mitigation measures.

The scoping process for this project includes pre-EIS consultation with the public, concerned individuals, community organizations and government agencies. A list of parties who are being invited to participate in scoping for the EIS and a copy of the pre-EISPN consultation request letter is provided in **Appendix C - Pre-EISPN Consultation Letter and Consultation List**.

In addition, a public information and EIS scoping meeting will be held during the EISPN public comment period, in compliance with HAR §11-200.1-23(d). The EISPN is expected to be published in the 4th quarter of 2025. The location, date and time of the EIS scoping meeting will be determined at a later date. The meeting will be held at a convenient location in the vicinity of downtown Honolulu, such as a public school or community center, to be determined. Public notice of the meeting date, time and location, and other pertinent information, will be mailed or emailed to the parties identified in **Appendix C**, and will be published in the Honolulu Star-Advertiser.

Section 9. Significance Criteria and Determination

In accordance with HAR §11-200.1-13, the ENV is required to consider the overall and cumulative significant effects of the project on the quality of the environment, by evaluating short- and long-term, primary and secondary effects of the action. The following significance criteria will be evaluated in the EIS to assess whether or not the project will have a significant adverse impact on the environment:

1. *Irrevocably commit a natural, cultural, or historic resource;*
2. *Curtail the range of beneficial uses of the environment;*
3. *Conflict with the State's environmental policies or long-term environmental goals established by law;*
4. *Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State;*
5. *Have a substantial adverse effect on public health;*
6. *Involve adverse secondary impacts, such as population changes or effects on public facilities;*
7. *Involve a substantial degradation of environmental quality;*
8. *Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;*
9. *Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;*
10. *Have a substantial adverse effect on air or water quality or ambient noise levels;*
11. *Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;*
12. *Have a substantial adverse effect on scenic vistas and viewplanes, during day or night, identified in county or state plans or studies; or*
13. *Require substantial energy consumption or emit substantial greenhouse gases.*

Section 10. References

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APPENDICES

Appendix A	Mayoral Delegation of Authority to ENV
Appendix B	HRS 6E-8 Letter from State Historic Preservation Division
Appendix C	Pre-EISPN Consultation Letter and Consultation List

APPENDIX A
Mayoral Delegation of Authority to ENV

OFFICE OF THE MAYOR
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813
PHONE: (808) 768-4141 • FAX: (808) 768-4242 • INTERNET: www.honolulu.gov



KIRK CALDWELL
MAYOR

ROY K. AMEMIYA, JR.
MANAGING DIRECTOR
GEORGETTE T. DEEMER
DEPUTY MANAGING DIRECTOR

October 26, 2017

MEMORANDUM

TO: Lori M. K. Kahikina, P.E.
Director

FROM:  The Honorable Kirk Caldwell, Mayor

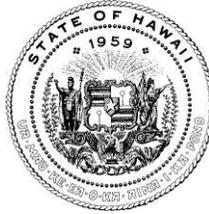
SUBJECT: Environmental Impact Statements for the City's Wastewater Program and Projects, Oahu, Hawaii

I hereby delegate authority to the Department of Environmental Services (ENV) to act as the Accepting Authority on behalf of the Mayor of the City and County of Honolulu for the Environmental Impact Statements (EIS's) which the City and County of Honolulu undertakes for its Wastewater Program and Projects. The undertaking of each EIS shall be in accordance with applicable law, rules and recommended practices. It is understood that this delegation will allow for a more efficient work process for the EIS's to the benefit of the Wastewater Program and Projects.

cc: Department of Planning and Permitting
Department of Design and Construction

APPENDIX B
HRS 6E-8 Letter from State Historic Preservation Division

DAVID Y. IGE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

January 6, 2021

Lori M.K. Kahikina, Director
City and County of Honolulu
Department of Environmental Services
1000 Uluohia Street, Suite 308
Kapolei, Hawai'i 96707
c/o Trudy Hamic, thamic@honolulu.gov

Dear Ms. Kahikina:

IN REPLY REFER TO:
Project No.: 2020PR34520
Log No.: 2020.02413
Doc. No.: 2011SCH02
Archaeology, Architecture

**SUBJECT: Chapter 6E-8 Historic Preservation Review –
Request for Concurrence with Effect Determination
Sand Island Wastewater Treatment Plant Facility Improvement Project
Archaeological Inventory Survey
Historic Context Study for Meeting Hall/Former Chapel
Honolulu Ahupua'a, Honolulu District, Island of O'ahu
TMK: (1) 1-5-041:005 and 002 and Sand Island Parkway por.**

This letter provides the State Historic Preservation Division's (SHPD's) review of the City and County of Honolulu, Department of Environmental Services (ENV) proposed project titled, *Sand Island Wastewater Treatment Plant Facility Improvement* and ENV's request for SHPD's concurrence with a project effect determination of "Effect, with proposed mitigation commitments" and the proposed mitigation in the form of a historic context study for the meeting hall/former chapel. SHPD's review also includes review of a revised draft report titled, *Archaeological Inventory Survey Report for the Sand Island Wastewater Treatment Plant Facility Plan EIS Project, Honolulu Ahupua'a, Honolulu District, O'ahu, TMK: (1) 1-5-041:005 and 022 and Sand Island Parkway (por.)* (O'Hare et al., April 2020, revised October 2020), and a draft report titled, *Thematic Historic Context Study: Post Chapel and Half-Way House, Sand Island, O'ahu, HI (MASON, September 2020)*.

SHPD received the initial submittal related to this project on May 16, 2018 (Log No. 2018.01176) in which ENV requested an HRS 6E-8 historic properties determination and included a supporting draft archaeological assessment (AA) report. Subsequently, SHPD received a revised AA report on May 20, 2019 (Log No. 2019.01160), followed by a draft EIS on June 25, 2019 (Log No. 2019.01404) and a Final EIS on December 27, 2019 (Log No. 2019.02801). SHPD requested the AA report be revised to an archeological inventory survey (AIS) report and requested revision of the 6E determination and mitigation commitments via email and meetings with Cultural Surveys Hawaii, Inc. (CSH) and AECOM. SHPD received the revised AIS report (O'Hare et al., April 2020, revised October 2020) and the draft Thematic Historic Context Study (MASON, September 2020) on October 12, 2020 (Log No. 2020.02413). This submittal also included ENV's letter dated May 6, 2020 (WEC.PE 20-013), a second letter dated September 28, 2020 (WEC.PE 20-028), and a copy of a SHPD email in which SHPD concurred with mitigation in the form of a Thematic Historic Context Study.

The City and County of Honolulu, Department of Environmental Services (ENV) is proposing improvements to the Sand Island Wastewater Treatment Plant (SIWWTP). The proposed work for the project consists of the planning and design of upgrades of the SIWWTP to provide secondary wastewater treatment to comply with the First Amended Consent Decree with the U.S. Environmental Protection Agency (EPA) and the State Department of Health (DOH).

In addition, the project involves the development of various non-process WWTP support facilities. The project may include two project-related traffic light signal locations involving subsurface work extending into Sand Island Parkway.

The AIS fieldwork included 100% pedestrian inspection of the project area and GPS data collection. The AIS report (O'Hare et al., revised October 2020) provides the environmental, cultural, historic, and archaeological background for the project area. The AIS identified two significant historic properties: four remnant features associated with the development of Sand Island during the pedestrian inspection of the SIWWTP (northeast) portion of the project area (SIHP # 50-80-14-8848); and the Meeting Hall (former chapel) at the Sand Island Treatment Center of the Kline-Welsh Behavioral Health Foundation (KWBHF) (SIHP # 50-80-14-8849).

SIHP # 50-80-14-8848 Feature 1 is interpreted as a portion of the unpaved perimeter road of the oval-shaped "Quarantine Island" and is understood to date to the 1906-1919 period. Based on a 1952 historical map the road was no longer present. SIHP # 50-80-14-8848 Feature 2 is a remnant concrete sea/retaining wall documented just makai (south) of Feature 1. This concrete, former Quarantine Island perimeter seawall is indicated to have been built in 1906. SIHP # 50-80-14-8848 Feature 3 is a water channel documented just makai (south) of Feature 2. SIHP # 50-80-14-8848 Feature 4, the makai road, first appears as an in-use road on a 1941-1946 Map of Sand Island POW Camps.

SIHP # 50-80-14-8848 as significant under HAR §13-275-6 Criterion d (have yielded or is likely to yield information important for research on history or prehistory) and retains diminished integrity of location, design, materials, and workmanship. Additionally, SIHP # 50-80-14-8849 is assessed as significant under HAR §13-275-6 Criterion a (be associated with events that have made an important contribution to the broad patterns of our history) and retains sufficient integrity of location, design, materials, and workmanship.

The **SHPD concurs** with ENV's integrity and site significance assessments for SIHP #s 50-80-14-8848 (structural remnants) and 50-80-14-8849 (former meeting hall/chapel), as summarized in ENV's letters and the AIS report (O'Hare et al., revised October 2020). SHPD also concurs that SIHP # 50-80-14-8848 Features 1-4 have been sufficiently documented and that no further archaeological work is required for this site.

ENV's cover letter dated September 28, 2020 requested the SHPD's concurrence with a project effect determination of "Effect, with proposed mitigation commitments." Based on the architectural and archaeological findings, the **SHPD concurs** with ENV's effect determination and proposed mitigation commitment of historical data recovery in the form of a two-part historic context study for the planned demolition of the former meeting hall/chapel building (SIHP # 50-80-14-8849); referred to in MASON (September 2020) historic context report as the *Post Chapel and Half-Way House*.

The architectural report titled, *Thematic Historic Context Study: Post Chapel and Half-Way House, Sand Island, O'ahu, HI (MASON, September 2020)*, meets the requirements of HAR 13-275-8(a)(1)(B). **It is accepted.** Additionally, the AIS report (O'Hare et al., revised October 2020) meets the requirements of HAR §13-275-6. **It is accepted.** Please send one hard copy each of both documents clearly marked FINAL, along with a copy of this acceptance letter to the Kapolei Office, attention SHPD Library. Please also provide a PDF copy of both reports to HICRIS Project 2020PR34520 using the Supplemental Attachment option. Lastly, please provide a PDF copy of the AIS report to Lehua.K.Soares@hawaii.gov.

The SHPD hereby notifies the City and County that project initiation may proceed.

Please contact Julia Flauaus, Architectural Historian, at julia.flauaus@hawaii.gov for any concerns regarding architectural resources, and Samantha Hemenway, O'ahu Island Archaeologist, at samantha.hemenway@hawaii.gov for any questions regarding archaeological resources or this letter.

Aloha,

Alan Downer

Alan S. Downer, PhD
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

Lori M.K. Kahikina
January 6, 2021
Page 2

cc: David Shideler, dshideler@culturalsurveyys.com
Courtney Cacace, Courtney.cacace@acocom.com
Denise Wong, dwong2@honolulu.gov
James Niermann, kimn@rmtowill.com
Jaime Nishikawa, jaimen@rmtowill.com

APPENDIX C
Pre-EISPN Consultation

Consultation Request Letter
Consultation Distribution List
Comments Received and Written Response

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



July 2, 2025

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

MICHAEL O'KEEFE
SECOND DEPUTY DIRECTOR
KA LUA O KA HOPE PO'O

IN REPLY REFER TO:
WEC.PE 25-016

To Whom It May Concern:

SUBJECT: Request for Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (City), Department of Environmental Services (ENV) is undertaking the planning, design and development of Secondary Treatment Phase 2 facility improvements at the Sand Island Wastewater Treatment Plant (SIWWTP), located on Sand Island in Honolulu, Island of O'ahu, Hawai'i (see enclosed existing project location map).

The City is under a 2010 consent decree (CD) with the Environmental Protection Agency (EPA) to meet secondary treatment water quality standards and is in the process of upgrading the facility in two phases. The Secondary Treatment Phase 1 project (Phase 1) is under construction and will provide secondary treatment for a maximum monthly flow of 20 million gallons per day (mgd) using a membrane bioreactor (MBR) treatment. The joint venture (JV) of R. M. Towill Corporation (RMTTC)/Stantec Consulting Services Inc. (Stantec) is supporting the City with the planning and design of secondary treatment alternatives to treat the remainder of the plant flow as part of the Secondary Treatment Phase 2 Project (Phase 2). The Phase 2 improvements will provide secondary treatment capacity for an additional 70 mgd maximum monthly flow, for a total WWTP secondary treatment capacity of 90 mgd maximum monthly flow upon project completion. The 2010 CD requires that the City "Complete Construction of facilities necessary to comply with secondary treatment standards of the Act, as defined by 40 C.F.R Part 133, for wastewater discharges from the SIWWTP by the compliance milestone of December 31, 2035."

The SIWWTP is the largest wastewater treatment plant on the Island of O'ahu. It is located on approximately 64 acres of land that consist of two parcels owned by the State of Hawai'i (Department of Land and Natural Resources). The parcels were set aside to the City for public purposes through Executive Order No. 3939 (50.0-acre parcel, Tax Map Key [TMK] 1-5-41:005) and No. 4498 (13.949-acre parcel, TMK: 1-5-41:022). SIWWTP is operated by the City and is located at 1350 Sand Island Parkway.

To Whom It May Concern
July 2, 2025
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Improvements will include modifications and expansion to existing facility structures and new facility structures for secondary treatment of separated liquid waste and solid waste streams. Improvements will include new basins, tanks, filter systems, digesters, pumps, piping, odor control, energy capture and conversion, various service buildings and related infrastructure. The City evaluated several secondary treatment technology alternatives, including MBR, Aerobic Granular Sludge (AGS), and Biological Aerated Filter, each requiring a unique site layout within the existing SIWWTP facility boundary. The City selected AGS as the preferred treatment process. AGS is being implemented to meet secondary treatment requirements efficiently within a constrained site. A site plan showing area available for secondary treatment facilities is enclosed.

The project's use of public lands and funds triggers the State Environmental Impact Statement (EIS) law (Chapter 343, Hawai'i Revised Statutes [HRS]). In addition, the project is located within the City's Special Management Area (SMA) as defined in HRS 205A; therefore, a SMA Use Permit – Major will be required from the City in accordance with HRS 205A and Revised Ordinances of Honolulu Chapter 25. An EIS was prepared and accepted in 2019 for a project to expand the SIWWTP to accommodate Secondary Treatment Phase 1 facilities and to upgrade and develop various non-process facilities (*Sand Island Wastewater Treatment Plant Facility Plan Final EIS*, December 2019). The 2019 EIS did not evaluate Secondary Treatment Phase 2 facility improvements, as the preferred treatment technology and facility design was not known at that time. The RMTC/Stantec JV is also assisting the ENV with the preparation of required environmental documentation for the project.

In accordance with Hawai'i Administrative Rules, Sections 11-200.1-18(a) and 11-200.1-23, we seek your input regarding any issues or potential project impacts to the natural, built and social environments that we should evaluate, or whether the proposed Secondary Treatment Phase 2 project may have an impact on any existing or proposed projects, plans, policies, or programs that we should consider when preparing the EIS. We ask that you provide any comments within 30 days of the date of this letter.

You can mail or email your comments to:

R.M. Towill Corporation
Attention: Jim Niermann
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819
Email: jimn@rmtowill.com

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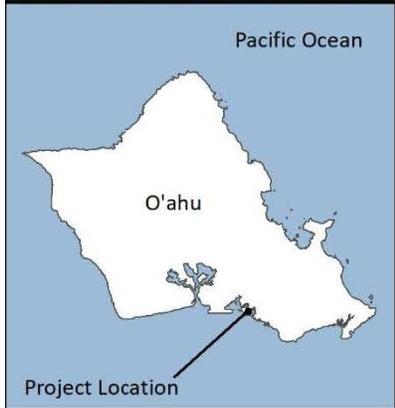
We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

Sincerely,

 Digitally signed by Babcock,
Roger W
Date: 2025.06.30 07:23:59
-10'00"

Roger Babcock, Jr., Ph.D., P.E.
Director

Enclosures: Project Location
Site Plan – Existing Facilities



Legend

-  Project Boundary
-  Potential Construction Staging & Stockpile Area

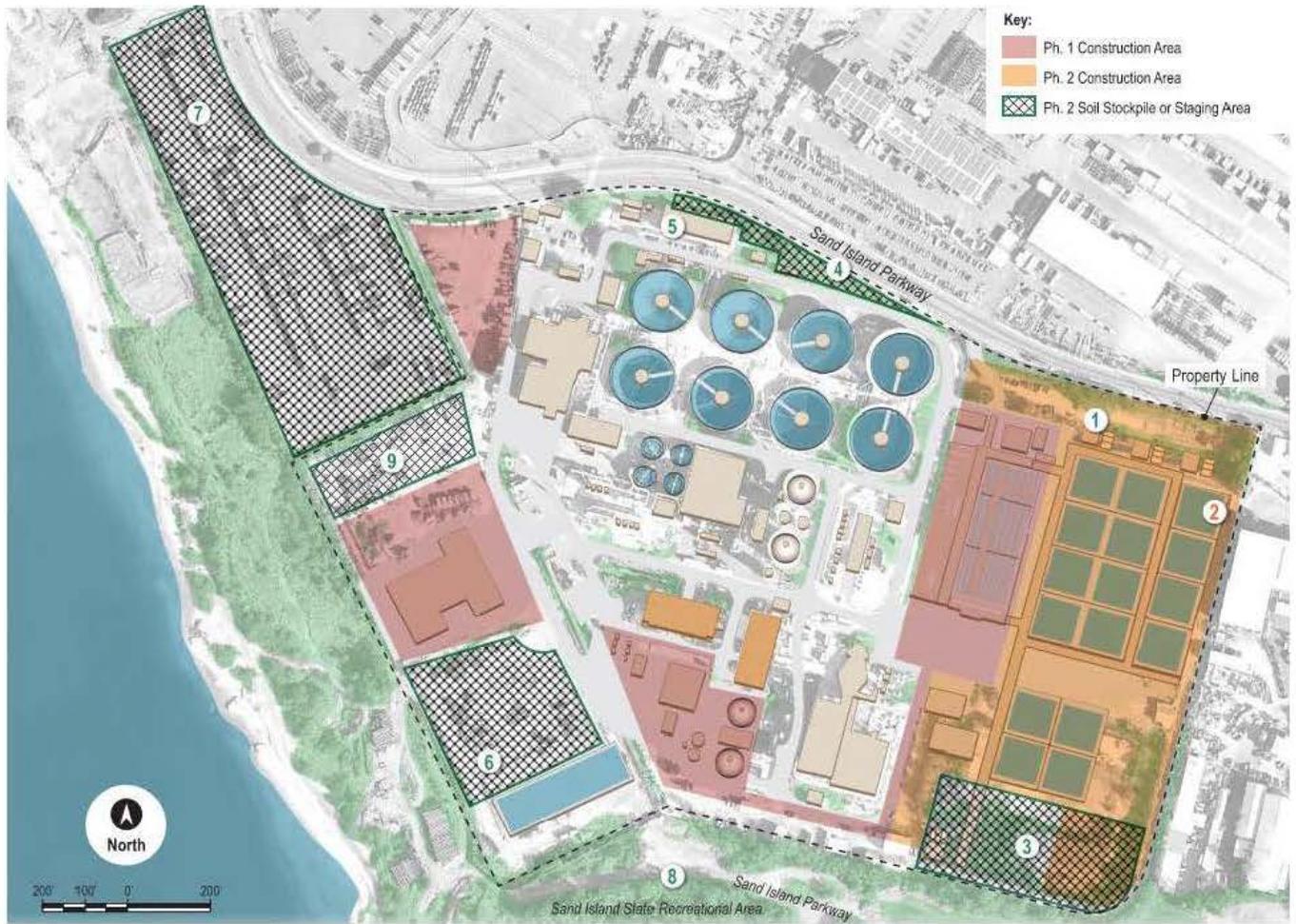
 R. M. Towill Corporation

Project Location Map

Sand Island WWTP Secondary Treatment Phase 2

TMKs: (1) 1-5-041: 005, 022, 351
Honolulu, O'ahu, Hawai'i





- Key:**
- Ph. 1 Construction Area
 - Ph. 2 Construction Area
 - Ph. 2 Soil Stockpile or Staging Area

