April 15, 2026

Via email to cleanwaterbranch@doh.hawaii.gov
Darryl Lum, P.E.
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Department of Health
2827 Waimano Home Road, Room 225
Pearl City, Hawaii 96782

Re: Comments Opposing Draft Sand Island WWTP NPDES Permit HI 0020117

Dear Mr. Lum,

Surfrider Foundation submits the following comments in opposition to the Draft Sand Island Wastewater Treatment Plant NPDES Permit, HI 0020117 ("Draft Permit").

The City and County of Honolulu has applied for a permit to continue to allow the Sand Island Wastewater Treatment Plant ("Sand Island WWTP") to discharge pollution into the ocean, through Outfall 001. The outfall discharges wastewater to Mamala Bay. Mamala Bay is designated for primary contact recreation and is impaired for Ammonia Nitrogen. However, the Draft Permit does not protect the receiving water's designated uses. The Department of Health must, under federal and state law and the Hawaii Constitution, revise the Draft Permit in order to comply with the law and protect public health and public trust resources before finalizing the permit. We welcome collaboration and conversation with DOH and the City and County to ensure that the Final Permit protects our water resources for Hawaii residents and visitors.

I. The Draft Permit Limits for Enterococci are Too High and Fail to Protect Public Health.

The Draft Permit's limits for Enterococci, which mirror the existing permit's limits, are orders of magnitude higher than the water quality standard set to protect primary contact recreation.

Enterococci	Monthly Average CFU/100 mL	Daily Maximum CFU/100 mL
Water Quality Standard for Class A marine waters	35	130
Draft Permit Limits	19,250	28,730

Hawaii Administrative Rules (HAR) § 11-54-8(b), (c).

A. The Permit Limits Must Protect the Designated Use.

Clean Water Act regulations direct that NPDES permits must "[e]stablish effluent limits… the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will **fully protect the designated use**." 40 C.F.R. § 122.44(d)(1)(vi)(A) (emphasis added). Hawaii's permitting regulations explicitly require that "NPDES permits shall apply and ensure compliance with... recreational criteria for all State waters in section 11-54-8." HAR § 11-55-19(a)(10).

B. The State Enterococci Criteria Protect the Primary Contact Recreation Designated Use in Marine Waters.

The state's Enterococci "criteria are designed to protect the public from exposure to harmful levels of pathogens while participating in water-contact activities." HAR § 11-54-8(a). These Enterococci criteria apply to all state waters. *Id*. The state Enterococci criteria comply with EPA's 2012 Recommended Water Quality Criteria, which sets limits for both marine and fresh water. Of note, EPA's recommended fecal bacteria indicator criteria for marine waters does not encourage or promote the use of mixing zones, even though it sets a standard for ocean discharges.

Table 1. Recommended 2012 RWQC.

Criteria Elements	**Estimated Illness Rate (NGI): 36 per 1,000 primary contact recreators**			**Estimated Illness Rate (NGI): 32 per 1,000 primary contact recreators**	
	Magnitude			**Magnitude**	
Indicator	GM (cfu/100 mL)[a]	STV (cfu/100 mL)[a]	OR	GM (cfu/100 mL)[a]	STV (cfu/100 mL)[a]
Enterococci – marine and fresh	35	130		30	110
OR					
E. coli – fresh	126	410		100	320
Duration and Frequency: The waterbody GM should not be greater than the selected GM magnitude in any 30-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 30-day interval.					

[a]

The recreational criteria were adopted to "protect the public from exposure to harmful levels of pathogens as a result of human sewage contamination while participating in water activities such as swimming, wading, surfing, and other water contact activities."[1]

C. Mamala Bay Designated Uses Include Primary Contact Recreation.

The Sand Island WWTP discharges into Mamala Bay, which is designated as a Class A marine water. Fact Sheet at 8. Hawaii regulations state "It is the objective of class A [marine] waters that their use for recreational purposes and aesthetic enjoyment be protected." HAR § 11-54-3(c)(2). Therefore, the Permit's effluent discharges must "fully protect" Mamala Bay's primary contact recreation designated use. *See* 40 C.F.R. § 122.44(d)(1)(vi)(A).

D. Sand Island WWTP Discharges Must Meet Enterococci Criteria at the Outfall in Order to Protect the Designated Primary Contact Recreation Designated Use.

The Sand Island WWTP effluent limits must be set at the Enterococci water quality standard, geometric mean of 35 CFU/100 mL and maximum 130 CFU/100 mL in order to protect the primary contact recreation designated use in Mamala Bay. "Primary contact recreation typically includes activities where immersion and ingestion are likely and there is a high degree of bodily contact with the water, such as swimming, bathing, surfing, water skiing, tubing, skin diving, water play by children, or similar water-contact activities." EPA, Recreational Water Quality Criteria, 2012 at 6. Primary contact recreation includes underwater recreation like scuba and free diving. In 2022, a Hawaii free diver broke the national free-diving record, reaching 358 feet deep.[2] This is more than 100 feet below the depth of the Sand Island WWTP outfall.

E. The Draft Permit Illegally Removes the Primary Contact Recreation Designated Use from a mile-long, quarter-mile wide portion of Mamala Bay.

The Draft Permit violates federal requirements in 40 C.F.R. § 122.44(d)(1)(vi)(A) mandating that the effluent discharges fully protect the primary contact recreational use in Mamala Bay. Instead, the Draft Permit employs a Zone of Initial Dilution and a Zone of Mixing to set permit effluent limits 19,250 CFU/100 mL monthly average and 28,730 CFU/100 mL daily maximum. The Draft Permit includes Offshore Monitoring at the edge of the Zone of Mixing for "compliance with water quality standards."

