

North Coast Regional Water Quality Control Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD NORTH COAST REGION

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ORDER No. R1-2022-0002
NPDES No. CA0023027
WDID NO. 1B84086OHUM

Waste Discharge Requirements and water recycling requirements

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

Permittee	Humboldt County Resort Improvement District No. 1
Name of Facility	Shelter Cove Wastewater Treatment Facility
Facility Address	Lower Pacific Drive at Wave Drive Shelter Cove, CA 95589 Humboldt County

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Disinfected, Dechlorinated Secondary Treated Wastewater	40° 01' 57.8"	124° 04' 47.4"	Pacific Ocean

002 ¹	Disinfected Tertiary Treated Recycled Water	40° 01' 31.4"	124° 04' 19.1"	Groundwater (Reclamation/Irrigation on Shelter Cove Golf Course)
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Table Note:

1. As adopted at the February 3, 2022 Regional Water Board meeting, this Order does not authorize discharge to Discharge Point 002. Discharge from Discharge Point 002 is not authorized and the requirements specified in sections 4.3, 4.4.1, and 4.4.2.2 do not apply until the Permittee receives approval of a title 22 Recycled Water Engineering Report from the State Water Board Division of Drinking Water (DDW) and completes the permitting process for the use of recycled water either through modification of this Order or enrollment under State Water Board Order WQ 2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use (Recycled Water General Order). This Order includes recycled water production requirements so that the Permittee may expedite the permitting process for the use of recycled water once the Permittee receives an acceptance letter for its title 22 Recycled Water Engineering Report.

This Order was adopted on:

February 3, 2022

This Order shall become effective on:

April 1, 2022

This Order shall expire on:

March 30, 2027

The Permittee 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: **September 28, 2026**. 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 “**Minor**”.

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 February 3, 2022

Matthias St. John, Executive Officer

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1. FACILITY INFORMATION

Information describing the Shelter Cove Wastewater Treatment Facility (Facility) is summarized on the cover page and in sections 1 and 2 of the Fact Sheet (Attachment F). Section 1 of the Fact Sheet also includes information regarding the Facility's permit application.

2. FINDINGS

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

- 2.1. **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 Permittee to discharge into waters of the United States at the discharge location described in Table 1 subject to the Waste Discharge Requirements (WDRs) and water recycling requirements pursuant to article 4, chapter 7, division 7 of the Water Code (commencing with section 13500). This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- 2.2. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee's application, monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order and is hereby incorporated into this Order and constitutes Findings for this Order. Attachments A through E and Attachment G are also incorporated into this Order.
- 2.3. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections 3.5, 3.6, 3.8, 4.3, 4.4.1, 4.4.2.2, 5.2, 6.3.1.6, and 6.3.5.1.1 of this Order and sections 6, 7, 9.1, 9.2.1.1.2, 10.4.3, and 10.5 of the 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.
- 2.4. **Notification of Interested Parties.** The Regional Water Board has notified the Permittee 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.

- 2.5. **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.

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) Order No. R1-2015-0017 and Monitoring and Reporting Program (MRP) No. R1-2015-0017, are rescinded upon the effective date of this Order except for enforcement purposes, and in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements of this Order. This action in no way prevents the North Coast Regional Water Board from taking enforcement action for past violations of the previous permit.

3. DISCHARGE PROHIBITIONS

- 3.1. The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.
- 3.2. Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.
- 3.3. The discharge of sludge or digester supernatant is prohibited, except as authorized under section 6.3.5.3 of this Order (Sludge Disposal and Handling Requirements).
- 3.4. The discharge or recycling use of untreated or partially treated waste (receiving a lower level of treatment than described in section 2.1 of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions 1.7 (Bypass) and 1.8 (Upset).
- 3.5. 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 that creates pollution, contamination, or nuisance, as defined in Water Code section 13050(m) is prohibited.
- 3.6. The discharge of waste to land that is not owned by the Permittee, governed by District ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited.
- 3.7. The discharge of waste at any point not described in Finding 2.2 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.

- 3.8. The discharge of recycled, filtered wastewater to any use area not addressed in a DDW-accepted title 22 Recycled Water Engineering Report is prohibited.
- 3.9. The discharge from the Facility to the Pacific Ocean at Discharge Point 001 shall not exceed either of the following flow prohibitions:
 - 3.9.1 The average dry weather flow (ADWF) of waste through the Facility shall not exceed 0.17 million gallons per day (mgd), measured daily and averaged over a calendar month. Compliance with this prohibition shall be determined as defined in sections 7.10 of this Order.
 - 3.9.2 The peak average daily wet weather flow of waste through the Facility shall not exceed an average daily wet weather flow of 0.77 mgd, measured daily. Compliance with this prohibition shall be determined as defined in sections 7.10 and 7.11 of this Order.
- 3.10 The discharge of any radiological, chemical, or biological warfare agent into waters of the state or the Pacific Ocean is prohibited.
- 3.11. The discharge of sludge directly into the ocean or into a waste stream that discharges to the ocean is prohibited.
- 3.12. The bypassing of untreated or partially treated wastes containing concentrations of pollutants in excess of those of Ocean Plan Tables 3 or 4 (2019) is prohibited.
- 3.13. The acceptance of septage to a location other than an approved septage receiving station and in accordance with a septage management program approved by the Regional Water Board Executive Officer is prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Point 001

4.1.1. Final Effluent Limitations – Discharge Point 001

- 4.1.1.1. The discharge of secondary 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 2. Effluent Limitations¹ - Discharge Point 001

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	--	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	--	--
pH	standard units	--	--	--	6.0	9.0
Oil and Grease	mg/L	25	40	--	--	75
Settleable Solids	mL/L	0.1	--	0.2	--	--
Turbidity	NTU	75	100	--	--	225

Table Notes

1. See Definitions in Attachment A and Compliance Determination discussion in section 7 of this Order.

4.1.1.2. **Percent Removal.** The average monthly percent removal of BOD₅ and TSS solids 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.

4.1.1.3. **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:

4.1.1.3.1. **Total Coliform Organisms**

4.1.1.3.1.1. The median value of total coliform bacteria shall not exceed a Most Probable Number (MPN) of 23 per 100 mL in a calendar month; and

4.1.1.3.1.2. No sample shall exceed an MPN of 240 per 100 mL.

4.1.1.4. **Total Residual Chlorine.** There shall be no detectable levels of chlorine in effluent discharged to the Pacific Ocean through Discharge Point 001 using the spectrophotometric DPD method 4500-CL G, or equivalent.

4.1.2. **Interim Effluent Limitations – Not Applicable**

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

4.2. **Land Discharge Specifications – Not Applicable**

This Order does not authorize discharges to land.

4.3. **Water Recycling Specifications and Requirements – Discharge Point 002**

4.3.1. **Water Recycling Specifications**

4.3.1.1. When discharging to the recycled water system, the Permittee shall maintain compliance with the following discharge specifications at Discharge Point 002, with compliance measured at Monitoring Location REC-001 as described in the attached MRP (Attachment E), unless otherwise specified.

¹ See sections 7.8.1 of this Order regarding compliance with total coliform effluent limitations.

Table 3. Recycled Water Discharge Specifications¹ – Discharge Point 002

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	10	15	--	--	--
Total Suspended Solids (TSS)	mg/L	10	15	--	--	--
pH	standard units	--	--	--	6.0	9.0

Table Notes

1. See Definitions in Attachment A and Compliance Determination discussion in section 7 of this Order.

4.3.1.2. **Disinfection.** Disinfected effluent discharged from the Facility through Discharge Point 002 to the recycled water system shall not contain total coliform bacteria exceeding the following concentrations, as measured at Monitoring Location REC-001²:

4.3.1.2.1. The median concentration shall not exceed an MPN of 2.2 per 100 mL, using the bacteriological results of the last 7 days for which analyses have been completed;

4.3.1.2.2. The number of total coliform bacteria shall not exceed an MPN of 23 per 100 mL, in more than one sample in any 30-day period; and

4.3.1.2.3. No sample shall exceed an MPN of 240 per 100 mL.

4.3.2. **Water Recycling Requirements**

4.3.2.1. This Order includes water recycling requirements that apply to the production of recycled water. The Permittee shall obtain permit coverage for the use of recycled water, prior to initiating recycled water use.