PH. 1 CONTRACTOR STAGING AND STORAGE

1 Ph. 1 CM Field Office 29,300 SF/ 0.67 AC - Available 2027 (Potential use for Ph.2)

PH. 2 CONSTRUCTION AREA

2 Phase 2 construction (The majority of Ph.2 construction area on the east side of the site is for AGS process tanks)

PH. 2 SOIL STOCKPILE, STAGING, CONTRACTOR/CM ADMIN AREA

3 RDSS Stockpile Area for Ph. 1 & 2: 119,400 SF/ 6 2.74 AC - Available ~2027

4 SIPH1 Contractor Parking (WEC): 25,000 SF/0.57 AC - Available ~2027 (Potentially use for Ph. 2)

5 Admin Building can possibly be used as shared space with CM, Design Engineering, and Contractor offices

6 SIWWTP SW Corner current (Phase 1) soil storage and laydown: 114,200 SF/2.62 AC

7 MATSON (DOT Harbors): 418,176 SF/9.6 AC

8 DLNR Federal 6F Grant Land (Not available)

9 Construction Laydown available (Mauka of MBSSI) 53,400 SF/1.23 AC

SIWWTP Secondary Treatment Phase 2 - EISPN Contact List (updated 7/3/2025)

NAME	CONTACT	TYPE
U.S. Environmental Protection Agency Pacific Islands Office, Region 9	Mr. Dean Higuchi, Public Affairs Specialist	F
Department of Transportation Federal Aviation Administration	Mr. Ron Simpson, Manager	F
Department of the Interior U.S. Fish and Wildlife Service Pacific Islands Fish and Wildlife Office	Mr. Earl Campbell, Project Leader	F
U.S. Army Corps of Engineers Honolulu District Regulatory Office	Lt. Col. Adrian Biggerstaff, Honolulu District Commander	F
National Oceanic and Atmospheric Administration National Marine Fisheries Service Pacific Islands Regional Office	Ms. Sarah Malloy, Regional Administrator	F
Office of Hawaiian Affairs	Ms. Stacy Kealohalani Ferreira, CEO	S
Department of Transportation	Mr. Edwin Sniffen, Director	S
Department of Transportation Highways Division	Mr. Robin Shishido, Deputy Director	S
Department of Transportation Harbors Division	Ms. Dre Kalili, Deputy Director	S
Department of Business, Economic Development and Tourism	Mr. Luis Salaveria, Director	S
Department of Business, Economic Development and Tourism Office of Planning & Sustainable Development	Ms. Mary Alice Evans, Director	S
Department of Land and Natural Resources Board of Land and Natural Resources	Ms. Dawn N. S. Chang, Esq.	S
Department of Land and Natural Resources State Historic Preservation Division	Ms. Jessica Puff, Administrator	S
Department of Land and Natural Resources Land Division	Mr. Russell Y. Tsuji, Administrator	S
Department of Land and Natural Resources Aquatic Resources Division	Mr. Brian Neilson, Administrator	S
Department of Land and Natural Resources Commission on Water Resource Management	Ms. Ciara W. K. Kahahane, Deputy Director	S
Department of Land and Natural Resources Office of Conservation and Coastal Lands	Mr. Michael Cain, Administrator	S
Department of Land and Natural Resources Division of Forestry and Wildlife	Mr. David Smith, Administrator	S
Department of Land and Natural Resources Engineering Division	Ms. Dina U Lau, Acting Chief Engineer	S
Department of Health Indoor and Radiological Branch	Ms. Gabrielle Fenix Grange, Chief	S
Department of Health Clean Water Branch	Mr. Darryl Lum, Chief	S
Department of Health Clean Air Branch	Ms. Marianne Rossio, P.E., Chief	S
Department of Health Safe Drinking Water Branch	Mr. Gaudencio (Dennis) Lopez, P.E.,	S

SIWWTP Secondary Treatment Phase 2 - EISPN Contact List (updated 7/3/2025)

Department of Health Wastewater Branch	Mr. Jonathan Nagato, P.E, Chief	S
Department of Health Environmental Management Division	Ms. Joanna L. Seto, P.E., Chief	S
Department of Health Solid and Hazardous Waste Branch	Mr. Glenn Haae, P.E., Acting Chief	S
Department of Health Disability and Communication Access Board	Mr. Kirby L. Shaw, Esq., Executive Director	S
Department of Accounting and General Services	Mr. Keith A. Regan, Comptroller	S
University of Hawai'i Sea Grant College Program	Mr. Darren Lerner, Director	S
University of Hawaii Water Resources Research Center	Mr. Tao Yan, Director	S
Legislative Reference Bureau	Librarian	S
Hawai'i State Library	Librarian	S
Department of Design and Construction	Mr. Haku Milles, P.E., LEED AP, Director	C
Department of Facility Maintenance	Mr. Gene C. Albano, P.E., Director and Chief Engineer	C
Department of Planning & Permitting	Ms. Dawn Takeuchi Apuna, Director	C
Department of Transportation Services	Mr. Roger J. Morton, Director	C
Department of Parks & Recreation	Ms. Laura H. Thielen, Director	C
Honolulu Board of Water Supply	Mr. Ernest Lau, Manager and Chief Engineer	C
Honolulu Emergency Services Department	Mr. Jim Howe, Director	C
Honolulu Police Department	Mr. Arthur J. Logan, Chief of Police	C
Honolulu Fire Department	Mr. Sheldon Kalani Hao, Fire Chief	C
Hawaiian Electric Company	Ms. Shelee Kimura, President and CEO	U
Hawaiian Telcom Inc.	Ms. Su Shin, President	U
Downtown Neighborhood Board No. 13	Mr. Ernest Carvalho, Chair	E
Kalihi Palama Neighborhood Board No. 15	Ms. Amanda Ybanez, Chair	E
Kalihi Valley Neighborhood Board No. 16	Ms. Leialoha Tumbaga, Chair	E
Salt Lake-Aliamanu Neighborhood Board No. 18	Mr. David Yomes, Chair	E
Hawai'i State Governor	The Honorable Josh Green, M.D. Governor, State of Hawai'i	E
Hawai'i State Lieutenant Governor	The Honorable Sylvia Luke Lieutenant Governor, State of Hawai'i	E
Senate District 13	Mr. Karl Rhoads, Senator	E
Senate District 15	Mr. Glenn Wakai, Senator	E
House District 29	Mr. Ikaika Hussey, Representative	E
House District 30	Ms. Shirley Ann Templo, Representative	E
Office of the Mayor	Mayor Rick Blangiardi	E
Honolulu City Council District 1	Ms. Andria Tupola, Councilmember	E
Honolulu City Council, District 2	Mr. Matt Weyer, Councilmember	E

SIWWTP Secondary Treatment Phase 2 - EISPN Contact List (updated 7/3/2025)

Honolulu City Council, District 3	Ms. Esther Kia'āina, Councilmember	E
Honolulu City Council, District 4	Mr. Tommy Waters, Council Chair	E
Honolulu City Council, District 5	Mr. Scott Nishimoto, Councilmember	E
Honolulu City Council, District 6	Mr. Tyler Dos Santos-Tam, Councilmember	E
Honolulu City Council, District 7	Ms. Radiant Cordero, Councilmember	E
Honolulu City Council, District 8	Ms. Val Aquino Okimoto, Councilmember	E
Honolulu City Council, District 9	Mr. Augie Tulba, Councilmember	E
Kalihi Business Association	Mr. Michael Anduha, President	B
Sand Island Business Association	Executive Director	B
Chinese Chamber of Commerce	Ms. Sarah Moy, President	B
Historic Hawai'i Foundation	Ms. Kiersten Faulkner, Executive Director	G
Sierra Club of Hawai'i	Mr. Letani Peltier, Chair	G
Hawai'i's Thousand Friends	Chuck Prentiss, President Donna Wong, Executive Director	G
Our Children's Earth Foundation	Tiffany Schauer, Executive Director	G
Blue Planet Foundation	Francois Rogers, Interim Executive Director	G
Conservation Council for Hawai'i	Colleen Kelley Heyer, President	G
Conservation International Hawai'i	Matt Ramsey, Senior Director	G
Council for Native Hawaiian Advancement	Kūhiō Lewis, Chief Executive Officer	G
Fish Pono—Save Our Reefs	n/a	G
Hawai'i Environmental Change Agents	n/a	G
Hawai'i Green Growth	Celeste Connors, Chief Executive Officer	G
Hawaii Community Foundation - Fresh Water Initiative	Micah Kāne, Chief Executive Officer and President	G
Hawai'i Reef and Ocean Coalition	n/a	G
KUPU	John Leong, Chief Executive Officer	G
Kuleana Coral Restoration	Alika Peleholani Garcia, Executive Director	G
The Nature Conservancy	Ulalia Woodside Lee, Hawai'i and Palmyra Executive Director	G
Earth Justice Hawai'i	Miranda Fox, Public Affairs and Communications Strategist	G
Attention: Victor D. Moreland, Ph.D., P.E. Roy K. Abe, P.E. James S. Kumagai, Ph.D., P.E. Han J. Krock, Ph.D., P.E. James Honke, P.E. Michael Chun, Ed.D.	c/o Moreland Consulting	P

SIWWTP Secondary Treatment Phase 2 - EISPN Contact List (updated 7/3/2025)

Roy K. Abe, P.E. James S. Kumagai, Ph.D., P.E. Han J. Krock, Ph.D., P.E. Victor D. Moreland, Ph.D., P.E.	Mr. Roy K. Abe, P.E. roy.abe@hdrinc.com	P
Roy K. Abe, P.E.	Mr. Roy K. Abe, P.E.	P
Krock Design Associates LLC	Han J. Krock, Ph.D., P.E.	P
Moreland Consulting	Victor D. Moreland, Ph.D., P.E.	P
James S. Kumagai, Ph.D., P.E.		P
James Honke, P.E.		P
Michael Chun, Ed.D.		P

Director Roger Babcock, Jr., PhD, PE
Department of Environmental Services
City and County of Honolulu
1000 Ulu'ōhi'a Street, Suite 308
Kapolei, Hawai'i 96707

Jim Niermann
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, HI 96819

Aloha e Dr. Babcock and Mr. Niermann,

Mahalo nui loa for the opportunity to provide pre-consultation and scoping comments for the Sand Island Wastewater Treatment Plant (SIWWTP) Phase 2 secondary treatment project. Specifically, you have asked The HWEA Lifetime Kupuna Group to identify issues and concerns we believe need to be addressed in the Draft EIS for this project. We greatly appreciate the opportunity to do so.

As you are aware, various members of our group have been engaged and were key leaders in formulating the water quality management program for the Island of O'ahu dating back to the 1960's. Our collective knowledge, experience, and expertise in environmental engineering, public health and environmental science reflect nearly half a century of professional practice and scientific research in the Pacific Region. We believe there is no other group of individuals who have more knowledge and deeper understanding of water quality management in Hawai'i in general and O'ahu in particular, than ours.

Prior to sharing our feedback on issues and concerns, it is important to identify and review key water quality legislation and events impacting Hawai'i from 1948 to present. These actions have served as the foundation for water quality decision making in Hawai'i:

Legislation/Event	Background
Federal Water Pollution Control Act (FWPCA) of 1948	Enhance the quality and value of our water resources and establish a national policy to prevent, control and reduce water pollution.
FWPCA Amendments of 1956	Strengthening enforcement provisions with abatement suits at the State pollution control agency request; where health was endangered.
Water Quality Act of 1965	Expanded the federal role requiring States to set water quality standards (cause and effect), that are both State and Federally enforceable.
Clean Water Restoration Act of 1966	Polluters were required to submit effluent reports and failure to do so would result in fines.
Congressional White Paper on National Policy for the Environment (October 1968)	This White Paper helped to shape the intellectual and legislative foundation for the National Environment Policy Act (NEPA) of 1969. The shaping included: <i>Holistic Vision, Interdisciplinary Collaboration, Preventive Philosophy, Environmental Accountability.</i>

Legislation/Event	Background
NEPA of 1969	Objective: <ol style="list-style-type: none"> 1. Encourage productive compatibility between man and his environment 2. Promote efforts that prevent and eliminate damage to the environment and biosphere, while stimulating man's health and welfare 3. Enrich understanding of our National ecosystems and natural resources 4. Establish the Council of Environmental Quality
Water Quality Improvement Act of 1970	Expanded Federal authority and created State certification procedures to prevent waters degradation below applicable standards
U.S. Environmental Protection Agency (EPA) created 1970	Tasked with: <ol style="list-style-type: none"> 1. Conducting environmental research and assessment 2. Establish and enforce national standards for air and water quality 3. Regulate pollutants for land, air and water 4. Collaborate with States and Tribes on enforcement and permitting
Water Quality Program for O'ahu (WQPO) 1971	The island water quality master plan: all inland wastewater effluent discharges be eliminated and coastal facilities use primary treatment with deep ocean outfalls
FWPCA Amendments of 1972 (Clean Water Act or CWA)	Key provisions: <ol style="list-style-type: none"> 1. National Pollutant Discharge Elimination System (NPDES) 2. Technology-based standards (end-of-pipe) 3. Areawide waste treatment planning 4. Nonpoint source pollution 5. State authority
Senate Hearing "The Impact of Secondary Treatment on Wastes Discharged into the Ocean" March 18, 1974 – Honolulu, Hawai'i	Also called the "Muskie Hearing": Oral and written testimony supported the position that secondary treatment at Sand Island was neither necessary nor prudent due to unique location, ocean environment and topography (240 feet depth is nutrient desert).
Clean Water Act of 1977	Amendments were designed to refine and strengthen the CWA 1972. Created 301(h) Waiver program that would not harm the biological community, public health, or water quality standards
1979	City and County of Honolulu (City) first applied for the 301(h) Waiver from EPA for the Sand Island Wastewater Treatment Plan
1990	First Sand Island WWTP 301(h) Waiver granted to City (5 years)
1993	National Research Council study "Managing Wastewater on Coastal Urban Areas" page 60 states " <i>In cases of deep ocean discharge where BOD, pathogens, nitrogen, and other nutrients are of little concern, and contributions of toxics and metals associated with solids are low, treatment for removal of these constituents is unnecessary.</i> " Page 278 states " <i>There are three basic engineering components for a municipal wastewater system: outfall(s), treatment works and source control. These three parts are a system where changes in one part will change the needs for the others.</i> "
1995	City applies for waiver renewal
1996	Māmala Bay Water Quality Study completed recommending primary treatment with disinfection
1998	Sand Island WWTP 301(h) Waiver granted a second time to City

Legislation/Event	Background
2003	City applies for waiver renewal (third time) with no EPA response for over 4 years
2007 March	Mayor Hanneman created his Environmental Panel of Advisors (EPA) Four senior engineers James Honke, Hans Krock, Jimmy Kumagai, and Victor Moreland agreed to advise the City Administration on 301(h) waiver
2007 December	EPA issues Tentative Decision (TD) to deny City's waiver applications for renewal
2008 March	City and Environmental Panel of Advisors separately submit comments to EPA in response to the tentative denial and requested that waivers continue to be issued and withdraw the TD
2009 January	EPA issues Final Waiver Denial to City requiring secondary treatment EPA decision ignores science and the scientific data provided
2009 February	City appeals waiver denial
2010 July	City signs Consent Decree with EPA requiring a multi-billion Sand Island secondary treatment facility Environmental Panel of Advisors disagreed with decision made by the Mayor and continued to recommend primary treatment with an extended and deeper ocean outfall
2019	City prepared Sand Island WWTP Secondary Treatment Project Phase 1 EIS Members of our group reviewed and provided feedback to City on the following issues Community outreach lacking No detailed economic analysis provided Facility Plan - not shared with Public
2021 July	Met with Mayor Blangiardi and his leadership team Shared facts and documents supporting that secondary treatment is not needed
2021 October	City issues contract to build Phase 1 (multi-phase project) December 2021 City issues Notice to Proceed
2025	Design Phase 2 started prior to completion of the Phase 2 Environmental Review Process and EIS scoping requested

It must be noted that the ruling for the City of San Diego CD case firmly supports the position shared with our response to your request as described below.

