

North Coast Regional Water Quality Control Board

**ORDER NO. R1-2020-0005
NPDES NO. CA1000001**

**WDID NO. 1B85017RHUM
WASTE DISCHARGE REQUIREMENTS**

FOR THE

**PENINSULA COMMUNITY SERVICES DISTRICT AND SAMOA PACIFIC
GROUP
TOWN OF SAMOA WASTEWATER TREATMENT FACILITY
HUMBOLDT COUNTY**

The following Permittees are subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Permittees Information

Permittees	Peninsula Community Services District and Samoa Pacific Group
Name of Facility	Town of Samoa Wastewater Treatment Facility
Facility Address	3 North Bay View Road
	Samoa, CA 95564
	Humboldt County
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.0528 million gallons per day (mgd) (average dry weather design flow) 0.0756 mgd (peak wet weather design flow)

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Disinfected Secondary Treated Municipal Wastewater	40° 49' 10"	124° 13' 32"	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	April 16, 2020
This Order shall become effective on:	June 1, 2020
This Order shall expire on:	May 31, 2025
The Permittees shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	May 31, 2024
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region have classified this discharge as follows:	Minor

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) Order No. R1-2001-62 and Monitoring and Reporting Program (MRP) No. R1-2007-0026, will be rescinded upon the completion of the new Town of Samoa Wastewater Treatment Facility and discharge to the Pacific Ocean at which time the Permittees shall comply with the requirements of this Order.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on **April 16, 2020**.

Matthias St. John, Executive Officer

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I. FACILITY INFORMATION

Information describing the Peninsula Community Services District and Samoa Pacific Group (Permittees), Town of Samoa Wastewater Treatment Facility (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board), finds:

- A. **Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit authorizing the Permittees to discharge into waters of the United States at the discharge location described in Table 2 subject to the Waste Discharge Requirements (WDRs). This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- B. **Basis and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittees' application, monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into this Order, and constitutes Findings for this Order. Attachments A through E are also incorporated into this Order.
- C. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections III.E, III.F, V.B, VI.C.5.a, and VI.C.5.d of this Order and section X.E of the Monitoring and Reporting Program (MRP) are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- D. **Notification of Interested Parties.** The Regional Water Board has notified the Permittees and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- E. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

III. DISCHARGE PROHIBITIONS

- A. The discharge of any waste not disclosed by the Permittees or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code, is prohibited.
- C. The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c of this Order (Sludge Disposal and Handling Requirements).
- D. The discharge of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset).
- E. Any sanitary sewer overflow (SSO) that results in a discharge of untreated or partially treated wastewater to (a) waters of the state or (b) land and creates pollution, contamination, or nuisance, as defined in Water Code section 13050(m) is prohibited.
- F. The discharge of waste to land that is not owned by the Permittees, governed by District ordinance, or under agreement to use by the Permittees, or for which the Permittees have explicitly permitted such use, is prohibited, except for use for fire suppression as provided in title 22, section 60307(b) of the California Code of Regulations (CCR).
- G. The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Resources Control Board (State Water Board) or another Regional Water Board is prohibited.
- H. The average dry weather flow of waste through the Facility shall not exceed 0.0528 million gallons per day (mgd), measured daily and averaged over a calendar month. The peak daily wet weather flow of waste through the Facility shall not exceed 0.0756 mgd. Compliance with this prohibition shall be determined as defined in sections VII.D and VII.E of this Order.
- I. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into waters of the state is prohibited.
- J. The discharge of sludge directly into the ocean or into a waste stream that discharges to the ocean is prohibited.
- K. The bypassing of untreated wastes containing concentrations of pollutants in excess of those of Ocean Plan Tables 1 or 2 (2015) is prohibited.
- L. The acceptance of septage is prohibited unless the Discharger has a septage receiving station approved by the Executive Officer of the Regional Water Board.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

- a. The discharge of treated wastewater shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP) (Attachment E).

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations ¹			
		Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	--	--
Oil and Grease	mg/L	25	40	--	75
pH	s.u.	--	--	6.0	9.0
Total Suspended Solids (TSS)	mg/L	30	45	--	--
Settleable Solids	mL/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225

Table Notes:
 1. See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

- b. **Percent Removal.** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over the same time period, as measured at Monitoring Locations INF-001 and EFF-001, respectively.
- c. **Disinfection.** Disinfected effluent discharged from the Facility through Discharge Point 001 to the Pacific Ocean shall not contain bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001¹:
 - i. **Enterococci**
 - (a) The six-week rolling geometric mean (GM) of enterococci shall not exceed 30 Colony Forming Units (CFU) per 100 milliliters (mL), calculated weekly; and

¹ See section VII.H of this Order regarding compliance with bacteriological limitations.

- (b) The Statistical Threshold Value (STV) of 110 CFU/100 mL shall not be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

ii. **Total Coliform**

- (a) The median value of total coliform bacteria shall not exceed a Most Probable Number (MPN) of 70 per 100 mL in a calendar month; and
- (b) No sample shall exceed an MPN of 230 per 100 mL.

2. Interim Effluent Limitations – Not Applicable

This Order does not establish interim effluent limitations or schedules for compliance with final limitations.

B. Land Discharge Specifications and Requirements – Not Applicable

This Order does not authorize discharges to land.

C. Water Recycling Specifications and Requirements – Not Applicable

This Order does not authorize discharges of recycled water.

D. Other Requirements

1. Disinfection Process Requirements for Ultraviolet Light (UV) Disinfection System

The Permittees shall operate the UV disinfection system to maintain compliance with disinfection effluent limitations specified in section IV.A.2.c of this Order. Specifically, the Permittees shall:

- a. Prior to initial discharge at Discharge Point 001, the Permittees shall submit, for Executive Officer approval, a copy of a letter from the UV supplier showing written acceptance of the UV system design specifications and capacity for the Facility.
- b. Prior to initial discharge at Discharge Point 001, the Permittees shall submit to the Executive Officer approval, an operations and maintenance plan detailing how compliance with the final effluent limitations for disinfection will be assured at all times.
- c. Provide continuous, reliable monitoring of flow, UV transmittance (UVT), UV intensity, UV dose, and UV power at Monitoring Location INT-001 . The Permittees must demonstrate compliance with the UV dose requirement.
- d. Operate the UV disinfection system to provide a minimum UV dose of 60 millijoules per square centimeter (mJ/cm²) at all times at Monitoring Location INT-001.
- e. Ensure that the UVT (at least 254 nanometers) in the wastewater does not fall below 50 percent of maximum at any time.

- f. Visually inspect the quartz sleeves and cleaning system components per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and check the efficacy of the cleaning system.
- g. Wipe/clean the quartz sleeves at fixed intervals following the manufacturer's procedures to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall be increased as necessary to ensure compliance with permit requirements, such as UV dose and fecal coliform organism requirements.
- h. Operate the UV disinfection system in accordance with an approved operations and maintenance plan, which clearly specifies the operational limits and responses required for critical alarms. The Permittees shall maintain a copy of the approved operations plan at the treatment plant and make the plan readily available to properly trained operations personnel and regulatory agencies. The Permittees shall post a quick reference plant operations data sheet at the treatment plant. The data sheet shall include the following information:
 - i. The alarm set points for high and low flow, UV dose and transmittance, UV lamp operation hours, and power.
 - ii. The values of high and low flow, UV dose and transmittance, UV lamp operation hours, and power when flow must be diverted to waste.
 - iii. The values of high daily and weekly median fecal coliform when an operational response must be taken.
 - iv. The required frequency of calibration for all meters measuring flow, UVT, and power.
 - v. The required frequency of mechanical cleaning/wiping and equipment inspection.
- i. Replace lamps per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. The Permittees shall maintain lamp age and lamp replacement records for a time period consistent with the record retention requirements in the Standard Provisions (Attachment D, section IV).
- j. Properly calibrate flow meters and UVT monitors to ensure proper disinfection.
- k. Inspect the UVT meter and check against a reference bench-top unit weekly to document accuracy.
- l. Recalibrate the on-line UVT analyzer by a procedure recommended by the manufacturer if the on-line analyzer UVT reading varies from the bench-top spectrophotometer UVT reading by 2 percent or more.

- m. Operate the UV disinfection system with a built-in automatic reliability feature that must be triggered when the system is below the target UV dose. If the measured UV dose goes below the minimum UV dose, the UV reactor in question must alarm and startup the next available row of UV lamps or UV lamp bank.
- n. Not allow equivalent or substitutions of equipment to occur without an adequate demonstration of equivalent disinfection performance to the satisfaction and approval of the Executive Officer.
- o. Ensure that flow through the UV disinfection system not exceed the peak design flow of the system as a daily maximum.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Ocean Plan (Surface Water Limitations) and the Basin Plan (Groundwater Limitations) and are a required part of this Order. Receiving water conditions not in conformance with the limitations are not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting that a violation has occurred.

A. Surface Water Limitations

Discharges from the Facility shall not cause the following in the receiving water upon completion of initial dilution (115:1):

1. Ocean Plan

a. Bacterial Characteristics

- i. **Water-Contact Standards.** Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated for water contact recreation use by the Regional Water Board, but including all kelp beds, the following bacteriological objectives shall be maintained throughout the water column:
 - (a) A 30-Day geometric mean of fecal coliform density not to exceed 200 CFU per 100 mL, calculated based on the five most recent samples from each site, and a single sample maximum not to exceed 400 CFU per 100 mL.
 - (b) A six-week rolling geometric mean of enterococci not to exceed 30 CFU per 100 mL, calculated weekly, and a statistical threshold value of 110 CFU per 100 mL not to be exceeded by more than 10

percent of the samples collected in a calendar month, calculated in a static manner.

- ii. **Shellfish Harvesting Standards.** At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacterial objectives shall be maintained throughout the water column:
 - (a) The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL.
- iii. **Physical Characteristics**
 - (a) Floating particulates and oil and grease shall not be visible.
 - (b) The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
 - (c) Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
 - (d) The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
- iv. **Chemical Characteristics**
 - (a) The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.
 - (b) The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
 - (c) The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
 - (d) The concentration of substances set forth in chapter II, Table 1 of the Ocean Plan shall not be increased in marine sediments to levels which would degrade indigenous biota.
 - (e) The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
 - (f) Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.
 - (g) Discharges shall not cause exceedances of water quality objectives for ocean waters of the state established in chapter II, Table 1 of the Ocean Plan.

(h) Discharge of radioactive waste shall not degrade marine life.

v. **Biological Characteristics**

(a) Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.

(b) The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

(c) The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

vi. **General Standards**

(a) The discharge shall not cause a violation of any applicable water quality standard for the receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder.

(b) Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

(c) Waste discharged to the ocean must be essentially free of:

(1) Material that is floatable or will become floatable upon discharge.

(2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

(3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.

(4) Substances that significantly decrease the natural light to benthic communities and other marine life.

(5) Materials that result in aesthetically undesirable discoloration of the ocean surface.

(d) Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

(e) Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

- (1) Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.
- (2) Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.
- (3) Maximum protection is provided to the marine environment.
- (4) The discharge does not adversely affect recreational beneficial uses such as surfing and beach walking.

2. Thermal Plan

a. Temperature Objectives

- i. The discharge shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.

B. Groundwater Limitations

1. The collection, treatment, storage, and disposal of wastewater shall not cause degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Basin Plan) and reasonable BMPs, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
2. The collection, treatment, storage, and disposal of wastewater shall not cause alterations of groundwater that contain chemical concentrations in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 4, sections 64435 (Tables 2 and 3), 64431, and article 5.5, section 64444, and article 16 section 64449 and the Basin Plan.
3. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain levels of radionuclides in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established in title 22, division 4, chapter 15, article 5, section 64442 and 64443 of the CCR.
4. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

5. The collection, treatment, storage, and disposal of wastewater shall not cause the median of the most probable number of coliform organisms over any 7-day period to exceed 1.1 MPN/100 mL or 1 colony/100 mL.
6. Groundwaters shall not contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Permittees shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Permittees shall comply with the following Regional Water Board standard provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
 - a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Permittees to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittees to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
 - b. In the event the Permittees do not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment infrastructure, breach of pond containment, sanitary sewer overflow, etc., that results in a discharge to a drainage channel or a surface water, the Permittees shall notify Regional Water Board staff within 24 hours of having knowledge of such non-compliance. Spill notification and reporting shall be conducted in accordance with section V.E of Attachment D and section X.E of the MRP.

B. Monitoring and Reporting Program (MRP) Requirements

The Permittees shall comply with the MRP, included as Attachment E of this Order, and future revisions thereto.

C. Special Provisions

1. Reopener Provisions

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.
- b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.
- c. **Whole Effluent Toxicity (WET).** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a new narrative or numeric chronic toxicity limitation, acute toxicity limitation and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.
- d. **303(d)-Listed Pollutants.** If an applicable total maximum daily load (TMDL) (see Fact Sheet, section III.D) program is adopted, this Order may be reopened and effluent limitations for the pollutant(s) that are the subject of the TMDL modified or imposed to conform this Order to the TMDL requirements.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Disaster Preparedness Assessment Report and Action Plan.** Natural disasters, extreme weather events, sea level rise, and shifting precipitation patterns, some of which are projected to intensify due to climate change, have significant implications for wastewater treatment and operations. Some natural disasters are expected to become more frequent and extreme according to the current science on climate change. In order to ensure that Facility operations are not disrupted, compliance with conditions of this Order are achieved, and receiving waters are not adversely impacted by permitted and unpermitted discharges, the Permittees shall submit a Disaster Preparedness Assessment Report and Action Plan to the Regional Water Board by **August 1, 2023** for Executive Officer review and approval.

The Permittees shall: (1) conduct an assessment of the wastewater treatment facility, operations, collection, and discharge systems to determine areas of short- and long-term vulnerabilities related to natural disasters and extreme weather, including sea level rise and other conditions projected by

climate change science, if applicable; the assessment shall consider, as applicable, impacts to plant operations due to changing influent and receiving water quality, rising sea level, storm surges, fires, floods, earthquakes, tsunamis, back-to-back severe storms, and other extreme conditions that pose a risk to plant operations and water quality; (2) identify control measures needed to protect, improve, and maintain wastewater infrastructure, waste discharge compliance, and receiving water quality in the event of a natural disaster or, if applicable, under conditions resulting from climate change; (3) develop a schedule to implement necessary control measures. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate potential risks associated with extreme weather events and changing conditions resulting from climate change; and (4) implement the necessary control measures per the approved schedule of implementation. Specifically, the Permittees shall analyze the effects of 5.3 feet of sea level rise by the year 2100 and provide sufficient emergency capacity and/or containment of effluent, emergency energy supply and backup pumping capacity to operate the Facility for a minimum of 72 hours in the event of severed outside power.

The Humboldt Bay Harbor District is pursuing a plan that would combine three separately permitted NPDES waste streams through the outfall at Discharge Point 001. Currently, the DG Fairhaven Power Facility is permitted to discharge wastewater through the same ocean outfall at Discharge Point 001. The Permittees may work with the DG Fairhaven Power Facility and any additional dischargers that utilize the ocean outfall to develop and submit for Executive Officer review and approval a joint Disaster Preparedness Assessment Report and Action Plan for the Samoa Peninsula.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

- i. The Permittees shall, as required by the Executive Officer, develop and conduct a PMP, as further described below, when there is evidence (e.g., sample results reported as detected, but not quantified (DNQ) when the effluent limitation is less than the method detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of WET, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:
 - (a) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reporting level (RL); and

maintenance of the Facility. The Permittees shall operate and maintain the Facility in accordance with the most recently updated O&M Manual. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following.