DOH has unlawfully removed the primary contact designated use in Mamala Bay in the Zone of Mixing, which "is 1,400 feet wide and 4,800 feet along the centerline of the diffuser and extends vertically downward to the ocean floor." Fact Sheet at 46. **DOH has created a "sacrifice zone" nearly a mile long and a quarter mile wide in Mamala Bay where it is**

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[1] *See* Department of Health, "Rationale for Proposed Revisions to Department of Health Administrative Rules, Title 11, Chapter 54 Water Quality Standards" at 10.

[2] Hawaii News Now, "Diving 358 feet in less than 3 minutes, Hawaii swimmer breaks record," July 4, 2022, https://www.hawaiinewsnow.com/2022/07/04/diving-308-feet-less-than-3-minutes-hawaii-swimmer-breaks-record/.

unsafe to swim, snorkel, dive, surf, or otherwise engage in body-contact water recreation. Likewise, people kayaking or canoe racing, where they are likely to get wet and have water splashed in their faces, are likewise unsafe in the sewage sacrifice zone. Even worse, this "sacrifice zone" is not marked, so people recreating in Mamala Bay have no way of knowing how to avoid this portion of the bay where DOH illegally decided to remove the primary contact recreation designated use.

F. Mixing Zones for Fecal Bacteria Indicators Do Not Protect the Primary Contact Recreation Designated Use Within the Mixing Zone.

The Department of Health has adopted a harmful policy for sewage discharges into the ocean: grant facilities a zone of mixing or zone of initial dilution so the facilities do not have to meet fecal indicator bacteria water quality standards at the end of the pipe. DOH has adopted this statewide policy, purportedly under the theory of "the solution to pollution is dilution." The Fact Sheet states that "DOH's current implementation procedures for compliance with the Enterococci standards is to establish a monthly geometric mean effluent limitation equal to the geometric mean WQS of 35 CFU/100 mL multiplied by the average dilution at the edge of the ZID." Fact Sheet at 38.

DOH's implementation policy using a Zone of Initial Dilution for a fecal bacteria indicator effluent limits violates state regulations. "Zones of initial dilution are a subset of zones for mixing that are applied to toxic pollutants." HAR § 11-55-41(a). Enterococci is not a toxic pollutant, therefore a Zone of Initial Dilution cannot be used.

It appears DOH's implementation policy relies on federal regulations applicable to facilities with section 301(h) waivers from secondary treatment, which no longer applies to this facility. When Sand Island was subject to a Clean Water Act Section 301(h) waiver, 40 C.F.R. 125.62(d)(1) provided: "The applicant's modified discharge must allow for the attainment or maintenance of water quality which allows for recreational activities beyond the **zone of initial dilution**, including, without limitation, swimming, diving, boating, fishing, and picnicking, and sports activities along shorelines and beaches." But the 301(h) waiver no longer applies, and therefore DOH may not grant Sand Island WWTP using a zone of initial dilution.[3]

Mixing zones are not appropriate for fecal indicator bacteria because the water quality criteria for Enterococci is set at a level necessary to protect the primary contact recreation designated use. In contrast, mixing zones may be appropriate for other pollutants for which there are acute and chronic water quality criteria because exceeding the criteria in a small mixing zone will not violate the aquatic life designated use. As EPA explains, a mixing zone "simply authorizes an applicable criterion to be exceeded within a defined area of the waterbody while still protecting the designated use of the waterbody as a whole."[4] Therefore, where the applicable criterion protects the designated use, a mixing zone may not be used for that criterion.

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[3] *See* Consent Decree in *USA v. City and County of Honolulu*, 1:94-cv-00765 (D. HI) Aug. 10, 2010 ("Pursuant to the terms of this Consent Decree, CCH will withdraw its appeals of EPA's decisions to deny renewal of NPDES permits for Sand Island WWTP... that had previously been issued pursuant to CWA section 301(h).").

[4] EPA Water Quality Standards Handbook, Section 5.1.

As recently as February 2026, EPA reiterated that mixing zones are not appropriate for "bacteria in areas designated for primary contact recreation."[5] This is consistent with EPA's recommendation from EPA's 2014 Water Quality Standards Handbook: "EPA recommends that state... mixing zone policies do not allow mixing zones for bacteria in waters designated for primary contact recreation."[6] It is also consistent with EPA guidance from the 2010 NPDES Permit Writer's Manual: "the use and size of the mixing zone must be limited such that the waterbody as a whole will not be impaired and such that all designated uses are maintained."[7] The NPDES Permit Writer's Manual "for some pollutants (e.g., pathogens in waters designated for primary contact recreation, bioaccumulative pollutants), the water quality standards or implementing procedures might not authorize any dilution allowance even where the effluent and receiving water mix rapidly and completely."[8]

G. The Department of Health Cannot Remove the Primary Contact Designated Use from a Portion of Mamala Bay without a Use Attainability Analysis.

The Clean Water Act has clear procedures for removing a designated use from a waterbody or a portion of a waterbody. To remove a designated use, a state must demonstrate, through a formal use attainability analysis, that attaining that use is not feasible because of any one of the six factors listed in 40 C.F.R. § 131.10(g). A state may not remove a designated use that is an existing use. 40 C.F.R. § 131.10(g). Because Mamala Bay is currently used for primary contact recreation, Hawaii could not remove the primary contact designated use through the use attainability analysis process. Therefore, the state also cannot remove the designated use for a portion of Mamala Bay by issuing a permit creating a Zone of Mixing around the Sand Island WWTP outfall in which it is unsafe for people to engage in primary contact recreation.