¹The United States District Judge - Rudi Brewster wrote in his "IV. SUMMARY OF EVIDENCE There are four main reasons this Court rejects the CD. First, without the CD the oceanic environment will benefit, and it would not be benefitted more if the CD were implemented. Second, by rejecting the CD valuable resources will be saved by not requiring the City to over-treat billions of gallons of wastewater to tertiary levels before dumping it into the ocean. Third, unnecessary sludge production will be avoided. Fourth, design, construction, and operational maintenance costs will be decreased immensely by not mandating the construction of unnecessary new reclamation and treatment facilities."

¹ *United States v. City of San Diego*, United States District Court for the Southern District of California, March 31, 1994 , Decided; March 31, 1994, FILED, Civ No. 88-1101-8, Pages 7 and 8.

Further details addressed “A. Environmental Benefits, B. Wasteful Over-Treatment, C. Sludge Production, and D. Satellite Facilities.”

With this as a backdrop, we believe that the following issues must be addressed in the SIWWTP secondary treatment project Phase 2 Draft EIS:

1. EPA Guidance and Action Needs

In navigating the complex process in developing a new or upgrading existing wastewater facilities from concept to construction requires a methodical approach for ensuring environmental soundness and cost-effectiveness for the ultimate decision. The key elements of the process must include:

- Needs assessment and feasibility study
- Facility Planning
- Design Guidelines
- Technical Design Manuals
- Design and permitting
- Construction
- Startup and operation

Environmental Impact Statement is best developed before finalizing the concept design effort. Also, it must be noted that the preparation of Environmental documents must not be done by piecemeal like what is being undertaken here with the Phase 1 EIS completed and project under construction and now another EIS document being prepared for Phase 2.

- 2. Public input during planning, design and EIS review.** A key planning step in projects of the size, complexity and cost associated with secondary treatment at SIWWTP is preparation of a Facility Plan. If not already completed, the planning process must provide for **authentic** and **widespread** public input. If already completed, this plan needs to be made available for public review, with the understanding that public input will be allowed after the fact. And if already completed, it is noted that the plan was developed with limited opportunities for public input.
- 3. Prepare comprehensive future flow analysis to identify the required Sand Island WWTP treatment capacity based on current analysis for potential growth in the wastewater service area.** Currently the identified need for treatment capacity is 90 MGD. Determination of capacity needs is essential as it is foundational to ensure the WWTP treatment capacity is not over designed causing waste of capital and O&M funds.
- 4. Public health and environmental impacts, both positive and negative, resulting from secondary treatment at the Sand Island WWTP.** In the EIS for Phase 1 of this project, the term “benefits” was used without clear identification, description and explanation, which we consider to be a major flaw in that

document. Additionally, that EIS failed to identify any drawbacks to secondary treatment, which we are prepared to highlight. If the EIS for Phase 2 is to have any credibility, a thorough, transparent and objective analysis of all impacts, both positive and negative and direct and indirect, must be undertaken and shared for public discussion. An example of a direct impact is effluent quality on public health and environmental quality. Examples of indirect impacts are generation of greenhouse gases on climate warming and biological solids requiring treatment and disposal.

5. **Financial impact on the citizens of the City and County of Honolulu (CCH) resulting from secondary treatment at the Sand Island WWTP.** In addressing the financial impacts of Phase 1, the EIS for that project only cited the economic returns from employment, job earnings and tax revenue, all without regard for the great project financial burdens on the citizens of the CCH. Since that time, the CCH completed a financial analysis upon which a new sewer fee schedule was proposed. This proposed schedule reflects a dramatic increase in rates, driven in part by secondary treatment at the SIWWTP. Not only must that analysis be included in the Phase 2 EIS, but it must also be broken out into its component parts including:
1. *Capital costs for all phases of the SIWWTP secondary treatment project, including planning, design, construction and construction management.*
 2. *Annual operating and maintenance (O&M) costs for secondary treatment at SIWWTP.*
 3. *Solids processing and disposal costs (capital and O&M) that are associated with secondary treatment at SIWWTP.*
 4. *Costs of administrative and maintenance support services associated with the liquid and solids streams that are part of the secondary treatment process at SIWWTP.*

Additionally, the impact of the total cost for secondary treatment at SIWWTP on the sewer fee schedule proposed by the CCH must be clearly identified, described and explained. Citizens of and businesses in the CCH must have a clear and transparent understanding of how secondary treatment at SIWWTP impacts the sewer fees they will be paying.

6. **Other water pollution control measures competing for CCH funding.** Studies and investigations since statehood have identified greater sources of near shore water pollution beyond treated municipal sewage. Two of these are stormwater runoff and cesspools. Both have been clearly identified as targets for municipal action, however, both also come with extremely high price tags. The EIS must examine the impact of these pollution sources on coastal water quality against that of discharging primary treated disinfected effluent into the deep ocean from SIWWTP, and the cost-benefits associated with remediating the former in lieu of providing secondary treatment

7. **Alternative Evaluation Considerations.** The Phase 2 EIS must provide a clear and transparent discussion on continuing the current practice of discharging primary treated disinfected effluent from the SIWWTP into the deep ocean outfall within Mamala Bay. This discussion must include:
1. Findings of monitoring studies conducted by the Water Resources Research Center at the University of Hawai'i at Mānoa for the CCH for the past four decades.
 2. Reports of any public health threat or environmental crisis associated with the current treatment and disposal practices at SIWWTP
 3. Options that can be considered to continue the current treatment and disposal practices at SIWWTP, including seeking reconsideration of the waiver denial under Section 301(h) and reopening and renegotiating the 2010 Consent Decree (CD)
 4. Regarding Section 301(h), a balanced analysis of the advantages of pursuing a waiver weighed against the disadvantages of doing so
 5. Regarding the CD, the progress made to date in complying with its stipulations, along with an explanation of the procedure and cost in seeking its reconsideration
 6. In both cases (301h and CD), arguments ***against*** doing either one must be overwhelming and compelling.
8. **Outfall extension.** Outfall construction technology has seen major advances since the existing SIWWTP outfall was designed and constructed fifty years ago. Coupled with the excellent performance of the existing outfall, its extension farther from shore and at greater depth should be evaluated as a legitimate alternative to secondary treatment at SIWWTP. For five decades, primary effluent has been discharged a mile and one half from shore at a depth of 240 feet and disinfected for the last two decades without public health threat or environmental degradation. Extending the outfall further and deeper to a depth of at least 650 feet using the ocean characteristics to bring added protection and enhancement, thereby warranting a thorough and objective evaluation for continuing this practice. Special Management Area (SMA) is a coastal zone designation established in 1975 to safeguard Hawai'i's shoreline and nearshore environments from overdevelopment and ecological degradation. This also means that this must comply with the Coastal Zone Management (CZM) objectives under Hawai'i Statutes (HRS) Chapter 205A. That requires evaluation of thermocline dynamics and internal tide waves, etc.
9. **Upstream satellite treatment and reuse.** Any responsible environmental assessment of wastewater treatment and disposal must consider reuse as an alternative. In the case of SIWWTP, this alternative necessitates consideration of upstream treatment facilities that would not only create another resource for water consumption but would also reduce flows into the SIWWTP. The challenges and benefits that come with this strategy need to be identified and discussed.

- 10. Delayed Action alternative.** Delaying implementation of secondary treatment at SIWWTP warrants review and investigation because it will allow the CCH to engage in Integrated Planning, an approach in managing environmental quality that reflects best practice, and a strategy that is strongly endorsed by the USEPA. This alternative does not remove the stipulation for secondary treatment from the CD, however, it does allow the CCH to prioritize other more pressing needs, such as cesspool conversion, watershed management and stormwater control. An added benefit of delaying implementation of this stipulation is the opportunity for newer and more effective technology to be developed.
- 11. Basis for selecting the AGS process for Phase 2.** In Phase 1, the Aerobic Granular Sludge (AGS) process was rejected in favor of the Membrane Bioreactor (MBR) process for a variety of factors. In Phase 2, the AGS process is being recommended. A clear explanation for this reversal is needed, along with a discussion on how these two different processes will interface.
- 12. Alternative secondary treatment technologies.** Although MBR and AGS technologies have been selected for Phases 1 and 2, respectively, other potentially viable solutions warrant investigation and discussion. In this evaluation of technologies, the associated solids handling/disposal and effluent disinfection processes and costs need to be evaluated and discussed as well.
- 13. Forever chemicals.** Substances such as per/polyfluoroalkyl (PFAs), dieldrin and chlordane are “forever chemicals” because of their persistence in the environment and potential health risks. Via groundwater and other various routes, these substances find their way into wastewater and their presence and removal need to be holistically evaluated and discussed.
- 14. Sea level rise.** The reality of sea level rise associated with climate change cannot be denied. The impact of this natural phenomenon is especially felt by island communities like Hawai'i. Relative to SIWWTP, rising sea levels will not only directly impact the physical plant and its operations, but it will also increase chloride content in the influent wastewater resulting from greater inundation of the collection system in low lying areas. The impacts of this higher chloride content on subsequent treatment processes, including both liquid and solid streams, must be carefully and thoughtfully evaluated.
- 15. Hydrodynamic models.** An early hydrodynamic model predicted the Sand Island outfall plume to be a dominant source of fecal coliform at all beaches in Mamala Bay, a dominant source of pathogenic organisms at the eastern beaches, and a significant contributor of enterococci and Clostridium in the western beaches. These predictions have long been disputed, not only by local researchers, but by actual in situ monitoring over the years. In a spirit of transparency and objectivity, a thorough discussion around this issue needs to be included in the EIS.

16. Tsunami impacts. As was recently demonstrated, the reality of tsunami remains a part of Hawai'i and our daily lives. A thorough discussion of mitigative measures for both existing and new facilities and operations at SIWWTP is needed.

Closing Statement. A consent decree signed by the City and County of Honolulu, Hawai'i State Department of Health, US Environmental Protection Agency and certain other members of Hawai'i's environmental caucus in 2010 requires secondary treatment at Sand Island WWTP by 2035. Notwithstanding this requirement, the Sand Island WWTP has been discharging primary effluent for almost 30 years and then disinfected primary effluent for almost 20 years into the deep ocean outside the photic zone of Mamala Bay without impairment (i.e. - algae blooms, epidemics, etc.). There is nothing that has occurred since that time to suggest anything other than the same outcomes in the years ahead.

Notwithstanding these outcomes and in compliance with the Consent Decree, the CCH has undertaken a project to provide secondary treatment at SIWWTP for which an EIS must be prepared. This planning step is vital to the integrity of the project, and the process must be diligent, transparent, proficient and authentic.

Short of these overriding principles, the EIS will not be credible. The undersigned believe appropriate attention to the issues herein described will help to bring credibility that is needed.

Our Kupuna Group would like to meet face-to-face with the team for further in-depth discussion/s.

Mahalo nui loa.

Me ka ha'aha'a,



Victor D. Moreland, PhD, PE

for

Roy K. Abe, MS, PE

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IN REPLY REFER TO:
WEC.PE 26-017

January 15, 2026

Mr. Victor D. Moreland, Ph.D., P.E.
HWEA Lifetime Kūpuna Group
c/o Moreland Consulting
1378 Mahiole Street
Honolulu, Hawai'i 96819

Dear Dr. Moreland:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant (SIWWTP) Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter received as a PDF file by email dated September 9, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comments below (in italics) and provide the following responses:

***Comment #1:** It must be noted that the ruling for the City of San Diego Consent Decree case firmly supports the position shared with our response to your request as described below. The United States District Judge - Rudi Brewster wrote in his "IV. SUMMARY OF EVIDENCE: There are four main reasons this Court rejects the Consent Decree. First, without the Consent Decree the oceanic environment will benefit, and it would not be benefitted more if the Consent Decree were implemented. Second, by rejecting the Consent Decree valuable resources will be saved by not requiring the City to over-treat billions of gallons of wastewater to tertiary levels before dumping it into the ocean. Third, unnecessary sludge production will be avoided. Fourth, design, construction, and operational maintenance costs will be decreased immensely by not mandating the construction of unnecessary new reclamation and treatment facilities."*

San Diego's experience is not applicable to Honolulu. The San Diego waiver was based on San Diego's investment in decentralized wastewater reuse to divert discharge to the ocean and to reuse the tertiary treated effluent for indirect and direct potable reuse applications. The focus of the Pure Water San Diego Program is on a much greater scale than Honolulu requires and can economically achieve.

Comment #2: In navigating the complex process in developing a new or upgrading existing wastewater facilities from concept to construction requires a methodical approach for ensuring environmental soundness and cost-effectiveness for the ultimate decision. The key elements of the process must include:

- *Needs assessment and feasibility study*
- *Facility Planning*
- *Design Guidelines*
- *Technical Design Manuals*
- *Design and permitting*
- *Construction*
- *Startup and operation*

Environmental Impact Statement is best developed before finalizing the concept design effort. Also, it must be noted that the preparation of Environmental documents must not be done by piecemeal like what is being undertaken here with the Phase 1 EIS completed and project under construction and now another EIS document being prepared for Phase 2.

The Secondary Treatment Phase 2 project is currently in the design phase. We agree that wastewater facility improvements require a methodical approach for ensuring environmental soundness and cost-effectiveness. The Phase 2 design alternatives and the recommended alternative were developed and continue to be evaluated and refined through such an approach, which includes planning and technical studies, as well as the subject EIS currently in process.

Separate EIS documents for Secondary Treatment Phase 1 and Phase 2 Improvements are appropriate. The two phases are not interdependent. Each phase has independent utility: that is, Phase 1 improvements did not compel or inevitably lead to Phase 2 improvements. Phase 2 improvements, while being designed to integrate with the Phase 1 improvements and other existing WWTP facilities, could be developed as a stand-alone treatment process. Moreover, given the time gap between the design and development of the Phase 1 and 2 Secondary Treatment improvements, it is appropriate to evaluate environmental conditions and potential project effects current with each phase individually.

Comment #3: A key planning step in projects of the size, complexity and cost associated with secondary treatment at SIWWTP is preparation of a Facility Plan. If not already completed, the planning process must provide for authentic and widespread public input. If already completed, this plan needs to be made available for public review, with the understanding that public input will be allowed after the fact. Also, if already completed, it is noted that the plan was developed with limited opportunities for public input.

Avenues for public involvement in the facility planning and design process is through elected representatives, direct participation in City Council and City agency hearings related to project funding and required regulatory approvals, such as the Special Management Area (SMA) Permit approval process. In addition, the public has the opportunity to review and comment on the project through the EIS process. Public outreach for the EIS is being

undertaken in accordance with Hawai'i Revised Statutes (HRS) 343 and Hawaii Administrative Rules (HAR) 11-200.1.

Comment #4: Prepare comprehensive future flow analysis to identify the required SIWWTP treatment capacity based on current analysis for potential growth in the wastewater service area. Currently the identified need for treatment capacity is 90 MGD. Determination of capacity needs is essential as it is foundational to ensure the WWTP treatment capacity is not over designed causing waste of capital and O&M funds.

The Secondary Treatment Phase 2 facility design is based on wastewater flow and load projections to the year 2055. A detailed description of the wastewater flow and load analysis will be provided in the EIS.

Comment #5: Public health and environmental impacts, both positive and negative, resulting from secondary treatment at the SIWWTP. In the EIS for Phase 1 of this project, the term "benefits" was used without clear identification, description and explanation, which we consider to be a major flaw in that document. Additionally, that EIS failed to identify any drawbacks to secondary treatment, which we are prepared to highlight. If the EIS for Phase 2 is to have any credibility, a thorough, transparent and objective analysis of all impacts, both positive and negative and direct and indirect, must be undertaken and shared for public discussion. An example of a direct impact is effluent quality on public health and environmental quality. Examples of indirect impacts are generation of greenhouse gases on climate warming and biological solids requiring treatment and disposal.

The EIS for the Secondary Treatment Phase 2 project will disclose positive and negative effects, including secondary and cumulative effects of the secondary treatment alternatives and the preferred alternative in accordance with HRS 343 and HAR 11-200.1. Where the term "benefits" is used to assess project effects, it will be accompanied by a qualitative or quantitative definition. In general, compliance with federal and state water quality standards in the treatment and discharge of wastewater effluent, which is the fundamental purpose of the Consent Decree and resulting WWTP facility improvements, will prevent the release of harmful concentrations of pollutants into the ocean. Maintaining water quality standards is considered to provide a benefit to the environment and to the public health and well-being.

Comment #6: Financial impact on the citizens of the CCH resulting from secondary treatment at the SIWWTP. In addressing the financial impacts of Phase 1, the EIS for that project only cited the economic returns from employment, job earnings and tax revenue, all without regard for the great project financial burdens on the citizens of the CCH. Since that time, the CCH completed a financial analysis upon which a new sewer fee schedule was proposed. This proposed schedule reflects a dramatic increase in rates, driven in part by secondary treatment at the SIWWTP. Not only must that analysis be included in the Phase 2 EIS, but it must also be broken out into its component parts including:

1. *Capital costs for all phases of the SIWWTP secondary treatment project, including planning, design, construction and construction management.*
2. *Annual operating and maintenance (O&M) costs for secondary treatment at SIWWTP.*
3. *Solids processing and disposal costs (capital and O&M) that are associated with secondary treatment at SIWWTP.*
4. *Costs of administrative and maintenance support services associated with the liquid and solids streams that are part of the secondary treatment process at SIWWTP.*

Additionally, the impact of the total cost for secondary treatment at SIWWTP on the sewer fee schedule proposed by the CCH must be clearly identified, described and explained. Citizens of and businesses in the CCH must have a clear and transparent understanding of how secondary treatment at SIWWTP impacts the sewer fees they will be paying.

As stated in Resolution No. 98-197, CD1 (date July 26, 2001), item II.B:

“The CCH will present at public meetings any proposed Sewer Service Charge increase, and will consider recommendations and input from the public.”

Increases in the Sewer Service Charge is based on the wastewater capital improvement program (CIP) as a whole (maintenance and upgrades of WWTP, Wastewater Pump Stations, and the Wastewater Collection System). This project is only a part of the entire program. Therefore, public input and discussion of increases to the Sewer Service Charge should take place at the public meetings held to comply with Resolution No. 98-197 CD1 and not for individual CIP project EIS.