4.3.2.2. The Permittee shall comply with applicable state and local requirements regarding the production and use of recycled water, including requirements of Water Code sections 13500 – 13577 (Water Reclamation) and State Water Board, Division of Drinking Water (DDW) regulations at title 22, sections 60301 – 60357 of the CCR (Water Recycling Criteria).

4.4. **Other Requirements**

4.4.1. **Filtration Process Requirements**

All recycled water produced at the Facility must be filtered using the two continuous backwash up-flow silica sand media filters as described in the title 22 Recycled Water Engineering Report. The Permittee shall not make any changes, additions, or modifications to the Facility unless approval is obtained from DDW and the Regional Water Board.

4.4.1.1. **Filtration Rate.** When discharging to the recycled water system, the rate of filtration through the tertiary filters, as measured at Monitoring Location INT-001A, shall not exceed 5 gallons per minute per square foot of surface area or

² See sections 7.8.1 and 7.8.2 of this Order regarding compliance with total coliform effluent limitations.

other filtration rates authorized in writing by the Regional Water Board Executive Officer and under conditions recommended by DDW.

4.4.1.2. **Filter Effluent Turbidity.** When discharging to the recycled water system, the effluent from the tertiary wastewater treatment process filters shall at all times be filtered such that the filtered effluent does not exceed any of the following specifications at Monitoring Location INT-001B prior to discharge to the disinfection unit:

4.4.1.2.1. An average of 2 NTU during any 24-hour period;

4.4.1.2.2. 5 NTU more than 5 percent of the time during any 24-hour period; and

4.4.1.2.3. 10 NTU at any time.

4.4.1.3. Filtered effluent in excess of turbidity specifications shall not enter the recycled water distribution system. Pursuant to title 22 sections 60304 and 60307, the Permittee shall have the capability and shall manage filtered effluent in excess of the turbidity specifications to automatically activate chemical addition or divert the wastewater to an upstream treatment process unit or to emergency storage. The Permittee shall provide notification of non-compliance with the filtration process requirements as required in section 9.1.2.3.2 of the MRP (Attachment E).

4.4.2. **Disinfection Process Requirements for the Chlorine Disinfection System**

When discharging to the Pacific Ocean at Discharge Point 001 or the recycled water system at Discharge Point 002, treated effluent shall be disinfected in a manner that ensures effective pathogen reduction as described in the following specifications, with compliance measured at the end of the disinfection processes at Monitoring Locations INT-002 and INT-003, respectively.

4.4.2.1. **Discharge Point 001**

As measured at the end of the chlorine contact tank at Monitoring Location INT-002, the total residual chlorine concentration shall be maintained at a concentration that ensures the discharge meets the total coliform effluent limitation at the end of the disinfection process for discharges to Discharge Point 001.

4.4.2.2. **Discharge Point 002**

As calculated from measurements downstream of the clearwell at Monitoring Location INT-003, the chlorine disinfection process shall provide a CT value³ of not less than 450 milligram-minutes per liter (mg-min/L) at all times with a modal contact time of at least 90 minutes based on peak dry weather design flow when discharging to the recycled water system at Discharge Point 002.

Filtered effluent not meeting the CT criteria shall be diverted to an upstream treatment process unit or to emergency storage as soon as the Permittee is aware of the exceedance. The Permittee shall provide notification of non-compliance with disinfection process requirements as required by section 9.2.1.1.2.2 of the MRP (Attachment E).

4.4.3. **Storage Ponds**

Ponds used for the storage of recycled water shall be constructed in a manner that protects groundwater. The Permittee shall submit design proposals for new storage ponds to the Regional Water Board for review prior to construction and demonstrate that the pond design incorporates features to protect groundwater from exceeding groundwater quality objectives.

5. **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 and/or may consider other available information.

5.1. **Surface Water Limitations**

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

³ The CT value is the product of total chlorine residual and modal contact time measured at the same period. The modal contact time is the amount of time that elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance of the chlorination chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber.

5.1.1. Ocean Plan

5.1.1.1. Bacterial Characteristics

5.1.1.1.1. **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:

5.1.1.1.1.1. A 30-day geometric mean of fecal coliform density not to exceed 200 per 100 mL, calculated based on the five most recent samples from each site, and a single sample maximum not to exceed 400 per 100 mL.

5.1.1.1.1.2. A 6-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.

5.1.1.1.2. **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:

5.1.1.1.2.1. 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.

5.1.1.2. Physical Characteristics

5.1.1.2.1. Floating particulates and oil and grease shall not be visible.

5.1.1.2.2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

5.1.1.2.3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

5.1.1.2.4. 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.

5.1.1.2.5. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

5.1.1.3. Chemical Characteristics

- 5.1.1.3.1. 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.
- 5.1.1.3.2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
- 5.1.1.3.3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
- 5.1.1.3.4. The concentration of substances set forth in chapter II, Table 3 of the Ocean Plan shall not be increased in marine sediments to levels which would degrade indigenous biota.
- 5.1.1.3.5. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
- 5.1.1.3.6. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.
- 5.1.1.3.7. Discharges shall not cause exceedances of water quality objectives for ocean waters of the state established in chapter II, Table 3 of the Ocean Plan.

5.1.1.4. Biological Characteristics

- 5.1.1.4.1. Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.
- 5.1.1.4.2. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
- 5.1.1.4.3. 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.

5.1.1.5. Radiological Standards

- 5.1.1.5.1. The discharge of radioactive waste shall not degrade marine life.

5.1.1.6. General Standards

- 5.1.1.6.1. 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.

- 5.1.1.6.2. 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.
- 5.1.1.6.3. Waste discharged to the ocean must be essentially free of:
 - 5.1.1.6.3.1. Material that is floatable or will become floatable upon discharge.
 - 5.1.1.6.3.2. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.
 - 5.1.1.6.3.3. Substances which will accumulate to toxic levels in marine waters, sediments or biota.
 - 5.1.1.6.3.4. Substances that significantly decrease the natural light to benthic communities and other marine life.
 - 5.1.1.6.3.5. Materials that result in aesthetically undesirable discoloration of the ocean surface.
- 5.1.1.6.4. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.
- 5.1.1.6.5. Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:
- 5.1.1.6.6. 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.
- 5.1.1.6.7. 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.
- 5.1.1.6.8. Maximum protection is provided to the marine environment.
- 5.1.1.6.9. The discharge does not adversely affect recreational beneficial uses such as surfing and beach walking.

5.2. Groundwater Limitations

- 5.2.1. The collection, treatment, storage, and disposal of wastewater or use of recycled water 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 reasonable BMPs, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
- 5.2.2. The collection, treatment, storage, and disposal of wastewater or use of recycled water shall not cause or contribute to levels of chemical constituents in groundwater that exceed the maximum and secondary maximum contaminant levels (MCLs and SMCLs) established for these pollutants in the title 22, division 4, chapter 15, article 4, section 64431; article 5.5, section 64444; and article 16, section 64449 of the CCR.
- 5.2.3. The collection, treatment, storage, and disposal of wastewater or use of recycled water shall not cause or contribute to levels of radionuclides in groundwater in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.
- 5.2.4. The collection, treatment, storage, and disposal of wastewater or use of recycled water shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- 5.2.5. The collection, treatment, storage, and disposal of wastewater or use of recycled water 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 in groundwaters used for domestic or municipal supply (MUN).
- 5.2.6. The collection, treatment, storage and disposal of wastewater or use of recycled water shall not cause groundwater to 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.

6. PROVISIONS

6.1. Standard Provisions

- 6.1.1. **Federal Standard Provisions.** The Permittee shall comply with all Standard Provisions included in Attachment D of this Order.