II. The Final Permit Must Set Enterococci Limits that Protect the Mamala Bay Primary Contact Recreation Designated Use.

A. The Permit Limits Should be Set at the Water Quality Criteria.

As set forth above, DOH's implementation policy for Enterococci in ocean discharges is illegal because mixing zones may not be used to remove a designated use. As EPA explained in its 2010 NPDES Permit Writer's Manual, "Where consideration of a dilution allowance or mixing zone is not permitted by the water quality standards or is not appropriate, the relevant water quality criterion must be attained at the point of discharge."[9] Therefore, the Final Permit

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[5] EPA, "Permitting Tools with Roots in WQS, Mixing Zones and Permit Compliance Schedules," Virtual WQS Academy, Feb. 2026, https://www.epa.gov/system/files/documents/2026-02/17_healeyvlcan_permittoolswrootswqs-feb-2026_508c.pdf.

[6] EPA, Office of Water, "Water Quality Standards Handbook," Sept. 2014 at 13. https://www.epa.gov/sites/default/files/2014-09/documents/handbook-chapter5.pdf.

[7] EPA, NPDES Permit Writers Manual, (2010) at 6-21, https://www.epa.gov/system/files/documents/2025-09/pwm_chapt_06_edits_2025_06.pdf..

[8] *Id*.

[9] NPDES Permit Writers Manual, 6-16.

must set the effluent limit for Enterococci at the water quality criteria: 35 CFU/100 mL monthly geomean and a Statistical Threshold Value of 130 CFU/100 mL.

B. The Facility's UV Disinfection System Should be able to Meet the Enterococci Water Quality Criteria.

The facility has a UV system that should function to remove Enterococci from the partially-treated sewage. The Fact Sheet asserts that "[d]isinfection is achieved through six (6) dual-bank, medium pressure disinfection channels, each with three (3) banks of UV lamps fitted with automated wipers." Fact Sheet at 6. However, the extremely high levels of Enterococci being measured in the effluent reflect that the UV disinfection is not properly functioning.

UV disinfection systems should be designed to meet the applicable water quality criteria when properly functioning. For example, Vermont's UV disinfection design standards require that "[a]ll Ultraviolet Light Disinfection Systems shall have the capacity to continuously disinfect the peak flow rate... in order to obtain a residual... bacteria count not greater than the limit established by the most current" water quality standards.[10]

In its 2009 Response to Comments, EPA noted that "bacterial concentrations associated with the discharge of wastewater from the Sand Island outfall do not meet current water quality standards without disinfection."[11] In order to "meet EPA's promulgated criteria for bacteria in coastal waters, EPA concluded that CCH must adequately operate and maintain the UV disinfection system at all times."[12]

1. The Facility's high Enterococci levels do not indicate adequate operations and maintenance of the system.

UV systems, when designed and operated properly, can very efficiently remove fecal indicator bacteria from wastewater.[13]

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[10] Vermont Dep't of Nat. Resources, UV Disinfection Design Standards, May 2000 at 2 https://anrweb.vt.gov/DEC/IronPIG/DownloadFile.aspx?DID=185716&DVID=0

[11] EPA Region 9, "Response to Comments from the City and County of Honolulu on the Environmental Protection Agency's December 7, 2007 Tentative Decision Regarding the City and County of Honolulu's request for a variance at the Sand Island Wastewater Treatment Plant under Section 301(h) of the Clean Water Act," Jan. 5, 2009 at 59 https://www.epa.gov/sites/default/files/documents/Sand-Island-RTC-from-CCH.pdf.

[12] *Id*.

[13] *See* Gonzalez, Yenifer et al "UV Disinfection Systems for Wastewater Treatment: Emphasis on Reactivation of Microogranisms," Sustainability 2023, 15(14) https://doi.org/10.3390/su151411262 ("With a dose of 29.74 mJ/cm2, there was a bacteria removal efficiency of 98.4%, with a contact time of 11.44 s... Doses between 100 and 300 mJ/cm2 achieved an effective total coliform removal of 99.97% using 8 20 W lamps and a contact time between 10 and 30 min." *internal citations omitted*.)

One factor that can interfere with proper UV system operation is high TSS in wastewater.[14] In Vermont, with an E. coli water quality standard of 77 colonies/100 mL, "for a or a proposed UV system to consistently and reliably achieve such an E. coli limit, the wastewater treatment facility needs to be capable of producing a final effluent with a daily maximum TSS concentration of 10.0 mg/L or less, which necessitates that chemical precipitation and/or effluent filtration be provided as the final treatment steps prior to UV disinfection."[15] With the Sand Island WWTP having a TSS limit of 50 mg/L, it is possible that the TSS is currently too high for the UV to work effectively.

2. Sand Island must evaluate the effectiveness of the UV system and determine ways to reduce Enterococci in the effluent to reduce the fecal indicator bacteria discharges and protect the primary contact recreation designated use.

The Final Permit should require the facility to test Enterococci before it enters into the UV system and then again before the outfall to evaluate the effectiveness of the UV system to disinfect the wastewater. The facility should identify ways to improve the efficacy of the disinfection, with the aim of getting the Enterococci levels down as quickly as possible to the recreational water quality standard. This is required by Hawaii regulations, which state "The permittee at all times shall maintain in good working order and operate as efficiently as possible any facility or system of control installed by the permittee to achieve compliance with the terms and conditions of the NPDES permit." HAR § 11-55-23(9).