The construction, operation and maintenance of the proposed Phase 2 secondary improvements are expected to contribute to an increase in sewer fees. The EPA uses median household income (rather than average household income) as a basis for calculating sewer fee increases and determining if the adjusted fee amounts can be supported or would represent a hardship on the State’s residents. The Phase 2 secondary improvements, together with other capital improvements to the island-wide wastewater collection and treatment system, will contribute to an overall increase in sewer fees over time. Sewer fee increases will represent an additional financial burden on individual households and businesses; however the EPA has determined that increased sewer fees for secondary treatment is supportable based on median household income calculations and in consideration of the environmental and public health benefit.

In addition to these considerations, the EPA maintained throughout that Consent Decree negotiations with the CCH that the legal requirements of Clean Water Act (CWA) Section 301(h) and the BEACH Act cannot be decided or dismissed based on cost considerations. The costs involved in secondary treatment upgrades are handled through a separate process involving stakeholders. The 2010 Consent Decree was negotiated to provide a reasonable time schedule for CCH to come into compliance with the secondary treatment requirements.

The EIS for the Secondary Treatment Phase 2 project will include a Socio-Economic Impact Study (SEIS). The SEIS will include a presentation of capital costs and operation and maintenance costs, a discussion of the secondary treatment project's contribution to anticipate island-wide sewer fee increases, and an assessment of the impacts and benefits of these costs.

Comment #7: Other water pollution control measures competing for CCH funding. Studies and investigations since statehood have identified greater sources of near shore water pollution beyond treated municipal sewage. Two of these are stormwater runoff and cesspools. Both have been clearly identified as targets for municipal action, however, both also come with extremely high price tags. The EIS must examine the impact of these pollution sources on coastal water quality against that of discharging primary treated disinfected effluent into the deep ocean from SIWWTP, and the cost-benefits associated with remediating the former in lieu of providing secondary treatment

The use of the sewer fund is regulated by the Revised Ordinances of Honolulu (ROH), Chapter 14 – Public Works Infrastructure Requirements Including Fees and Services; and the passage of various fiscal year CIP Budget Ordinances by the Mayor and the City Council.

In 1996, the City Council passed Resolution 96-026 which established the debt and financial policies of City. Under the topic of Revenues, the following is stated:

“The CCH shall maintain a sewer fee rate structure which is adequate to insure that the programs the sewer funds finance remain firmly and separately self-supporting, including the costs of operations, maintenance, and debt service; provided that this shall not preclude the use of community facilities districts, benefit district, unilateral agreements, development agreements, user fees and impact fees to pay for sewer capital improvements.”

Therefore, unless changes are made to the ROH Chapter 14 and a revised Resolution is passed by the City Council, the intention and practice is that sewer funds are only to be used to fund sewer projects and cannot be used for storm water projects or other non-sewer projects.

The CCH is looking at cesspool mitigation as a separate project; however, cesspools exist predominately on the Windward side of the island, with few exceptions in urban O’ahu, e.g., Makiki. Cesspools are not characteristic of the Sand Island basin area.

The CCH recently completed a feasibility study to evaluate an integrated planning approach to water quality management that treats all water – freshwater, stormwater, wastewater and recycled water, as a single resource. The integrated planning approach recognizes the financial burden on communities that can result from compliance with multiple CWA requirements and supports flexibility in timing and prioritization of CWA compliance requirements for wastewater collection and treatment facilities and stormwater systems. The integrated planning process involves the community, stakeholder groups, State and CCH agencies and the EPA in setting priorities for public investments to meet CWA requirements. The CCH is in the early stages of the integrated planning process. It will take time to characterize system conditions and build participant consensus around the values, goals and priorities that will guide the Integrated Plan. In the meantime, the integrated planning process

does not offer relief from the CCH's obligations to complete SIWWTP Secondary Treatment improvements stipulated by the 2010 Consent Decree.

This EIS is focused on the Phase 2 secondary treatment facilities at the SIWWTP facility as required by the Consent Decree, and is not intended to address basin-wide or island-wide issues. Per the 2010 Consent Decree, the Environmental Protection Agency (EPA) and Department of Health (DOH) consider the secondary treatment facilities will provide a benefit to public health and environmental protection. We agree with your assertion that examining pollutant discharges to near shore waters from stormwater runoff and cesspools and pursuing improvements in these areas is important to understanding and improving overall environmental conditions. The CCH's efforts in these areas will be described in the Draft EIS as key elements of an integrated planning approach to protect overall water quality. The EIS will also disclose a preliminary evaluation of these alternatives according to the project purpose and need, which is to:

- Protect public and environmental health and safety through the development and maintenance of municipal wastewater treatment facilities;
- Meet secondary treatment requirements set by the EPA under the Clean Water Act, in accordance with the 2010 Consent Decree, Amended in 2012;
- Accommodate projected wastewater flows from the Sand Island Sewer Basin through 2055;
- Upgrade existing process and non-process facilities to meet wastewater management needs; and
- Implement certain requirements of federal and state permits and mandates.

Comment #8: Alternative Evaluation Considerations. The Phase 2 EIS must provide a clear and transparent discussion on continuing the current practice of discharging primary treated disinfected effluent from the SIWWTP into the deep ocean outfall within Mamala Bay. This discussion must include:

- 1. Findings of monitoring studies conducted by the Water Resources Research Center at the University of Hawai'i at Mānoa for the CCH for the past four decades.*
- 2. Reports of any public health threat or environmental crisis associated with the current treatment and disposal practices at SIWWTP*
- 3. Options that can be considered to continue the current treatment and disposal practices at SIWWTP, including seeking reconsideration of the waiver denial under Section 301(h) and reopening and renegotiating the 2010 CD*
- 4. Regarding Section 301(h), a balanced analysis of the advantages of pursuing a waiver weighed against the disadvantages of doing so*
- 5. Regarding the CD, the progress made to date in complying with its stipulations, along with an explanation of the procedure and cost in seeking its reconsideration*
- 6. In both cases (301h and CD), arguments against doing either one must be overwhelming and compelling.*

The CWA requires publicly owned treatment process facilities to comply with secondary treatment standards as defined by 40 C.F.R. Part 133. The purpose of this project is to upgrade the existing SIWWTP facility to provide secondary treatment in compliance with the CWA and

the 2010 Consent Decree. The CCH considers the negotiation of the 2010 Consent Decree to be a settled matter and is committed to fulfilling the CCH's responsibilities in accordance with the Decree.

Comment #9: Outfall extension. Outfall construction technology has seen major advances since the existing SIWWTP outfall was designed and constructed fifty years ago. Coupled with the excellent performance of the existing outfall, its extension farther from shore and at greater depth should be evaluated as a legitimate alternative to secondary treatment at SIWWTP. For five decades, primary effluent has been discharged a mile and one half from shore at a depth of 240 feet and disinfected for the last two decades without public health threat or environmental degradation. Extending the outfall further and deeper to a depth of at least 650 feet using the ocean characteristics to bring added protection and enhancement, thereby warranting a thorough and objective evaluation for continuing this practice. Special Management Area (SMA) is a coastal zone designation established in 1975 to safeguard Hawai'i's shoreline and nearshore environments from overdevelopment and ecological degradation. This also means that this must comply with the Coastal Zone Management (CZM) objectives under HRS Chapter 205A. That requires evaluation of thermocline dynamics and internal tide waves, etc.

The CCH is proceeding with complying with the requirements in the 2010 Consent Decree. Extending the outfall would not contribute to meeting the compliance milestones of the Consent Decree. Moreover, undertaking the necessary studies, design and regulatory approvals for an outfall extension would require diverting CCH staff and capital resources from other essential wastewater improvement projects.

The CCH has met the interim compliance milestone of January 1, 2019, to "execute a design contract and issue notice to proceed with the design of treatment process facilities needed to comply with secondary treatment standards for wastewater discharges from the SIWWTP." The CCH has also met the interim compliance milestone of January 1, 2022, to "execute a construction contract and issue a notice-to-proceed with construction of facilities that are part of its design to upgrade the SIWWTP, in relation to compliance with secondary treatment standards" for Secondary Treatment Phase 1 improvements.

The CCH is in the process of meeting the interim compliance milestone of January 1, 2030, to "execute a construction contract (or contracts) and issue a notice (or notices) to proceed with construction of all secondary treatment process facilities necessary to comply with secondary treatment standards for wastewater discharges from the SIWWTP."

Study, planning and design of a SIWWTP outfall extension alternative for inclusion in the Phase 2 EIS would cause the CCH to not be able to meet the January 1, 2030, interim milestone. Moreover, extension of the outfall without accompanying secondary treatment upgrades would fail to meet the CCH's 2010 Consent Decree compliance obligations.

The CCH is evaluating the possibility of extending the outfall, as part of future facility planning; however, this requires more study, particularly in the area of constructability and the

need for advances in construction methodology before this can be considered a viable and cost effective facility improvement. Nevertheless, the Phase 2 EIS will include a description of the existing outfall and alternatives for extending the outfall to deeper waters, including a description of thermocline dynamics.

Comment #10: Upstream satellite treatment and reuse. Any responsible environmental assessment of wastewater treatment and disposal must consider reuse as an alternative. In the case of SIWWTP, this alternative necessitates consideration of upstream treatment facilities that would not only create another resource for water consumption but would also reduce flows into the SIWWTP. The challenges and benefits that come with this strategy need to be identified and discussed.

The implementation and evaluation of scalping plants and/or decentralized system is a basin-wide issue that is outside of the scope for this project and the EIS.

However, ENV has completed two feasibility studies of potential scalping plants and decentralized treatment facilities in the SIWWTP Basin (February 2019, Scalping Plant Feasibility Study, 2023 Decentralized Treatment Evaluation). In order for the potential scalping plants to have a meaningful impact on reducing wastewater flows to the SIWWTP, the scalping plants needed to meet the following criteria:

- Large enough end user of treated wastewater.
- Raw wastewater quality.
- Appropriate location for satellite/scalping plants.
- Availability of alternate disposal site(s).

Should the CCH decide to pursue further development of decentralized treatment plants, additional planning, design, and construction would have to be done under a separate CIP project. The implementation of such a project would not be completed in an adequate timeframe to assist the CCH with meeting the 2010 Consent Decree requirements for the SIWWTP; and therefore, is not an alternative that will be carried forward for environmental analysis in the Phase 2 Draft Environmental Impact Statement (DEIS). However, a description of the scalping plant / decentralized treatment concept and development criteria will be provided in the DEIS.

Comment #11: Delayed Action alternative. Delaying implementation of secondary treatment at SIWWTP warrants review and investigation because it will allow the CCH to engage in Integrated Planning, an approach in managing environmental quality that reflects best practice, and a strategy that is strongly endorsed by the USEPA. This alternative does not remove the stipulation for secondary treatment from the CD, however, it does allow the CCH to prioritize other more pressing needs, such as cesspool conversion, watershed management and stormwater control. An added benefit of delaying implementation of this stipulation is the opportunity for newer and more effective technology to be developed.

The City Council passed Resolution 07-132, CD1 which was titled “Establishing a CCH goal that all CCH Wastewater Treatment Plants be in compliance with all applicable U.S. Environmental Protection Agency Requirements and Regulations” and the CCH and the EPA entered into the 2010 Consent Decree, which requires the CCH to upgrade the SIWWTP to provide secondary treatment in accordance with CWA requirements. The ENV is focused on meeting the requirements of the 2010 Consent Decree. Therefore, the discussion on the delayed action will not be expanded to include the renegotiation of the Consent Decree requirements. The delayed action alternative discussion in the EIS will address additional potential effects of delayed action on issues such as greenhouse gas emissions and sewer fee increases. Regarding integrated planning, please see our response to Comment #7 above.

We wish to clarify that in accordance with HRS, Chapter 343, the EIS serves as a disclosure document, and not a decision-making document. According to §11-200.1.24(h), the EIS shall include a discussion of the alternative of no action as well as reasonable alternatives that could attain the objectives of the action. The discussion shall include an objective analysis and evaluation of the environmental impacts of all such alternative actions.

Comment #12: Basis for selecting the Aerobic Granular Sludge (AGS) process for Phase 2. In Phase 1, the AGS process was rejected in favor of the Membrane Bioreactor (MBR) process for a variety of factors. In Phase 2, the AGS process is being recommended. A clear explanation for this reversal is needed, along with a discussion on how these two different processes will interface.

The EIS will include a detailed description of the criteria and process used to evaluate the various secondary treatment technologies considered for the Phase 2 project, including disclosure of the comparative performance of each alternative according to the following criteria: operation and maintenance (O&M) complexity, access to equipment and vendor support, process robustness, process integration, sustainability, constructability, footprint requirements, energy demands, O&M costs, capital costs, and process adaptability. In addition, the EIS will describe the site visits to working installations which allowed direct observation and engaged interaction with operations personnel at these locations. The CCH will also include a description of how the Membrane Bioreactor (MBR) and AGS systems will interface.

Comment #13: Alternative secondary treatment technologies. Although MBR and AGS technologies have been selected for Phases 1 and 2, respectively, other potentially viable solutions warrant investigation and discussion. In this evaluation of technologies, the associated solids handling/disposal and effluent disinfection processes and costs need to be evaluated and discussed as well.

The EIS will include an assessment of alternatives for solids handling and disposal. No changes to the existing Ultraviolet system are recommended as part of the Phase 2 project.

Comment #14: Forever chemicals. Substances such as per/polyfluoroalkyl (PFAs), dieldrin and chlordane are “forever chemicals” because of their persistence in the environment and potential health risks. Via groundwater and

other various routes, these substances find their way into wastewater and their presence and removal need to be holistically evaluated and discussed.

The EIS will include a discussion regarding the presence of PFAs, dieldrin, chlordane and other chemicals in waste water and how these chemicals are addressed in the treatment process.

Comment #15: Sea level rise. The reality of sea level rise associated with climate change cannot be denied. The impact of this natural phenomenon is especially felt by island communities like Hawai'i. Relative to SIWWTP, rising sea levels will not only directly impact the physical plant and its operations, but it will also increase chloride content in the influent wastewater resulting from greater inundation of the collection system in low lying areas. The impacts of this higher chloride content on subsequent treatment processes, including both liquid and solid streams, must be carefully and thoughtfully evaluated.

The *City and County of Honolulu Actions to Address Climate Change and Sea Level Rise* (SLR) Mayor's Directive No. 18-2; dated July 16, 2018, establishes policies to adapt and minimize risks from climate change and SLR in accordance with the most current versions of the City Climate Change Commission's SLR Guidance Document, Climate Change Brief, and State SLR Report. The SLR Guidance Document (adopted 2018; updated 2022) recommends the CCH utilize the 5.8 feet of SLR by year 2100 scenario as the planning and policy benchmark for all planning and design of public infrastructure and other projects with low tolerance for risk.

The Mayor's Directive in particular provides technical guidance to the CCH for wastewater resiliency planning around SLR and other climate change considerations. It recommends setting a planning benchmark of up to 6 feet of SLR by year 2100 for critical infrastructure, which includes wastewater treatment and collection facilities, such as the SIWWTP, that have long expected lifespans and low risk tolerance.

Using the Mayor's Directive as guidance, Phase 1 structures were designed with a flood surface water elevation of 16 feet above mean sea level. This number is based on the current Federal Emergency Management Agency flood elevation of 8 feet, plus 6 feet of SLR recommended by the Mayor's Directive, plus 2 feet of freeboard, due to the criticality of the facility.

Phase 2 structures will also be designed to be protected from flooding up to an elevation of 16 feet above mean sea level to align with the Mayor's Directive and Phase 1. Climate change guidance will be monitored for updates as Phase 2 planning and design progresses.

Comment #16: Hydrodynamic models. An early hydrodynamic model predicted the Sand Island outfall plume to be a dominant source of fecal coliform at all beaches in Māmalā Bay, a dominant source of pathogenic organisms at the eastern beaches, and a significant contributor of enterococci and Clostridium in the western beaches. These predictions have long been disputed, not only by local researchers, but by actual in situ monitoring over the years. In a spirit of

transparency and objectivity, a thorough discussion around this issue needs to be included in the EIS.

The CWA requires publicly owned treatment process facilities to comply with secondary treatment standards as defined by 40 C.F.R. Part 133. The purpose of this project is to upgrade the existing SIWWTP facility to provide secondary treatment.

In 1990, the action before the United States District Court for the District of Hawai'i, the Sierra Club Legal Defense Fund (representing the Sierra Club and Hawaii's Thousand Friends) filed suit against the CCH alleging violation of the CWA and the National Pollutant Discharge Elimination Systems (NPDES) permit regulating discharges from the SIWWTP. The suit contended that even though the CCH had received provisional approval from EPA for a waiver from the secondary treatment provisions in the CWA, the CCH failed to meet the national deadline for upgrading treatment to the secondary level. The CCH asserted that the discharge into Māmala Bay from the SIWWTP did not degrade the water quality of the bay or pose unacceptable risk to public health or other beneficial uses. The Māmala Bay Study was conceived to resolve the issue of water quality in Māmala Bay and to recommend measures to improve water quality.

The Māmala Bay Study, planned and directed by the Māmala Bay Study Commission, was "prepared in response to a consent decree issued by the United States District Court for the District of Hawai'i on November 10, 1991. The decree directed the Commission to study point and non-point sources of pollution, to analyze the effects of these sources on the environment and the public health, and to make appropriate recommendations to improve the water quality of Māmala Bay" (April 1996, Māmala Bay Study Final Report).

The study was subject to peer review and presented for public comment prior to it being finalized. The study was used as the basis for the requirements included in the 1995 Consent Decree.