- 6.1.2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following Regional 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:
- 6.1.2.1. 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 Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
 - 6.1.2.2. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, recycled water specification, other specification, receiving water limitation, or provision of this Order, that may result in significant threat to human health or the environment, such as inundation of treatment infrastructure, breach of pond containment, sanitary sewer overflow, recycled water main break or equivalent release, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall:
 - 6.1.2.2.1. Notify the Regional Water Board within 24 hours of having knowledge of such noncompliance. Spill notification and reporting shall be conducted in accordance with section 5.5 of Attachment D and section 10.5 of the MRP (Attachment E).
 - 6.1.2.2.2. Investigate the cause(s) of final effluent limitation and discharge specification exceedances and failures to comply with any prohibition, specification, or provision of this Order that may result in significant threat to human health or the environment.
 - 6.1.2.2.3. Identify and implement corrective actions to prevent future exceedances or failures to comply with Order requirements.
 - 6.1.2.2.4. Report the results of such investigations and corrective actions implemented in the monthly SMR as required by MRP section 10.2.6.2.5 and 10.2.6.2.6.

6.2. **Monitoring and Reporting Program (MRP) Requirements**

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

6.3. Special Provisions

6.3.1. Reopener Provisions

- 6.3.1.1. **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.
- 6.3.1.2. **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.
- 6.3.1.3. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a narrative or numeric chronic toxicity limitation, a new 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.
- 6.3.1.4. **303(d)-Listed Pollutants.** If an applicable total maximum daily load (TMDL) (see Fact Sheet, section 3.4) program is adopted, this Order may be reopened and effluent limitations for the pollutant(s) that are the subject of the TMDL may be modified or imposed to conform this Order to the TMDL requirements.
- 6.3.1.5. **Ocean Plan Exception.** The State Water Board granted an exception to the Ocean Plan for discharges to near shore waters of the King Range National Conservation Area on October 20, 1983. All exceptions issued by the State Water Board's Triennial Review are reviewed at this time. If there is sufficient cause to reopen or revoke any exception, the State Water Board may direct staff to prepare a report and to schedule a public hearing. If after the public hearing the State Water Board decides to reopen, revoke, or reissue a particular exception, it may do so at that time. Accordingly, this Order may be reopened and modified if the State Water Board revokes or reissues the existing exception granted to the Permittee.
- 6.3.1.6. **Title 22 Recycled Water Engineering Report.** This Order implements title 22 requirements to protect public health. If the Permittee's title 22 Recycled Water Engineering Report requires modifications to this Order to adequately implement title 22, this Order may be reopened and modified as necessary.

6.3.2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

- 6.3.2.1. **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 Permittee shall submit a Disaster Preparedness Assessment Report and Action Plan to the Regional Water Board by **April 1, 2025**, for Executive Officer review and approval.

The Permittee shall: (1) conduct an assessment of the wastewater treatment facility, operations, collection, and discharge systems (including the discharge outfall) 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.

- 6.3.2.2. **Analysis of Influent Flow and Treatment Capacity.** Once during the 5-year term of this Order, the Permittee shall prepare a report documenting actual wet and dry weather flows of the Facility, as well as projected wet and dry weather flows five and ten years into the future. The report shall include design treatment capacities, discharge rates to the King Range State Water Quality Protection Area (SWQPA), and the amount of water used for water recycling. The final report shall be submitted to the Regional Water Board no later than **April 1, 2026**.

- 6.3.2.3. **Effluent Discharge Evaluation.** The Permittee shall complete an Effluent Discharge Evaluation to establish the appropriate dilution ratio and to

demonstrate that the Permittee's discharge meets all requirements of the California Ocean Plan regarding establishment of the Zone of Initial Dilution (and associated dilution ratio), and that the effluent discharge does not impact aquatic life and recreational beneficial uses in the vicinity of the outfall.

6.3.2.4. By **June 1, 2023**, the Permittee shall submit for Regional Water Board Executive Officer approval, a Work Plan for conducting the effluent discharge evaluation. The Work Plan shall identify specific tasks to be completed and a schedule for completing each task. The Permittee shall implement the Work Plan per the approved schedule.

6.3.2.5. The effluent discharge evaluation may be conducted in phases.

6.3.2.5.1. At a minimum the first phase shall include: a review of existing studies (i.e., 1982 Dye Study, etc.) and monitoring data to determine if sufficient data is available to confirm the currently approved dilution ratio of 50 to 1. For example, the current or new minimum probable initial dilution (D_m) might be based on a recalculation of the results of the old dye study using updated variables.

6.3.2.5.2. If this first phase review does not establish a defensible basis for confirming the existing dilution ratio, in the next phase, the Permittee shall propose a plan for further evaluation of the dilution ratio using an updated method and new variables. This evaluation may include, but is not limited to, modelling, mixing zone study, and/or additional monitoring and evaluation, to demonstrate what the current dilution ratio is in accordance with requirements of the California Ocean Plan.

6.3.2.6. By **March 1, 2026**, the Permittee shall submit a final discharge evaluation report, for review and approval by the Regional Water Board Executive Officer, summarizing study findings and recommendation(s) for modifying the outfall or adding other discharge options, if necessary, to achieve compliance with all requirements of the Ocean Plan and this Order. The final report shall include a schedule of implementation for the recommended action(s). This report shall be identified as a specific task in the Work Plan to be submitted on **June 1, 2023**. The Permittee shall implement the recommended action(s) per the approved schedule.

6.3.3. **Best Management Practices and Pollution Prevention**

6.3.3.1. **Pollutant Minimization Program (PMP)**

6.3.3.1.1. The Permittee shall, as required by the Regional Water Board Executive Officer (hereafter Executive Officer), develop and conduct a PMP, as further described below, when there is evidence (e.g., sample results from analytical methods more sensitive than those methods required by this

Order, presence of whole effluent toxicity, 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:

- 6.3.3.1.1.1. The concentration of the pollutant is reported as “Detected, but Not Quantified” (DNQ) and the effluent limitation is less than the reporting limit (RL);
- 6.3.3.1.1.2. A sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL), using definitions described in Attachment A and reporting protocols described in MRP section 10.2.5.
- 6.3.3.1.2. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
 - 6.3.3.1.2.1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
 - 6.3.3.1.2.2. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
 - 6.3.3.1.2.3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
 - 6.3.3.1.2.4. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
 - 6.3.3.1.2.5. An annual status report that shall be submitted as part of the Annual Facility Report due **March 1st** to the Regional Water Board and shall include:
 - 6.3.3.1.2.5.1. All PMP monitoring results for the previous year;
 - 6.3.3.1.2.5.2. A list of potential sources of the reportable pollutant(s);
 - 6.3.3.1.2.5.3. A summary of all actions undertaken pursuant to the control strategy; and
 - 6.3.3.1.2.5.4. A description of actions to be taken in the following year.

6.3.4. **Construction, Operation and Maintenance Specifications**

- 6.3.4.1. **King Range SWQPA Construction Activity Notification.** The Permittee shall notify the Regional Water Board **180 days prior to any Facility-related**

construction activity that could result in any new or altered discharge or habitat modification in the King Range SWQPA. In accordance with section III.E.4 of the Ocean Plan, the Permittee must receive approval from and comply with any conditions regarding such a discharge that are imposed by the Regional Water Board, prior to performing any significant modification, rebuilding, or renovation of the waterfront facilities, including the Facility's ocean outfall pipe.

- 6.3.4.2. **Proper Operation and Maintenance.** This Order (Attachment D, Standard Provision 1.4) requires that the Permittee at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures.
- 6.3.4.3. **Operation and Maintenance Manual.** The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the operational components of the Facility. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The Permittee 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.
- 6.3.4.3.1. 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.
- 6.3.4.3.2. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
- 6.3.4.3.3. Description of laboratory and quality assurance procedures.
- 6.3.4.3.4. Process and equipment inspection and maintenance schedules.
- 6.3.4.3.5. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Permittee will be able to comply with requirements of this Order.
- 6.3.4.3.6. 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.