- i. Description of the Facility's organizational structure showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the Facility so as to achieve the required level of treatment at all times.
 - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
 - iii. Description of laboratory and quality assurance procedures.
 - iv. Inspection and essential maintenance schedules for all processes and equipment.
 - v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittees will be able to comply with requirements of this Order.
 - vi. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.
- c. **New Facility Certification Report.** All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The Permittees shall submit a certification report, **once construction of the new Facility is complete and prior to first discharge**, for each new treatment facility, expansion of an existing facility, and design capacity re-ratings, prepared by the design engineer. For design capacity re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility design capacity. The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report.

- i. The certification report shall:
 - (a) Identify the dates when testing and full operation of the new treatment facilities occurred.
 - (b) Demonstrate that the Facility was constructed to meet the design criteria and identify any changes that occurred in relation to the original design plans. This may include submittal of the as-built drawings and a narrative description of any changes that occurred in relation to the original design plans.
 - (c) Identify and certify the design capacity of the treatment facility, including wet- and dry-weather flow capacities; and
 - (d) Certify the adequacy of each component of the treatment facility to meet requirements of this Order.
- d. **Old Facility Decommission Plan and Report.** The Permittees shall submit a work plan to the Regional Water Board by **June 1, 2020**, that includes the schedule and details for decommissioning all elements of the previous facility. The work plan shall also evaluate and determine if any elements of the existing facility, such as the existing equalization and treatment ponds, are State or Federal jurisdictional waters and identify all necessary permits regulatory requirements prior to any impact occurring. The work plan must be approved by the Regional Board Executive Officer prior to any decommissioning work. A final report shall be submitted to the Regional Water Board upon completion of the decommissioning and removal of the old facility. The report shall provide detailed information on how each portion of the old facility was decommissioned, the date each component was decommissioned, and the results of any restoration performed on the old facility.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Wastewater Collection Systems

i. Statewide General WDRs for Sanitary Sewer Systems

The Permittees shall, as required by the Executive Officer, apply for enrollment under State Water Board Order No. 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems, as amended by Order No. WQ 2013-0058-EXEC.

b. Source Control and Pretreatment Provisions

- i. The Permittees shall perform source control functions and provide a summary of source control activities conducted in the Annual Facility Report (due **March 1st** to the Regional Water Board). Source control functions and requirements shall include the following:

- (a) Implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system, and inspect facilities connected to the system.
- (b) If waste haulers are allowed to discharge to the Facility, establish a waste hauler permit system, to be reviewed by the Executive Officer, to regulate waste haulers discharging to the Facility's collection system.
- (c) Perform public outreach to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial and toxic wastes to the Facility, at least once per year.
- (d) Perform on-going inspections and monitoring, as necessary, to ensure adequate source control.
- (e) General prohibitions. Pollutants introduced into WWTFs by a non-domestic source shall not pass through [40 C.F.R. § 403.3(n)] the WWTF or interfere [40 C.F.R. § 403.3(i)] with the operation or performance of the WWTF. These general prohibitions and the specific prohibitions in paragraph (f) of this provision apply to all non-domestic sources introducing pollutants into a WWTF whether or not the source is subject to other National Pretreatment Standards or any national, state, or local pretreatment requirements.
- (f) Specific prohibitions. In addition, the following pollutants shall not be introduced into a WWTF:
 - (1) Pollutants that create a fire or explosion hazard in the WWTF;
 - (2) Pollutants that will cause corrosive structural damage to the WWTF, but in no case discharges with pH lower than 5.0, unless the WWTF is specifically designed to accommodate such discharges;
 - (3) Solid or viscous pollutants in amounts that will cause obstruction to the flow in the WWTF resulting in interference;
 - (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration that will cause interference with the WWTF;
 - (5) Heat in amounts which will inhibit biological activity in the WWTF resulting in interference, but in no case heat in such quantities that the temperature at the WWTF exceeds 40°C (104°F) unless the Regional Water Board, upon request of the WWTF, approves alternate temperature limits;

- (6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through; and
 - (7) Pollutants that result in the presence of toxic gases, vapors, or fumes within the WWTF in a quantity that may cause acute worker health and safety problems.
 - ii. In the event that the Permittees identifies industrial wastes subject to regulation under the NPDES Pretreatment Program being discharged to the wastewater treatment plant, or the Regional Water Board or its Executive Officer determines that circumstances warrant pretreatment requirements in order to prevent interference [40 C.F.R. §403.3(j)] with the wastewater treatment facility or Pass Through [40 C.F.R. §403.3(n)], then:
 - (a) The Permittees shall notify the Regional Water Board **60 days** prior to allowing industrial waste discharges that trigger the pretreatment requirements to enter the Facility;
 - (b) The Permittees shall submit a revised ROWD and the pretreatment program for the Regional Water Board's review and approval as soon as possible, but no less than **30 days** prior to accepting industrial waste discharges;
 - (c) The Permittees shall enforce the federal categorical pretreatment standards on all categorical industrial users (CIUs);
 - (d) The Permittees shall notify each CIU of its discharge effluent limits. The limits must be as stringent as the pretreatment standards contained in the applicable federal category (40 C.F.R. part 400-699). The Permittees may develop more stringent, technology-based local limits if it can show cause; and
 - (e) The Permittees shall notify the Regional Water Board if any CIU violates its discharge effluent limits.
 - iii. The Regional Water Board retains the right to take legal action against an industrial user and/or the Permittees where a user fails to meet the approved applicable federal, state, or local pretreatment standards.
 - iv. The Regional Water Board may amend this Order, at any time, to require the Permittees to develop and implement an industrial pretreatment program pursuant to the requirements of 40 C.F.R. part 403 if the Regional Water Board finds that the Facility receives pollutants from an industrial user that is subject to pretreatment standards, or if other circumstances so warrant.

c. Sludge Disposal and Handling Requirements

- i. Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Biosolids refers to sludge that has been treated, tested, and demonstrated to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.
- ii. All collected sludge and other solid waste removed from liquid wastes shall be removed from screens, sumps, ponds, and tanks as needed to ensure optimal plant operation and disposed of in accordance with applicable federal and state regulations.
- iii. The use and disposal of biosolids shall separately comply with all of the land application and disposal requirements in 40 C.F.R. part 503, which are enforceable by the U.S. EPA, not the Regional Water Board. If during the life of this Order, the state accepts primacy for implementation of 40 C.F.R. part 503, the Regional Water Board may also initiate enforcement where appropriate.
- iv. Sludge or biosolids that are disposed of in a municipal solid waste landfill or used as daily landfill cover shall meet the applicable requirements of 40 C.F.R. part 258. In the annual self-monitoring report (SMR), the Permittees shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.
- v. The Permittees shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that may adversely affect human health or the environment.
- vi. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
- vii. Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas to protect the boundaries of the site from erosion and prevent drainage from the treatment and storage site. Adequate protection is defined as protection from a design storm with a 100-year recurrence interval and 24-hour duration.
- viii. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.

- ix. For the land application of biosolids as soil amendment, the Permittees shall submit a report of waste discharge or the Permittees may dispose of biosolids at another appropriately permitted facility.
- x. New sludge treatment and storage facilities must comply with the requirements of the title 27 of the CCR for the protection of water quality.

d. Operator Certification

Supervisors and operators of municipal wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with CCR, title 23, section 3680. The State Water Board may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment facility operator, the State Water Board may approve use of a water treatment facility operator of appropriate grade certified by Division of Drinking Water (DDW) where water recycling is involved.

e. Adequate Capacity

If the Facility will reach capacity within 4 years, the Permittees shall notify the Regional Water Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies, and the press. Factors to be evaluated in assessing reserve capacity shall include, at a minimum, (1) comparison of the wet weather design flow with the highest daily flow, and (2) comparison of the average dry weather design flow with the lowest 30-day flow. The Permittees shall demonstrate that adequate steps are being taken to address the capacity problem. The Permittees shall submit a technical report to the Regional Water Board showing how flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Water Board, or within 120 days after receipt of Regional Water Board notification that the Facility will reach capacity within 4 years. The time for filing the required technical report may be extended by the Regional Water Board. An extension of 30 days may be granted by the Executive Officer and longer extensions may be granted by the Regional Water Board itself. [CCR, title 23, section 2232].

6. Other Special Provisions

a. Storm Water

For the control of storm water discharges from the Facility, if required, the Permittees shall seek separate authorization to discharge under the requirements of the State Water Board's Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (or subsequent renewed versions of the NPDES General Permit CAS000001), which is not incorporated by reference in this Order.

For control of storm water discharges from construction at the Facility the Permittees are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ.

Best management practices (BMPs) to control the run-on of storm water to the Facility site shall be maintained and upgraded as necessary. The Permittees shall describe the effectiveness of these storm water BMPs, as well as activities to maintain and upgrade these BMPs during the previous year, in its annual report to the Regional Water Board.

7. Compliance Schedules

The Permittees shall implement activities according to the following schedule.

Table 5: Schedule for Compliance with this Order

Task	Task Description	Due Date
1	The Facility shall be incorporated into the Peninsula Community Services District.	Before first discharge commences
2	Submit Facility O&M Plan	30 days prior to first discharge
3	The existing residences in the Town of Samoa shall be connected to the Facility before discharging out EFF-001 shall commence.	Before first discharge commences.
4	All new residential, commercial and industrial construction shall be connected to the Facility.	Within 180 days after the Facility is constructed and in service.
5	The existing wastewater treatment plant and any existing private septic system(s) shall be removed or remediated in accordance with Regional Water Board requirements, and otherwise properly abandoned, subject to any necessary coastal development permit.	Within 180 days of connection of the subject residences to the Facility.
6	The Samoa Resource Recovery Center shall be connected to the Facility	Within 180 days after the Facility is constructed and in service.
7	Submit the Disaster Preparedness Assessment Report and Action Plan that will, in part, analyze the effects of 5.3 feet of sea level rise by the year 2100.	August 1, 2023

8	Achieve sufficient emergency capacity and/or containment of effluent, emergency energy supply and backup pumping capacity to continue to operate the Facility for a minimum of 72 hours in the event of severed outside power.	Before first discharge commences.
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VII. COMPLIANCE DETERMINATION

Compliance with the discharge prohibitions and effluent limitations contained in sections III and IV of this Order, respectively, will be determined as specified below.

A. Compliance with Effluent Limitations

- 1. Single Constituent Effluent Limitations.** The Permittees are out of compliance with the effluent limitation if the concentration of the pollutant (see section VII.C) in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).
- 2. Effluent Limitations Expressed as a Sum of Several Constituents.** The Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as non-detect (ND) or detected but not quantified (DNQ).

B. Multiple Sample Data

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Permittees shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Permittees shall compute the median in place of the arithmetic mean in accordance with the following procedure.

- 1.** The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is not important.
- 2.** The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both of the points are ND or DNQ, in which case a value of zero shall be used for the ND or DNQ value in the median calculation for compliance purposes only. Using a value of zero for DNQ or ND samples does not apply when performing reasonable potential or antidegradation analyses.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B, above, for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Permittees will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittees will be considered out of compliance for that calendar month. The Permittees will only be considered out of compliance for days when the discharge occurs. If there are ND or DNQ results for a specific constituent in a calendar month, the Permittees shall calculate the median of all sample results within that month for compliance determination with the AMEL as described in section VII.B, above.

D. Average Dry Weather Flow (ADWF)

Compliance with the ADWF prohibition in section III.H of this Order will be determined once each calendar year by evaluating all flow data collected in a calendar year. The flow through the Facility, measured daily and averaged monthly, must be 0.0528 mgd or less for the month with the lowest average monthly flow. Compliance with this prohibition shall be measured continuously at Monitoring Location INF-001 and calculated daily.

E. Peak Wet Weather Flow (PWWF)

The PWWF is the maximum flow rate that occurs over a 24-hour period. Compliance with the PWWF prohibition in section III.H of this Order will be determined once daily by measuring the daily average flow at Monitoring Location INF-001. If the measured daily average flow exceeds 0.0756 mgd, the discharge is not in compliance with Prohibition III.H of this Order.

F. Average Weekly Effluent Limitation (AWEL)

The arithmetic mean of all samples collected in a calendar month, calculated as the sum of all samples in a calendar month divided by the number of samples. If only one sample is collected in a calendar month, that sample result will constitute the monthly average and daily maximum results for the purpose of determining compliance with effluent limitations.

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge

occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

G. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

H. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Permittees will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

If the Permittees monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittees shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

I. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Permittees will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

If the Permittees monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittees shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total sum of time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

J. Bacteriological Limitations

1. Single Sample Maximum. All single sample results are compared to single sample maximum limitations. Single sample results are only compared to the

median, geometric mean, six-week rolling geometric mean, and statistical threshold value when sampling is required at the frequency required to properly assess compliance, as further stated in 2. through 5, below. Compliance with a single annual sample is determined in comparison to single sample maximum limitations only. If single sample maximums are routinely exceeded, the Regional Water Board may require additional sampling to assess whether the Permittee's discharge is the source of the exceedance in the receiving water.

2. **Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. The median value is determined based on the number of data points in the set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.
3. **Geometric Mean (GM).** The geometric mean is a type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean shall be calculated using the 5 most recent samples from a site using the following formula:
$$GM = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$
, where x is the sample value and n is the number of samples taken.
4. **Six-week Rolling Geometric Mean.** The rolling geometric mean shall be calculated using at least 5 sample results over a 6-week period from a site using the following formula:
$$GM = \sqrt[n]{(x_1)(x_2)(x_3)\dots(x_n)}$$
, where x is the sample value and n is the number of samples taken.
5. **Statistical Threshold Value.** (1) The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. (2) The number of sample results should then be multiplied by 90 percent then rounded up to the nearest whole number. (3) Count the values in the data set starting from lowest to highest until the number indicated in step (2) is reached. (4) To be compliant with the statistical threshold value in Receiving Water Limitation V.A.2.a,i.b, all sample results less than the point described in step 3 must be less than 100 MPN/100 mL.

K. Bacteriological Limitations (Fecal Coliform Bacteria, Enterococci, and Total Coliform Bacteria)

1. The geometric mean² for enterococci in section IV.A.1.c.i. shall be calculated weekly based on six or more effluent sample results collected within the last rolling six-week period.
2. **Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, followed by quantified values. The median value is determined based on the number of data points in the set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.

L. Chronic Toxicity

Compliance with the accelerated monitoring and TRE provisions shall constitute compliance with the chronic toxicity requirements, as specified in the MRP (Attachment E, sections V.A and V.B).

² See definition in Attachment A.

ATTACHMENT A – DEFINITIONS

Areas of Special Biological Significance (ASBS)

Those areas designated by the State Water Resources Control Board (State Water Board) as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

Arithmetic Mean (μ)

Also called the average is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative Pollutants

Substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic Pollutants

Substances that are known to cause cancer in living organisms.

Chlordane

Shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane

Chronic Toxicity

This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response. See also Test of Significant Toxicity.

Coefficient of Variation (CV)

A measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

DDT

Shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Degrade

Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Detected, but Not Quantified (DNQ)

Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

Shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Dilution Credit

The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil."

Enclosed Bays

Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan

The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estimated Chemical Concentrations

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Geometric Mean

The geometric mean is a type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean is defined as the nth root of the product of n numbers. The formula is expressed as: *Geometric Mean* = $\sqrt[n]{(x_1)(x_2)(x_3) \dots (x_n)}$, where x is the sample value and n is the number of samples taken.

Halomethanes

The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH

The sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution

The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

Inland Surface Waters

All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Kelp Beds

For purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

Mariculture

The culture of plants and animals in marine waters independent of any pollution source.

Material

(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)

The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)

The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone

A limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Natural Light

Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

Ocean Waters

The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons)

The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls)

The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Persistent Pollutants

Substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table 1 pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change,

operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Publicly Owned Treatment Works (POTW)

A treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a government agency as defined by section 502(4) of the CWA. Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to state law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes. This definition includes any devices and systems used in the storage, treatment, recycling, and recycling of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the CWA, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Recycled Water

Water which, as a result of treatment of municipal wastewater, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource (Water Code section 13050). The terms “recycled water” and “reclaimed water” have the same meaning (Water Code section 26).