In 2006, the EPA and DOH filed a Supplemental Complaint against the CCH alleging that the CCH is violating the CWA and State law by discharging sewage from its SIWWTP in violation of the NPDES permit. Following lengthy negotiation, the 2010 Consent Decree (which included a dismissal of the requirements included in the 1995 Consent Decree) was negotiated between EPA, DOH, and the CCH; and included the Sierra Club, Hawai'i Chapter, Hawai'i's Thousand Friends, and Our Children's Earth Foundation as "Intervenors." The 2010 Consent Decree includes compliance milestones that the CCH needs to meet to comply with secondary treatment standards of the CWA. Prior to being approved by the United States District Court for the District of Hawai'i, a notice of lodging of the 2010 Consent Decree was published in the August 16, 2010, Federal Register and open to a 30-day public comment period by the Department of Justice. The 2010 Consent Decree was later approved by the court on December 15, 2010, and was determined by the court to be "reasonable, fair, and consistent with the purposes that [the CWA] is intended to serve." (CV. No. 94-00765 DAE-KSC)

Objections to the Māmala Bay Study recommendations should have been submitted when the Māmala Bay Study was available for public comment. Objections to the 2010

Consent Decree requirements should have been submitted to the Department of Justice when the 2010 Consent Decree was collecting public comments.

The CCH's commitment to the 2010 Consent Decree does not offer an opportunity to deviate from the approach and schedule in the consent decree. Issues associated with the 1996 Māmala Bay Study should be raised during the NPDES permitting process.

Comment #17: Tsunami impacts. As was recently demonstrated, the reality of tsunami remains a part of Hawai'i and our daily lives. A thorough discussion of mitigative measures for both existing and new facilities and operations at SIWWTP is needed.

The EIS will include a description of tsunami risks and potential impacts to SIWWTP, including disclosure of consultation with appropriate agencies and an analysis of each alternative considered, its potential to create conditions that could exacerbate the effects of a tsunami, and proposed mitigation measures for existing and new facilities and operations at SIWWTP.

Comment #18: Closing Statement. A consent decree signed by the City and County of Honolulu, Hawai'i State Department of Health, US Environmental Protection Agency and certain other members of Hawai'i's environmental caucus in 2010 requires secondary treatment at Sand Island WWTP by 2035. Notwithstanding this requirement, the SIWWTP has been discharging primary effluent for almost 30 years and then disinfected primary effluent for almost 20 years into the deep ocean outside the photic zone of Māmala Bay without impairment (i.e. - algae blooms, epidemics, etc.). There is nothing that has occurred since that time to suggest anything other than the same outcomes in the years ahead.

Notwithstanding these outcomes and in compliance with the Consent Decree, the CCH has undertaken a project to provide secondary treatment at SIWWTP for which an EIS must be prepared. This planning step is vital to the integrity of the project, and the process must be diligent, transparent, proficient and authentic.

Short of these overriding principles, the EIS will not be credible. The undersigned believe appropriate attention to the issues herein described will help to bring credibility that is needed.

The ENV is committed to constructing and operating secondary treatment facilities in fulfillment of its responsibilities set forth in the Consent Decree. We will ensure that the EIS process is likewise diligent, transparent, proficient and authentic. The development of secondary treatment Phase 2 facilities at SIWWTP does not preclude future implementation of alternate wastewater treatment technologies or systems, potentially including distributed systems or modifications to the deep ocean outfall. The Draft EIS will describe these alternatives, evaluate them according to the subject project's purpose and need, and disclose the reasons they are not being carried forward for detailed environmental assessment as part of the current undertaking.

Victor D. Moreland, Ph.D., P.E.
January 15, 2026
Page 13

We will include additional information from your comments in the EIS as indicated in our responses above.

Comment #19: *Our Kupuna Group would like to meet face-to-face with the team for further in-depth discussion/s.*

We welcome the Kūpuna Group's participation through the EIS public review process, including attendance at planned public meetings during publication of the EISPN and Draft EIS. We believe the public consultation process, conducted in conformance with HRS 343 and HAR 11-200.1, provides meaningful opportunity for your group to review and comment on the project and for ENV's responses to be properly documented.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or via email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 14:38:02 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

Re: EISPN Sand Island WWTP

From James Niermann <JimN@rmtowill.com>

Date Mon 11/17/2025 3:07 PM

To Stephen Holmes <councilmemberholmes@icloud.com>

Aloha Steve,

I'm following up on your email below re: the SIWWTP Secondary Treatment Phase 2 project. We're currently finalizing the EIS Preparation Notice for publication in January 2026. I wanted to check if you would like me to include your comments below in the record of pre-EISPN consultation comments published with the EISPN. You're welcome to submit formal comments for inclusion in the EISPN. If so, we will need to receive them by December 17, 2026. You'll have additional opportunities to comment during the EISPN and Draft EIS public review periods next year.

We appreciate your participation in the public review process. Regarding your two comments, ENV is preparing a GHG study for inclusion in the Draft EIS. It is indeed a complex issue. The GHG study will look at overall plant operations, including the effect of secondary treatment and power co-generation on GHG emissions. I appreciate the reference to the EPA GHG handbook. I wasn't familiar with that document.

We're also preparing a socio-economic impact study for the project, which will include disclosure of all costs associated with the project construction, O&M cost projections, and the contribution of the secondary treatment project to projected sewer fee increases.

We've added your email to our contact list for all future notifications for the EIS process. The next milestones will be publication of the EISPN followed by a public scoping meeting to be held during the 30-day EISPN publication period, likely in early February.

Please let me know if you have any questions or need additional information.

Aloha

Jim Niermann, AICP, LEED AP BD+C

Planning Project Coordinator

<mailto:JimN@rmtowill.com>

R. M. Towill Corporation

2024 North King Street Suite 200

Honolulu, Hawaii 96819

voice: 808 842 1133 cell: 808 381 5445 fax: 808 842 1937 web: www.rmtowill.com

-

From: Stephen Holmes <councilmemberholmes@icloud.com>

Sent: Monday, July 28, 2025 10:38 AM

To: James Niermann <JimN@rmtowill.com>

Subject: Re: EISPN Sand Island WWTP

CAUTION: External Email

Jim:

Much better! Slides used at the GCD were presented by the City and I took screenshots, but hard to see detail.

It is a very challenging site to fit everything in plus the capacity of the plant is being increased in addition to full secondary. Lots of moving pieces. Hardening for sea level rise, too.

Roger and his team worked hard on choosing the technology for the upgrade and the expected removal efficiency is a nice bump up over the minimum standards. Should play well with the Synagro sludge management and cogeneration, too.

We will submit formal comments, but let me flag two- GHG emissions and cost. Both are complex. Suspended solids going out an outfall actually create a GHG footprint and EPA has a handbook on this. So, an analysis should recognize this as a reduction. Also, UV disinfection will now require less energy, so another GHG reduction. Cogeneration has replaced old energy hog centrifuges as waste heat dries the sludge for recycling and keeps wet sludge out of the landfill where nature turns it into methane, a powerful GHG gas. So, we will see a balancing act as the plant is expanded to meet growth in the service area.

Cost became an issue this year as DES proposed sewer fees be increased. The upgrade to full secondary at Sand Island became the political whipping boy without a cost breakdown. Increased capacity is not GCD related. Upgrading the existing aged plant isn't GCD related. All very necessary as treatment plants constantly require capital expenditures.

I served on the Honolulu City Council for 12 years and then served as the City Energy & Sustainability Coordinator, so public documents like this need to clearly spell out where public money is being spent and why so there is no confusion. The same with protecting our environment.

I appreciate being added to the email list and for your fast response.

Steve Holmes

On Jul 28, 2025, at 12:38PM, James Niermann <JimN@rmtowill.com> wrote:

Aloha Steve,

Attached is a copy of the Pre-EISPN consultation request letter. I will add you to the contact list for future project notifications.

Best regards

Jim Niermann, AICP, LEED AP BD+C
Planning Project Coordinator
<mailto:JimN@rmtowill.com>

R. M. Towill Corporation
2024 North King Street Suite 200
Honolulu, Hawaii 96819
voice: 808 842 1133 cell: 808 381 5445 fax: 808 842 1937 web: www.rmtowill.com

-

From: Stephen Holmes <councilmemberholmes@icloud.com>
Sent: Monday, July 28, 2025 9:30 AM
To: James Niermann <JimN@rmtowill.com>
Cc: Donna Wong <htf3000@gmail.com>
Subject: EISPN Sand Island WWTP

CAUTION: External Email

Jim:

I represented both Sierra Club Hawaii Chapter and Hawaii's Thousand Friends at the last GCD update Zoom call. Both forwarded the email regarding the EISPN, both were blurry for some reason. Could you please send me a copy directly? And add me to your email list, please.

Mahalo!
Steve Holmes
808-201-7073 cell

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

<WEC.PE 25-016 (signed).pdf>

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BOARD OF WATER SUPPLY
KA 'OIHANA WAI
CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET • HONOLULU, HAWAII 96843
Phone: (808) 748-5000 • www.boardofwatersupply.com

RICK BLANGIARDI
MAYOR
MEIA

ERNEST Y. W. LAU, P.E.
MANAGER AND CHIEF ENGINEER
MANAKIA A ME KAHU WILIKI

ERWIN KAWATA
DEPUTY MANAGER
HOPE MANAKIA



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EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

July 31, 2025

Mr. Jim Niermann
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819

Dear Mr. Niermann:

Subject: Your Letter Dated July 2, 2025 Regarding the Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for the Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project Tax Map Key: 1-5-041: 005 and 022

Thank you for the opportunity to comment on the proposed Sand Island Wastewater Treatment Plant (SI-WWTP) upgrade project.

The existing water system is currently adequate to accommodate the proposed SI-WWTP development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Hālawā Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come, first-served basis. The Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remains safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at www.boardofwatersupply.com and www.protectoahuwater.org for the latest updates and water conservation tips.

Mr. Jim Niermann
July 31, 2025
Page 2

When water is made available, the applicant will be required to pay our Water System Facilities Charges (WSFC) for resource development, transmission, and daily storage.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

The construction drawings should be submitted for our approval, and the construction schedule should be coordinated to minimize impact to the water system.

The capacity expansion project should incorporate a revised potable water intake design that eliminates extreme pressure transients in the serving BWS water system. The existing SI-WWTP potable water intake headworks originally took water from the BWS system at such a high acceleration/deceleration rate and high-volume flow rate, with a high intermittent frequency, that extreme pressure transients were observed and recorded in the entire Sand Island area, especially through the transmission main feeding the SI-WWTP. Significant efforts by SI-WWTP and BWS staff were needed to devise a mechanical means to reduce, though not eliminate, the amplitude of the transients in the BWS water system. Possible intake design revisions should consider the use of recycled water, instead of potable water, for SI-WWTP processes and for irrigation of on-site and neighboring properties. Your system should be designed to mitigate creating pressure transients in the BWS water system.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Barry Usagawa of our Water Resources Division, at (808) 748-5900.

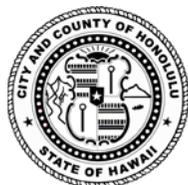
Very truly yours,


ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer


DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-004

January 15, 2026

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Water Supply
630 South Beretania Street
Honolulu, Hawai'i 96843

Dear Mr. Lau:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant (SIWWTP) Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated July 31, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comment below (in italics) and provide the following response.

The existing water system is currently adequate to accommodate the proposed SIWWTP development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Hālawā Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come, first-served basis. The Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application.

We acknowledge your comment and understand that the existing water system is currently adequate for the proposed SIWWTP development, pending final evaluation and subject to changes by the BWS.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively

restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remains safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at www.boardofwatersupply.com and www.protectoahuwater.org for the latest updates and water conservation tips.

When water is made available, the applicant will be required to pay our Water System Facilities Charges (WSFC) for resource development, transmission, and daily storage.

Water conservation measures are required for all proposed developments. These measures include utilization of non-potable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

We acknowledge your comment and understand that voluntary water conservation remains in effect, and that conservation measures are required for all new developments. We also acknowledge that water availability is subject to ongoing monitoring, and applicable fees when service is approved.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications. The construction drawings should be submitted for our approval, and the construction schedule should be coordinated to minimize impact to the water system.

We acknowledge your comment that the project is subject to BWS Cross-Connection Control and Backflow Prevention requirements and confirm that the project's construction drawings will be submitted to BWS for review and approval, as well as the project's construction schedule will be coordinated with BWS to minimize impact to the water system.

The capacity expansion project should incorporate a revised potable water intake design that eliminates extreme pressure transients in the serving BWS water system. The existing SIWWTP potable water intake headworks originally took water from the BWS system at such a high acceleration/deceleration rate and high-volume flow rate, with a high intermittent frequency, that extreme pressure transients were observed and recorded in the entire Sand Island area, especially through the transmission main feeding the SIWWTP. Significant efforts by SIWWTP and BWS staff were needed to devise a mechanical means to reduce, though not eliminate, the amplitude of the transients in the BWS water system. Possible intake design revisions should consider the use of recycled water, instead of potable water, for SIWWTP processes and for irrigation of on-site and

neighboring properties. Your system should be designed to mitigate creating pressure transients in the BWS water system.

The project will incorporate a revised potable water intake design that eliminates extreme pressure transients in the BWS system. The design team will investigate the potential for use of recycled water for irrigation and reuse of process water for plant processes where possible. ENV will continue to coordinate with BWS, including submitting project plans to BWS for review, to ensure that the planned improvements meet BWS requirements and standards.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We acknowledge your comment and confirm that ENV will coordinate with the Honolulu Fire Department's Fire Prevention Bureau for on-site fire protection requirements.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



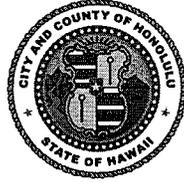
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J
DN: cn=Briec, Daniel J
Date: 2026.01.15 11:24:51 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

DEPARTMENT OF DESIGN AND CONSTRUCTION
KA 'OIHANA HAKULAU A ME KE KĀPILI
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8480 • FAX: (808) 768-4567 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



HAKU MILLES, P.E.
DIRECTOR
PO'O

MARK YONAMINE, P.E.
DEPUTY DIRECTOR
HOPE PO'O

July 21, 2025

SENT VIA EMAIL

Mr. Jim Niermann
jimn@rmtowill.com

Dear Mr. Niermann:

Subject: Request for Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041:005 and 022

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any questions, please contact me at (808) 768-8480.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Milles".

Haku Milles, P.E., LEED AP
Director

HM:krm (942457)

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-006

January 15, 2026

Mr. Haku Milles, P.E., LEED AP, Director
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawai'i 96813

Dear Mr. Milles:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an
Environmental Impact Statement (EIS) for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated July 21, 2025, responding to our request for early consultation for the proposed project. We acknowledge that the Department of Design and Construction has no comments at this time.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,

A handwritten signature in blue ink that reads "DJB".

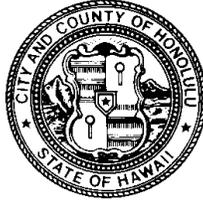
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DN: cn=BriECK, Daniel J
Date: 2026.01.15 11:26:53 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

**DEPARTMENT OF FACILITY MAINTENANCE
KA 'OIHANA MĀLAMA HALE
CITY AND COUNTY OF HONOLULU**

1000 ULU'OHIA STREET, SUITE 215, KAPOLEI, HAWAII 96707
PHONE: (808) 768-3343 • Fax: (808) 768-3381 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



GENE C. ALBANO, P.E.
DIRECTOR AND CHIEF ENGINEER
PO'O A ME LUNA NUI 'ENEKINIA

WARREN K. MAMIZUKA
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
SWQ 25-197

August 6, 2025

Mr. Jim Niermann
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819

Dear Mr. Niermann:

**SUBJECT: Sand Island Wastewater Treatment Plant Secondary Treatment
Phase 2 Project - Tax Map Keys: (1) 1-5-041:005 and 022**

Further to your request for input regarding any issues or potential impacts of the captioned project to the natural, built and social environment, the Department of Facility Maintenance, Storm Water Quality Division (SWQ) notes that the City and County of Honolulu (City) has no stormwater assets that directly connect to the Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 project lands.

However, we note the proximity of the project lands to State waters. We also note that stormwater discharges directly from the project lands into those waters without the opportunity for management through the City's storm drain system. Given these two (2) facts, strict adherence to the Rules Relating to Water Quality (Title 20, Chapter 3) is critical. This will minimize the potentially damaging effects of stormwater runoff both during construction and once construction is complete. We strongly recommend that a wide variety of best management practices be installed, including green stormwater infrastructure to ensure that both stormwater quantity and quality are managed effectively.

Should you have any questions, please contact Ms. Saani Fong, Planner VII of the SWQ by phone at (808) 768-3387 or by email at saani.fong@honolulu.gov.

Sincerely,

A handwritten signature in blue ink that reads "Gene C. Albano".

Digitally signed by
Albano, Gene
Date: 2025.08.06
11:55:27-10'00'

Gene C. Albano, P.E.
Director and Chief Engineer

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-007

January 15, 2026

Mr. Gene C. Albano, P.E., Director and Chief Engineer
Department of Facility Maintenance
1000 Ulu'ōhi'a Street, Suite 215
Kapolei, Hawaii 96707

Dear Mr. Albano:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated August 6, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comment below (in italics) and provide the following response.

However, we note the proximity of the project lands to State waters. We also note that stormwater discharges directly from the project lands into those waters without the opportunity for management through the City's storm drain system. Given these two (2) facts, strict adherence to the Rules Relating to Water Quality (Title 20, Chapter 3) is critical. This will minimize the potentially damaging effects of stormwater runoff both during construction and once construction is complete. We strongly recommend that a wide variety of best management practices be installed, including green stormwater infrastructure to ensure that both stormwater quantity and quality are managed effectively.