The permit should recognize the need to reduce the Enterococci levels and set a schedule to reduce the Enterococci limit as the facility's operations improve, the TSS reduces, and the UV system is optimized. DOH should also evaluate the facility's actual Enterococci discharges over the past year and at the very minimum, immediately reduce the Enterococci limit to reflect the actual discharge levels (other than those reflecting upset, like the 78,622 CFU/100 mL result in July 2025).

3. Sand Island WWTP has not shown it is receiving the best degree of treatment or control for Enterococci.

Hawaii regulations prohibit a permit from including a zone of mixing unless the application and the supporting information clearly show that the discharge "has received the best degree of treatment or control." HAR § 11-55-41(c)(2)(D). DOH must require Sand Island

[14] *See* Vermont DNR, UV Disinfection Design Standards, May 2000 at 2 https://anrweb.vt.gov/DEC/IronPIG/DownloadFile.aspx?DID=185716&DVID=0 ("The ability of a UV disinfection system to provide effective disinfection is... highly dependent on the Total Suspended Solids (TSS) concentration of the final effluent being discharged from the wastewater treatment facility.").
[15] *Id*.

WWTP to demonstrate that the UV system is "adequately operate[d] and maintain[ed]... at all times," as EPA directed in its 2009 response to comments.[16]

C. Sand Island WWTP may not discharge effluent that does not protect the primary contact beneficial use at the outfall.

Hawaii regulations state, "It is the public policy of this State... to provide that no waste be discharged into any State waters without first being given the degree of treatment necessary to protect the beneficial uses of the waters." HAR § 11-55-02(a)(3). Hawaii regulations also state that Class A Marine 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." HAR § 11-54-3(c)(2).

III. The Permit Fails to Adequately Address Pretreatment.

A. The Application, Draft Permit and Draft Fact Sheet Fail to Contain Sufficient Information for the Public to Evaluate and Comment on the Pretreatment Program.

The Department of Health should make information about the facility's industrial users publicly available and then re-circulate the Draft Permit and Fact Sheet for public comment.

1. The Application did not contain any information to allow the public to evaluate the facility's Significant Industrial Users and the pretreatment program.

In its 2022 Permit Quality Review, EPA directed, "Permit writers must ensure that NPDES permit applications contain all the necessary information (required by 40 CFR 122.21(j)(6)) to comprehensively evaluate the POTW and the potential need for a pretreatment program, including accurately identifying all SIUs, industrial processes, flows, and hauled industrial waste, and identify any applicable categorical classifications."[17] EPA characterized this change to DOH's permitting process as "essential."[18] However, the Permit application for the Sand Island WWTP contains no information about the facility's Significant Industrial Users. Instead, Table F is blank and includes the note: "Table F is not applicable because the Permittee previously submitted this information to the NPDES permitting authority in the 2023 Pretreatment Annual Assessment Report for the Sand Island Water Treatment Plant." Form 2A, Table F.

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[16] EPA Region 9, "Response to Comments from the City and County of Honolulu on the Environmental Protection Agency's December 7, 2007 Tentative Decision Regarding the City and County of Honolulu's request for a variance at the Sand Island Wastewater Treatment Plant under Section 301(h) of the Clean Water Act," Jan. 5, 2009 at 59.

[17] 2022 EPA NPDES Program and Permit Quality Review at 34 (POTW means Publicly Owned Treatment Works) https://www.epa.gov/system/files/documents/ 2024-03/hawaii-2022-pqr-report.pdf.

[18] *Id*.

While the 2023 or 2024 Pretreatment Annual Assessment Reports may contain relevant information about the pretreatment program, that information was not publicly posted along with the permit application for interested members of the public to review, nor is posted on the internet in a place where members of the public can easily locate it. This lack of information deprives the public of key information about the facility's industrial influent and the potential nature of its discharges, making it impossible for the public to make effective and informed comments on pretreatment.

2. The Draft Permit Fact Sheet did not identify and characterize all contributing industrial dischargers.

In its recent Permit Quality Review, EPA instructed that "permit writers should ensure that the fact sheets identify and characterize all contributing industrial dischargers. Types of non-domestic discharges received by the POTW that were known and documented by the POTW at the time of permit issuance should be noted to distinguish them from new wastestreams accepted after permit issuance."[19] The Fact Sheet states that the facility has 11 Significant Industrial Users. Fact Sheet at 6. Under Sand Island's prior permit, the facility had 8 non-categorical SIUs including: Coke, Itoen, ALSCO, United Laundry-Hoonee, United Laundry-Alahao, Meadow Gold Dairies, Dust-Ex, and Pacific Biodiesel. EPA noted that in 2022 Sand Island WWTP had 8 permitted SIUs because the number decreased "from 9 to 8 in 2020 with the closing of Meadow Gold Dairies."[20] This means that the facility has added three new industrial discharges since 2022. The Fact Sheet should identify those new dischargers and the makeup of their wastewater.

3. The Draft Permit fails to state the basis for pretreatment program implementation.

In the 2022 EPA Permit Quality Review, EPA criticized the Sand Island Permit and fact sheet because they "did not state the basis for pretreatment program implementation."[21] EPA recognized that the prior permit "fact sheet described some of the industrial contributions including specifying the number of non-categorical SIUs discharging to the WWTP, it did not mention receiving industrial contributions from the CIU listed in the permit application."[22] Here, the Draft Permit and Fact Sheet do not state the basis for pretreatment program implementation; they do not describe any of the industrial contributions nor mention receiving industrial contributions from any CIUs, and the permit application contains no information about any industrial users. DOH must correct these deficiencies before issuing the Final Permit and Fact Sheet.