Reported Minimum Level

The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Permittees for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a of the Ocean Plan or established in accordance with section III.C.5.b of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Septage

Defined as the liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, recreational vehicle’s sanitation tank, or similar storage or treatment works that receives domestic waste.

Shellfish

Organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference

Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation

The highest allowable moving median of all daily discharges for any 180-day period.

Standard Deviation (σ)

A measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

State Water Quality Protection Areas (SWQPAs)

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents

The sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

Test of Significant Toxicity (TST)

The statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). TST was developed by the U.S. Environmental Protection Agency (EPA) for analyzing WET and ambient toxicity data. Using the TST approach, the sample is declared toxic if there is greater than or equal to a 25% effect in chronic tests, or if there is greater than or equal to a 20% effect in acute tests at the permitted instream waste concentration (IWC) (referred to as the toxic regulatory management decision (RMD)). The sample is declared non-toxic if there is less than or equal to a 10% effect at the IWC in acute or chronic tests (referred to as the non-toxic RMD).

Toxicity Reduction Evaluation (TRE)

A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

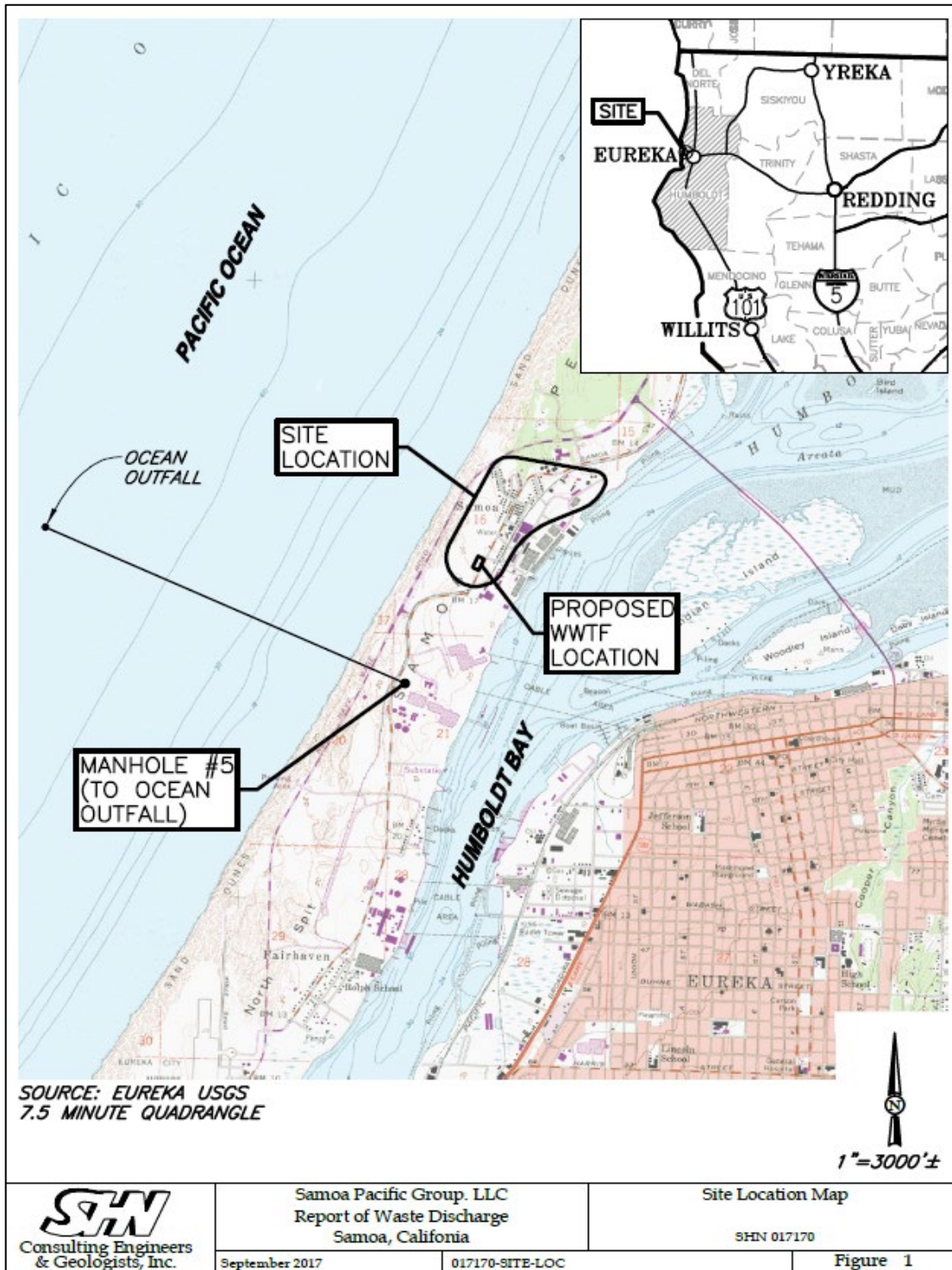
Waste

As used in the Ocean Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

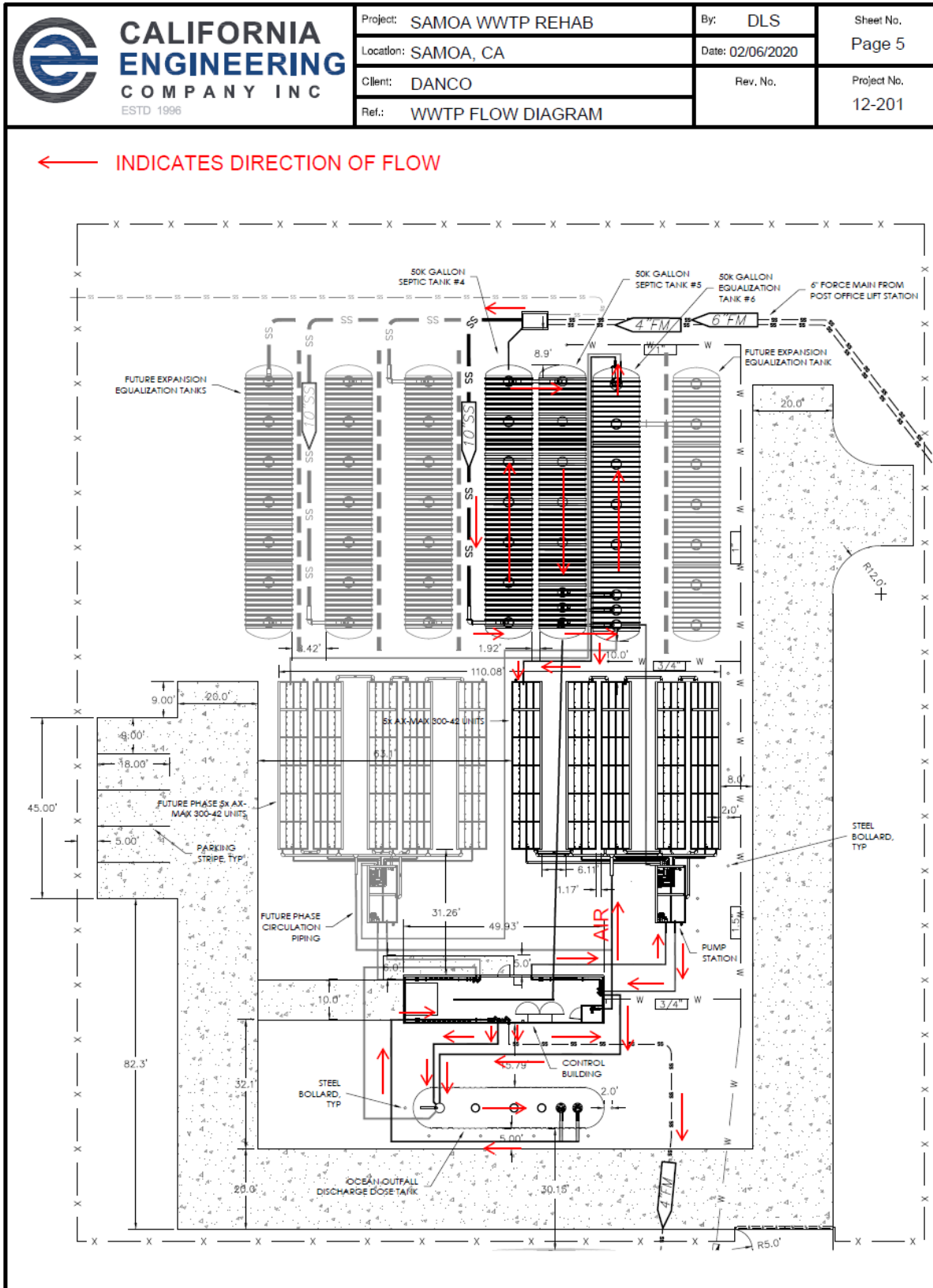
Water Recycling

The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittees must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385)
2. The Permittees shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1))

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittees in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c))

C. Duty to Mitigate

The Permittees shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d))

D. Proper Operation and Maintenance

The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittees to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Permittees only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e))

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g))
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c))

F. Inspection and Entry

The Permittees shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittees' premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383)

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i))
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii))

2. Bypass not exceeding limitations. The Permittees may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2))

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against the Permittees for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Permittees submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C))
4. **Burden of Proof.** In any enforcement proceeding, the Permittees seeking to establish the bypass defense has the burden of proof.
 5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii))
 6. **Notice**
 - a. **Anticipated bypass.** If the Permittees knows in advance of the need for a bypass, it shall submit a prior notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i))
 - b. **Unanticipated bypass.** The Permittees shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii))

H. **Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittees. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1))

1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2))
2. **Conditions necessary for a demonstration of upset.** A Permittees who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Permittees can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

- b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Permittees submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - d. The Permittees complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv))
3. **Burden of proof.** In any enforcement proceeding, the Permittees seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4))

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittees for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f))

B. Duty to Reapply

If the Permittees wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittees must apply for and obtain a new permit. (40 C.F.R. § 122.41(b))

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittees and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61)

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1))
- B. Monitoring must be conducted according to test procedures under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R., chapter 1, subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is “sufficiently sensitive” when:
 - 1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and, either the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is

above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv))

In the case of sludge use or disposal approved under 40 C.F.R. part 503, monitoring must be conducted according to test procedures in part 136 unless otherwise specified in 40 C.F.R. or other test procedures have been specified in this Order.

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Permittees' sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Permittees shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2))
- B. **Records of monitoring information shall include:**
 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi))
- C. **Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):**
 1. The name and address of any permit applicant or Permittees (40 C.F.R. § 122.7(b)(1)); and
 2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2))

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittees shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittees shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k))
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3))
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3))
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports,

information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c))

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d))

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e))

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4))
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring, sludge use, or disposal practices. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i))
3. If the Permittees monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii))
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii))

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be

submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5))

E. Twenty-Four Hour Reporting

1. The Permittees shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittees becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittees becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(40 C.F.R. § 122.41(l)(6)(i))

For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i))

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A))
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B))
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii))

F. Planned Changes

The Permittees shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii))
3. The alteration or addition results in a significant change in the Permittees' sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii))

G. Anticipated Noncompliance

The Permittees shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2))

H. Other Noncompliance

The Permittees shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7))

I. Other Information

When the Permittees becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Permittees shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8))

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9))

VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 C.F.R. § 122.42(b)(2))
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3))

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) section 13383 also authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations. The monitoring and reporting requirements included in this MRP are in effect once the Facility begins discharge to manhole 5 ending in discharge from the ocean outfall.

I. GENERAL MONITORING PROVISIONS

- A. **Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.
- B. **Supplemental Monitoring Provision.** If the Permittees monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 C.F.R. part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.
- C. **Data Quality Assurance Provision.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) in accordance with the provisions of Water Code section 13176 and must include quality assurance / quality control data with their analytical reports. The Permittees may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) with field equipment or its on-site laboratory provided that the Permittees has standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results. The Permittees shall keep a manual onsite containing the steps followed in this program and must demonstrate sufficient capability to adequately perform these on-site laboratory and field tests (e.g., qualified and trained employees, properly calibrated and maintained on-site laboratory and field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.
- D. **Instrumentation and Calibration Provision.** All monitoring instruments and devices used by the Permittees to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one-year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E. **Minimum Levels (ML) and Reporting Levels (RL).** Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. Environmental Protection Agency (U.S. EPA) approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the

test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed in Table 1 of the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (2015)* (Ocean Plan) shall also adhere to guidance and requirements contained in the Ocean Plan. However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the Ocean Plan. For instance, U.S. EPA Method 1631E for mercury is not currently listed in Ocean Plan Appendix II, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

- F. **Discharge Monitoring Report Quality Assurance (DMR-QA) Study.** The Permittees shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board
 Quality Assurance Program Officer
 Office of Information Management and Analysis
 1001 I Street, Sacramento, CA 95814

II. MONITORING LOCATIONS

The Permittees shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Influent wastewater prior to treatment and following all significant input of waste to the treatment system and consisting of wastewater from the collection system.
--	INT-001	Location for monitoring ultraviolet light (UV) radiation dose and UV transmittance of the UV disinfection system.
001	EFF-001	A location where representative samples of the treated wastewater to be discharged to the Pacific Ocean at Discharge Point 001 can be collected at a point after treatment, including UV disinfection, and prior to manhole 5 and commingling with wastewater discharges from other facilities in the Humboldt Bay Harbor District's outfall line.
--	BIO-001	A representative sample of the sludge or biosolids generated when removed for disposal.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Permittees shall monitor influent to the Facility at Monitoring Location INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Influent Flow ¹	mgd	Meter	Continuous	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	24-hr Composite	Weekly	Part 136 ²
Total Suspended Solids (TSS)	mg/L	24-hr Composite	Weekly	Part 136 ²

Table Notes:

- The Permittees shall report the daily average and monthly average flows at INF-001
- Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration).

IV. EFFLUENT MONITORING REQUIREMENTS**A. Monitoring Location EFF-001**

- The Permittees shall monitor treated effluent at Monitoring Location EFF-001 during periods of discharge to the Pacific Ocean at Discharge Point 001 as follows:

Table E-3. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ¹	mgd	Meter	Continuous	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	24-hr Composite	Weekly	Part 136 ²
	% Removal	Calculate	Monthly	--
Oil and Grease	mg/L	Grab	Monthly	Part 136 ²
pH	s.u.	Grab	Weekly	Part 136 ²
Total Suspended Solids (TSS)	mg/L	24-hr Composite	Weekly	Part 136 ²
	% Removal	Calculate	Monthly	--
Ammonia Nitrogen, Total (as N)	mg/L	Grab	Monthly	Part 136 ²
Settleable Solids	ml/L	Grab	Weekly	Part 136 ²
Turbidity	NTU	Grab	Weekly	Part 136 ²
Enterococci	CFU/100 mL	Grab	Weekly	Part 136 ²
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Part 136 ²
Temperature	°F	Grab	Weekly	Part 136 ²
Ocean Plan Table 1 Pollutants ³	µg/L	Grab/Composite ⁴	Once per permit term ⁵	Part 136 ²
Chronic Toxicity ⁶	TUc	Grab	Twice per permit term	See section V below

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<u>Table Notes:</u>				
1. The Permittees shall report the daily average, monthly average and peak daily flows.				
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of Standard Methods for Examination of Water and Wastewater (American Public Health Administration).				
3. Excluding acute toxicity.				
4. Grab samples shall be used for volatile chemicals listed in Table II-1 of the Ocean Plan (2019). Composite samples shall be used for all other Ocean Plan Table 1 parameters.				
5. Sampling shall be conducted within 1 year following commencement of discharges at Discharge Point 001.				
6. Chronic whole effluent toxicity (WET) shall be monitored in accordance with the requirements of section V of this MRP.				