The ENV will ensure that the project complies with the Rules Relating to Water Quality (Title 20, Chapter 3) and that stormwater discharges are managed effectively, both in terms of stormwater quantity and quality, during and after construction. The state receiving waters adjacent to Sand Island are classified by the State of Hawaii Department of Health (DOH), Clean Water Branch (CWB) as Class A Marine Waters. National Pollutant Discharge Elimination System (NPDES) Notice of General Permit Coverage (NGPC) Notice of Intent (NOI) coverage will be required for the project's construction-related discharges to waters of the state from stormwater runoff, hydrotesting and construction dewatering. Best management practices (BMPs) will be employed during construction to control flows and mitigate sediments and other pollutants in

Gene C. Albano, P.E., Director and Chief Engineer
January 15, 2026
Page 2

construction-related stormwater, hydrotesting and dewatering discharge water in compliance with state and federal water quality standards.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



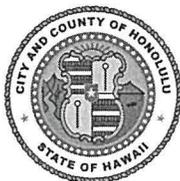
Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:28:04 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

DEPARTMENT OF PLANNING AND PERMITTING
KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEBSITE: honolulu.gov/dpp

RICK BLANGIARDI
MAYOR
MEIA



DAWN TAKEUCHI APUNA
DIRECTOR
PO'O

BRYAN GALLAGHER, P.E.
DEPUTY DIRECTOR
HOPE PO'O

REGINA MALEPEAI
2ND DEPUTY DIRECTOR
HOPE PO'O KUALUA

July 29, 2025

2025/ELOG-1301(MM)

MEMORANDUM

TO: Roger Babcock Jr., Ph.D., Director
Department of Environmental Services

FROM: Dawn Takeuchi Apuna, Director 
Department of Planning and Permitting

SUBJECT: Pre-Consultation and Scoping for the Preparation of Environmental Impact Statement (EIS)
Sand Island Wastewater Treatment Plant Secondary Treatment Phase Two Project (Project)
Tax Map Keys 1-5-041: 005 and 022

This is in response to your letter, received July 10, 2025, requesting input regarding any issues or potential impacts of the proposed Project in preparation of the EIS. The Project will provide secondary treatment capacity for an additional 70 million gallons per day maximum monthly flow, for a total capacity of 90 million gallons per day. The improvements are proposed to include modifications and expansion to existing facility structures and new facility structures for secondary treatment of separated liquid waste and solid waste streams. The work also includes new basins, tanks, filter systems, digesters, pumps, piping, odor control, energy capture and conversion, various service buildings and related infrastructure.

The Project site is within the I-3 Waterfront Industrial District and the Special Management Area (SMA). We acknowledge that the Project will need a Major SMA Permit. The Draft EIS should note that the EIS is also being prepared pursuant to Revised Ordinance of Honolulu Chapter 25.

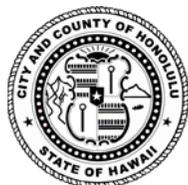
Thank you for the opportunity to comment. Should you have any questions, please contact Molly Murai, of our Land Use Approval Branch, at extension 88016 or via email at molly.murai@honolulu.gov.

cc: R.M. Towill Corporation, Attn: Jim Niermann via email at jimn@rmtowill.com

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-013

January 15, 2026

Ms. Dawn Takeuchi Apuna
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Dear Ms. Apuna:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated July 29, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comments below (in italics) and provide the following response.

The Project site is within the 1-3 Waterfront Industrial District and the Special Management Area (SMA). We acknowledge that the Project will need a Major SMA Permit. The Draft EIS should note that the EIS is also being prepared pursuant to Revised Ordinance of Honolulu Chapter 25.

The project will comply with Department of Planning and Permitting requirements to obtain a SMA Permit major. The EIS Preparation Notice (EISPN) will note that the EIS is also being prepared pursuant to Revised Ordinance of Honolulu Chapter 25.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EISPN.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,

A handwritten signature in blue ink that reads "DJB".

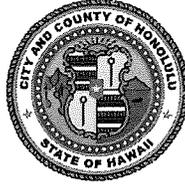
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Date: 2026.01.15 11:35:33 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

DEPARTMENT OF TRANSPORTATION SERVICES
KA 'OIHANA LAWELAWE 'ŌHUA
CITY AND COUNTY OF HONOLULU

711 KAPI'OLANI BOULEVARD, SUITE 1600
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Website: honolulu.gov/transportation

RICK BLANGIARDI
MAYOR
MEIA



J. ROGER MORTON
DIRECTOR
PO'O

JON Y. NOUCHI
DEPUTY DIRECTOR
HOPE PO'O

TP8/25-942703

August 8, 2025

Mr. Jim Niermann, Senior Planner
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819

Dear Mr. Niermann:

SUBJECT: Request for Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2; Project Tax Map Keys: (1) 1-5-041: 005 and 022

Thank you for the opportunity to provide written comments regarding the Request for Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2; Project Tax Map Keys: (1) 1-5-041: 005 and 022. We have the following comments.

1. Transportation Impact Assessment (TIA). The applicant should perform a TIA to examine the vehicle, pedestrian, and bicycle, safety, stress, and comfort levels at the nearby intersections and driveways with corresponding improvements to mitigate these impacts by applying Complete Streets principles. The applicant shall discuss the future year growth rate, trip distribution, mode split, and route assignment assumptions used in the TIA.

The applicant shall submit all native files (e.g., Synchro, Excel, etc.) for the raw multi-modal counts (in the format specified at <https://geocounts.com/api/format/> and the example file at <https://bit.ly/DTS-count-sample>) and accompanying analyses to the Department of Transportation Services Regional Planning Branch at dtsplanningdiv@honolulu.gov. Please refer to the Department of Transportation Services (DTS) TIA Guide for multimodal assessment tools

Mr. Jim Niermann, Senior Planner
August 8, 2025
Page 2

and recommended analyses. The TIA Guide can be found at <http://www4.honolulu.gov/docushare/dsweb/View/Collection-7723>.

2. **Parking.** A discussion regarding off-street parking and site generated parking demand should be included in the document.
3. **Street Usage Permit.** A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane, sidewalk, bicycle lane, or pedestrian mall on a City street.
4. **Neighborhood Impacts.** The area representatives, neighborhood board, as well as the area guests, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.
5. **Disability and Communication Access Board (DCAB).** Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with Americans with Disabilities Act requirements.

Should you have any questions, please contact Bartholomew Mikitowicz, of my staff, at (808) 768-6681.

Very truly yours,

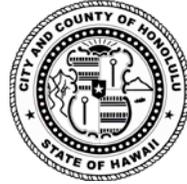


J. Roger Morton
Director

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-015

January 15, 2026

Mr. J. Roger Morton, Director
Department of Transportation Services
711 Kapiolani Boulevard, Suite 1600
Honolulu, Hawai'i 96813

Dear Mr. Morton:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated August 8, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comment below (in italics) and provide the following response.

Transportation Impact Assessment (TIA). The applicant should perform a TIA to examine the vehicle, pedestrian, and bicycle, safety, stress, and comfort levels at the nearby intersections and driveways with corresponding improvements to mitigate these impacts by applying Complete Streets principles. The applicant shall discuss the future year growth rate, trip distribution, mode split, and route assignment assumptions used in the TIA.

The applicant shall submit all native files (e.g., Synchro, Excel, etc.) for the raw multi-modal counts (in the format specified at <https://geocounts.com/api/formaU> and the example file at <https://bit.ly/DTS-count-sample>) and accompanying analyses to the Department of Transportation Services Regional Planning Branch at dtsplanningdiv@honolulu.gov. Please refer to the Department of Transportation Services (DTS) TIA Guide for multimodal assessment tools and recommended analyses. The TIA Guide can be found at <http://www4.honolulu.gov/docushare/dswebNiew/Collection-7723>.

A TIA will be prepared to address multimodal safety to nearby intersections and driveways, data and route assumptions. All files will be submitted in the required format to dtsplanningdiv@honolulu.gov.

Parking. A discussion regarding off-street parking and site generated parking demand should be included in the document.

A discussion of off-street parking and site-generated parking demand will be included in the TIA document.

Street Usage Permit. A street usage permit from the DTS should be obtained for any construction-related work that may require the temporary closure of any traffic lane, sidewalk, bicycle lane, or pedestrian mall on a City street.

ENV will obtain a Street Usage Permit from DTS for any construction activities requiring temporary closures on City streets.

Neighborhood Impacts. The area representatives, neighborhood board, as well as the area guests, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.

ENV will keep area representatives, stakeholders, and relevant agencies informed of project details, status, and potential impacts to the surrounding local street network.

Disability and Communication Access Board (DCAB). Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with Americans with Disabilities Act requirements (ADA).

We acknowledge your comment and will submit project plans to the DCAB for review to ensure compliance with ADA requirements.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or via email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:37:17 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

HONOLULU POLICE DEPARTMENT
KA 'OIHANA MĀKA'I O HONOLULU
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 • WEBSITE: www.honoluluupd.org

RICK BLANGIARDI
MAYOR
MEIA



ARTHUR J. LOGAN
CHIEF
KAHU MĀKA'I

KEITH K. HORIKAWA
RADE K. VANIC
DEPUTY CHIEFS
HOPE LUNA NUI MĀKA'I

OUR REFERENCE **EO-SH**

July 21, 2025

SENT VIA EMAIL

Mr. Jim Niermann
jimn@rmtowill.com

Dear Mr. Niermann:

This is in response to your letter of July 2, 2025, requesting input on the Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project.

The Honolulu Police Department has reviewed the project description and has no comments at this time.

If there are any questions, please contact Major Elgin Arquero of District 5 (Kalihi) at (808) 723-8208.

Sincerely,

A handwritten signature in black ink that reads "Glenn Hayashi".

GLENN HAYASHI
Assistant Chief of Police
Support Services Bureau

**DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-014

January 15, 2026

Mr. Rade Vanic, Interim Chief of Police
Honolulu Police Department
801 South Beretania Street
Honolulu, Hawai'i 96813

Dear Mr. Vanic:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an
Environmental Impact Statement (EIS) for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for the Honolulu Police Department's letter dated July 21, 2025, responding to our request for early consultation for the proposed project. We acknowledge that the Honolulu Police Department (HPD) has no comments at this time.

We value HPD's participation in the environmental review process. The response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,

A handwritten signature in blue ink that reads "DJB".

Digitally signed by Brieck, Daniel
J
DN: cn=Briec, Daniel J
Date: 2026.01.15 11:36:21 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



KEITH A. REGAN
COMPTROLLER
KA LUNA HO'OMALU HANA LAULĀ

MEOH-LENG SILLIMAN
DEPUTY COMPTROLLER
KA HOPE LUNA HO'OMALU HANA LAULĀ

STATE OF HAWAI'I | KA MOKU'ĀINA O HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELU A LAWELAWÉ LAULĀ
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)25.103

JUL 23 2025

Jim Niermann
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Jim Niermann:

Subject: Pre-Consultation and Scoping for the Preparation of an
Environmental Impact Statement for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Sand Island, Oahu, Hawaii
T.M.K. No. (1) 1-5-041:005 and 022

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may call Dora Choy-Johnson of the Planning Branch at (808) 586-0488.

Sincerely,

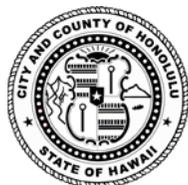
GORDON S. WOOD
Public Works Administrator

DC:vca

**DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-005

January 15, 2026

Mr. Gordon S. Wood, Public Works Administrator
State of Hawai'i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai'i 96810

Dear Mr. Wood:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an
Environmental Impact Statement (EIS) for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated July 23, 2025, responding to our request for early consultation for the proposed project. We acknowledge that the Department of Accounting and General Services (DAGS) has no comments at this time as the proposed project does not impact any of DAGS' projects or existing facilities.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,

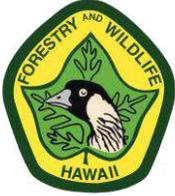
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Digitally signed by Brieck, Daniel
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DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:25:46 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

JOSH GREEN, M.D.
GOVERNOR | KE KIAʻĪʻĪNA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIAʻĪʻĪNA



STATE OF HAWAII | KA MOKUʻĀINA ʻO HAWAIIʻI
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA ʻOIHANA KUMUWAIWAI ʻĀINA

DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKAʻOLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

November 8, 2025

Log no. 5103

Jim Niermann
Senior Planner
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, HI 96819

Dear Jim Niermann,

The Department of Land and Natural Resources—Division of Forestry and Wildlife (DOFAW) has received R.M. Towill Corporation’s communication regarding the Division’s comments on pre-consultation and scoping for the preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project; impacting TMKs (1) 1-5-041:005 & 022. The proposed project consists of the following improvements: **1)** modifications and expansion to existing facility structures and new facility structures for secondary treatment of separated liquid waste and solid waste streams; **2)** installation of a new basin, tanks, filter systems, digesters, pumps, piping, odor control, and energy capture and conversion; and **3)** construction of various service buildings and related infrastructure.

DOFAW has concluded that the project site is not near any Federal designated critical habitat or administrated lands. However, the worksite is adjacent to the State administrated Sand Island State Recreation Area. The Division notes that there is potential for several State listed species, protected under HRS § 195D, to found within the proposed project area. These include: **1)** ʻōpeʻapeʻa, or Hawaiian hoary bat (*Lasiurus*

where standing water can collect on-site, several species of waterbirds. Guidance to reduce negative impacts to these taxa has been included in this letter.

The State listed ʻōpeʻapeʻa or Hawaiian hoary bat (*Lasiurus semotus*) could potentially occur at or in the vicinity of the project and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should

also be avoided in any construction as bats can become ensnared and killed by such fencing material during flight.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15, when young seabirds make their maiden voyage to sea.

If nighttime construction is required during the seabird fledging season (September 15 to December 15), we recommend that a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling around the area, lights should then be turned off. If a downed seabird is detected, please follow DOFAW's recommended response protocol by visiting <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/>

Permanent lighting found at facilities also poses a risk of seabird attraction, and as such should be eliminated or minimized to the greatest extent possible to protect seabird flyways and preserve the night sky. If lighting is needed please review <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf> for illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i.

State-listed waterbirds such as ae'ō or Hawaiian stilt (*Himantopus mexicanus knudseni*), 'ālae ke'oke'ō or Hawaiian coot (*Fulica alai*), 'ālae 'ula or Hawaiian gallinule (*Gallinula chloropus sandvicensis*), koloa maoli or Hawaiian Duck (*Anas wyvilliana*), and nēnē or

proposed project site. It is against State law to harm or harass these species. If any of these species are present during construction, all activities within 100 feet (30 meters) should cease and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the **O'ahu Branch DOFAW Office at (808) 973-9778** and establish a buffer zone around the nest.

We recommend consulting the **O'ahu Invasive Species Committee (OISC) at (808) 266-7994** to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. Soil and plant material may contain detrimental fungal pathogens (like Rapid 'Ōhi'a Death), vertebrate and invertebrate pests

(Albizia, Pampas Grass, Fireweed, etc.) that will harm our native ecosystems, and the unique native found within them. Therefore, DOFAW advances the guidance that all equipment and personal items—to include clothing and foot ware should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Additionally, DOFAW recommends minimizing the movement of plant or soil material between

worksites. Suspect pests should be reported through the statewide pest hotline. Photos, videos, and locations can be shared at www.643pest.org or call: 743-PEST. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The invasive coconut rhinoceros beetle (*Oryctes rhinoceros*) or CRB is widespread on the island of O'ahu. CRB have been detected on other islands with moderate infestation on Kaua'i, one incipient site on Hawai'i Island, and only one positive site on Maui in 2023. Hawai'i Department of Agriculture interim rule 24-1 restricts the movement of CRB-host material from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes **1)** entire dead trees; **2)** mulch, compost, trimmings, fruit and vegetative scraps, and **3)** decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. Inspection and/or treatment approved by HDOA is mandatory before inter-island transport. For more information regarding CRB, please visit <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>.

DOFAW requests that our division be included in planning for this project as it moves forward. Mahalo for contacting our office to receive guidance regarding the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. If you have any questions, please contact Jesse W. Adams, Protected Species Habitat Conservation Planning Associate, at jesse.w.adams.researcher@hawaii.gov or call (808) 265-3276.

Sincerely,



JASON D. OMICK
Wildlife Program Manager

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
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RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-009

January 15, 2026

Mr. Jason D. Omick, Wildlife Program Manager
State of Hawai'i
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, Hawai'i 96813

Dear Mr. Omick:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated November 8, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comments below (in italics) and provide the following response.

Division of Forestry and Wildlife (DOFAW) has concluded that the project site is not near any Federal designated critical habitat or administrated lands. However, the worksite is adjacent to the State administrated Sand Island State Recreation Area. The Division notes that there is potential for several State listed species, protected under Hawai'i Revised Statutes (HRS) § 195D, to (be) found within the proposed project area. These include: 1) 'ōpe'ape'a, or Hawaiian hoary bat (Lasiurus semotus); 2) several species of seabirds; and 3) in any open water features or areas where standing water can collect on-site, several species of waterbirds. Guidance to reduce negative impacts to these taxa has been included in this letter.

ENV recognizes the potential for project impacts to species protected under HRS §195D, including the Hawaiian hoary bat, and protected seabirds and waterbirds that may visit the project area, as noted in your comments. ENV is preparing a biological

Jason D. Omick, Wildlife Program Manager
January 15, 2026
Page 2

survey for inclusion in the EIS. The biological survey will identify protected species that may be present in the project area and will recommend mitigation measure to reduce or eliminate impacts to those species. We will share your letter with the project's biological subconsultant, AECOS Inc., and incorporate the guidance measures in your letter as part of the project's mitigation commitments.

We recommend consulting the Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. Soil and plant material may contain (e.g. Little Fire Ants, and Coconut Rhinoceros Beetle), or invasive plant propagules (e.g. Albizia, Pampas Grass, Fireweed, etc.) that will harm our native ecosystems, and the unique native found within them. Therefore, DOFAW advances the guidance that all equipment and personal items to include clothing and foot ware should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Additionally, DOFAW recommends minimizing the movement of plant or soil material between worksites. Suspect pests should be reported through the statewide pest hotline. Photos, videos, and locations can be shared at www.643pest.org or call: (808) 743-PEST. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The project team will contact the O'ahu Invasive Species Committee for comment and include them in all future consultation for the EIS process. Recommended mitigation measures to minimize the spread of invasive species will be included in the contract specifications for the project.

We value your participation in the environmental review process. ENV will continue to consult with DOFAW through the planning phase of the project. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:29:59 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

JOSH GREEN, M.D.
GOVERNOR | KE KIA ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

July 11, 2025

MEMORANDUM

RECEIVED
LAND DIVISION
2025 JUL 16 PM 2:22
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

TO:

DLNR Agencies:

- Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
- Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
- Engineering Division (DLNR.ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
- Div. of State Parks (curt.a.cottrell@hawaii.gov)
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
- Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
- Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

FROM:

Ian Hirokawa, Land Administrator

SUBJECT:

Pre-Consultation and Scoping Request for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project

LOCATION:
APPLICANT:

Sand Island, Honolulu, Island of O'ahu; TMK: (1) 1-5-041:005 and 022
City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **July 30, 2025**.