[19] 2022 EPA Permit Quality Review at 33.
[20] *Id.* at 29.
[21] *Id*. at 32.
[22] *Id*. CIU means Categorical Industrial User.

B. The Permit Must Address PFAS and Emerging Contaminants.

1. The Permit should require testing industrial users for PFAS.

Per- and Polyfluoroalkyl substances (PFAS) are a group of thousands of harmful pollutants for which EPA is slowly establishing recommended water quality criteria. In 2024, EPA published final recommended water quality criteria and benchmarks to help states address PFAS pollution. EPA adopted acute and chronic criteria for PFOA and PFOS and benchmarks for 8 other PFAS--PFBA, PFHxA, PFNA, PFDA, PFBS, PFHxS, 8:2 FTUCA, and 7:3 FTCA.[23]

Table 1. Final Recommended Freshwater Aquatic Life Water Quality Criteria for PFOA and PFOS

Criteria Component	Acute Water Column (CMC)[1] (mg/L)	Chronic Water Column (CCC)[2] (mg/L)	Invertebrate Whole-Body (mg/kg ww[3])	Fish Whole-Body (mg/kg ww[3])	Fish Muscle (mg/kg ww[3])
PFOA Magnitude	3.1	0.10	1.18	6.49	0.133
PFOS Magnitude	0.071	0.00025	0.028	0.201	0.087
Duration	1-hour average	4-day average	Instantaneous	Instantaneous	Instantaneous
Frequency	Not to be exceeded more than once in three years, on average	Not to be exceeded more than once in three years, on average	Not to be exceeded	Not to be exceeded	Not to be exceeded

Table 3. Acute Freshwater Aquatic Life Benchmarks for Eight PFAS

Chemical	PFBA (mg/L)	PFHxA (mg/L)	PFNA (mg/L)	PFDA (mg/L)	PFBS (mg/L)	PFHxS (mg/L)	8:2 FTUCA (mg/L)	7:3 FTCA (mg/L)
Magnitude	5.3	4.8	0.65	0.50	5.0	0.21	0.037	0.012
Duration	1-hour average							
Frequency	Not to be exceeded more than once in three years on average							

Hawaii should incorporate these recommended criteria into the state's water quality standards during the upcoming triennial review process. In the meantime, the Final Permit must take appropriate steps to protect water quality from harm caused by PFAS, particularly from industrial sources.

[23] *See* Final Recommended Aquatic Life Criteria and Benchmarks for Select PFAS, Sept. 2024, https://www.epa.gov/system/files/documents/2024-09/pfoa-pfos-pfas-final-factsheet-2024.pdf

2. The Permit should address risk from PFAS in Sand Island WWTP's influent.

PFAS can enter the sewage system from domestic sources, like soaps or cookwater, but it can also enter a sewage treatment plant from industrial sources, like landfills. Nowhere in the permit application, Draft Permit, or Fact Sheet does it suggest that the Sand Island WWTP accepts landfill leachate and condensate.

However, DOH's recent Field Study of PFAS in Hawaii states that Sand Island WWTP accepts landfill leachate: "The Sand Island WWTP... receive[s] an average of 30-40,000 gallons per month of leachate and condensate from landfills and [is] restricted to receipt of no more than 12,000 gallons of leachate and condensate on a given day, up to three times per week." DOH, "Field Study of Per- and Polyfluoroalkyl Substances Associated with Wastewater Treatment Plants, Landfills and AFFF-Release Sites in Hawai'i," Nov. 2024, updated Aug. 2025, at 3. https://health.hawaii.gov/heer/files/2025/09/Hawaii-PFAS-Study-HIDOH-Nov-2024-rev-Aug-2025-RB-9-6-2025.pdf

a. <u>The Field Study results for Sand Island WWTP do not reflect landfill leachate or condensate.</u>

The 2025 PFAS Field Study concluded that "[c]oncentrations of PFAS in effluent are well below published levels that could pose acute or chronic toxicity to aquatic organisms." Field Study at vii. The study reported influent at the Sand Island WWTP as 38 ng/L Total PFAS and 366 ng/L Total PFAS, with effluent levels at 47 ng/L and 447 ng/L Total PFAS respectively. Field Study at 52, Fig. 11a. These influent and effluent numbers were collected over a 24-hour period.

The study did not specifically collect influent from Sand Island WWTP on a day that it accepted landfill leachate or concentrate, so we assume these numbers do not reflect the surge of PFAS through Sand Island WWTP when it accepts landfill leachate and concentrate. PFAS numbers from the Waimanalo Gulch Landfill were orders of magnitude higher than the Sand Island WWTP influent tested during the Field Study. The leachate from Waimanalo Gulf Landfill measures **66,664 ng/L** Total PFAS and **40,618 ng/L** Total PFAS. Field Study at 61, Fig. 17.

b. <u>The PFAS Field Study used some risk levels less protective than EPA criteria and benchmarks.</u>

DOH cannot rely on the Field Study's conclusion that there is low risk of harm from the PFAS effluent because the Field Study used some criteria and benchmarks that were less stringent than EPA's recommended criteria and benchmarks. Specifically, DOH's numbers for PFOS, PFHxA and PFBS were less stringent than EPA's criteria and benchmarks, and DOH did not measure risk from 8:2 FTUCA and 7:3 FTCA.