6.3.4.4. **Operating Records.** The Permittee shall maintain operating records at the Facility or at the Permittee's central depository. The records shall include: all analyses specified in the reclamation criteria; any documentation of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; and documentation of all corrective or preventive actions taken

6.3.5. **Special Provisions for Municipal Facilities (POTWs Only)**

6.3.5.1. **Wastewater Collection Systems**

6.3.5.1.1. **Statewide General WDRs for Sanitary Sewer Systems.**

The Permittee has coverage under, and is separately subject to the requirements of, State Water Board Order No. 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems, as amended by Order No. WQ 2013-0058-EXEC, and any subsequent revisions. As such, the Permittee provides notification and reporting of SSOs in accordance with the requirements of Order Nos. 2006-0003-DWQ and WQ 2013-0058-EXEC and any revisions thereto for operation of its wastewater collection system.

6.3.5.2. **Source Control Provisions**

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

6.3.5.2.1.1. 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.

6.3.5.2.1.2. 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 collection system or Facility.

6.3.5.2.1.3. Perform public outreach to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial toxic wastes to the wastewater treatment plant, at least once per year.

6.3.5.2.1.4. Perform ongoing inspections and monitoring, as necessary, to ensure adequate source control.

6.3.5.3. **Sludge Disposal and Handling Requirements**

- 6.3.5.3.1. Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or tertiary 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.
- 6.3.5.3.2. All collected sludges 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.
- 6.3.5.3.3. The use and disposal of biosolids shall 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.
- 6.3.5.3.4. 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, the Permittee shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.
- 6.3.5.3.5. The Permittee 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.
- 6.3.5.3.6. 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.
- 6.3.5.3.7. Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, 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.
- 6.3.5.3.8. 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.

- 6.3.5.3.9. For the land application of biosolids as soil amendment, the Permittee shall submit a report of waste discharge or the Permittee may dispose of biosolids at another appropriately permitted facility.
- 6.3.5.3.10. New sludge treatment and storage facilities must comply with the requirements of the Water Code and title 27 of the CCR for the protection of water quality.
- 6.3.5.3.11. The Permittee currently sends all dewatered sludge to Humboldt County Solid Waste Transfer Station for landfill disposal at the Anderson Landfill. The Permittee shall notify the Regional Water Board prior to changing biosolids use or disposal practices.

6.3.5.4. **Operator Certification**

Supervisors and operators of municipal wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with title 23, CCR, 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 DDW where water recycling is involved.

6.3.5.5. **Adequate Capacity**

If the Facility will reach capacity within 4 years, the Permittee 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 Permittee shall demonstrate that adequate steps are being taken to address the capacity problem. The Permittee 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].

6.3.6. **Other Special Provisions**

6.3.6.1. **Storm Water**

For the control of storm water discharges from the Facility, if required, the Permittee 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.

BMPs to control the run-on of storm water to the Facility site shall be maintained and upgraded as necessary. The Permittee 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.

6.3.7. **Compliance Schedules – Not Applicable**

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

7. **COMPLIANCE DETERMINATION**

Compliance with the discharge prohibitions (section 3 of this Order) and effluent limitations (section 4 of this Order) and receiving water limitations (section 5 of this Order), respectively, will be determined as specified below.

7.1. **Compliance with Effluent Limitations**

7.1.1. **Single Constituent Effluent Limitations.** The Permittee is out of compliance with the effluent limitation if the concentration of the pollutant (see section 7.3) in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

7.1.2. **Effluent Limitations Expressed as a Sum of Several Constituents.** The Permittee is 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).

7.2. **Multiple Sample Data**

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Permittee 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 Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure.

- 7.2.1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- 7.2.2. 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, then the median is the average of the two middle values, unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ and 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.

7.3. **Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection 7.2, 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 Permittee 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 Permittee will be considered out of compliance for that calendar month. The Permittee 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 Permittee shall calculate the median of all sample results within that month for compliance determination with the AMEL as described in section 7.2, above.

7.4. **Average Weekly Effluent Limitation (AWEL)**

If the average (or when applicable, the median determined by subsection 7.2, above, for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance.

If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee 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 week, the Permittee shall calculate the median of all sample results within that week for compliance determination with the AWEL as described in section 7.2, above.

7.5. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection 7.2, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Permittee will be considered out of compliance for that parameter for that 1 day only within the reporting period.

7.6. 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 Permittee 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 Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee 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.

7.7. 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 Permittee 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 Permittee monitors pH continuously, pursuant to 40 C.F.R. section 401.17, the Permittee 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.

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

The following paragraphs describe how compliance is to be determined for effluent limitations for total coliform bacteria and receiving water limitations for total coliform bacteria, fecal coliform, and enterococcus contained in this Order.

7.8.1. **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.

7.8.2. **7-Day Median.** Compliance with the 7-day median will be determined as a rolling median using the bacteriological results of the last 7 days for which analyses have been completed

7.8.3. **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:

$$\text{Geometric Mean} = \sqrt[n]{(x_1)(x_2)(x_3) \dots (x_n)}$$

Where x is the sample value and n is the number of samples taken.

7.8.4. **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:

$$\text{Geometric Mean} = \sqrt[n]{(x_1)(x_2)(x_3) \dots (x_n)}$$

Where x is the sample value and n is the number of samples taken.

7.8.5. **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 5.1.1.1.1.2, all sample results less than the point described in step 3 must be less than 100 MPN/100 mL.

7.9. 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 5.1 and 5.2).

7.10. Average Dry Weather Flow

Compliance with the average dry weather flow prohibition in section 3.9.1 of this Order will be determined once each calendar year by evaluating all equalized influent flow data collected at Monitoring Location INF-001 in a calendar year. The flow through the Facility, measured daily and averaged monthly, must be 0.17 mgd or less for the month with the lowest average monthly flow.

7.11. Peak Daily Wet Weather Flow

The peak daily wet weather flow is the maximum flow rate that occurs over a 24-hour period. Compliance with the peak daily wet weather flow prohibition in section 3.9.2 of this Order will be determined daily by measuring the daily average equalized influent flow at Monitoring Location INF-001. If the measured daily average flow exceeds 0.77 mgd, the discharge does not comply with Prohibition 3.9.2 of this Order.

7.12. Six-Month Median Effluent Limitations

The six-month median effluent limitations shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

7.13 Single Sample Maximum

All single sample results are compared to single sample maximum and median limitations. Single sample results are only compared to the geometric mean and 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 7.8.2. through 7.8.4, above. 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

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require additional sampling to further assess the effluent and to determine impacts on the receiving water.

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:

$$\text{Arithmetic mean} = \mu = \Sigma x / n$$

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.

Basin Plan

A Basin Plan is a water quality control plan that is specific to a Regional Water Quality Control Board (Regional Water Board), and serves as regulations that: (1) define and designate beneficial uses of surface and ground waters, (2) establish water quality objectives to protect the beneficial uses, and (3) provide implementation measures.

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.

California Integrated Water Quality System (CIWQS)

CIWQS is the State Water Board, statewide electronic reporting database that provides for electronic reporting of mandatory reports that are requirements of State and Regional Water Board-issued waste discharge requirements.

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:

$$\text{Geometric Mean} = \sqrt[n]{(x_1)(x_2)(x_3) \dots (x_n)}$$

Where:

x is the sample value and n is the number of samples taken.

Halomethanes

Halomethanes shall mean 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 3 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.

Receiving Water

A receiving water is a water of the State that receives a discharge of waste.

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 Permittee 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 Public Health 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.

Sludge and Biosolids

Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or tertiary 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.

Six-Month Median Effluent Limitation

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

Standard Deviation

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 Resolutions 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.

Statistical Threshold Value (STV)

The STV for the bacteria water quality objectives is a set value that approximates the 90th percentile of the water distribution of a bacterial population.

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

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 Permittee's total discharge, of whatever origin, i.e., gross, not net, discharge.

Water Quality Objective

A water quality objective is the amount of pollutant or a parameter level which is established for the reasonable protection of beneficial uses of surface waters and groundwater, and the prevention of nuisance.