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

BRIEF COMMENTS:

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:

Print Name:

Richard Howard

Division:

DOBOR

Date:

7/15/2025

Attachment(s)

RECEIVED
SERVICES OFC
2025 JUL 15 P 3:18
DEPT. OF LAND &
NATURAL RESOURCES

CA-26-11

JOSH GREEN, M.D.
GOVERNOR | KE KIA'AINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'AINA



RECEIVED
LAND DIVISION

2025 JUL 18 PM 2:48



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

MC

RECEIVED
OFFICE OF CONSERVATION
AND COASTAL LANDS

2025 JUL 15 A 10:51

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII
KA 'OIHANA KUMUWAIWAI 'AINA
LAND DIVISION

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

P.O. BOX 621
HONOLULU, HAWAII 96809

July 11, 2025

MEMORANDUM

TO: **DLNR Agencies:**
 X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
 X Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
 X Engineering Division (DLNR.ENGR@hawaii.gov)
 X Div. of Forestry & Wildlife (rubbyrosa.t.terrago@hawaii.gov)
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 X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
 X Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
 X Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
 X Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

FROM: Ian Hirokawa, Land Administrator *J. H.*

SUBJECT: **Pre-Consultation and Scoping Request for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project**

LOCATION: Sand Island, Honolulu, Island of O'ahu; TMK: (1) 1-5-041:005 and 022

APPLICANT: City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **July 30, 2025**.

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

- BRIEF COMMENTS:**
- () We have no objections.
 - (X) We have no comments. *Parcel is urban*
 - () We have no additional comments.
 - () Comments are included/attached.

Signed: *Michael Cain*
 Print Name: Michael Cain
 Division: DLNR-eccl
 Date: 7-17-25

Attachment(s)

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

July 11, 2025

MEMORANDUM

FROM: ~~TO:~~

DLNR Agencies:

- Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
- Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
- Engineering Division** (DLNR.ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
- Div. of State Parks (curt.a.cottrell@hawaii.gov)
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
- Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
- Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO: FROM:

SUBJECT:

Ian Hirokawa, Land Administrator 
Pre-Consultation and Scoping Request for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project

LOCATION:
APPLICANT:

Sand Island, Honolulu, Island of O'ahu; TMK: (1) 1-5-041:005 and 022
City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **July 30, 2025**.

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

BRIEF COMMENTS:

- () We have no objections.
- () We have no comments.
- () We have no additional comments.
- () Comments are included/attached.

Signed:

Print Name:

Dina U. Lau, Acting Chief Engineer

Division:

Engineering Division

Date:

Jul 30, 2025

Attachment(s)

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/Ian C. Hirokawa

**Ref: Pre-Consultation and Scoping Request for the Preparation of an
Environmental Impact Statement for Sand Island Wastewater Treatment
Plant Secondary Treatment Phase 2 Project
Location: Sand Island, Honolulu, Island of O‘ahu
TMK(s): (1) 1-5-041:005 and 022
Applicant: City and County of Honolulu, Department of Environmental
Services**

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). Be advised that 44CFR, Chapter 1, Subchapter B, Part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible for researching the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA’s Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA’s Map Service Center (msc.fema.gov). Our Flood Hazard Assessment Tool (FHAT) (fhat.hawaii.gov) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed: 
DINA U. LAU, ACTING CHIEF ENGINEER

Date: Jul 30, 2025

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-008

January 15, 2026

Mr. Ian Hirokawa, Acting Land Administrator
State of Hawai'i
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawai'i 96809

Dear Mr. Hirokawa:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an
Environmental Impact Statement (EIS) for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated August 1, 2025, responding to our request for early consultation for the proposed project. We acknowledge that the Department of Land and Natural Resources (DLNR), Land Division, Office of Conservation and Coastal Lands, and Division of Boating and Ocean Recreation has no comments at this time. We also acknowledge the comments from the DLNR, Engineering Division regarding flood hazards and provide the following response.

The majority of the project is within the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) flood zone 'X', and portions of the project are within flood zone 'AE', with base flood elevations (BFEs) of 7 to 8 feet above msl. A flood hazard variance from the Department of Planning and Permitting will be required for Phase 2 improvements located within FEMA-designated flood zone. The project will comply with all applicable Federal and State law. Further consultation with appropriate agencies, flood impacts, and appropriate mitigation measures will be included in the EIS for this project.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

Ian Hirokawa, Acting Land Administrator
January 15, 2026
Page 2

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:28:57 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

Comments: Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 project

From DOH.CABPASS <DOH.CABPASS@doh.hawaii.gov>

Date Thu 7/24/2025 2:42 PM

To James Niermann <JimN@rmtowill.com>

CAUTION: External Email

Hello Jim Niermann,
R.M. Towill Corporation

Thank you for the opportunity to review the Request for Pre-Consultation and Scoping for the Preparation of an Environmental Impact Statement for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 project Tax Map Keys: (1) 1-5-041: 005 and 022 received via postal mail on July 8, 2025. Please go to the Clean Air Branch (CAB) website to download and utilize our Standard Comments for Land Use Reviews. The link is included below.

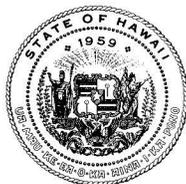
<https://health.hawaii.gov/cab/clean-air-branch/standard-comments-for-land-use-reviews/>

Thank you,

Lisa Kitahara
Planning & Administrative Support Staff Supervisor | Clean Air Branch
Hawai'i State Department of Health | Ka 'Oihana Olakino
2827 Waimano Home Road #130 | Pearl City, Hawaii 96782
Office: (808) 586-4200

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STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

24-288A CAB

July 3, 2024

MEMORANDUM

TO: Agencies and Project Owners

FROM: MARIANNE ROSSIO, P.E., CHIEF
Clean Air Branch

A handwritten signature in blue ink, appearing to read "Marianne Rossio".

SUBJECT: Clean Air Branch Standard Project Comments

This memo is provided for your information and sharing. You are encouraged to share this memo with your project partners, team members, and appropriate personnel.

The Department of Health (DOH), Clean Air Branch (CAB), will no longer be responding directly to requests for comments on the following documents (including pre-consultation, early consultation, preparation notice, draft, final, addendums, and/or supplements):

- Environmental Impact Statements (EIS)
- Environmental Assessments (EA)
- Anticipated Finding of No Environmental Significant Impacts (AFONSI)
- Conservation District Use Applications (CDUA)
- Special Management Area Permits (SMAP)

For agencies or project owners requiring DOH-CAB comments on one or more of these documents, please utilize the DOH-CAB Standard Comments below regarding your project's responsibilities to maintain air quality and any necessary permitting. DOH-CAB Standard Comments are also available on the DOH-CAB website located at:

https://health.hawaii.gov/cab/files/2024/07/Standard-Comments-for-Land-Use-Reviews-Clean-Air-Branch-July_2024.pdf.

If you have any questions, please the Clean Air Branch at (808) 586-4200.

CH:rkb

Standard Comments for Land Use Reviews
Clean Air Branch
Hawaii State Department of Health
July 3, 2024

All project activities shall comply with Hawaii Administrative Rules (HAR), Chapter 11-59 and 11-60.1.

If your proposed project:

Requires an Air Pollution Control Permit

- You must obtain an air pollution control permit from the Clean Air Branch and comply with all applicable conditions and requirements. If you do not know if you need an air pollution control permit, please contact the Permitting Section of the Clean Air Branch.
- Permit application forms can be found here: <https://health.hawaii.gov/cab/permit-application-forms/>

Has the potential to generate fugitive dust

- You must reasonably control the generation of all airborne, visible fugitive dust. Note that construction activities that occur near existing residences, businesses, public areas and major thoroughfares exacerbate potential dust concerns. It is recommended that a dust control management plan be developed which identifies and mitigates all activities that may generate airborne, visible fugitive dust. The plan, which does *not* require Department of Health approval, should help you recognize and minimize potential airborne, visible fugitive dust problems.
- Construction activities must comply with the provisions of Hawaii Administrative Rules, §11- 60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, it is strongly recommended that buffer zones be established, wherever possible, in order to alleviate potential dust concerns.
- You must provide reasonable measures to control airborne, visible fugitive dust from the road areas and during the various phases of construction. These measures include, but are not limited to, the following:
 - Planning the different phases of construction, focusing on minimizing the amount of airborne, visible fugitive dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
 - Providing an adequate water source at the site prior to start-up of construction activities;
 - Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
 - Minimizing airborne, visible fugitive dust from shoulders and access roads;
 - Providing reasonable dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
 - Controlling airborne, visible fugitive dust from debris being hauled away from the project site.
- If you have questions about fugitive dust, please contact the Enforcement Section of the Clean Air Branch. Please also see fugitive dust fact sheet at: <https://health.hawaii.gov/cab/files/2024/02/Hawaii-Fugitive-Dust-Fact-Sheet-February-2024.pdf>.

Includes construction, demolition, or renovation activities that involve potential asbestos and lead containing materials

- Please contact the Indoor and Radiological Health Branch at (808) 586-4700 or visit: <https://health.hawaii.gov/irhb/>

Increases the population and potential number of vehicles in an area

- The creation of apartment buildings, complexes, and residential communities may increase the overall population in an area. Increasing the population in an area may inadvertently lead to more air pollution via vehicle exhaust. Vehicle exhaust releases pollutants in the air that can negatively impact human health and air quality, including lung irritants, carcinogens, and greenhouse gases.
- Ensure that drivers keep vehicle idling times to three (3) minutes or less.
- Consider and incorporate support for alternative transportation options such as bike racks and/or electric vehicle charging stations where possible.

If you have any questions, please contact the Clean Air Branch at (808) 586-4200 or at cab@doh.hawaii.gov.

DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELawe KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 26-010

January 15, 2026

Ms. Lisa Kitahara, Planning and Administrative Support Staff Supervisor
Clean Air Branch
Hawai'i State Department of Health
2827 Waimano Home Road, Suite 130
Pearl City, Hawai'i 96782

Dear Ms. Kitahara:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an
Environmental Impact Statement (EIS) for Sand Island Wastewater
Treatment Plant Secondary Treatment Phase 2 Project
Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your email dated July 24, 2025, responding to our request for early consultation for the proposed project. ENV acknowledges the Department of Health (DOH), Clean Air Branch's Standard Comments for Land Use Reviews and will comply with the requirements related to the proposed project. Specifically, the project will obtain air quality permits for covered and non-covered emission sources. Best management practices will be employed during construction, in compliance with Hawai'i Administrative Rules §11-60.1-33 on Fugitive Dust to mitigate dust generation and control fugitive dust. Demolition activities that might involve potential asbestos and lead containing materials will comply with federal and state regulations administered by DOH, Indoor and Radiological Health Branch and Solid and Hazardous Waste Branch, for hazardous materials abatement and disposal.

Additional details regarding regulatory requirements and mitigation measures proposed for the project will be included in the EIS.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

Lisa Kitahara, Planning and Administrative Support Staff Supervisor
January 15, 2026
Page 2

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel
J
DN: cn=Brieck, Daniel J
Date: 2026.01.15 11:31:17 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.
Director

Pre Consultation and Scoping for Preparation of EIS for Sand Island WWTP Secondary Treatment Phase 2 Project

From Lum, Darryl <darryl.lum@doh.hawaii.gov>

Date Tue 7/22/2025 11:15 AM

To James Niermann <JimN@rmtowill.com>

 1 attachment (765 KB)

SIWWTP EIS PREPARATION-07222025110934-0001.pdf;

CAUTION: External Email

Hi Jim,

We received the July 2, 2025, letter requesting Department of Health (DOH), Environmental Management Division comments on the subject project. Please click on the following link for comments relating to DOH's Environmental Health programs:

<https://health.hawaii.gov/epo/landuse/>.

Thanks,
Darryl

Darryl Lum

Program Manager | Environmental Management Division/Clean Water Branch

Hawai'i State Department of Health | Ka 'Oihana Olakino

2827 Waimano Home Road #225 | Pearl City, HI 96782

Office: (808) 586-4309

<https://health.hawaii.gov/cwb/>

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State of Hawaii, Department of Health
Environmental Planning Office
Ka 'Oihana Olakino

[Home](#) » Land Use Planning Review

LAND USE PLANNING REVIEW

The Environmental Planning Office (EPO) closed effective May 2, 2018. Due to federal EPA funding reductions, the office is no longer providing services.