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. Chronic Toxicity Testing

The Permittees shall conduct chronic WET testing in accordance with the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittees shall conduct chronic WET testing twice during the permit term, within the first 2 years following commencement of discharges at Discharge Point 001, as summarized in Table E-3, above.
2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 0.87 percent effluent.
3. **Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection.

For toxicity tests requiring renewals (*Atherinops affinis*), a minimum of three samples shall be collected. The lapsed time (holding time) from sample collection to first use of each sample must not exceed 36 hours.

4. **Chronic Marine Test Species and Test Methods.** If effluent samples are collected from outfalls discharging to receiving waters with salinity >1 ppt, the Permittees shall conduct the following chronic toxicity tests on effluent samples at the discharge IWC in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine prepared from natural seawater shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.
 - a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0).
 - b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0), or a static non-renewal toxicity test with the mussel, *Mytilus spp* (Embryo-Larval Shell Development Test Method).

- c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).
- 5. Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittees shall collect a single effluent sample and concurrently conduct three chronic toxicity tests using the fish, an invertebrate, and the alga species identified in section V.A.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest¹ "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit term.
- 6. Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.
- a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" for chronic toxicity tests using the TST approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (H_0) for the TST approach is: Mean discharge IWC response $\leq 0.75 \times$ Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent (%) Effect" at the discharge IWC is defined and reported as: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$. The IWC for the chronic toxicity test is 0.87 percent effluent.
 - b. If the effluent toxicity test does not meet the minimum effluent or reference toxicant test acceptability criteria (TAC) specified in the referenced test method, then the Permittees shall re-sample and re-test within 14 days.
 - c. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
 - d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.
 - e. The Permittees shall perform toxicity tests on final effluent samples. Ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the MRP and the rationale is explained in the Fact Sheet (Attachment F).
 - f. **Ammonia Removal.** Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittees must demonstrate the effluent toxicity is caused by

¹ If the Percent Effect is less than or equal to 0% for each species, the Permittees shall either perform the test procedures again or use the species that was most sensitive during the previous permit term.

ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH-sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

- i. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
- ii. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
- iii. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.
- iv. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures that do not significantly alter the nature of the effluent.

7. **Notification.** The Permittees shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of a result of "Fail" during routine or accelerated monitoring.
8. **Accelerated Monitoring Requirements.** Accelerated monitoring for chronic toxicity is triggered when a chronic toxicity test, analyzed using the TST approach, results in "Fail" and the "Percent (%) Effect" is ≥ 0.50 . Within 24 hours of the time the Permittees becomes aware of a summary result of "Fail", the Permittees shall implement an accelerated monitoring schedule consisting of four toxicity tests—consisting of 5-effluent concentrations (including the discharge IWC) and a control—conducted at approximately 2-week intervals, over an 8-week period. If each of the accelerated toxicity tests results is "Pass," the Permittees shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is "Fail", the Permittees shall immediately implement the TRE Process conditions set forth in section V.B, below.
9. **Reporting**
 - a. **Routine Reporting.** Chronic toxicity monitoring results shall be submitted with the annual self-monitoring report (SMR) for the year in which chronic toxicity was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:
 - i. WET reports shall include the contracting laboratory's complete report provided to the Permittees and shall be consistent with the appropriate "Report Preparation and Test Review" sections of the methods manual and this MRP. The WET test reports shall contain a narrative report that

includes details about WET test procedures and results, including the following:

- (a) Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia);
- (b) The source and make-up of the lab control/diluent water used for the test;
- (c) Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
- (d) Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUc, and IC25;
- (e) Identification of any anomalies or nuances in the test procedures or results;
- (f) WET test results shall include, at a minimum, for each test:
 - (1) Sample date(s);
 - (2) Test initiation date;
 - (3) Test species;
 - (4) Determination of “Pass” or “Fail” and “Percent (%) Effect” following the TST hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). The “Percent (%) Effect” shall be calculated as follows:
$$\text{“Percent Effect” (or Effect, in \%)} = ((\text{Control mean response} - \text{IWC mean response}) \div \text{Control mean response}) \times 100$$
 - (5) Endpoint values for each dilution (e.g., number of young, growth rate, percent survival);
 - (6) NOEC value(s) in percent effluent;
 - (7) IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;
 - (8) TUc values (100/NOEC);
 - (9) Mean percent mortality (\pm s.d.) after 96 hours in 100 percent effluent (if applicable);
 - (10) NOEC and LOEC values for reference toxicant test(s);
 - (11) IC50 or EC50 value(s) for reference toxicant test(s);
 - (12) Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia);

- (13) Statistical methods used to calculate endpoints;
- (14) The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and
- (15) Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

- b. **TRE/TIE Results.** The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. TRE/TIE results shall be submitted to the Regional Water Board within 60 days of completion.

B. Toxicity Reduction Evaluation (TRE) Process

- 1. **TRE Work Plan.** The Permittees shall prepare and submit to the Regional Water Board Executive Officer a TRE Work Plan **by June 1, 2022**. The Permittees' TRE Work Plan shall be reviewed and updated as necessary to remain current and applicable to the discharge and discharge facilities.

The Permittees shall notify the Regional Water Board of this review and submit any revisions of the TRE Work Plan within 90 days of the notification, to be ready to respond to toxicity events. The TRE Work Plan shall describe the steps the Permittees intends to follow if toxicity is detected and should include at least the following items:

- a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- b. A description of the Facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.
- c. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

- 2. **Preparation and Implementation of a Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in section V.A.8, above, results in "Fail", the Permittees shall immediately initiate a TRE using EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and, within 30 days of receipt, submit the accelerated monitoring results to the Regional Water Board Executive Officer. The Permittees shall also submit a Detailed TRE Work Plan, which shall follow the generic TRE Work Plan revised as appropriate for the toxicity event described in section V.A.8

of this MRP. The Detailed TRE Work Plan shall include the following information and comply with additional conditions set by the Regional Water Board Executive Officer:

- a. Further actions by the Permittees to investigate, identify, and correct causes of toxicity.
 - b. Actions the Permittees will take to mitigate effects of the discharge and prevent the recurrence of toxicity.
 - c. A schedule for these actions, progress reports, and the final report.
- 3. TIE Implementation.** The Permittees may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test methods and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
4. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Permittees shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
 5. The Permittees shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.
 6. The Regional Water Board recognizes that toxicity may be episodic and identification of the causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

This Order does not authorize discharges to land.

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

This Order does not authorize discharges of recycled water.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water Monitoring – Not Required

This Order does not require surface water monitoring at this time.

B. Groundwater Monitoring – Not Required

This Order does not require groundwater monitoring at this time.

IX. OTHER MONITORING REQUIREMENTS

A. Disinfection Process Monitoring for UV Disinfection System

- 1. Monitoring.** The UV transmittance of the effluent from the UV disinfection system shall be monitored continuously and recorded at Monitoring Location INT-001. The operational UV dose shall be calculated from UV transmittance and flow.
- 2. Compliance.** Unless otherwise approved by the Regional Water Board Executive Officer, the UV transmittance shall not fall below 50 percent of maximum at any time, the operational UV dose shall not fall below 60 millijoules per square centimeter (mJ/cm^2) at any time and the flow shall not exceed 0.0864 mgd.
- 3. Reporting.** The Permittee shall report daily average and lowest daily transmittance and operational UV dose on its monthly monitoring reports. The Permittee shall report daily average and minimum flow through the UV disinfection system. If the UV transmittance falls below 50 percent or UV dose falls below $60 \text{ mJ}/\text{cm}^2$, the event shall be reported to the Regional Water Board by telephone within 24 hours.

B. Biological Survey

The Humboldt Bay Harbor District is pursuing a plan that would combine three separately permitted NPDES waste streams through the outfall at Discharge Point 001. Currently, the DG Fairhaven Power Facility is permitted to discharge wastewater through the same ocean outfall at Discharge Point 001.

The Permittees, either separately or in coordination with the Humboldt Bay Harbor District, DG Fairhaven Power, LLC, and any additional dischargers that utilize the ocean outfall at Discharge Point 001, shall conduct a comparative evaluation of indigenous biota in the vicinity of the outfall using a qualified aquatic biologist, at least once every 5 years. The biologist shall prepare a report of observations, including objectionable aquatic growths, floating particulates or grease and oil, aesthetically undesirable discoloration of the ocean surface, color of fish or shellfish, and any evidence of degradation of indigenous biota attributable to the rate of deposition of inert solids, settleable material, nutrient materials, increased concentrations of organic materials, or increased concentrations of Ocean Plan Table 1 substances. The Permittees shall submit to the Regional Water Board Executive Officer for approval a Biological Survey Work Plan no later than **August 1, 2021**, in order to complete the survey and prepare a final report by the due date for receipt of an application for permit renewal. The final report shall be submitted no later than **August 1, 2023**.

C. Sludge Monitoring (Monitoring Location BIO-001)

1. Sludge sampling shall be conducted according to the requirements specified by the location and type of disposal activities undertaken.
2. Sampling records shall be retained for a minimum of 5 years. A log shall be maintained for sludge quantities generated and handling and disposal activities. The frequency of entries is discretionary; however, the log must be complete enough to serve as a basis for developing the Sludge Handling and Disposal Report that is required as part of the Annual Report.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Permittees shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self-Monitoring Reports (SMRs)

1. The Permittees shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Website (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittees shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittees personnel or consultant) on how to prepare and submit eSMRs.
2. The Permittees shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittees shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittees monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following the end of each quarter ¹ (February 1, May 1, August 1, November 1)

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Once per permit term	Permit effective date	All	March 1 following the year that monitoring is completed (with annual report) and at least 180 days prior to permit expiration
Twice per permit term	Permit effective date	All	March 1 following the year that monitoring is completed (with annual report) and at least 180 days prior to permit expiration
Table Note:			
1. Quarterly monitoring periods are as follows: January 1 through March 31; April 1 through June 30; July 1 through September 30; and October 1 through December 31.			

5. **Reporting Protocols.** The Permittees shall report with each sample result the applicable ML, the RL, and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Permittees shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. The Permittees is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples

relative to calibration standards) is the lowest calibration standard. At no time is the Permittees to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

6. The Permittees shall submit SMRs in accordance with the following requirements:
 - a. The Permittees shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation. The Permittees is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittees shall electronically submit the data in a tabular format as an attachment.
 - b. The Permittees shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
 - i. Facility name and address;
 - ii. WDID number;
 - iii. Applicable period of monitoring and reporting;
 - iv. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);
 - v. Corrective actions taken or planned; and
 - vi. The proposed time schedule for corrective actions.
 - c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Website (<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that an alternate method for submittal of SMRs is required, the Permittees shall submit the SMR electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://www.waterboards.ca.gov/northcoast>.

c. Discharge Monitoring Reports (DMRs)

1. DMRs are U.S. EPA reporting requirements. The Permittees shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. DMRs shall be submitted quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, and November 1). Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/.

D. Other Reports

- 1. Special Study Reports and Progress Reports.** As specified in the Special Provisions contained in section VI of the Order and in the MRP, special study and progress reports shall be submitted in accordance with the following reporting requirements.

Table E-5. Reporting Requirements for Special Provisions Reports

Order Section	Special Provision Requirement	Reporting Requirements
Special Provision VI.C.2.a	Disaster Preparedness Assessment Report and Action Plan	August 1, 2023
Special Provision VI.C.3.a.ii(e)	Pollutant Minimization Program, Annual Facility Report	March 1 , annually, following development of Pollutant Minimization Program
Special Provision VI.C.4.d	Old Facility Decommission Plan and Report.	June 1, 2020
Special Provision VI.C.5.b.i	Source Control and Pretreatment Provisions, Annual Report	March 1, annually
Special Provision VI.C.5.b.ii(a)	Source Control and Pretreatment Provisions, Notification of Discharges that Trigger Pretreatment Requirements	Within 30 days of discharges that trigger pretreatment requirements
Special Provision VI.C.5.b.ii(b)	Source Control and Pretreatment Provisions, Revised Report of Waste Discharge and Pretreatment Program	Within 1 year of discharges that trigger pretreatment requirements
Special Provision VI.C.5.e	Adequate Capacity, Technical Report	Within 120 days of notification that the Facility will reach capacity within 4 years
MRP General Monitoring Provision I.F	DMR-QA Study Report	Annually , per State Water Board instructions
MRP WET Testing Requirement V.A.9.b	Notification of TRE/TIE Results	No later than 30 days from completion of each aspect of the TRE/TIE analyses
MRP WET Testing Requirement V.A.9.b	TRE/TIE Results	Within 60 days of completion of TRE/TIE analyses
MRP WET Testing Requirement V.B.1	TRE Work Plan	June 1, 2022
MRP WET Testing Requirement V.B.2	Detailed TRE Work Plan	Within 30 days of an accelerated monitoring test that results in "Fail"
MRP Other Monitoring Requirement IX.B	Biological Survey Work Plan	August 1, 2021
MRP Other Monitoring Requirement IX.B	Biological Survey Final Report	August 1, 2023
MRP Reporting Requirement X.E	Spills and Unauthorized Discharge Reporting	Oral reporting within 24 hours and written report within 5 days

- 2. Annual Report.** The Permittees shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site

(<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that an alternate method for submittal of the annual report is required, the Permittees shall submit the annual report electronically via the email address in section X.B.6.c., above. The report shall be submitted by **March 1st** of the following year and certified as required by Standard Provisions (Attachment D) of this Order. The report shall, at a minimum, include the following:

- a. Where appropriate, tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittees monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 C.F.R. part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.
- b. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.
- c. The names and general responsibilities of all persons employed at the Facility;
- d. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and
- e. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
- f. **Source Control Activity Reporting.** The Permittees shall submit, as part of its Annual Report to the Regional Water Board, a description of the Permittees' source control activities, as required by Special Provision VI.C.5.b.i, during the past year. This annual report is due on **March 1st** of each year, and shall contain:
 - i. A copy of the source control standards, including a table presenting local limits.
 - ii. A description of the waste hauler permit system; if applicable.
 - iii. A summary of the compliance and enforcement activities taken by the Permittees during the past year, which ensures industrial user compliance. The summary shall include the names and addresses of any industrial or commercial users under surveillance by the Permittees, an explanation of whether they were inspected, sampled, or both, the frequency of these activities at each user, and the conclusions or results from the inspection or sampling of each user.
 - iv. A summary of public outreach activities to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial and toxic wastes to the Facility.
- g. **Sludge Handling and Disposal Activity Reporting.** The Permittees shall submit, as part of its annual report to the Regional Water Board, a

description of the Permittees' solids handling, disposal, and reuse activities, as required by Special Provision VI.C.5.c of this Order, over the previous 12 months. At a minimum, the report shall contain:

- i. Annual sludge production, in dry tons and percent solids;
- ii. Sludge monitoring results;
- iii. A schematic diagram showing sludge handling facilities (e.g., digesters, thickeners, drying beds, etc.), if any and a solids flow diagram;
- iv. Methods of final disposal of sludge:
 - (a) For any portion of sludge discharged to a sanitary landfill, the Permittees shall provide the volume of sludge transported to the landfill, the names and locations of the facilities receiving sludge, the Regional Water Board's WDRs Order number for the regulated landfill, and the landfill classification.
 - (b) For any portion of sludge discharged through land application, the Permittees shall provide the volume of biosolids applied, the date and locations where biosolids were applied, the Regional Water Board's WDRs Order number for the regulated discharge, a demonstration that the discharge was conducted in compliance with applicable permits and regulations, and, if applicable, corrective actions taken or planned to bring the discharge into compliance with WDRs.
 - (c) For any portion of sludge further treated through composting, the Permittees shall provide a summary of the composting process, the volume of sludge composted, and a demonstration and signed certification statement that the composting process and final product met all requirements for Class A biosolids.
- v. Results of internal or external third-party audits of the Biosolids Management System, including reported program deficiencies and recommendations, required corrective actions, and a schedule to complete corrective actions.
- h. **Storm Water Reporting.** The Permittees shall submit, as part of its annual report to the Regional Water Board, an evaluation of the effectiveness of the Permittees' best management practices (BMPs) to control the run-on of storm water to the treatment facility site, as well as activities to maintain and upgrade these BMPs.