Chronic Water Column (mg/L)	PFOA	PFOS
EPA	0.10	0.00025
DOH	0.0083	**0.0011**

mg/L	PFBA	PFHxA	PFNA	PFDA	PFBS	PFHxS	8:2FTUCA	7:3 FTCA
EPA	5.3	4.8	0.65	0.5	5	0.21	0.037	0.012
DOH	0.83	**6.3**	0.008	0.01	**127**	0.01	**None**	**None**

3. The Permit should direct Sand Island WWTP to require all industrial wastewater, including any hauled landfill leachate or condensate, to be tested and treated for PFAS.

The Draft Permit does not authorize the Sand Island WWTP to discharge any PFAS into Mamala Bay. But as the Field Study revealed, the facility is in fact discharging various PFAS. While Hawaii has not yet adopted any numeric criteria for PFAS, the narrative water quality standard prohibiting "toxic... or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human, animal, plant, or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water." HAR § 11-54-4(a)(4).

Because the Sand Island WWTP is not authorized to discharge PFAS into Mamala Bay, and because the facility does not remove PFAS from wastewater, any PFAS in industrial wastewater accepted by the facility will pass through the facility in violation of the facility's permit. Therefore, the facility must evaluate all industrial discharges, including any hauled landfill leachate or concentrate, for PFAS. The facility must direct industrial users to remove PFAS from the industrial wastewater prior to bringing the waste to the facility. The City and County of Honolulu have this power through their pretreatment program as secondary permitting authorities.

4. The Permit should require industrial wastewater be tested for other emerging contaminants.

The Final Permit should include a requirement that Sand Island WWTP require all industrial users to test their wastewater for emerging contaminants before bringing their wastewater to the facility.

IV. The Permit Must Contain an Enforceable Limit for Ammonia Nitrogen that Complies with the Water Quality Standard at the Outfall.

A. The Draft Permit does not contain an effluent limit for Ammonia Nitrogen.

The Draft Permit does not include an effluent limit for Ammonia Nitrogen. *See* Draft Permit at 5-6. Instead, the Draft Permit only requires once-monthly grab sampling of Ammonia Nitrogen at designated Offshore Monitoring Locations. Draft Permit at 21.

DOH based its decision to not include effluent limits for Ammonia Nitrogen in the permit on its reasonable potential analysis. Fact Sheet at 20. The Fact Sheet concludes that "there is assimilative capacity" for Ammonia Nitrogen "based on background data collected at control stations D1, D5, E1, and E5."[24] This means the analysis excludes data from D2, D3A, E3, and E3, as well as any data used to determine that Mamala Bay is impaired for Ammonia Nitrogen.

B. Permits must include effluent limits for all pollutants that may have a reasonable potential to cause a water quality violation.

Clean Water Act regulations require permits to contain effluent limitations for all pollutants that are or may be discharged at a level that has the "reasonable potential to cause or contribute to" a violation of a water quality standard in the receiving water. 40 C.F.R. § 122.44(d)(1)(i).

EPA's guidance on how to complete a reasonable potential analysis instructs that a qualitative reasonable potential analysis takes into account whether the "receiving water [is] impaired and listed on the CWA section 303(d) list."[25]

C. Mamala Bay's new Ammonia Nitrogen impairment means the Permit must include effluent limits for Ammonia Nitrogen.

Mamala Bay is impaired for Ammonia Nitrogen.[26] This impairment is new in 2024; Hawaii changed Mamala Bay from Category 2 (some, but not all, designated uses met) to Category 5 (water quality is impaired and TMDL is needed). 2024 303(d) list at 25.

This means that **water quality in Mamala Bay has gotten worse with respect to Ammonia Nitrogen under current pollution discharge conditions** and those discharges collectively violate the Ammonia Nitrogen water quality standard. In other words, the current mixing zone for the Sand Island WWTP allowed too much Ammonia Nitrogen into Mamala Bay and now the bay is impaired for Ammonia Nitrogen. This violates the baseline requirement of a

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[24] *Id*. While the Fact Sheet claims these results are available in Appendix 1, that appendix does not demonstrate how DOH concluded there is no reasonable potential for Sand Island's Ammonia Nitrogen discharges to cause or contribute to a violation of the water quality standard.

[25] EPA, Selecting a "Reasonable Potential Analysis" Approach, December 2022, https://www.epa.gov/system/files/documents/2022-12/Part%203-Selecting-a-Reasonable-Potential-Analysis-Approach.pdf.

[26] Fact Sheet at 8, 2024 State of Hawaii Water Quality Monitoring and Assessment Report ("303(d) list) https://attains.epa.gov/attains-public/api/documents/cycles/18764/219310.

mixing zone: "the size of the mixing zone must be limited such that the waterbody as a whole will not be impaired."[27] Indeed, Hawaii law prohibits a permit from containing a zone of mixing "unless the application and the supporting information clearly show that… [t]he capacity of the receiving water to dilute a pollutant or assimilative capacity is available in the receiving water for the pollutant in which a zone of mixing is being requested." HAR § 11-55-41(c)(2)(E). Here, there is no assimilative capacity because there is too much Ammonia Nitrogen in Mamala Bay. Therefore, the Final Permit must include enforceable effluent limits for Ammonia Nitrogen.

D. The Permit should include Ammonia Nitrogen effluent limits equal to the water quality standard.

In order to ensure that the Sand Island WWTP discharge does not cause or contribute to a violation of the Ammonia Nitrogen water quality standard in Mamala Bay, DOH should incorporate an effluent limit equal to the water quality standard until DOH completes a TMDL with a wasteload allocation.