The information posted here will temporarily remain in place for public reference. For Standard Comments, please see below. If your project concerns are not addressed in the Standard Comments, please contact the appropriate Environmental Health Administration branch(es) and office(s) directly using [DOHEHALandUseContactList_20240827.pdf](#).

~~~~~  
**Standard comments** are provided by most environmental programs, and are intended to help applicants, consultants and agencies to better prepare land use planning documents, such as an Environmental Assessment (EA), Environmental Impact Statement (EIS), or permit application. This provides land use organizations with a full picture of potential comments for their proposed projects. Standard comments relating to Environmental Health programs are available for review below.

- [Clean Air Branch \(CAB\)](#) [as of July 3, 2024]
- [Clean Water Branch \(CWB\)](#) [as of July 28, 2023]
- [Hazard Evaluation & Emergency Response \(HEER\) Office](#) [as of August 2, 2021]
- [Indoor and Radiological Health Branch \(IRHB\)](#) [as of May 2012]
- [Safe Drinking Water Branch \(SDWB\)](#) [as of November 27, 2020]
- [Solid & Hazardous Waste Branch \(SHWB\)](#) [as of October 11, 2024]
- Surface Water Protection Branch (SWPB) [pending]
- [Wastewater Branch \(WWB\)](#) [as of December 26, 2024] **NEW**
- [Hilo District Health Office \(HDHO\)](#) [as of November 16, 2022]
- [Kauai District Health Office \(KDHO\)](#) [as of November 16, 2022 Version 2.0]
- [Maui District Health Office \(MDHO\)](#) [as of August 27, 2024]



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**T**he DOH **Environmental Health Administration (EHA)** is an advocate for sustainability. EHA intends to insure the benefits of a clean environment for Hawaii residents and visitors alike. This means safeguarding ample supplies of clean drinking water, beaches and streams that are safe to swim in, outdoor and indoor air that is healthy, and food that is safe to eat.

**The Office of Environmental Quality Control (OEQC)** was established in 1970 to help stimulate, expand, and coordinate efforts to maintain the optimum quality of the State's environment. OEQC implements Chapter 343 of the Hawaii Revised Statutes (HRS), which sets forth the **Hawaii Environmental Policy Act (HEPA)**. The OEQC publishes 'The Environmental Notice' which details the Environmental Assessments (EA) and Environmental Impact Statements (EIS) under public review.

- [OEQC website](#)
- [HEPA Flow Chart](#)

**The Hawaii State Physical Activity and Nutrition Plan, 2013 -2020 (State PAN Plan 2020)** was developed by the **Chronic Disease Management Branch** within the Hawaii DOH. The PAN Plan describes strategies to increase physical activity and healthy eating, with long-term goals of reducing chronic diseases, such as obesity.

- [Physical Activity & Nutrition – Chronic Disease Prevention & Health Promotion Division](#)
- [Hawaii Physical Activity and Nutrition Plan, 2013-2020](#)

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## OTHER RESOURCES

### State of Hawaii:

Dept. of Business, Economic Development and Tourism (DBEDT), Office of Planning (OP)

- [Office of Planning](#) Homepage
- [Coastal and Estuarine Land Conservation Plan \(CELCP\)](#)
- [A Participant's Guide to the Special Management Area \(SMA\) Permit Process in the State of Hawaii](#)

Department of Land and Natural Resources

- [DLNR Divisions and Offices](#)

Department of Transportation

- [HDOT Homepage](#)

University of Hawaii

- [School of Ocean and Technology \(SOEST\) – Coastal Geology](#)
- [Sea Level Rise](#)

**Federal:**

U.S. Environmental Protection Agency (EPA)

- [Smart Growth Principles](#)
- [Green Infrastructure](#)
- [School Siting Guidelines](#)
- [Energy Star](#)

U.S. Department of Health and Human Services (HHS)

- [Sustainability and Climate Change Resilience](#)
- [Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities \(09/09/2015\)](#)

U.S. Centers for Disease Control and Prevention (CDC)

- [Healthy Places](#)
- [Physical Activity](#)
- [Healthy Community Design Checklist Toolkit](#)
- [Transportation and Health Tool](#)
- [The Built Environmental Assessment Tool](#)

U.S. Department of Transportation

- [Health in Transportation](#)

**Other:**

- [American Public Health Association \(APHA\) – Healthy Community Design](#)
- [Plan for Health Toolkits](#)

- [AARP Livable Communities](#)
- [American Planning Association \(APA\)](#)
  - [Health Impact Assessment's Role in Planning](#)
    - [Health Impact Assessment Toolkit for Planners](#)
- [International Well Building Standard](#)
- [Smart Growth America](#)
  - [Complete Streets](#)
- [STAR Communities](#)
- [U.S. Green Building Council](#)
- [Urban Land Institute \(ULI\)](#)
- [World Health Organization](#)

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*NOTICE: If you do not have the Adobe Acrobat Reader installed on your computer, you need to install it before you can view and print the downloadable pdf files. The Acrobat Reader is free and can be downloaded to your computer by clicking here:*



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**“Mōhala i ka wai ka maka o ka pua.”**

**Flowers thrive where there is water, as thriving people are found where living conditions are good.**

---

Last update: 12/27/2024 (first paragraph & standard comments portion only)

**DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**KA 'OIHANA LAWELawe KAIĀPUNI**  
**CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707  
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI  
MAYOR  
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.  
DIRECTOR  
PO'O

DANIEL BRIECK, P.E.  
DEPUTY DIRECTOR  
HOPE PO'O

IN REPLY REFER TO:  
WEC.PE 26-011

January 15, 2026

Mr. Darryl Lum, Program Manager  
Clean Water Branch  
Environmental Management Division  
Hawai'i State Department of Health  
2827 Waimano Home Road, Suite 225  
Pearl City, Hawai'i 96782

Dear Mr. Lum:

**SUBJECT:** Pre-Assessment Consultation for the Preparation of an  
Environmental Impact Statement (EIS) for Sand Island Wastewater  
Treatment Plant Secondary Treatment Phase 2 Project  
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your email dated July 22, 2025, responding to our request for early consultation for the proposed project. ENV acknowledges the Department of Health (DOH) Environmental Health Program (EHP) standard comments pertaining to the various DOH offices and branches. ENV will comply with the requirements related to the proposed project. A detailed description of the regulatory requirements, assessment of potential project impacts, proposed mitigation measures and compliance with the EHP standard comments will be provided in the Draft Environmental Impact Statement (EIS).

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "DJB", is written over a digital signature line.

Digitally signed by Brieck, Daniel  
J  
DN: cn=Brieck, Daniel J  
Date: 2026.01.15 11:32:07 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.  
Director



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII  
DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

August 14, 2025

IN REPLY REFER TO

DIR0002210  
STP 8.3954

VIA EMAIL: [jimn@rmtowill.com](mailto:jimn@rmtowill.com)

Mr. Jim Niermann  
R.M. Towill Corporation  
2024 North King Street, Suite 200  
Honolulu, Hawaii 96819

Dear Mr. Niermann:

Subject: Pre-Consultation for an Environmental Impact Statement (EIS)  
Sand Island Wastewater Treatment Plant (WWTP) Secondary Treatment  
Phase 2 Project  
Honolulu, Oahu, Hawaii  
Tax Map Key: (1) 1-5-041: 005 and 022

Thank you for your letter, dated July 2, 2025, requesting the Hawaii Department of Transportation's (HDOT) review and comments on the pre-consultation for an EIS for the subject project. HDOT understands that the City and County of Honolulu, Department of Design and Construction, is proposing to undertake the planning, design, and development of the Secondary Treatment Phase 2 facility improvements at the Sand Island WWTP.

The HDOT has the following comments:

1. The proposed wastewater treatment project is approximately 0.10 miles from the property boundary of the Daniel K. Inouye International Airport (HNL). All projects within 5 miles from Hawaii State airports, it is advised to read the [Technical Assistance Memorandum \(TAM\)](#) for guidance with development and activities that may require further review and permits. The TAM can be viewed at this link: [http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports\\_08-01-2016.pdf](http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports_08-01-2016.pdf).
2. The project site is approximately 7,598 feet from the end of Runway 26L at HNL. Federal Aviation Administration (FAA) regulation requires the submittal of FAA Form 7460-1 Notice of Proposed Construction or Alteration pursuant to the [Code of Federal Regulations, Title 14, Part 77.9](#), if the construction or alteration is within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Construction equipment and staging area heights, including heights of temporary construction cranes, shall be included in the submittal. The form and criteria for submittal can be found at the following website: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>. Please provide a copy of the FAA response to the Part 77 analysis to the HDOT Airport Planning Section.

3. The HDOT has a Noise Monitoring Terminal located on the rooftop of Building nine and requests coordination with the HDOT as the project progresses.
4. The project is located within the 65-75 Day Night Level (DNL) noise contour on the attached 2008 HNL Noise Exposure Map. While sewage treatment plants are an acceptable use within this noise contour, the HDOT recommends that noise reduction measures be incorporated into the building's design and construction of portions of these buildings where the public is received, office areas, or where the noise level is low to achieve interior noise levels of 45 DNL or less per the attached State of Hawaii Land Use Compatibility Guidelines.
5. The proposed project shall not provide landscape and vegetation that will create a wildlife attractant, which can potentially become a hazard to aircraft operations. Please review the [FAA Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants On Or Near Airports](#), for guidance. The applicant should evaluate all site features, including equalization basins, aeration tanks, dewatering areas, or landscaping, to ensure they do not function as wildlife attractants. If any landscaping or operational element is determined by the HDOT and/or FAA to pose a wildlife hazard, the applicant shall implement appropriate mitigation measures immediately upon notification.
6. Due to the proximity of the Sand Island WWTP Phase 2 project to the Sand Island Container Terminal (SICT) "Matson Container Yard" as denoted on the Project Location Map located north of the project site, we recommend continued coordination throughout the planning, design, construction with the HDOT – Harbors Operations, Property Management, and harbor users that may be impacted by the planned construction activities.
7. Based on the Project Location Map, please confirm there are no proposed improvements or effects that would extend beyond the project site limits, for new sewer lines or upgrades to existing utilities that cross SICT and Honolulu Harbor.

Please submit any subsequent land use entitlement-related requests for review or correspondence to the HDOT Land Use Intake email address at [DOT.LandUse@hawaii.gov](mailto:DOT.LandUse@hawaii.gov).

If there are any questions, please contact Mr. Blayne Nikaido, Planner, Land Use Section of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at [blayne.h.nikaido@hawaii.gov](mailto:blayne.h.nikaido@hawaii.gov).

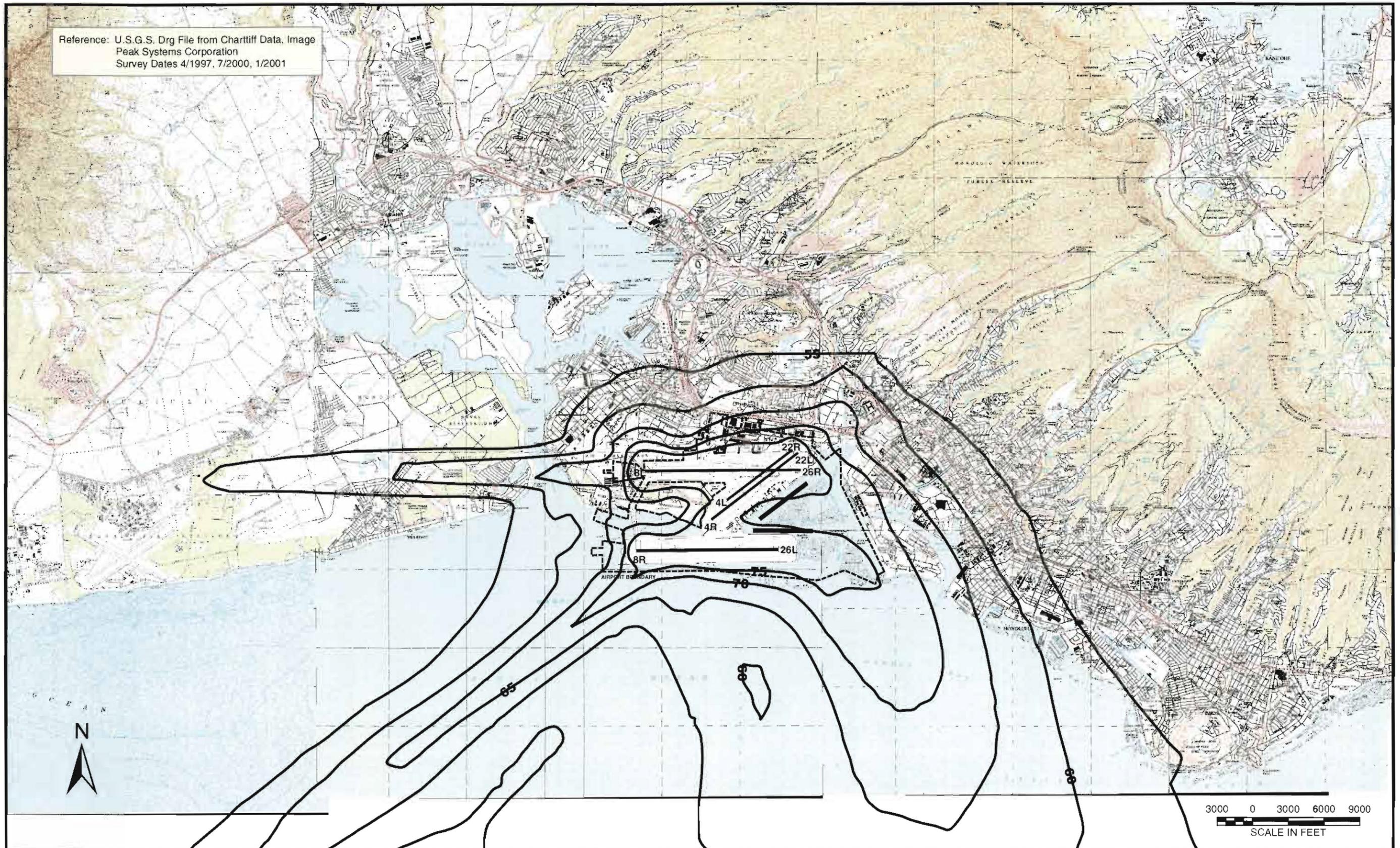
Sincerely,



EDWIN H. SNIFFEN  
Director of Transportation

Attachment

Reference: U.S.G.S. Drg File from Chartiff Data, Image  
Peak Systems Corporation  
Survey Dates 4/1997, 7/2000, 1/2001



**AIRPORTS DIVISION**  
DEPARTMENT OF TRANSPORTATION  
STATE OF HAWAII

**HONOLULU INTERNATIONAL AIRPORT  
MASTER PLAN UPDATE AND  
NOISE COMPATIBILITY PROGRAM**



**Edward K. Noda  
and Associates, Inc**

**2008 (FORECAST) FIVE YEAR  
NOISE EXPOSURE MAP  
NO MITIGATION SCENARIO**

**FIGURE  
5-1**

**DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**KA 'OIHANA LAWELawe KAIĀPUNI**  
**CITY AND COUNTY OF HONOLULU**

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DIRECTOR  
PO'O

DANIEL BRIECK, P.E.  
DEPUTY DIRECTOR  
HOPE PO'O

IN REPLY REFER TO:  
WEC.PE 26-012

January 15, 2026

Mr. Edwin H. Sniffen, Director  
State of Hawai'i  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawai'i 96813

Dear Mr. Sniffen:

**SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Impact Statement (EIS) for Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project**  
**Tax Map Keys: (1) 1-5-041: 005 and 022**

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your letter dated August 14, 2025, responding to our request for early consultation for the proposed project. We acknowledge your comment below (in italics) and provide the following response.

*The proposed wastewater treatment project is approximately 0.10 miles from the property boundary of the Daniel K. Inouye International Airport (HNL). All projects within 5 miles from Hawaii State airports, it is advised to read the Technical Assistance Memorandum (TAM) for guidance with development and activities that may require further review and permits. The TAM can be viewed at this link: [http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOTAirports\\_08-01-2016.pdf](http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOTAirports_08-01-2016.pdf).*

We acknowledge your comment and will refer to the Technical Assistance Memorandum (TAM) and coordinate with the appropriate agencies to ensure compliance with applicable regulations and permitting requirements.

*The project site is approximately 7,598 feet from the end of Runway 26L at HNL. Federal Aviation Administration (FAA) regulation requires the submittal of FAA Form 7460-1 Notice of Proposed Construction or Alteration pursuant to the Code of Federal Regulations, Title 14, Part 77.9, if the construction or alteration is within 20,000 feet of a public use or military airport which exceeds a 100: 1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Construction equipment and staging area heights,*

*including heights of temporary construction cranes, shall be included in the submittal. The form and criteria for submittal can be found at the following website: <https://oeaaa.faa.gov/oeaaa/external/portal.jsp>. Please provide a copy of the FAA response to the Part 77 analysis to the Hawai'i Department of Transportation (HDOT) Airport Planning Section.*

We acknowledge that the project site's proximity to Runway 26L at HNL may trigger requirements under Title 14 CFR Part 77.9. We will review the criteria for FAA Form 7460-1 submittal and include relevant details such as construction equipment, as applicable. The project will file a FAA airway obstruction review form 7460-1 for the project. A copy of the FAA's response to the Part 77 analysis will be provided to the HDOT Airport Planning Section.

*The HDOT has a Noise Monitoring Terminal located on the rooftop of Building nine and requests coordination with the HDOT as the project progresses.*

CCH-ENV will coordinate with HDOT regarding maintaining operation of the Noise Monitoring Terminal as the project progresses.

*The project is located within the 65-75 Day Night Level (DNL) noise contour on the attached 2008 HNL Noise Exposure Map. While sewage treatment plants are an acceptable use within this noise contour, the HDOT recommends that noise reduction measures be incorporated into the building's design and construction of portions of these buildings where the public is received, office areas, or where the noise level is low to achieve interior noise levels of 45 DNL or less per the attached State of Hawaii Land Use Compatibility Guidelines.*

We acknowledge your comment and will consider appropriate noise reduction measures in accordance with the provided State of Hawaii Land Use Compatibility Guidelines.

*The proposed project shall not provide landscape and vegetation that will create a wildlife attractant, which can potentially become a hazard to aircraft operations. Please review the FAA Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants On Or Near Airports, for guidance. The applicant should evaluate all site features, including equalization basins, aeration tanks, dewatering areas, or landscaping, to ensure they do not function as wildlife attractants. If any landscaping or operational element is determined by the HDOT and/or FAA to pose a wildlife hazard, the applicant shall implement appropriate mitigation measures immediately upon notification.*

We acknowledge your comment and will review FAA Advisory Circular 150/5200-33C to ensure that project features do not create wildlife attractants. Any required mitigation measures will be implemented promptly if identified by HDOT or FAA.

*Due to the proximity of the Sand Island Wastewater Treatment Plant Phase 2 project to the Sand Island Container Terminal (SICT) "Matson Container Yard" as denoted on the Project Location Map located north of the project site, we recommend continued coordination throughout the planning, design, construction*

Edwin H. Sniffen, Director  
January 15, 2026  
Page 3

*with the HDOT - Harbors Operations, Property Management, and harbor users that may be impacted by the planned construction activities.*

CCH-ENV will continue to coordinate with HDOT Harbors and relevant harbor users that may be impacted by the planned construction activities throughout the design and construction phases of project.

*Based on the Project Location Map, please confirm there are no proposed improvements or effects that would extend beyond the project site limits, for new sewer lines or upgrades to existing utilities that cross SICT and Honolulu Harbor.*

The project does not propose improvements that would extend beyond the project site limits for new sewer lines or upgrades to existing utilities that cross SICT and Honolulu Harbor. The project will involve permanent improvements within the State right-of-way for driveway and utility connections. The secondary treatment facilities will also require modifications to Hawaiian Electric power utilities both inside and outside of the Sand Island Wastewater Treatment Plant property, however these improvements will not affect SICT. Other short-term and long-term effects related to the project that may extend beyond the project site limits, such as effects from traffic, dust or odor emissions, noise and lighting, will be described and assessed in the project EIS along with proposed mitigation measures as necessary.

*Please submit any subsequent land use entitlement-related requests for review or correspondence to the HDOT Land Use Intake email address at DOT.LandUse@hawaii.gov.*

CCH-ENV will submit any future land use entitlement-related requests to the HDOT Land Use through the provided email.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or by email at jimn@rmtowill.com.

Sincerely,



Digitally signed by Brieck, Daniel  
J  
DN: cn=Brieck, Daniel J  
Date: 2026.01.15 11:34:17 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.  
Director



---

## Pre-Consultation For Sand Island Wastewater Treatment Plant Secondary Treatment Phase 2 Project

---

From Browning, Joy <joy\_browning@fws.gov>

Date Mon 7/14/2025 2:29 PM

To James Niermann <JimN@rmtowill.com>

**CAUTION:** External Email

Aloha Mr. Niermann,

The Pacific Island Fish and Wildlife Office (PIFWO) has transitioned to the use of the Information for Planning and Consultation (IPaC) online portal, <https://ipac.ecosphere.fws.gov/>, for federal action agencies and non-federal agencies or individuals to obtain official species lists, including threatened and endangered species and designated critical habitat in your project area. Using IPaC expedites the process for species list distribution and takes minimal time to complete.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change the species list. Verification can be completed by visiting the IPaC website at regular intervals during project planning and implementation and refreshing your initial species list. We hope this process provides efficiencies to our partners in obtaining a species list.

Sincerely,

***Joy Hiromasa Browning***



Fish and Wildlife Biologist  
Pacific Islands Fish and Wildlife Office  
U.S. Fish and Wildlife Service  
300 Ala Moana Blvd., Rm 3-122

Honolulu, Hawaii 96850

**This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.**

**DEPARTMENT OF ENVIRONMENTAL SERVICES**  
**KA 'OIHANA LAWELawe KAIĀPUNI**  
**CITY AND COUNTY OF HONOLULU**

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAII 96707  
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI  
MAYOR  
MEIA



ROGER BABCOCK, JR., Ph.D., P.E.  
DIRECTOR  
PO'O

DANIEL BRIECK, P.E.  
DEPUTY DIRECTOR  
HOPE PO'O

IN REPLY REFER TO:  
WEC.PE 26-016

January 15, 2026

Ms. Joy Hiromasa Browning  
U.S. Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawai'i 96850

Dear Ms. Browning:

**SUBJECT:** Pre-Assessment Consultation for the Preparation of an  
Environmental Impact Statement (EIS) for Sand Island Wastewater  
Treatment Plant Secondary Treatment Phase 2 Project  
Tax Map Keys: (1) 1-5-041: 005 and 022

The City and County of Honolulu (CCH), Department of Environmental Services (ENV), thanks you for your email dated July 14, 2025, responding to our request for early consultation for the proposed project. ENV will utilize the Information for Planning and Consultation (IPaC) online portal to obtain the species list and conservation measures for the project and ensure they are included in the Draft EIS.

We value your participation in the environmental review process. Your response and this letter will be reproduced in the forthcoming EIS Preparation Notice.

On behalf of the CCH-ENV, R.M. Towill Corporation will be preparing environmental documentation for the project. Should you have any questions, please contact Jim Niermann, R.M. Towill Corporation at (808) 842-1133, or via email at [jimn@rmtowill.com](mailto:jimn@rmtowill.com).

Sincerely,

A handwritten signature in blue ink that reads 'DJB'.

Digitally signed by Brieck, Daniel  
J  
DN: cn=Briec, Daniel J  
Date: 2026.01.15 11:38:15 -10'00'

For Roger Babcock, Jr., Ph.D., P.E.  
Director