E. Spill Notification

1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges [except sanitary sewer overflows (SSOs)] that may endanger health or the environment shall be provided orally to the Regional Water Board² within 24 hours from the time the Permittees becomes aware of the

² The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor's Office of Emergency Services Warning Center (CalOES) will satisfy the 24

circumstances, and a written report shall be provided within five (5) days of the time the Permittees becomes aware of the circumstances, in accordance with section V.E of Attachment D.

Information to be provided verbally to the Regional Water Board includes:

- a. Name and contact information of caller;
- b. Date, time, and location of spill occurrence;
- c. Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;
- d. Surface water bodies impacted, if any;
- e. Cause of spill, if known at the time of the notification;
- f. Cleanup actions taken or repairs made at the time of the notification; and
- g. Responding agencies.

2. **Sanitary Sewer Overflows (SSOs).** Notification and reporting of SSOs shall be conducted in accordance with the requirements of Order No. 2006-0003-DWQ (Statewide General WDRs for Sanitary Sewer Systems), which is not incorporated herein by reference, and any revisions thereto.

hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in Section I, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Permittees. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittees.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	1B85017RHUM
Permittees	Peninsula Community Services District and Samoa Pacific Group
Name of Facility	Town of Samoa Wastewater Treatment Facility
Facility Address	3 North Bay View Road
	Samoa, CA 95564
	Humboldt County
Facility Contact, Title and Phone	Daniel Unea, Facility Operator, (707) 599-4951
Authorized Person to Sign and Submit Reports	Dan Johnson, Owner, (707) 822-9000 Troy Nicolini, CSD General Manager, (707) 496-5959
Mailing Address	5251 Ericson Way, Arcata, CA 95521
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable
Recycling Requirements	Not Applicable
Facility Permitted Flow	0.0528 million gallons per day (mgd) (average dry weather flow)
	0.0756 mgd (peak wet weather flow)
Facility Design Flow	0.0528 mgd (average dry weather flow)
	0.0756 mgd (peak wet weather flow)
Watershed	Eureka Plain
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean Waters

- A. The Peninsula Community Services District and Samoa Pacific Group (hereinafter Permittees) is the owner and operator of the Town of Samoa Wastewater Treatment Facility (hereinafter Facility), a POTW.

For the purposes of this Order, references to the “discharger” or “Permittees” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittees herein.

The Permittees are authorized to discharge subject to waste discharge requirements (WDRs) in this Order at the discharge location described in Table 2 on the cover page of this Order. The Code of Federal Regulations at 40 C.F.R. section 122.46 limits the

duration of National Pollutant Discharge Elimination System (NPDES) permits to be effective for a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the effective period for the discharge authorized by this Order. Pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on continuation of expired permits are complied with.

- B. The Facility discharges disinfected secondary treated wastewater to the Pacific Ocean, a water of the United States. Attachment B provides a map of the area around the Facility and the discharge point. Attachment C provides a flow schematic of the Facility.
- C. The Permittees filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and a new NPDES permit on September 29, 2017. Supplemental information was submitted on March 13, 2018. The application was deemed complete on **October 3, 2019**.

II. FACILITY DESCRIPTION

The Town of Samoa is located on the Samoa Peninsula in Humboldt County, California. Currently, wastewater within the Town of Samoa originates from 93 occupied residences, the Samoa Cookhouse Restaurant, a post office, hostelry, museum, the Samoa Woman's Club, and the Samoa Elementary School. Wastewater from these sources flows into one of three wastewater collection treatment and disposal systems: the Eastern System, Western System, and School System. The School System's wastewater will be connected to the new wastewater treatment plant during Phase One of the upgrade project.

The Eastern System serves the majority of the town, including the Samoa Cookhouse Restaurant, Samoa Woman's Club, hostelry, and 68 of the occupied residences. The Eastern System currently consists of three septic tanks and two bark filters (the bark filters are no longer operational) distributed in the collection system that discharge into an equalization and treatment pond. The pond is followed by a percolation basin located in near the ridge top on the western edge of Humboldt Bay, just north of the Western side of the Samoa Bridge. The discharge of this system is to the Humboldt Bay watershed.

The Western System serves approximately 25 occupied residences on the west side of the ridge line of the peninsula. The Western System discharges through a 15,000 gallon septic tank to a leach-trench system in the sand dunes north west of New Navy Base Road. The discharge from this system is to the Pacific Ocean watershed.

The Permittees are planning a three-phased development project as described in the [Town of Samoa Master Plan](#) (Master Plan) to reconfigure existing property lines to provide a variety of land uses including additional single-family residential and multi-family affordable housing; commercial properties, both coastal dependent and recreational; and a business park. Phase I of the Master Plan, which is scheduled to be completed during the term of this Order, will include construction of a new wastewater treatment facility, phased construction of a new wastewater collection system, and subsequent removal of the existing wastewater collection systems, and bark filters. Flows currently treated and disposed of separately by the Eastern and Western systems will be consolidated and conveyed the new Facility. In addition to the construction of a new wastewater treatment

facility and associated collection system, Phase I proposes to upgrade nine dilapidated residences within the existing service area and construct an 84-unit multi-family housing unit. Following completion of Phase I of the Master Plan, the Permittees anticipate the Facility will serve a residential population of approximately 510 in addition to the existing commercial sources.

Phase II of the Master Plan will construct 105 new single-family residential units and 62 multi-family units. Phase III of the Master Plan involves the construction of a business park along with additional coastal-dependent industrial development. Phase III proposes to allocate approximately 35.2 acres for industrial/coastal-dependent businesses and construct an 18.6-acre business park.

A. Description of Wastewater and Biosolids Treatment and Controls

1. Wastewater Treatment Facility

The proposed wastewater treatment facility will be designed to provide secondary wastewater treatment for an average dry weather flow of 0.0528 mgd and a peak daily wet weather flow of 0.0756 mgd, which corresponds to the maximum projected flows from Phase III of the Master Plan development project.

On March 3, 2020, the Permittees submitted a new Facility design that no longer includes the equalization pond and the pre-anoxic pond. To provide flow equalization for the new Facility, five 50,000-gallon fiberglass settling tanks are to be installed and operated in series. Wastewater treatment provided by the pre-anoxic pond specified in the original design will now occur in two 50,000-gallon pre-anoxic tanks, where primary treated effluent will be blended with recirculated filtered effluent from the AX-Max filtration units to provide denitrification. Orenco Bio-tube filters will be attached to the outlets of the settling tanks to further remove solids prior to wastewater entering the pre-anoxic tanks.

Secondary treatment is performed using Orenco AX-Max textile filtration units as proposed in the original design. The UV disinfection system has been upgraded from the UV Pure Hallett 30 to the UV Pure Hallett 1000 for longer lamp life and larger system capacity.

2. Biosolids Management

Sludge generated during the treatment process will be pumped and hauled to a dewatering facility to be combined with biosolids from other municipal facilities and dewatered. Dried biosolids will be hauled from the dewatering facility to a Class B landfill for disposal.

In addition to the treatment system discussed above, an alternative treatment system is being proposed to provide treatment for towns on the Samoa Peninsula that include Fairhaven and Finntown. This alternative system would replace the current treatment system but retain the current system to use as a back-up under certain circumstances.

B. Discharge Points and Receiving Waters

Secondary treated wastewater will be discharged at Discharge Point 001 at 40° 49' 10" N latitude and 124° 13' 32" W longitude to the Pacific Ocean. The

Humboldt Bay Harbor District (Harbor District) owns and maintains the 48-inch diameter outfall line that terminates approximately 1.5 miles off-shore.

This outfall was formerly owned by Freshwater Pulp (formerly Evergreen Pulp, formerly Samoa Pacific Cellulose, LLC). The Harbor District acquired the outfall during a property acquisition of Freshwater Tissue/Freshwater Pulp property in August 2013. The Permittees have entered into a lease agreement with the Harbor District that allows the Permittees access to the outfall for Facility operations. The Permittees have completed environmental studies for the construction of a 0.75-mile pipeline between the proposed Facility and the existing outfall pipe at Manhole No. 5 (shown on site map in Attachment B), which was formerly the monitoring point for the pulp mill.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data – Not Applicable

This section is not applicable because this is a new NPDES permit.

D. Compliance Summary – Not Applicable

This section is not applicable because this is a new NPDES permit.

E. Planned Changes

As discussed in Section II and II.A of this Fact Sheet, the Permittees is planning a three-phased development project within the Town of Samoa. The project will include replacement of the existing collection systems, abandonment of the existing treatment system, extension and connection to an existing ocean outfall, and construction of a new wastewater treatment facility.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, and division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Permittees to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of chapter 3 of CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

- 1. Water Quality Control Plan.** The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) that

designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). With high concentrations of total dissolved solids, ocean waters meet an exception to State Water Board Resolution No. 88-63; and therefore, the MUN designation is not applicable to the ocean receiving water for this Permittees. Beneficial uses applicable to the Pacific Ocean are summarized in Table F-3, below:

Table F-2. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	<p><u>Existing:</u> Navigation (NAV); Water contact recreation (REC-1); Non-contact water recreation (REC-2); Commercial and sport fishing (COMM); Wildlife habitat (WILD); Rare, threatened, or endangered species (RARE); Marine habitat (MAR); Migration of aquatic organisms (MIGR); Spawning, reproduction, and/or early development (SPAWN); Shellfish harvesting (SHELL); and Aquaculture (AQUA).</p> <p><u>Potential:</u> Industrial water supply (IND); Industrial process supply (PRO); and Preservation of Areas of Special Biological Significance (ASBS).</p>
--	Groundwater	<p><u>Existing:</u> Municipal and domestic supply (MUN); Agricultural supply (AGR); Industrial service supply (IND); and Native American Culture (CUL).</p> <p><u>Potential</u> Industrial Process Supply (PRO); and Aquaculture (AQUA).</p>

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971 and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters.

The Thermal Plan is applicable to the discharge from the Facility. The discharge from the Facility is considered to be a New Discharge of Elevated Temperature Waste to Coastal Waters, as defined by the Thermal Plan. The Thermal Plan in section 3.B contains the following temperature objectives for new discharges to coastal waters:

- a. *Elevated temperature wastes shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.*

The proposed discharge at Discharge Point 001 will occur through an existing outfall located 1.5 miles offshore, which meets the requirement of an open ocean discharge away from the shoreline.

- b. *Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.*

The Facility will not discharge in the vicinity of an area of special biological significance (ASBSs).

- c. *The maximum temperature of thermal waste discharges shall not exceed the natural temperature of receiving waters by more than 20°F.*

The proposed Facility will not discharge thermal waste, which is defined as cooling water and industrial process water used for the purposes of transporting waste heat. Therefore, this Thermal Plan requirement is not applicable to discharges from the Facility.

- d. *The discharge of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.*

These Thermal Plan requirements are established as receiving water limitations in this Order, as described in section V.A.2 of this Fact Sheet.

- e. *Additional limitations shall be imposed when necessary to assure protection of beneficial uses.*

This Order establishes effluent monitoring requirements for temperature to characterize the effluent temperature and potential impacts to water quality.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, and 2015. The State Water Board adopted the latest amendment on May 6, 2015, and it became effective on January 28, 2016. The Ocean Plan is applicable, in its entirety, to point source discharges to the Pacific Ocean. In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program for implementation. The Ocean Plan identifies the beneficial uses of ocean waters of the state to be protected as summarized below:

Table F-3. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	<p><u>Existing:</u> Industrial water supply; Water contact and non-contact recreation, including aesthetic enjoyment; Navigation; Commercial and sport fishing; Mariculture; Preservation and enhancement of designated Areas of Special Biological Significance (ASBS); Rare and endangered species; Marine habitat; Fish migration; Fish spawning; and Shellfish harvesting.</p>

Requirements of this Order implement the Ocean Plan.

- 4. Compliance Schedules and Interim Requirements.** The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which includes compliance schedule policies for pollutants that are not addressed by the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). This Policy became effective on August 27, 2008.

Section VI.C.7 Order includes a compliance schedule with requirements contingent on the California Coastal Commission Coastal Development Permit to ensure that all new development is properly connected to the Facility.

- 5. Antidegradation Policy.** 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. As discussed in detail in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

7. **Endangered Species Act Requirements.** This Order does not authorize an act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 or 2097) or the Federal Endangered Species Act (16 U.S.C.A sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, and endangered species. The Permittees are responsible for meeting all requirements of the applicable Endangered Species Act.

D. Impaired Water Bodies on the CWA section 303(d) List

Section 303(d) of the federal CWA requires states to identify water bodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Water Bodies, every two years. In addition to identifying the water bodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The CWA requires development of a total maximum daily load (TMDL) or alternate program of implementation for each 303(d)-listed pollutant and water body to remedy the impairment. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine waste load allocations (the portion of a TMDL allocated to existing and future point sources) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On April 6, 2018, the U.S. EPA provided final approval of the 2014 and 2016 303(d) List of Impaired Water Bodies prepared by the state. The Pacific Ocean, in the vicinity of the discharge, is not listed as an impaired water body on the 303(d) list.

E. Other Plans, Policies and Regulations

1. On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, *Statewide General WDRs for Sanitary Sewer Systems* and on August 6, 2013 adopted Order No. WQ 2013-0058-EXEC Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDRs. This Order requires, upon Executive Officer issuance, the Permittees to apply for coverage under Order Nos. 2006-0003-DWQ and WQ 2013-0058-EXEC and any future revisions thereto for operation of its wastewater collection system.
2. Coverage under State Water Board Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial Storm Water General Permit) is not required based on the size of the Facility (less than 1 mgd).

3. Coverage under State Water Board Water Quality General Order No. 2009-0009-DWQ, General Permit for Discharges of Storm Water Associated with Construction Activity.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exist.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** The discharge of any waste not disclosed by the Permittees or not within the reasonable contemplation of the Regional Water Board is prohibited.

This prohibition is based on the Basin Plan and State Water Board Order No. WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No. WQO 2002-0012, the State Water Board found that this prohibition is acceptable in Orders, but should be interpreted to apply only to constituents that are either not disclosed by the Permittees, or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Permittees. It specifically does not apply to constituents in the discharge that do not have “reasonable potential” to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were “*disclosed to the permitting authority and...can be reasonably contemplated.*” [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002) Order No. WQO 2002-0012, p. 24]. In that Order, the State Water Board cited a case which held the Permittee is liable for the discharge of pollutants “*not within the reasonable contemplation of the permitting authority...whether spills or otherwise...*” [*Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland* (4th Cir. 2001) 268 F. 3d 255, 268.] Thus, the State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Permittees and (2) can be reasonably contemplated by the Regional Water Board.

2. **Discharge Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code, is prohibited.

This prohibition is based on section 13050 of the Water Code and section 5411 of the California Health and Safety Code.

3. **Discharge Prohibition III.C.** The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c of this Order (Sludge Disposal and Handling Requirements).