Ammonia Nitrogen (ug NH4-N/L)	**Geometric mean not to exceed the given value**	**Not to exceed the given value more than ten percent of the time**	**Not to exceed the given value more than two percent of the time**
Wet	3.5	8.5	15
Dry	2	5	9

III. The Draft Permit Must Maintain Influent Monitoring for Fats, Oils and Grease.

The Draft Permit has removed influent monitoring for fats, oils and grease "since there are no numeric WQS established for these pollutants at HAR Chapters 11-54 and 11-55." Fact Sheet at 50. The Final Permit should reinstate influent monitoring for fats, oils and grease. Influent monitoring is important to measure the effectiveness of the local sewer program to prevent fats, oils, and grease from entering the sewer in the first place. Furthermore, the state has a narrative water quality standard relating to fats, oils and grease: "all waters shall be free of substances attributable to domestic, industrial, or other controllable sources of pollutants, including... oil, grease, scum, or other floating materials." HAR § 11-54-4(a)(2).

Likewise, Honolulu's sewer use law prohibits people from discharging "[a]ny wastewater with an animal/vegetable fat, oil, and grease (FOG) content having detrimental characteristics so as to cause obstruction, upset, interference, or pass through in the POTW." Honolulu Code § 43-1.8(g)(18).

[27] EPA NPDES Permit Writer's Manual at 6-21.

To implement these requirements, the City and County of Honolulu's Department of Environmental Services has a preventative maintenance program in place.[28] Additionally, the Draft Permit requires that "the Permittee shall update and resubmit the BMP-based program for controlling animal and vegetable oil and grease within 180 calendar days of the effective date of this permit." Draft Permit at 35. According to EPA's 2022 Permit Quality Review, Sand Island WWTP accepts waste from at least three food processors.[29]

Because the City and County of Honolulu must control and reduce fats, oils, and grease entering the sewer system, the Final Permit must include influent monitoring so that DOH and the public can assess the efficacy of those control programs and its pretreatment program with respect to food processors. These programs are necessary to reduce sewer spills that threaten public health and water quality.

IV. The Department of Health and EPA Must Require that All NPDES Monitoring Data Be Submitted on Discharge Monitoring Reports.

The Draft Permit, like the current permit, requires the Sand Island WWTP to submit monthly Discharge Monitoring Reports, Shoreline Water Quality Monitoring Reports, Nearshore Water Quality Monitoring Reports, and Offshore Water Quality Monitoring Reports. Draft Permit at 46. The Draft Permit requires effluent monitoring to be submitted on a Discharge Monitoring Report using NetDMR. Draft Permit at 48. The influent and effluent numbers submitted on the Discharge Monitoring Reports are publicly available on EPA's ECHO platform.

The Draft Permit requires Sand Island WWTP to submit the receiving water reports--the Shoreline, Nearshore, and Offshore Water Quality Monitoring Reports--through the Electronic Signature CWB Compliance Submittal Form for Individual NPDES Permits and NGPCs on the e-Permitting Portal. Draft Permit at 49. These reports are not posted online and are not publicly available, short of submitting a formal public records request.

The Draft Permit's requirement that some of the monitoring required under the permit be submitted other than through a Discharge Monitoring Report violates federal regulations. Clean Water Act regulations require that all permit monitoring data be submitted via Discharge Monitoring Reports: "Monitoring results must be reported on a Discharge Monitoring Report." 40 C.F.R. 122.41(l)(4). The regulation does not say that only outfall monitoring must be reported on the Discharge Monitoring Report--all monitoring must be reported on DMRs. This is consistent with EPA's intention to "make this more complete set of data available electronically to the public, to promote transparency and accountability by providing communities and citizens with easily accessible information on facility and government performance."[30] EPA noted that "[t]his can serve to elevate the importance of compliance information and environmental performance within regulated entities, providing opportunity for them to quickly address any noncompliance."[31]

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[28] *See* City and County of Honolulu Dept' of Env. Services, "Preventing Sewer Spills: Our Muli-Faceted Approach," https://www.honolulu.gov/env/csm/division-of-collection-system-maintenance/.
[29] 2022 EPA Permit Quality Review at 31.
[30] 80 Fed. Reg. 64064, 64065 (Oct. 22, 2015).
[31] *Id*.

For this reason, the Final Permit must require that all monitoring required under the permit be submitted on the Discharge Monitoring Report submitted via NetDMR, which EPA will then make publicly available on its ECHO portal. The Department of Health should take steps to make this change in all existing permits and all permit renewals. Without this data publicly available, the public is unable to independently assess whether the facility is in compliance with its permit and whether or not the permit limits are in fact protective of water quality standards. By setting barriers to the public receiving this critical information, DOH is violating federal regulations and flouting EPA's direction to make water quality data publicly available.

V. The Hawaii Constitution Requires that the Permit protect water quality standards and conserve and protect ocean resources for future generations.

A. The Hawaii Constitution requires the Department of Health to set effluent limits and monitoring that conserve and protect the state's water resources.

The Department of Health has an affirmative constitutional duty under Article XI, section 1 of the Hawaii Constitution to protect public trust resources in exercising its discretion over NPDES permits. *See Kelly v. 1250 Oceanside Partners*, 111 Hawaii 205, 230, 140 P.3d 985, 1010 (2006) ("Although in some respect, exercise of DOH's authority is discretionary in nature, such discretionary authority is circumscribed by the public trust doctrine."). The Department of Health also "has an obligation to protect the use of Hawaii's water resources for the benefit of the people." Article XI, Section 7 Hawaii State Constitution, *see also In re Waiāhole Ditch Combined Contested Case Hr'g* (*Waiāhole I*), 94 Hawaii 97, 131 (2000).