Water Recycling

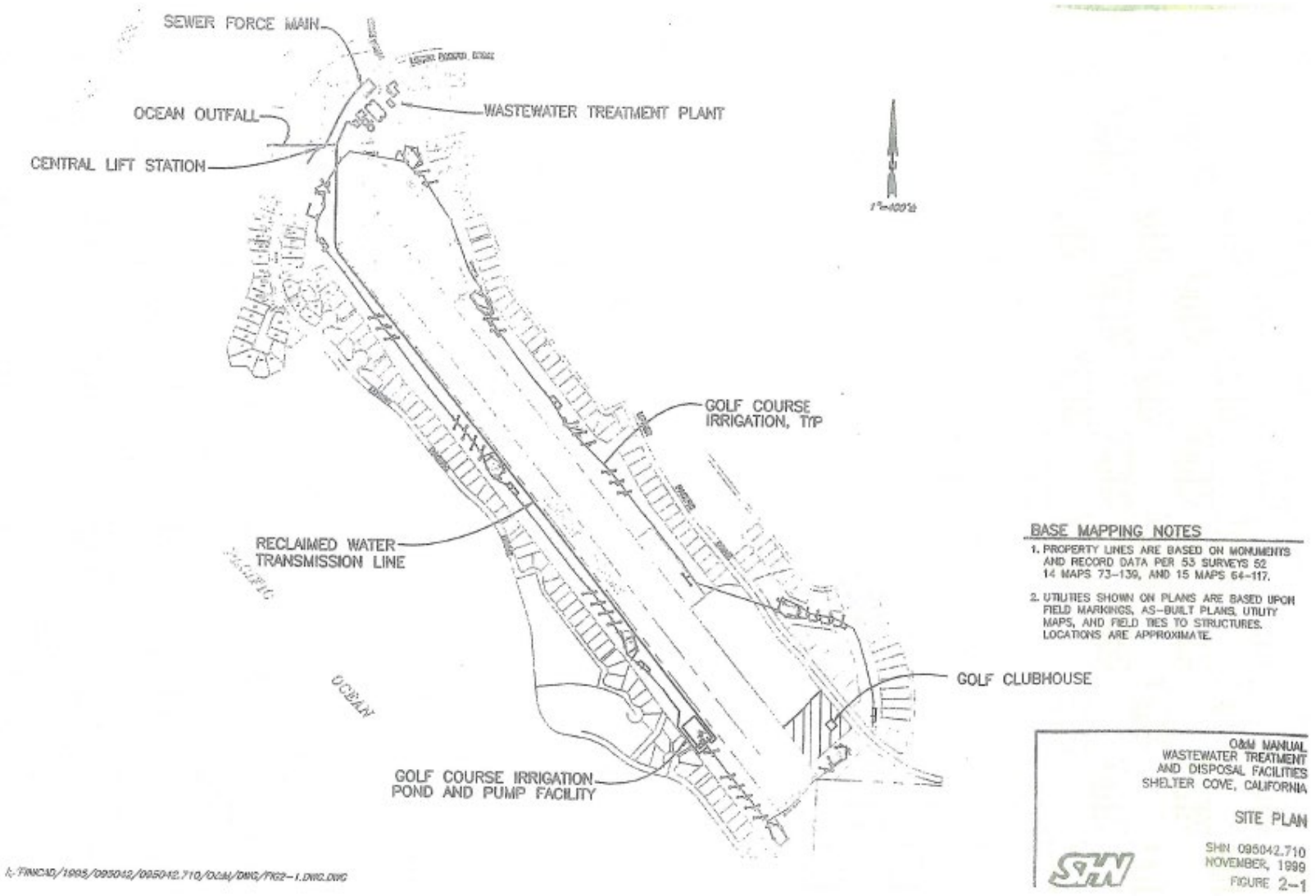
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

ATTACHMENT B - MAP

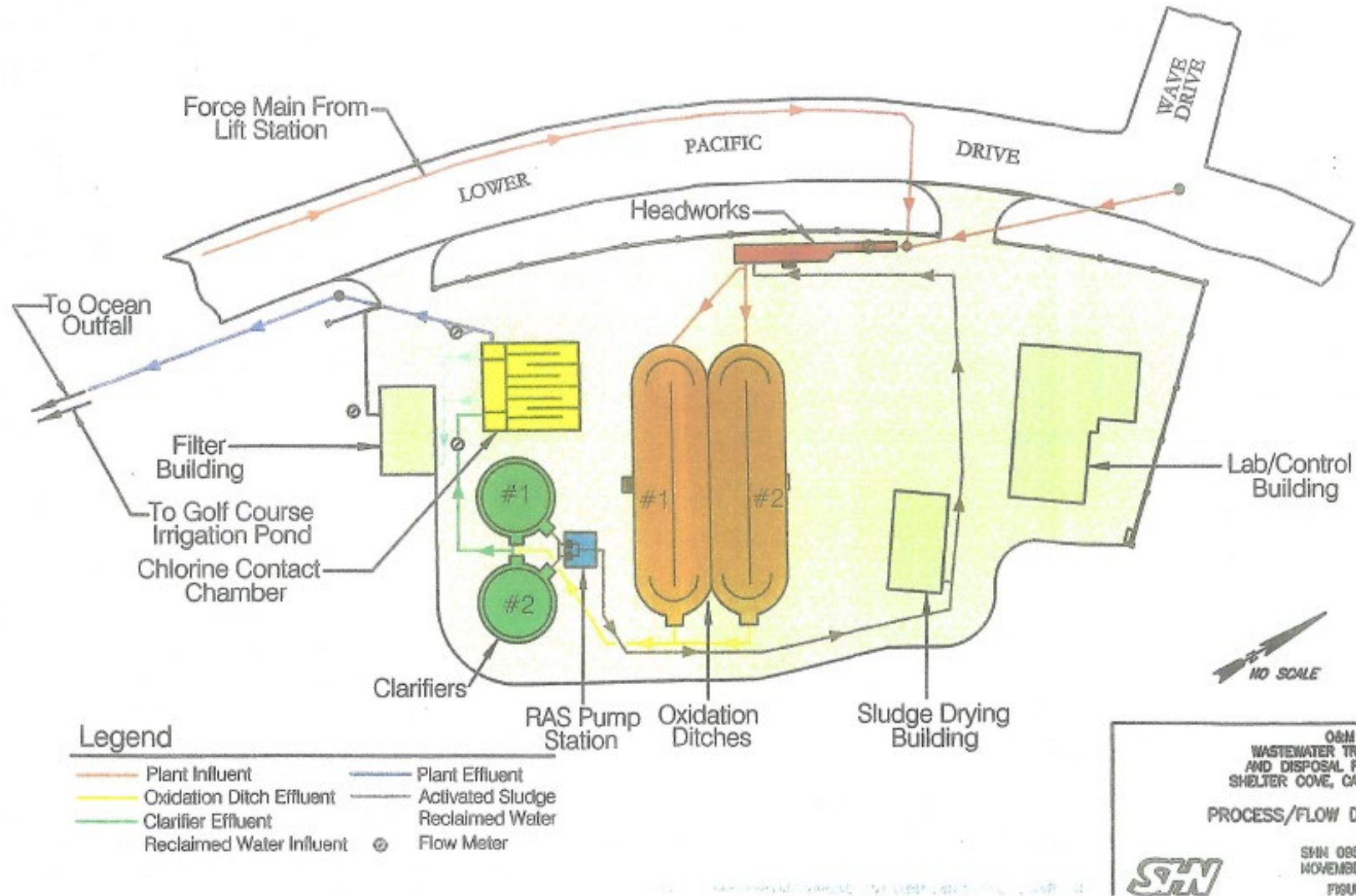
Figure B-1. Site Map



Figure B-2. Site Plan



ATTACHMENT C - FLOW SCHEMATIC



ATTACHMENT D - STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

- 1.1.1. The Permittee must comply with all of the terms, requirements, and 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; 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)
- 1.1.2. The Permittee 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))

1.2. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee 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))

1.3. Duty to Mitigate

The Permittee 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))

1.4. Proper Operation and Maintenance

The Permittee 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 Permittee 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 a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e))

1.5. **Property Rights**

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g))
- 1.5.2. 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))

1.6. **Inspection and Entry**

The Permittee 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):