This prohibition is based on restrictions on the disposal of sewage sludge found in federal regulations [40 C.F.R. part 503 (Biosolids), part 527, and part 258] and title 27 of the CCR.

4. **Discharge Prohibition III.D.** The discharge of untreated or partially treated waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions G (Bypass) and H (Upset).

This prohibition is based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and the intent of the Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the state without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** Any SSO that results in a discharge of untreated or partially treated wastewater to (a) waters of the state or (b) land that creates pollution, contamination, or nuisance, as defined in Water Code section 13050(m) is prohibited.

This prohibition applies to spills related to SSOs and is based on state standards, including section 13050 of the Water Code and the Basin Plan. This prohibition is consistent with the state's antidegradation policy as specified in State Water Board Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Water in California*) in that the prohibition imposes conditions to prevent impacts to water quality, the degradation of water quality, negative effects on receiving water beneficial uses, and lessening of water quality beyond that prescribed in State Water Board or Regional Water Board plans and policies.

This prohibition is stricter than the prohibitions stated in State Water Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Order No. 2006-0003-DWQ prohibits SSOs that result in the discharge of untreated or partially treated wastewater to waters of the United States and SSOs that cause a nuisance, compared to Prohibition III.E of this Order, which prohibits SSO discharges that create nuisance or pollution to waters of the state and land for a more complete protection of human health. The rationale for this prohibition is because of the prevalence of high groundwater in the North Coast Region and this Region's reliance on groundwater as a drinking water source.

6. **Discharge Prohibition III.F.** The discharge of waste to land that is not owned by the Permittees, governed by District ordinance, or under agreement to use by the Permittees, or for which the Permittees have explicitly permitted such use, is prohibited, except for use for non-structural fire suppression as provided in title 22, section 60307(b) of the CCR.

This prohibition is established to prohibit unauthorized discharges to land.

7. **Discharge Prohibition III.G.** The discharge of waste at any point not described in Finding II.B of the Fact Sheet or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

This prohibition is a general prohibition that allows the Permittees to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

8. **Prohibition III.H.** The average dry weather flow of waste through the Facility shall not exceed 0.0528 million gallons per day (mgd), measured daily and averaged over a calendar month. The peak daily wet weather flow of waste through the Facility shall not exceed 0.0756 mgd. Compliance with this prohibition shall be determined as defined in sections VII.J and VII.K of this Order.

This prohibition is based on the average dry weather and peak wet weather treatment capacity of the planned Facility based on the complete buildout of all three phases of the Master Plan. Exceedance of these capacities on a daily basis may result in effluent violations and/or the need to bypass untreated effluent blended with treated effluent, which is prohibited.

9. **Prohibition III.I.** The discharge of any radiological, chemical, or biological warfare agent or radioactive waste into waters of the state is prohibited.

This prohibition is based on the discharge prohibitions contained in section III.I of the Ocean Plan and section 13375 of the Water Code.

10. **Prohibition III.J.** The discharge of sludge directly into the ocean or into a waste stream that discharges to the ocean is prohibited.

This prohibition is based on the discharge prohibitions contained in section III.I of the Ocean Plan.

11. **Prohibition III.K.** The bypassing of untreated wastes containing concentrations of pollutants in excess of those of Ocean Plan Tables 3 or 4 (2019) is prohibited.

This prohibition is based on the discharge prohibitions contained in section III.I. of the Ocean Plan.

12. **Prohibition III.K.** The acceptance of septage to a location other than an approved septage receiving station is prohibited.

This prohibition is newly established by this Order and is necessary to ensure that septage is not accepted in the absence of a septage management program to ensure that pollutants associated with domestic septage do not pass through or interfere with the operation or performance of the Facility.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 C.F.R. part 133.

Regulations promulgated in 40 C.F.R. section 125.3(a)(1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the U.S. EPA Administrator.

Based on this statutory requirement, U.S. EPA developed secondary treatment regulations, which are specified in 40 C.F.R. part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH, as follows:

a. BOD₅ and TSS

- i. The 30-day average shall not exceed 30 mg/L.
- ii. The 7-day average shall not exceed 45 mg/L.
- iii. The 30-day average percent removal shall not be less than 85%.

b. pH

The pH shall be maintained within the limits of 6.0 to 9.0.

The effluent limitation for pH required to meet the water quality objective for hydrogen ion concentration (pH) is contained in the Basin Plan, Table 3-1.

In addition, 40 C.F.R. section 122.45(f) requires the establishment of mass-based effluent limitations for all pollutants limited in Orders, except for 1) pH, temperature, radiation, or other pollutants that cannot be appropriately expressed by mass, and 2) when applicable standards and limitations are expressed in terms of other units of measure.

2. Applicable Technology-Based Effluent Limitations

- a. **Secondary Treatment Standards (BOD₅, TSS, and pH).** As described above, the secondary treatment standards at 40 C.F.R. part 133 establish the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅, TSS, and pH. Numeric effluent limitations for BOD₅, TSS,

and pH, including the percent removal requirements for BOD₅ and TSS, have been established in this Order and reflect the secondary treatment standards at 40 C.F.R. part 133.

- b. **Ocean Plan Table 2 Effluent Limitations (Oil and Grease, TSS, Settleable Solids, Turbidity, and pH).** The State Water Board, in Table 2 of the Ocean Plan, has established technology-based requirements for oil and grease, TSS, settleable solids, turbidity, and pH. Table 2 effluent limitations apply to POTWs, and also to industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to sections 301, 302, 304, or 306 of the federal CWA. Compliance with Table 2 effluent limitations shall be the minimum level of treatment acceptable under the Ocean Plan and shall define reasonable treatment and waste control technology. The Facility is a POTW; therefore, technology-based limitations contained in Table 2 of the Ocean Plan are applicable to the Permittees.

This Order includes effluent limitations for oil and grease, turbidity, and pH based on Table 2 of the Ocean Plan. Table 2 of the Ocean Plan includes effluent limitations for oil and grease, settleable solids, and turbidity of 75 mg/L, 3.0 ml/L, and 225 NTU, respectively, not to be exceeded at any time. To be consistent with the averaging period specified in Table 2 of the Ocean Plan, this Order establishes these effluent limitations as instantaneous maximum effluent limitations.

The percent removal requirements for TSS in the secondary treatment requirements (i.e., 85 percent) are more stringent than the percent removal requirements in Table 2 of the Ocean Plan (i.e., 75 percent); therefore, this Order establishes percent removal requirements for TSS based on the secondary treatment standards at 40 C.F.R. part 133.

- c. **Mass-Based Effluent Limitations.** Federal regulations at 40 C.F.R. section 122.45(f) require that, except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. Among the conditions exempting the application of mass-based limitations is section 40 C.F.R. section 122.45(f)(1)(i), which states “*for pH, temperature, and radiation, or other pollutants which cannot appropriately be expressed by mass*” and 40 C.F.R. section 122.45(f)(1)(ii), which states “*when applicable standards and limitations are expressed in terms of other units of measurement.*”

This Order does not include mass-based effluent limitations for the following pollutants pursuant to the exception in 40 C.F.R. section 122.45(f)(1)(i) and (ii):

- i. BOD₅ and TSS, because these two parameters are expressed in terms of concentration and percent removal;
- ii. Settleable solids, turbidity, and pH because these parameters cannot appropriately be expressed by mass; and
- iii. Oil and grease, because the applicable standards for oil and grease in Table 2 of the Ocean Plan are expressed in terms of concentration.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water, as specified in the Basin Plan and Ocean Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. **Beneficial Uses.** Beneficial use designations for receiving waters for discharges from the Facility are presented in section III.C.1 and III.C.3 of this Fact Sheet.
- b. **Ocean Plan Water Quality Objectives.** Water quality criteria applicable to ocean waters of the Region are established by the Ocean Plan, which includes general provisions and water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. These water quality objectives from the Ocean Plan are incorporated as receiving water limitations in section V.A of the Order. Table 1 of the Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 C.F.R. section 122.44(d)(1), and in accordance with procedures established by the Ocean Plan, the Regional Water Board has performed an Ocean Plan reasonable potential analysis (RPA) to determine the need for effluent limitations for the Table 1 toxic pollutants.
- c. **Minimum Initial Dilution.** WDRs Order Nos. R1-2010-0033 and R1-2018-0013 for the Freshwater Tissue Company's Samoa Pulp Mill and DG Fairhaven Power, LLC, were previously regulated for discharge out of the Ocean Outfall were the Permittees propose to discharge. These previous Orders applied a minimum initial dilution of 115:1 (i.e., 115 parts ocean water

to 1 part effluent) for discharges from the ocean outfall. A February 2016 *Diffuser Performance Assessment Report for the Redwood Marine Terminal II Ocean Outfall* prepared for the County of Humboldt and the Harbor District suggest that a minimum initial dilution of 115:1 is appropriate for the discharge. The report indicated that greater than 100:1 dilution could be achieved for flows ranging up to 40 MGD, except where the effluent salinity is greater than 30 psu (similar to seawater) and effluent temperature is similar to the receiving water temperature. These high salinity/low temperature conditions are not anticipated from the combined discharge from the DG Fairhaven Power Facility and the Facility; therefore, this Order utilizes a minimum initial dilution of 115:1.

3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard.

- a. **Ocean Plan Reasonable Potential Analysis (RPA).** Procedures for performing an RPA for ocean dischargers are described in section III.C and Appendix VI of the Ocean Plan. In general, the procedure is a statistical method that projects an effluent data set while taking into account the averaging period of water quality objectives, the long-term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set, and compares the 95th percentile concentration at 95 percent confidence of each Table 1 pollutant, accounting for dilution, to the applicable water quality criterion. The RPA results in one of three following endpoints.

Endpoint 1 – There is “reasonable potential,” and a WQBEL and monitoring are required.

Endpoint 2 – There is “no reasonable potential.” WQBELs are not required, and monitoring is required at the discretion of the Regional Water Board.

Endpoint 3 – The Ocean Plan RPA is inconclusive. Existing WQBELs are retained, and monitoring is required.

The State Water Board has developed a reasonable potential calculator, which is available at <http://www.waterboards.ca.gov/plnspols/docs/oplans/rpcalc.zip>. The calculator (RPcalc 2.2) shall be used in conducting the RPA and considers several pathways in the determination of reasonable potential.

- i. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Regional Water Board may decide that WQBELs are

necessary after a review of such information. Such information may include: the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, 303(d) status of the receiving water, or the presence of threatened or endangered species or their critical habitat, or other information.

ii. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

iii. Third Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant, and compared to the most stringent applicable water quality objective to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed lognormally. If the 95th percentile value is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

iv. Fourth Path

If the effluent data contains three or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps.

(a) If the number of censored values (those expressed as a “less than” value) account for less than 80 percent of the total number of effluent values, calculate the ML (the mean of the natural log of transformed data) and SL (the standard deviation of the natural log of transformed data) and conduct a parametric RPA, as described above for the Third Path.

(b) If the number of censored values account for 80 percent or more of the total number of effluent values, conduct a non-parametric RPA, as described below for the Fifth Path. (A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution.)

v. Fifth Path

A non-parametric RPA is conducted when the effluent data set contains less than three detected and quantified values, or when the effluent data set contains three or more detected and quantified values but the number of censored values accounts for 80 percent or more of the total number of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable water quality

objective, and accounting for ties. The sample number is reduced by one for each tie, when the dilution adjusted method detection limit (MDL) is greater than the water quality objective. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the water quality objective. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limitations in the expiring permit are retained.

b. Reasonable Potential Determination

Since no effluent data is available for the planned discharge to the Pacific Ocean at Discharge Point 001, a qualitative RPA using RPcalc 2.2 could not be conducted. The Monitoring and Reporting Program (MRP) (Attachment E) for this Order requires the Permittees to conduct monitoring for the parameters subject to water quality objectives in Table 1 of the Ocean Plan within 1 year following commencement of discharges from the Facility at Discharge Point 001 in order to obtain representative data to conduct an RPA. Results from the RPA will be used to determine the need for effluent limitations, in the next permit term, for Table 1 parameters given in the Ocean Plan. This Order may be reopened to establish new effluent limitations based on the monitoring results.

The Facility is a POTW that treats domestic wastewater. Pollutants of concern in domestic wastewater include conventional pollutants and certain toxic pollutants, such as ammonia. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "*State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting authority might also determine that WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's discharging to contact recreational waters).*" U.S. EPA's *Technical Support Document for Water Quality-Based Toxics Control* (TSD) also recommends that factors other than effluent data should be considered in the RPA, "*When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data.*" With regard to POTW's, U.S. EPA recommends that, "*POTW's should also be characterized for the possibility of chlorine and ammonia problems.*" (TSD, p. 50)

Based on the Permittees' design specifications, the proposed Facility will be able to consistently achieve treatment of total ammonia nitrogen (as N) to concentrations 10 mg/L (10,000 µg/L) or less in the effluent. Table 1 of the Ocean Plan includes 6-month median, daily maximum, and instantaneous maximum effluent limitations of 600 µg/L, 2,400 µg/L, and 6,000 µg/L, respectively, for ammonia. It is uncertain whether the discharge from the

Facility will exhibit reasonable potential to cause or contribute to an exceedance of the water quality objectives in the Ocean Plan for ammonia. Therefore, this Order requires the Permittees to conduct monthly effluent monitoring for total ammonia nitrogen (as N) to collect sufficient data for conducting an RPA prior to the next permit renewal. The Permittee does not use chlorine as a disinfection method and instead utilizes UV disinfection to achieve compliance with bacteria standards. Therefore, no chlorine monitoring is required by this Order.

c. Non-Table 1 Water Quality Objectives

- i. Bacteria (Fecal Coliform Bacteria, Enterococci, and Total Coliform Bacteria).** The Ocean Plan includes bacterial objectives for ocean waters used for water contact recreation and shellfish harvesting. For total and fecal coliform bacteria and the enterococcus group of bacteria, water contact standards must be met within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated for water contact recreation use by the Regional Water Board. Shellfish harvesting standards for total coliform bacteria must be maintained throughout the water column. In lieu of receiving water bacterial monitoring, the Permittees are required to meet the most stringent water quality standards, shellfish harvesting standards, at end of the Permittee's transmission line, before discharge to manhole 5.

(a) Water Contact Standards

The Ocean Plan includes bacterial standards for fecal coliform bacteria and enterococci for protection of ocean waters used for water contact recreation. The enterococci objectives are based on an estimated illness rate of 32 per 1,000 primary contact recreators in U.S. EPA's 2012 Recreational Water Quality Criteria. The fecal coliform objectives were retained in the Ocean Plan, in addition to the enterococci objectives, based on California-specific epidemiological studies that suggest fecal coliform may be a better indicator of gastrointestinal illness than enterococci during certain types of exposure and environmental conditions. As a result, both objectives for enterococci and fecal coliform are applicable.

The water contact standards must be met within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline. The Facility's outfall is located 1.25 miles offshore and public access to offshore areas surrounding the Facility's outfall is open and unrestricted. Therefore, the water contact standards are applicable to the receiving water in the vicinity of the outfall.

Although the Facility provides disinfection, inadequate or incomplete disinfection of municipal wastewater creates the potential for pathogens to be discharged. Therefore, the Regional Water Board

finds the discharge has reasonable potential for pathogens and WQBEL's are required.

To comply with the Ocean Plan, and instead of requiring receiving water monitoring and direct determination of compliance with WQO for bacteria, the disinfected effluent discharged through Discharge Point 001 shall not contain concentrations of enterococci, as measured at Monitoring Location EFF-001, exceeding the limitations. This Order does not establish effluent limitations for fecal coliform because the shellfish standard for total coliform is more stringent and will allow for assessment of compliance with the Ocean Plan fecal coliform limitations.

(1) Enterococci

The 6-week rolling geometric mean of enterococci shall not exceed 30 colony forming units (CFU) per 100 mL; and (ii)

No sample shall exceed a CFU of 110 per 100 mL.