Article XI, section 1 of the Hawaii Constitution requires the Department of Health "[f]or the benefit of present and future generations," to "conserve and protect Hawaii's natural beauty and all natural resources." Article XI, section 1 further declares that "[a]ll public natural resources are held in trust by the State for the benefit of the people." This mandate adopts "the public trust doctrine as a fundamental principle of constitutional law in Hawaii." *Waiāhole I*, 94 Hawaii 97, 132 (2000).

The Hawaii Supreme Court has made clear that the public trust includes "the authority and duty 'to maintain the purity and flow of our waters for future generations,'" which "requires the State and its political subdivisions to 'protect' and 'promote' the State's water resources." *Kelly v. 1250 Oceanside Partners*, 111 Hawaii 205, 221-23, 140 P.3d 985, 1102-03 (Haw. 2006). "[T]he public trust doctrine applies to all water resources without exception or distinction," and the Hawaii Supreme Court has applied it specifically to nearshore marine waters." *Id.* at 221-23, 140 P.3d at 1101-03; s*ee*, *e.g.*, *Umberger v. Dep't of Land & Natural Res.*, 140 Hawaii 500, 520-21, 403 P.3d 277, 297-98 (2017).

"The State's constitutional public trust obligations exist independent of any statutory mandate and must be fulfilled regardless of whether they coincide with any other legal duty." *Ching v. Case*, 145 Hawaii 148, 178 (2019). The "basic premise" of the public trust is "that the state has certain powers and duties which it cannot legislatively abdicate." *Waiāhole I*, 94 Hawaii at 130-31. Thus, resource protection statutes such as H.R.S. ch. 342D and its implementing rules

"do[] not supplant the protections of the public trust doctrine" or "override the public trust doctrine or render it superfluous." Rather, "the doctrine continues to inform the [statute]'s interpretation, define its permissible 'outer limits,' and justify its existence." *Id*. at 133, 9 P.3d at 445. "The public trust doctrine at all times forms the outer boundaries of permissible government action with respect to public trust resources." *Id*. at 132, 9 P.3d at 444 (citation omitted).

To fulfill their public trust duties, Hawaii government agencies including the Department of Health must "take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decision-making process." *Kelly*, 94 Hawaii at 231, 140 P.3d at 1011 (quoting *Waiāhole*, 94 Hawaii at 143, 9 P.3d at 446). More specifically, agencies must "consider the cumulative impact" of its actions on public trust resources and "implement reasonable measures to mitigate this impact, including the use of alternative[s]." *Waiāhole*, 94 Hawaii at 143, 9 P.3d at 446. Agencies must also reassess prior decisions and consider actions they can take to undo harm that has already been caused. *Id.* at 149-50, 9 P.3d at 461-62.

Therefore, the public trust places upon the Department of Health "a fiduciary duty analogous to the common law duty of a trustee." *Ching*, 145 Hawaii at 170, 449 P.3d at 1168. "The most basic aspect of the State's trust duties is the obligation to protect and maintain the trust property and regulate its use," which necessarily includes an "obligation to reasonably monitor trust property to ensure it is not harmed." *Id*. at 170, 177, 449 P.3d at 1168, 1175 (cleaned up). "As trustee, the State must take an active role in preserving trust property and may not passively allow it to fall into ruin." *Id.* at 177, 449 P.3d at 1175.

B. The Draft Permit and Fact Sheet violate Constitutional protections of Hawaii's water resources.

The Draft Permit and the Department of Health's justification for it, as set out in the Fact Sheet, violate the Hawaiian Constitution's protection of public trust resources in a number of ways. First, the Draft Permit's Enterococci limits sacrifice the public trust ocean resources in Mamala Bay, swapping the primary contact recreational uses for a "sacrifice zone" for a sewage treatment plant that regularly fails to disinfect its partially-treated sewage effluent. The City and County, which sought a continuation of the high Enterococci effluent limits, failed to meet their burden under the Hawaii Constitution of "justifying their proposed uses in light of protected public rights in the resource." *In re Water Use Permit Applications*, 94 Hawaii 97, 160 (2000).

Similarly, the Department of Health violated its public trust duties by including a zone of initial dilution for Enterococci even though doing so removes a designated and actual use of the receiving water.

VI. We Request a Public Hearing on the Draft Permit.

Surfrider Foundation requests a public hearing on the Draft Permit. We request that the hearing be held at a time and place that is convenient for the public. We request that the Department of Health record the meeting and waive the requirement that all oral comments also be submitted in writing. Such a requirement decreases accessibility of the proceedings to the

public, particularly for those community members who may have difficulty with writing or merely those who provide more compelling and authentic testimony orally rather than in writing. Particularly given the strong oral tradition of storytelling in native Hawaiian culture, the Department of Health should ensure that community members can share their concerns about the Draft Permit solely by providing oral testimony. We request that a Department of Health employee who is a decision-maker with respect to this permit application be in attendance to hear and consider all oral comments.

We also request an extension of the comment period through the end of the public hearing.

CONCLUSION

Given the extensive issues with the Draft Permit, Surfrider Foundation urges the Department of Health to go back to the drawing board and revise the Draft Permit so that it complies with the law before it is finalized. Surfrider Foundation looks forward to working collaboratively with the City and County of Honolulu and the Department of Health to ensure the revised Permit meets all legal requirements and protects public health and water quality.

Respectfully Submitted,

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