- 1.6.1. Enter upon the Permittee's 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);
- 1.6.2. 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);
- 1.6.3. 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
- 1.6.4. 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)

1.7. **Bypass**

1.7.1. **Definitions**

- 1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i))
- 1.7.1.2. "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))

- 1.7.2. **Bypass not exceeding limitations.** The Permittee 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 1.7.3, 1.7.4, and 1.7.5 below. (40 C.F.R. § 122.41(m)(2))
- 1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - 1.7.3.2. 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
 - 1.7.3.3. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance 1.7.6 below. (40 C.F.R. § 122.41(m)(4)(i)(C))
- 1.7.4. **Burden of Proof.** In any enforcement proceeding, the permittee seeking to establish the bypass defense has the burden of proof.
- 1.7.5. 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 1.7.3 above. (40 C.F.R. § 122.41(m)(4)(ii))
- 1.7.6. **Notice**
 - 1.7.6.1. **Anticipated bypass.** If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 1, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 below. Notices shall 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(m)(3)(i))

- 1.7.6.2. **Unanticipated bypass.** The Permittee shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). Notices shall 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(m)(3)(ii))

1.8. 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 Permittee. 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))

- 1.8.1. **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 1.8.2 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))
- 1.8.2. **Conditions necessary for a demonstration of upset.** A Permittee 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)):
- 1.8.2.1. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
- 1.8.2.2. The Facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
- 1.8.2.3. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
- 1.8.2.4. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 C.F.R. § 122.41(n)(3)(iv))
- 1.8.3. **Burden of proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4))

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee 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))

2.2. Duty to Reapply

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

2.3. 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 Permittee 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)

3. STANDARD PROVISIONS – MONITORING

- 3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1))
- 3.2. Monitoring must be conducted according to test procedures approved 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 methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapters N or O. For the purposes of this paragraph, a method is sufficiently sensitive when:
 - 3.2.1. The method minimum level (ML) is at or below the level of the most stringent 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 most stringent 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 the Facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

- 3.2.2. 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, subchapters N or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters 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 or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv))

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

4. STANDARD PROVISIONS – RECORDS

- 4.1. Except for records of monitoring information required by this Order related to the Permittee's 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 Permittee 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))

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi))

4.3. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

- 4.3.1. The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and
- 4.3.2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2))

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Permittee 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 Permittee 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, 13383)

5.2. Signatory and Certification Requirements

- 5.2.1. 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 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 C.F.R. § 122.41(k))
- 5.2.2. 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)).
- 5.2.3. 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 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting 5.2.2 above (40 C.F.R. § 122.22(b)(1));
 - 5.2.3.2. 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

5.2.3.3. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3))

5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 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 5.2.3 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))

5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 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))

5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, 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))

5.3. Monitoring Reports

5.3.1. 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))

5.3.2. 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, 2025, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 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))

5.3.3. If the Permittee 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 or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii))

5.3.4. 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))

5.4. **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))

5.5. **Twenty-Four Hour Reporting**

5.5.1. The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee 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.

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, 2025, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10. 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 Permittee 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))

5.5.2. 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)):

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A))

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B))

5.5.3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(ii)(B))

5.6. **Planned Changes**

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

5.6.1. The alteration or addition to a 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

5.6.2. 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))

5.6.3. The alteration or addition results in a significant change in the Permittee's 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))

5.7. **Anticipated Noncompliance**

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

5.8. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 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 5.5 and the applicable required data in appendix A to 40 C.F.R. part 127. As of December 21, 2025, the Regional Water Board may also require the Permittee 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))

5.9. Other Information

When the Permittee 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 Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8))

5.10. 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))

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. 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 13268, 13350, 13385, 13386, and 13387.

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. 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)):

7.1.1. Any new introduction of pollutants into the POTW from an indirect Permittee 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

- 7.1.2. 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 the Order. (40 C.F.R. § 122.42(b)(2))
- 7.1.3. 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)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. California Water Code sections 13267 and 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 law.

1. GENERAL MONITORING PROVISIONS

- 1.1. **Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.
- 1.2. **Supplemental Monitoring Provision.** If the Permittee 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.
- 1.3. **Laboratory Certification.** 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 Permittee may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) with field equipment or its on-site laboratory provided that the Permittee has standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results. The Permittee must demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.

- 1.4. **Instrumentation and Calibration Provision.** All monitoring instruments and devices used by the Permittee 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.

The Permittee shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate and reliable operation.

- 1.5. **Minimum Levels (ML) and Reporting Levels (RL).** U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became

effective September 18, 2015. 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. 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). A U.S. EPA-approved analytical method is sufficiently sensitive where:

- 1.5.1 The ML is at or below both the level of the applicable water quality criterion/objective and the permit limitation for the measured pollutant or pollutant parameter; or
- 1.5.2 In permit applications, the ML is above the applicable water quality criterion/objective, 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
- 1.5.3 The method has the lowest ML of the U.S. EPA-approved analytical methods where none of the U.S. EPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation.

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 3 of the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (2019) (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.

- 1.6. **Discharge Monitoring Report Quality Assurance (DMR-QA) Study.** The Permittee shall participate in the DMR-QA program and ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study from each laboratory providing testing services for the permit are submitted **annually** to the State Water Board at qualityassurance@waterboards.ca.gov. For more information on the DMR-QA Program, contact the State DMR-QA Coordinator at the aforementioned email address.

2. MONITORING LOCATIONS

The Permittee 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	Untreated influent wastewater collected at the plant headworks at a representative point preceding primary treatment.
--	INT-001A	Location for monitoring the flow and surface loading rate through the tertiary filters.
--	INT-001B	Location for monitoring turbidity and effluent flow immediately following the tertiary filters.
---	INT-002	Treated wastewater from the chlorine contact chamber prior to dechlorination for purposes of measuring chlorine residual prior to discharge at Discharge Point 001.
--	INT-003	Filtered, chlorinated wastewater downstream of the filtration building clearwell for the purpose of measuring chlorine residual prior to distribution to the recycled water system at Discharge Point 002.
001	EFF-001	A location where representative samples of the discharge from the treatment system can be collected following all treatment and contributions to the waste stream, including dechlorination, but prior to contact with the receiving water. Latitude: 40° 01' 57.8" N Longitude: -124° 04' 47.4" W
002	REC-001	A location where representative samples of the disinfected tertiary recycled water can be collected as required by Table E-4 to demonstrate compliance with disinfected tertiary recycled water specifications in Order sections 4.3.1.1 and to collect data to characterize the nutrient and salt concentrations of the recycled water. Latitude: 40° 01' 31.4" N Longitude: -124° 04' 19.1" W

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	BIO-001	A representative sample of the sludge or biosolids generated when removed for disposal.

3. INFLUENT MONITORING REQUIREMENTS

3.1. Monitoring Location INF-001

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

Table E-2. Influent Monitoring – Monitoring Location INF-001

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	8-hr Composite	Monthly	Part 136 ²
Total Suspended Solids (TSS)	mg/L	8-hr Composite	Monthly	Part 136 ²

Table Notes

1. Each month, the Permittee shall report the daily average and monthly average 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).