Although the Ocean Plan specifies that this concentration should not be exceeded in 10 percent of samples collected in a calendar month, this Order applies the limitation as a single sample limitation for ease of determining compliance with the limitation.

These effluent limitations can reasonably be expected to be achieved with the new facilities and will ensure that bacterial standards for water contact recreation are maintained throughout the water column.

(b) Shellfish Standards

The Ocean Plan includes bacterial standards for total coliform bacteria for protection of ocean waters used for shellfish harvesting. Shellfish harvesting standards for total coliform bacteria must be maintained throughout the water column.

Regional Water Board staff has determined that there is a reasonable potential that the discharge can cause or contribute to exceedances of bacterial water quality objectives for shellfish harvesting. This determination is based on the following factors:

- (1)** The Ocean Plan specifies that shellfish standards shall be maintained throughout the water column (i.e., without dilution credit);
- (2)** Raw domestic wastewater inherently contains human pathogens that threaten human health and life and constitute a threatened pollution and nuisance under Water Code section 13050 if discharged untreated to the receiving water;
- (3)** A complete representation of the daily effluent quality is unavailable, since the Permittees have not completed construction of the Facility;

- (4) Receiving water monitoring data is not available for the area in the vicinity of the discharge; and
- (5) Public access to offshore areas surrounding the Facility's outfall is open and unrestricted. Members of the public wishing to harvest shellfish in the area can approach by boat and collect shellfish in accordance with state regulations.

In accordance with the Ocean Plan, the disinfected effluent discharged through Discharge Point 001 shall not contain concentrations of total coliform bacteria, as measured at Monitoring Location EFF-001, exceeding the following limitations:

(1) Total Coliform Bacteria

The median concentration shall not exceed an MPN of 70 organisms per 100 mL in a calendar month.

Not more than 10 percent of samples shall exceed an MPN of 230 organisms per 100 mL. Although the Ocean Plan specifies compliance with this objective using the results of 10 consecutive samples, this Order applies the limitation as a single sample limitation for ease of determining compliance with the limitation.

These effluent limitations can reasonably be expected to be achieved with the Permittees' planned Facility and will ensure that bacterial standards for both shellfish harvesting and water contact recreation are maintained throughout the water column.

4. WQBEL Calculations

At this time, no effluent data for Ocean Plan Table 1 pollutants is available, since the Facility has yet to be constructed. Therefore, this Order does not establish WQBELs applicable to the discharge to the Pacific Ocean at Discharge Point 001 except for total coliform organisms and enterococci bacteria, for which WQBELs have been established based on water quality objectives in section II.B of the Ocean Plan.

5. Whole Effluent Toxicity (WET)

Whole Effluent Toxicity monitoring triggers protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in the effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life.*" Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species,

and/or significant alterations in population, community ecology, or receiving water biota. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittees to conduct WET testing for chronic toxicity, as specified in the MRP (Attachment E, section V).

The Ocean Plan contains toxicity testing requirements based on minimum initial dilution (Dm) factors in section III.C.4.c. Following the implementation procedures of the Ocean Plan, dischargers with Dm factors ranging from 100:1 to 350:1 are required to conduct chronic toxicity testing and may be required to conduct acute toxicity testing as necessary for the protection of beneficial uses of ocean waters. This Order allows for a Dm of 115 for the acute and chronic conditions. The Permittees has not completed construction of the Facility; therefore, neither acute nor chronic WET data representative of the permitted Facility is available. Since the planned Facility is very small and there is a low potential for acutely toxic substances to be present in the treated municipal wastewater, acute toxicity testing requirements are not required in this Order. In accordance with the Ocean Plan (section III.C, Implementation Provisions for Table 1), this Order establishes chronic toxicity monitoring requirements for the discharge at Discharge Point 001.

Test of Significant Toxicity (TST)

The Ocean Plan establishes a daily maximum chronic toxicity objective of 1.0 TUc = 100/NOEC, using a five-concentration hypothesis test, and a daily maximum acute toxicity objective of 0.3 TUA = 100/LC50, using a point estimate model. In 2010, U.S. EPA endorsed the peer-reviewed TST two-concentration hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from U.S. EPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the current NOEC hypothesis-testing approach used in the Ocean Plan.

This Order does not include effluent limitations for toxicity based on the TST approach. However, this Order does require the Permittees to monitor and report results in a manner that will allow the Regional Water Board to conduct an RPA in accordance with the TST approach at the time of the next permit renewal.

The State Water Board is developing a toxicity amendment to the Water Quality Control Plan for Enclosed Bays and Estuaries of California that will standardize the regulation of aquatic toxicity for all non-oceanic surface waters. U.S. EPA's TST approach is an essential component of this draft toxicity amendment as it forms the basis for utilizing numeric water quality objectives and acts as the primary means of determining compliance with the proposed effluent limitations.

In a letter dated February 12, 2014, the State Water Board submitted an alternative test process (ATP) request to U.S. EPA Region 9 for the statewide use of a two-concentration toxicity test design when using the TST approach. This two-concentration test design is composed of a single effluent concentration and a control concentration. U.S. EPA approved the ATP request on March 17th, 2014. In June 2014, the approval was challenged in court on procedural grounds

under the Administrative Procedures Act by the Southern California Alliance of Publicly Owned Treatment Works (SCAP) and the Central Valley Clean Water Association (CVCWA). U.S. EPA withdrew the approval and notified State Water Board in a memo dated February 11, 2015.

It is important to note that U.S. EPA's rescission of its approval of the ATP is not based on the substantive TST statistical analysis or the scientific validity of a two-concentration test design. The withdrawal letter also states that currently there is a proposed rulemaking to change the language in the ATP regulations at 40 C.F.R. part 136.

The benefits of requiring the TST in new or amended permits include improving the statistical power of the toxicity test and simplifying the analysis as compared to the traditional hypothesis statistical approaches or point estimates. The calculations are straightforward and provide a clear pass/fail result. With the withdrawal of the two-concentration test design approval, an NPDES permit can still require the TST for statistical analyses. If the two-concentration test design is approved at a future date, the MRP may be modified to remove the need for a five-concentration test. Toxicity tests shall be run using a multi-concentration test design in accordance with 40 C.F.R. section 136.3, and the TST shall be utilized with the biological responses from the permitted in-stream waste concentration (IWC) and the control (effluent concentration of zero). However, even with only two of the five concentration biological responses being used, cost savings in the form of time and effort are still realized for the statistical analysis and data interpretation carried out by the Permittees, lab, and permit manager. This Order requires application of the TST for statistical analysis of whole effluent toxicity data.

Test of Significant Toxicity (TST) Design

The TST's null hypothesis for chronic toxicity is:

H_0 : Mean response (In-stream Waste Concentration (IWC) in % effluent) \leq 0.75 mean response (control)

Results are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The chronic IWC (in % effluent) for Discharge Point 001 is 0.87%.¹ The chronic toxicity trigger for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (b value) of 0.75 for the chronic toxicity methods in the MRP. The null hypothesis for this discharge is:

H_0 : Mean response (0.87% effluent) \leq 0.75 mean response (control)

The Permittees have not conducted chronic toxicity testing prior to construction of the Facility and reasonable potential to cause or contribute to an exceedance of water quality objectives for chronic toxicity cannot be assessed using the TST

¹ The IWC was calculated as follows, using the dilution of 115:
 $1/115 \times 100 = 0.87\%$

approach. Therefore, this Order does not include an effluent limitation for chronic toxicity.

This Order requires monitoring for chronic toxicity twice during the permit term, within the first 2 years following commencement of discharges from the Facility at Discharge Point 001. Results shall be analyzed using the TST hypothesis testing approach in section V.A.6.a of the MRP. Compliance with this chronic toxicity limitation is demonstrated by rejecting the null hypothesis and reporting “Pass” or “P”.

When the chronic toxicity test results in a “Fail” or “F,” the Permittees must initiate accelerated monitoring as specified in the MRP (Attachment E, section V). After accelerated monitoring, if conditions of chronic toxicity are found to persist, the Permittees will be required to conduct a TRE, as described by the MRP.

Notification requirements for chronic WET testing include a 72-hour verbal notification requirement and a 14-day written report requirement, if test results indicate toxicity. The 14-day written notification is established in the U.S. EPA WET Guidance documents cited in the MRP. The 72-hour verbal notification requirement is being added to provide the Regional Water Board with knowledge of the toxicity in advance of the written report. The 72-hour requirement is intended to give the Permittees sufficient time to make a telephone call to Regional Water Board staff and accounts for non-working days (e.g., weekends). Verbal notification of WET test exceedances may be left by voice mail if the Regional Water Board staff person is not immediately available by telephone.

This Order requires the Permittees to conduct a screening test using at least one vertebrate, invertebrate, and plant species. After the screening test is completed, monitoring can be reduced to the most sensitive species.

Chronic WET limitations will be established if future monitoring results demonstrate that discharges from the Facility are causing or contributing to chronic toxicity in the receiving water.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Anti-backsliding requirements do not pertain to this Order, since the planned Facility is a newly regulated discharge.

2. Antidegradation Policies

The Permittees have requested authorization to discharge up to an average dry weather flow of 0.0528 mgd and a peak daily wet weather flow of 0.0756 mgd from the Facility to the Pacific Ocean. As discussed below, the Regional Water Board conducted an antidegradation analysis to evaluate whether changes in water quality associated with the proposed discharge of secondary treated wastewater to the Pacific Ocean is consistent with the antidegradation provision

of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. The Regional Water Board followed the procedures established in State Water Board Administrative Procedures Update (APU) 90-004 to conduct the antidegradation analysis.

APU 90-004 specifies that a simple antidegradation analysis is sufficient and a complete antidegradation analysis is not required under certain conditions, including where a Regional Board determines that the proposed action will produce minor effects which will not result in a significant reduction in water quality and where the Regional Board determines that the proposed activity has been approved in the General Plan of a political subdivision and has been adequately subjected to the environmental and economic analyses in an environmental impact report (EIR) required under CEQA. Based on the level of treatment provided, low discharge flow, and large dilution available, the Regional Water Board finds that the proposed discharge will produce minor effects which will not result in a significant reduction in water quality. Additionally, construction of the collection system and Facility in the Town of Samoa was evaluated as part of the Samoa Town Master Plan Supplemental Environmental Impact Report (State Clearinghouse No. 2003052054). Therefore, the Regional Water Board determined that a simple antidegradation analysis is sufficient. Findings of the antidegradation analysis are summarized below.

- a. **Water quality parameters and beneficial uses which will be affected by the proposed expansion and the extent of the impact.** Compliance with this Order will not adversely impact beneficial uses of the receiving water. All beneficial uses will be maintained and protected. 40 C.F.R. section 131.12 defines the following tier designations to describe water quality in the receiving water body.

Tier 1 Designation: Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. (40 C.F.R. §131.12)

Tier 2 Designation: Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. (40 C.F.R. §131.12)

The tier designation is assigned on a pollutant-by-pollutant basis. Pollutants of concern in domestic wastewater include conventional pollutants and certain toxic pollutants, such as ammonia. The Pacific Ocean is not identified

on the 2014 and 2016 303(d) list as impaired. Therefore, the Pacific Ocean is considered a Tier 2 receiving water for all pollutants considered.

Monitoring data for the pollutants of concern is not available to characterize the extent of their impact since the Facility has yet to be constructed. Nevertheless, this Order establishes terms and conditions to ensure that the discharge does not unreasonably affect the present and anticipated beneficial uses of the Pacific Ocean, including effluent limitations for BOD₅, TSS, oil and grease, settleable solids, pH, and total coliform organisms. This Order includes effluent monitoring for ammonia and Ocean Plan Table 1 parameters. This Order may be reopened to include effluent limitations for ammonia and any parameters that indicate reasonable potential to cause or contribute to an exceedance of a water quality objective.

As discussed below, the antidegradation analysis evaluated whether allowance of the proposed discharge and associated increase in concentration and mass loading in this Order will result in the best practicable treatment or control of the discharge necessary to assure a pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

b. Scientific Rational for Determining Potential Lowering of Water Quality.

The rationale used in the Antidegradation Analysis is based on 40 C.F.R. section 131.12, U.S. EPA Region 9 Guidance on Implementing the Antidegradation Provisions of 40 C.F.R. section 131.12 (U.S. EPA 1987), State Water Board Resolution No. 68-16, a State Water Board 1987 policy memorandum to the Regional Water Boards, and an Administrative Procedures Update (APU 90-004) issued by the State Water Board to the Regional Water Boards.

c. Alternative Control Measures Considered. The Regional Water Board has considered the feasibility of alternative treatment and control methods which might reduce, eliminate, or compensate for the negative impacts of the proposed discharge, including maintaining the current wastewater collection and treatment infrastructure and construction of a tertiary treatment system with discharge to land through a leachfield system.

The current collection and wastewater treatment systems are subject to high inflow and infiltration and includes an aging septic tank and a surface discharge to an isolated wetland, which do not provide a high level of treatment and may be adversely impacting groundwater.

The land discharge alternative would require a higher level of treatment (i.e., Full Advanced Treatment) as compared to the proposed discharge. However, without Full Advanced Treatment, land discharge would have the potential to cause adverse effects to the municipal and domestic supply uses of the underlying groundwater. Furthermore, the Full Advanced Treatment system, which would include filtration, may require additional energy consumption. The construction and operational costs associated with the tertiary treatment system which would be required for land disposal exceed those of the proposed discharge alternative.

The Regional Water Board finds that the environmental impacts associated with the proposed discharge alternative are lower than those associated with the land discharge alternative. The treatment system is designed to achieve compliance with the requirements of the Ocean Plan. The utilization of UV disinfection will reduce the potential for formation of disinfection byproducts associated with chlorine disinfection systems and ensure compliance with the applicable water quality objectives for those parameters in the Ocean Plan. Therefore, the Regional Water Board finds that the proposed discharge alternative will provide for the best practicable treatment or control of the discharge.

- d. **Socioeconomic Evaluation.** The Regional Water Board performed a socioeconomic analysis to determine if the lowering of water quality in the Pacific Ocean is in the maximum interest of the people of the state. For the socioeconomic evaluation, the Regional Water Board considered:
- i. The social benefits and costs based on the ability to accommodate socioeconomic development in the Town of Samoa Master Plan and the ROWD;
 - ii. The anticipated change in water quality from existing conditions, the water quality impacts, and expected effects on beneficial uses of the Pacific Ocean;
 - iii. The feasibility and effectiveness of reducing the lowering of water quality by implementing alternatives to lowering of Pacific Ocean water quality; and
 - iv. The economic costs for alternatives compared to the costs of the proposed discharge.
- e. **Justification for Allowing Degradation.** The Regional Water Board finds that the proposed discharge and associated degradation is appropriate, as follows:
- i. The proposed discharge will accommodate important economic and social development in the area and provide maximum benefit to the people of the state. Specifically, the proposed discharge will provide for additional single-family residential and multi-family affordable housing; commercial properties, both coastal dependent and recreational; and a business park.
 - ii. The proposed improvements to the collection and treatment systems will provide for improved environmental conditions in the area.
 - iii. The new discharge will not adversely affect existing or probable beneficial uses of the Pacific Ocean, nor will it cause water quality to fall below applicable water quality objectives.

The Regional Water Board finds that the proposed discharge of up to an average dry weather flow of 0.0528 mgd and a peak daily wet weather flow of 0.0756 mgd from the Facility is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. Compliance with

these requirements will result in the best practicable treatment or control of the discharges from the Facility.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD₅, oil and grease, pH, settleable solids, TSS, and turbidity. Restrictions on these pollutants are discussed in section IV.B of this Fact Sheet. This Order's technology-based pollutant restrictions implement section III.B, Table 2 of the Ocean Plan, and the minimum, applicable federal technology-based requirements.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "*applicable water quality standards for purposes of the CWA*" pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

The Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

E. Interim Effluent Limitations – Not Applicable

This Order does not establish interim effluent limitations or schedules for compliance with final limitations.

F. Land Discharge Specifications and Requirements – Not Applicable

This Order does not authorize discharges to land.

G. Recycling Specifications – Not Applicable

This Order does not authorize discharges of recycled water.

H. Other Requirements

- a. **Disinfection Process Requirements for Ultraviolet Light (UV) Disinfection System.** This Order contains monitoring requirements for the UV disinfection system in section IV.D.1. These requirements are needed to ensure that the disinfection process achieves effective pathogen reduction.

UV system operation requirements are necessary to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses, bacteria) in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, and wastewater flow through the UV system. Minimum dosage requirements are based on the Permittees' proposed design specifications for the UV disinfection system, which identify site-specific

UV operating specifications for virus inactivation necessary to protect Beneficial Uses. Minimum UV dosage requirements specified in section IV.D.1 of the Order ensure that adequate disinfection of wastewater will be achieved.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. Ocean Plan

CWA section 303(a-c) requires states to adopt water quality standards, including criteria, where they are necessary to protect beneficial uses. The State Water Board adopted water quality criteria as water quality objectives in the Ocean Plan. Receiving water limitations within this Order reflect all applicable, general water quality objectives of the Ocean Plan.

The Ocean Plan includes numeric and narrative water quality objectives for various beneficial uses. This Order contains receiving water limitations for discharges to the Pacific Ocean based on the Ocean Plan numerical and narrative water quality objectives for bacteria, dissolved oxygen, floating particulates, oil and grease, pH, discoloration, natural lighting, deposition of solids, dissolved sulfides, organic materials in sediments, Table 1 parameters, nutrient materials, radioactive wastes, and biological characteristics.

2. Thermal Plan

The Thermal Plan is applicable to the discharge from the Facility. The discharge is considered to be a New Discharge of Elevated Temperature Waste to Coastal Waters, as defined in the Thermal Plan. Therefore, as described in section III.C.2 of this Fact Sheet, the water quality objectives for new discharges to coastal waters at section 3.B.(4) of the Thermal Plan have been established as receiving water limitations in this Order.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the Order. The Permittees must comply with all Standard Provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The rationale for the special conditions contained in the Order is provided in section VI.B, below.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R.

sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Permittees shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2 of the Order.

- a. Order Provision VI.A.2.a identifies the state's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., 40 C.F.R. sections 122.41(j)(5) and (k)(2)).
- b. Order Provision VI.A.2.b requires the Permittees to notify Regional Water Board staff, orally and in writing, in the event that the Permittees does not comply or will be unable to comply with any Order requirement. This provision requires the Permittees to make direct contact with a Regional Water Board staff person.

B. Special Provisions

1. Reopener Provisions

- a. **Standard Revisions (Special Provision VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, and include the following:
 - i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.
 - ii. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.
- b. **Reasonable Potential (Special Provision VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the discharge governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.
- c. **Whole Effluent Toxicity (WET) (Special Provision VI.C.1.c).** This Order requires the Permittees to investigate the causes of and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a numeric acute and/or chronic toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

- d. **303(d)-Listed Pollutants (Special Provision VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are subject of any future TMDL action.

2. Special Studies and Additional Monitoring Requirements

- a. **Disaster Preparedness Assessment Report and Action Plan (Special Provision VI.C.2.a).** Natural disasters, extreme weather events, sea level rise, and shifting precipitation patterns, some of which are projected to intensify due to climate change, have significant implications for wastewater treatment and operations. Some natural disasters are expected to become more frequent and extreme according to the current science on climate change. In order to ensure that Facility operations are not disrupted, compliance with conditions of this Order are achieved, and receiving waters are not adversely impacted by permitted and unpermitted discharges, this Order requires the Permittees to submit a Disaster Preparedness Assessment Report and Action Plan. The Permittees may complete the Disaster Preparedness Assessment Report and Action Plan as part of a collaborative effort with DG Fairhaven Power, LLC and any additional dischargers that utilize the ocean outfall.

3. Best Management Practices and Pollution Prevention

- a. **Pollutant Minimization Program (PMP) (Special Provision VI.C.3.a).** This provision is included in this Order pursuant to section III.C.9 of the Ocean Plan. The Regional Water Board includes provisions in all NPDES permits requiring development of a PMP when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.

4. Construction, Operation, and Maintenance Specifications

- a. **Operation and Maintenance (O&M) (Special Provisions VI.C.4.a and VI.C.4.b).** 40 C.F.R. section 122.41(e) requires proper O&M of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date O&M Manual, as required by Provision VI.C.4.b of this Order, is an integral part of a well-operated and maintained facility.
- b. **New/Upgraded Facility Certification Report (Special Provision VI.C.4.c).** This provision requires the Permittees to certify any treatment plant upgrade or expansion and provide the Regional Water Board with as-built plans and record.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Wastewater Collection Systems (Special Provision VI.C.5.a)**
 - i. **Statewide General WDRs for Sanitary Sewer Systems.** On May 2, 2006, the State Water Board adopted General WDRs for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order). The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll

for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all SSOs, among other requirements and prohibitions. This Order requires the Permittees to apply for enrollment and obtain coverage under the General Order upon notification from the Executive Officer.

On February 20, 2008, the State Water Board adopted Order No. WQ 2008-0002-EXEC Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, to ensure adequate and timely notifications are made to the Regional Water Board and appropriate local, state, and federal authorities in case of sewage spills. On August 6, 2013, the State Water Board adopted Order No. WQ 2013-0058-EXEC Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. Order No. WQ 2013-0058-EXEC addressing compliance and enforceability of the Monitoring and Reporting Program and superseding the amendments in Order No. WQ-2008-0002-EXEC. Notification and reporting of SSOs shall be conducted in accordance with the requirements of Order Nos. 2006-0003-DWQ and WQ 2013-0058-EXEC, and any revisions thereto for operation of the Facility's wastewater collection system.

- b. **Source Control and Pretreatment Provisions (Special Provision VI.C.5.b).** Pursuant to Special Provision VI.C.5.b.i, the Permittees shall implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system, and inspect facilities connected to the system.

40 C.F.R. section 403.8(a) requires POTWs with a total design flow greater than 5 mgd and receiving pollutants that pass through or interfere with the operation of the POTW to establish a POTW Pretreatment Program. The Regional Water Board may also require that a POTW with a design flow of 5 mgd or less develop a POTW Pretreatment Program if the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant, in order to prevent interference or pass through. The Permittees report that there are no known industrial wastes subject to regulation under the NPDES Pretreatment Program being discharged to the Facility and the design flow of the Facility is less than 5 mgd; therefore, the Order does not require the Permittees to develop a pretreatment program that conforms to federal regulations. However, in order to prevent interference with the POTW or pass-through of pollutants to the receiving water, the Order requires the Permittees to implement a source control program.

Water Code section 13263.3(d)(1) allows the Regional Water Board to require a discharger to complete and implement a pollution prevention plan if pollution prevention is necessary to achieve a water quality objective, to include, pursuant to Water Code section 13263.3(d)(3), an analysis of the

methods that could be used to prevent the discharge of the pollutants into the POTW. These methods can include application of local limits to industrial or commercial dischargers, pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of pollutants to the POTW. The analysis shall also identify sources, or potential sources, not within the ability or authority of the POTW to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible. This Order includes requirements for the Permittees to implement a source identification and reduction program.

A key component of an effective source control program is the identification and location of possible industrial users within the POTW's wastewater collection system. This information is typically obtained by the POTW through industrial waste surveys. The following types of resources can be consulted in compiling a master list of industrial users:

- i. Water and sewer billing records;
- ii. Applications for sewer service;
- iii. Local telephone directories;
- iv. Chamber of Commerce and local business directories;
- v. Business license records;
- vi. POTW and wastewater collection personnel and field observations;
- vii. Business associations;
- viii. The internet; and
- ix. Industrial and non-residential sewer use permit records.

In addition, the Regional Water Board recognizes that some form of source control is prudent to ensure the efficient operation of the Facility, the safety of Facility staff, and to ensure that pollutants do not pass through the treatment Facility to impair the beneficial uses of the receiving water. The Order includes prohibitions for the discharge of pollutants that may interfere, pass through, or be incompatible with treatment operations, interfere with the use of disposal of sludge, or pose a health hazard to personnel.

- c. **Sludge Disposal and Handling Requirements (Special Provision VI.C.5.c).** The disposal or reuse of wastewater treatment screenings, sludges, or other solids removed from the liquid waste stream is regulated by 40 C.F.R. parts 257, 258, 501, and 503, and the State Water Board promulgated provisions of title 27 of the CCR. Sludge generated at the Facility is currently disposed of in a landfill.

This provision also requires the Permittees to comply with the state's regulations relating to the discharge of biosolids to the land. The discharge of biosolids through land application is not currently regulated under this Order. In the event that the Permittees wishes to discharge biosolids to land, the

Permittees are required to either submit a ROWD or dispose of biosolids at another permitted facility.

- d. **Operator Certification (Special Provision VI.C.5.d).** This provision requires the Facility to be operated by supervisors and operators who are certified as required by title 23, section 3680 of the CCR.
- e. **Adequate Capacity (Special Provision VI.C.5.e).** The goal of this provision is to ensure appropriate and timely planning by the Permittees to ensure adequate capacity for the protection of public health and water quality.

6. Other Special Provisions

- a. **Storm Water (Special Provision VI.C.6.a).** This provision requires the Permittees, if applicable, to obtain coverage under the State Water Board's Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (or subsequent renewed versions of the NPDES General Permit CAS000001). Currently, the Facility is exempted from these requirements based on a design flow of less than 1.0 mgd.

The provision also requires the Permittees to obtain coverage under State Water Board Water Quality General Order No. 2009-0009-DWQ, General Permit for Discharges of Storm Water Associated with Construction Activity for control of storm water discharges from construction at the Facility.

The Order requires the Permittees to implement and maintain BMPs to control the run-on of storm water to the Facility and to describe the effectiveness of these storm water BMPs, as well as activities to maintain and upgrade these BMPs during the previous year, in its Annual Facility Report to the Regional Water Board.

7. Compliance Schedules

This Order includes a compliance schedule with requirements consistent with the California Coastal Commission Coastal Development Permit to ensure that all new development is properly connected to the Facility.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code section 13383 authorizes the Regional Water Board to require technical and monitoring reports. The MRP, Attachment E, establishes monitoring and reporting requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

Influent monitoring requirements at Monitoring Location INF-001 for flow, BOD₅ and TSS are necessary to determine compliance with the flow prohibition and the 85 percent removal effluent limitation for BOD₅ and TSS.

B. Effluent Monitoring

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Monitoring at Monitoring Location EFF-001 is necessary to demonstrate compliance with effluent limitations and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives for discharges to the Pacific Ocean.

1. Effluent monitoring requirements have been established for flow, BOD₅, oil and grease pH, TSS, settleable solids, total coliform organisms, Enterococcus, and turbidity at Monitoring Location EFF-001 in order to determine compliance with applicable prohibitions and effluent limitations.
2. Ammonia is a pollutant of concern in domestic wastewater and is extremely toxic to aquatic life. The Facility is designed to achieve an ammonia concentration of 10 mg/L. This Order requires monthly effluent monitoring for ammonia to determine if discharges from the Facility exhibit reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives for ammonia.
3. This Order requires effluent monitoring for Ocean Plan Table 1 pollutants annually during the permit term, within the first year following commencement of discharges from the Facility, at Monitoring Location EFF-001 to generate adequate data to perform an RPA. Samples for Ocean Plan Table 1 pollutants shall be collected as 24-hour composites, with the exception that grab samples shall be collected for those priority pollutants that are volatile.

C. Whole Effluent Toxicity (WET) Testing Requirements

WET monitoring requirements are established for discharges to the Pacific Ocean from Discharge Point 001 at Monitoring Location EFF-001 and are included in the Order to protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth. The Ocean Plan (section III.C.4.c.(3)) requires chronic toxicity testing where the minimum initial dilution of the effluent is between 100:1 and 350:1 and allows for the Regional Water Board to require acute toxicity testing as necessary to protect beneficial uses of ocean waters. This Order allows for a Dm of 115 for the acute and chronic conditions.

As described in section IV.C.5 of this Fact Sheet, since the planned Facility is very small and there is a low potential for acutely toxic substances to be present in the treated municipal wastewater, the Regional Water Board has determined that acute toxicity testing requirements are not necessary to protect the beneficial uses of the ocean waters. Therefore, in accordance with the Ocean Plan, WET monitoring shall consist of chronic toxicity testing only. This Order includes monitoring requirements for chronic toxicity to assess whether there is reasonable potential to exceed the Ocean Plan's narrative water quality objectives for toxicity. Consistent with Appendix III of the Ocean Plan, this Order requires chronic toxicity testing twice per permit term,

within the first 2 years following the commencement of discharges at Discharge Point 001.

In addition to routine toxicity monitoring, this Order requires the Permittees to develop a TRE Work Plan, in accordance with appropriate U.S. EPA guidance, to ensure that the Permittees have a plan to immediately move forward with the initial tiers of a TRE in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

D. Land Discharge Monitoring Requirements

This Order does not authorize discharges to land.

E. Recycling Monitoring Requirements

This Order does not authorize discharges of recycled water.

F. Receiving Water Monitoring – Not Required

This Order does not require surface water monitoring at this time.

G. Groundwater Discharge Monitoring Requirements – Not Required

This Order does not require groundwater monitoring at this time.

H. Other Monitoring Requirements

- 1. Accelerated Monitoring Requirements.** Table E-3 includes accelerated monitoring requirements for parameters that are required to be monitored weekly and monthly.
- 2. Biological Survey.** This Order requires the Permittees to perform a biological survey of the outfall location once every 5 years. The Permittees may complete the biological survey in collaboration with the Humboldt Bay Harbor District, DG Fairhaven Power, LLC, and any additional dischargers that utilize the ocean outfall.
- 3. Sludge Monitoring (Monitoring Location BIO-001).** Sludge monitoring requirements at Monitoring Location BIO-001 serve as a basis for the Permittees to develop the Sludge Handling and Disposal Activity Report, which is required as part of the Annual Facility Report, pursuant to section X.D.2.f of the MRP.
- 4. Flow Monitoring.** Section I.D of the MRP requires proper installation, calibration, operation, and maintenance of flow metering devices.
- 5. Discharge Monitoring Report Quality Assurance (DMR-QA) Study Program.** Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major Permittees under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Permittees can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Permittees can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or

its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Permittees shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

- 6. Spill Notification.** The MRP that is part of this Order establishes requirements for reporting spills and unauthorized discharges, with the exception of SSOs, which must be reported in accordance with the requirements of State Water Board Order No. 2006-0003-DWQ and WQ-2013-0058-EXEC.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) has considered the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Peninsula Community Services District, Town of Samoa Wastewater Treatment Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Permittees and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following posting on the Regional Water Board's Internet site at:

http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml

B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs as provided through the notification process. Comments were due to the Regional Water Board Executive Office electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://www.waterboards.ca.gov/northcoast>.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **February 8, 2020**.

C. Public Hearing

The Regional Water Board held a public hearing on the draft WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **April 16, 2020**
Time: 8:30 a.m. or as announced in the Regional Water Board's agenda
Location: Regional Water Quality Control Board
5550 Skylane Blvd. Suite A
Santa Rosa, California

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/northcoast> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instruction on how to file a petition for review see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The ROWD, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address identified in section VIII.C, above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (707) 576-2220.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Justin McSmith at Justin.McSmith@waterboards.ca.gov or (707) 576-2082.