4. EFFLUENT MONITORING REQUIREMENTS

4.1. Monitoring Location EFF-001

4.1.1. The Permittee shall monitor secondary treated effluent prior to contact with the receiving water at Monitoring Location EFF-001 during periods of discharge 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	8-hr Composite	Monthly	Part 136 ²
Total Suspended Solids (TSS)	mg/L	8-hr Composite	Monthly	Part 136 ²
pH	standard units	Grab	Daily ⁴	Part 136 ²
Oil and Grease	mg/L	8-hr Composite	Quarterly ⁴	Part 136 ²
Settleable Solids	mL/L	Grab	Daily ⁴	Part 136 ²
Turbidity	NTU	Grab	Daily ⁴	Part 136 ²
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Part 136 ²
Total Coliform Bacteria, Calendar Month Median	MPN/100 mL	Calculate	Monthly ²	--
Total Residual Chlorine	mg/L	Grab	Daily ³	Part 136 ²
Ammonia, Total (N)	mg/L	Grab	Quarterly ⁴	Part 136 ²
Ocean Plan Table 3 Pollutants ⁵	µg/L	Grab/Composite ⁶	Annually	Part 136 ²
Chronic Toxicity ⁷	Pass or Fail, and % Effect	Grab	Annually	See Section 5 Below

Table Notes

- Each month, the Permittee shall report the daily average and monthly average flows.
- 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). Table note 3
- Accelerated Monitoring (total residual chlorine). If a test result exceeds an effluent limitation, the Permittee shall increase monitoring frequency to a minimum of twice a day for a week to evaluate whether an exceedance is persisting. If two or more samples in a week exceed an effluent limitation, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
<p>4. Quarterly monitoring at Monitoring Location EFF-001 is not required during calendar quarters during which there has been no discharge at Discharge Point 001.</p> <p>5. Those pollutants listed in Table 3 of the Ocean Plan (2019), excluding Table 3 pollutants with specific monitoring requirements established by this table (Table E-3) and acute toxicity.</p> <p>6. Grab samples shall be collected for volatile chemicals listed in Table 3 of the Ocean Plan (2019). Composite samples shall be collected for all other Ocean Plan Table 3 parameters.</p> <p>7. Whole effluent chronic toxicity shall be monitored in accordance with the requirements in section 5 of this MRP.</p>				

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Chronic Toxicity Testing

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

- 5.1.1. **Test Frequency.** The Permittee shall conduct chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001 as summarized in Table E-3 above.
- 5.1.2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 2 percent⁴ effluent.
- 5.1.3. **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 The IWC is calculated using the approved dilution ratio of 50 to 1 (seawater to wastewater) as follows: $(1 \div 50) \times 100$.

- 5.1.4. **Chronic Marine Test Species and Test Methods.** If effluent samples are collected from outfalls discharging to receiving waters with salinity >1 ppt, the Permittee shall conduct the following chronic toxicity tests on effluent samples at the IWC for the discharge in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014, 2002) and Table 1A of 40 CFR part 136. 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.
- 5.1.4.1. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0). If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Permittee shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.0).
- 5.1.4.2. 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), or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).
- 5.1.4.3. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0)
- 5.1.5. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittee 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 5.1.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit term⁵.

⁵ If the percent effect is less than or equal to zero percent effect for each species, or all percent effect are the same value, in the species sensitivity screening test, the Permittee shall either use the species that was most sensitive during the previous permit term for routine monitoring or repeat the species sensitivity screening for all species to confirm the results of the first screening before selecting the most sensitive species to use for routine monitoring. If two consecutive species sensitivity screening tests demonstrate that the percent effect for all species exhibit less than or equal to zero

- 5.1.6. **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.
- 5.1.6.1. 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 2 percent effluent.
- 5.1.6.2. 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 Permittee shall re-sample and re-test within 14 days.
- 5.1.6.3. 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.
- 5.1.6.4. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.
- 5.1.6.5. The Permittee shall perform toxicity tests on final effluent samples. Chlorine and 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).
- 5.1.6.6. **Ammonia Removal.** Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee must demonstrate the effluent toxicity is caused by 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
-

percent, the Permittee may select the species to be used for routine monitoring during the permit term.

and not other toxicants before the Executive Officer would allow for control of pH in the test.

- 5.1.6.6.1. 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.
- 5.1.6.6.2. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
- 5.1.6.6.3. 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.
- 5.1.6.6.4. 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 which do not significantly alter the nature of the effluent.

- 5.1.7. **Notification.** The Permittee 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.
- 5.1.8. **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 Permittee becomes aware of a summary result of "Fail", the Permittee 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 Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is "Fail", the Permittee shall immediately implement the TRE Process conditions set forth in section 5.2, below.
- 5.1.9. **Reporting**
 - 5.1.9.1. **Routine Reporting.** Chronic toxicity monitoring results for effluent at Monitoring Location EFF-001 shall be submitted with the monthly self-monitoring report (SMR) for the month in which chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:

- 5.1.9.1.1. WET reports shall include the contracting laboratory's complete report provided to the Permittee 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:
- 5.1.9.1.1.1. 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);
 - 5.1.9.1.1.2. The source and make-up of the lab control/diluent water used for the test;
 - 5.1.9.1.1.3. Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
 - 5.1.9.1.1.4. Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUc, and IC25;
 - 5.1.9.1.1.5. Identification of any anomalies or nuances in the test procedures or results;
 - 5.1.9.1.1.6. WET test results shall include, at a minimum, for each test:
 - 5.1.9.1.1.6.1. Sample date(s);
 - 5.1.9.1.1.6.2. Test initiation date;
 - 5.1.9.1.1.6.3. Test species;
 - 5.1.9.1.1.6.4. 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:
$$\text{"Percent Effect" (or Effect, in \%)} = ((\text{Control mean response} - \text{IWC mean response}) \div \text{Control mean response}) \times 100$$
 - 5.1.9.1.1.6.5. End point values for each dilution (e.g., number of young, growth rate, percent survival);
 - 5.1.9.1.1.6.6. NOEC value(s) in percent effluent;
 - 5.1.9.1.1.6.7. IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent;

- 5.1.9.1.1.6.8. TUC values (100/NOEC);
 - 5.1.9.1.1.6.9. Mean percent mortality (\pm s.d.) after 96 hours in 100 percent effluent (if applicable);
 - 5.1.9.1.1.6.10. NOEC and LOEC values for reference toxicant test(s);
 - 5.1.9.1.1.6.11. IC50 or EC50 value(s) for reference toxicant test(s);
 - 5.1.9.1.1.6.12. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia);
 - 5.1.9.1.1.6.13. Statistical methods used to calculate endpoints;
 - 5.1.9.1.1.6.14. The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and
 - 5.1.9.1.1.6.15. 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.
- 5.1.9.2. **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.

5.2. Toxicity Reduction Evaluation (TRE) Process

- 5.2.1. **TRE Work Plan.** The Permittee submitted a TRE Work Plan to the Regional Water Board on August 19, 2014. The Permittee's TRE Work Plan shall be reviewed by **April 1, 2023** for consistency with permit requirements and the Permittee's procedures and updated as necessary in order to remain current and applicable to the discharge and requirements of this Order.

The Permittee 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 Permittee intends to follow if toxicity is detected, and should include at least the following items:

- 5.2.1.1. 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.
- 5.2.1.2. 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.
- 5.2.1.3. 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).
- 5.2.2. **Preparation and Implementation of a Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in section 5.1.8, above, results in "Fail", the Permittee 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 result to the Regional Water Board Executive Officer. The Permittee 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 5.1.8 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:
 - 5.2.2.1. Further actions by the Permittee to investigate, identify, and correct causes of toxicity.
 - 5.2.2.2. Actions the Permittee will take to mitigate effects of the discharge and prevent the recurrence of toxicity.
 - 5.2.2.3. A schedule for these actions, progress reports, and the final report.
- 5.2.3. **TIE Implementation.** The Permittee 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.

- 5.2.4. 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 Permittee 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.
- 5.2.5. The Permittee 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.
- 5.2.6. 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.

6. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

This Order does not authorize discharges to land.

7. RECYCLING MONITORING REQUIREMENTS

7.1. Monitoring Location REC-001

- 7.1.1. The Permittee shall monitor treated wastewater to be recycled and used for irrigation at Monitoring Location REC-001 (prior to recycled water storage), as follows:

Table E-4. Recycled Water Monitoring Requirements – Monitoring Location REC-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow ¹	mgd	Meter	Continuous	--
BOD ₅	mg/L	8-hr Composite	Weekly ²	Part 136 ³
TSS	mg/L	8-hr Composite	Weekly ²	Part 136 ³
pH	standard units	Grab	Weekly ²	Part 136 ³
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly ²	Part 136 ³
Total Residual Chlorine	mg/L	Meter	Continuous	Part 136 ³

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Turbidity	mg/L	Meter	Continuous	Part 136 ³
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly ⁵	Part 136 ³
Nitrite Nitrogen, Total (as N)	mg/L	Grab	Monthly	Part 136 ³
Ammonia Nitrogen, Total (as N)	mg/L	Grab	Monthly	Part 136 ³
Organic Nitrogen, Total (as N)	mg/L	Grab	Monthly	Part 136 ³
Total Nitrogen (as N) ⁴	mg/L	Calculation	Monthly	--
Total Dissolved Solids (TDS)	mg/L	Grab	Monthly	Part 136 ³

Table Notes

1. Each month the Permittee shall report the number of days that treated wastewater was used for recycled water irrigation at the approved recycled water use site(s), as well as the average and maximum daily flow rate.
2. Accelerated Monitoring (weekly monitoring frequency). If two consecutive weekly test results exceed an effluent limitation, the Permittee shall take two samples each of the two weeks following receipt of the second sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps to return to compliance.
3. 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).
4. Total Nitrogen shall be calculated using the results of ammonia nitrogen, total nitrate, total nitrite, and organic nitrogen.

8. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

8.1. Surface Water Monitoring – Not Required

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

8.2. Groundwater Monitoring – Not Required

This Order does not require groundwater monitoring at this time.

9. OTHER MONITORING REQUIREMENTS

9.1. Filtration Process Monitoring

Filtration process monitoring shall demonstrate compliance with section 4.4.1 (Filtration Process Requirements) of the Order and applies when discharging to the recycled water system. The following filtration process monitoring shall be implemented:

9.1.1. Effluent Filter Monitoring (Monitoring Location INT-001A)

- 9.1.1.1. **Monitoring.** The Permittee shall calculate, on a daily basis, the surface loading rate in gallons per minute per square foot and report the maximum surface loading rate and any exceedances of the surface loading rate limitations specified in section 4.4.1.1 of the Order. The rate of flow through the tertiary wastewater treatment process filters shall be measured at Monitoring Location INT-001A.
- 9.1.1.2. **Compliance.** Compliance with the maximum daily filter surface loading rate, as specified in section 60301.320 of the CCR Water Recycling Criteria (title 22), shall be calculated based on the flow rate through each filter unit.
- 9.1.1.3. **Reporting.** The daily instantaneous maximum daily filter surface loading rate, maximum daily flow rate, and daily average flow rate shall be reported on the monthly SMRs.

9.1.2. Effluent Filter Monitoring (Monitoring Location INT-001B)

- 9.1.2.1. **Monitoring.** The turbidity of the filter effluent shall be continuously measured and recorded. Should the turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The recorded data shall be maintained by the Permittee for at least 3 years. The daily maximum, daily average, and 95th percentile turbidity results shall be reported for Monitoring Location INT-001B on the monthly SMRs.
- 9.1.2.2. **Compliance.** Compliance with the 95th percentile effluent turbidity limitation specified in title 22, as referenced in section 4.4.1.2 of the Order, shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2 hours over a 24-hour period. Exceedances of the maximum turbidity requirement referenced in section 4.4.1.2 of this Order shall not be considered a violation of these waste discharge requirements if such exceedance does not exceed a duration of one minute. Mitigation of the event shall consist of diverting all inadequately treated wastewater to temporary storage or an

upstream process or automatically activated chemical addition to comply with title 22 requirements (sections 60304 and 60307).

9.1.2.3. Reporting.

- 9.1.2.3.1. The daily average, maximum, and 95th percentile values of combined effluent turbidity shall be reported on the monthly SMRs.
- 9.1.2.3.2. If the filtered effluent turbidity exceeds 2 NTU, based on a daily average, 5 NTU for more than 15 minutes, or 10 NTU at any time, the incident shall be reported in the monthly SMR and to the Regional Water Board and the Division of Drinking Water (DDW) by telephone within 24 hours in accordance with Provision 6.1.2.2 of the Order. A written report describing the incident and the actions undertaken in response shall be included in the monthly SMR.
- 9.1.2.3.3. A summary of compliance with all effluent filter requirements shall be included as part of the Permittee's Annual Report submitted to the Regional Water Board.

9.2. Disinfection Process Monitoring for the Chlorine Disinfection System

Disinfection process monitoring shall demonstrate compliance with section 4.4.2 (Disinfection Process Requirements for the Chlorine Disinfection System) of this Order. Disinfection process monitoring at Monitoring Locations INT-002 and INT-003 shall apply to all treated wastewater flows through Discharge Points 001 and 002, respectively. The following disinfection process monitoring requirements must be implemented.

9.2.1. Disinfection Process Monitoring (Monitoring Locations INT-002 and INT-003)

9.2.1.1. Monitoring

9.2.1.1.1. Monitoring Location INT-002

When discharging to the Pacific Ocean at Discharge Point 001, the Permittee shall monitor treated wastewater from the chlorine contact chamber prior to dechlorination for purposes of measuring chlorine residual at Monitoring Location INT-002 as follows:

Table E-5. Disinfection Process Monitoring – Monitoring Location INT-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Residual Chlorine	mg/L	Grab	Daily	Part 136 ¹

Table Notes

1. 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). Per Order section 4.1.1.4 the Permittee shall use the spectrophotometric DPD method 4500-CL G, or equivalent.

9.2.1.1.2. Monitoring Location INT-003

When discharging to the recycled water system at Discharge Point 002, the chlorine residual of the effluent from the clearwell shall be monitored continuously at Monitoring Location INT-003 at a point following chlorination and prior to discharge and recorded. The modal contact time shall be determined at the same point.

9.2.1.1.2.1. **Compliance.** When discharging to the recycled water system at Discharge Point 002, the chlorine disinfection CT (the product of total residual chlorine and modal contact time) shall not fall below 450 mg-min/L, with a modal contact time of at least 90 minutes. Each day the Permittee shall calculate the CT values for the following conditions:

- 9.2.1.1.2.1.1. Modal contact time under highest daily flow and corresponding chlorine residual.
- 9.2.1.1.2.1.2. Modal contact time under lowest daily flow and corresponding chlorine residual
- 9.2.1.1.2.1.3. Lowest chlorine residual and corresponding modal contact time.
- 9.2.1.1.2.1.4. Highest chlorine residual and corresponding modal contact time.

The lowest calculated CT value under the aforementioned conditions shall be reported as the daily CT value on the monthly SMR.

9.2.1.1.2.2. **Reporting.** If the chlorine disinfection CT calculated at Monitoring Location INT-003 is less than 450 mg-min/L or if the chlorination

equipment fails, the event shall be reported in the monthly SMR and the incident shall be reported to the Regional Water Board and DDW by telephone within 24 hours in accordance with Special Provision 6.1.2.2 of the Order. A written report describing the incident and the actions undertaken in response shall be included in the monthly SMR. The report shall describe the measures taken to bring the discharge into compliance. Upon discovery of any equipment failure or failure to achieve 1.5 mg/L total residual chlorine at Monitoring Location INT-002, or a CT value of 450 mg-min/L at Monitoring Location INT-003 when discharging to the recycled water system, inadequately treated and disinfected wastewater shall be diverted to a storage basin or an upstream process for adequate treatment.

9.3. **Visual Monitoring (Monitoring Location EFF-001)**

Visual observations of the discharge and receiving water shall be recorded monthly and on the first day of each intermittent discharge. Visual monitoring shall include, but not be limited to, observations for floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations shall be recorded and included in the Permittee's monthly SMRs.

9.4. **Sludge Monitoring (Monitoring Location BIO-001)**

9.4.1. Sludge sampling shall be conducted according to the requirements specified by the location and type of disposal activities undertaken. At a minimum:

9.4.1.1. The Permittee shall run a paint filter test, SW-846 method 9095B, on sewage sludge prior to hauling it to the landfill transfer point to verify that it does not contain free liquids.⁶

9.4.2. Sampling records shall be retained for a minimum of 5 years. A log shall be maintained for sludge quantities generated and of 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.

9.5. **Outfall Inspection**

9.5.1. At least once per permit term, the Permittee shall visually inspect (e.g., divers, dye study, etc.) the outfall structure, including the diffuser ports to assess the operational status and integrity of the outfall and diffuser structure. The outfall

⁶ The paint filter test may be run by the Permittee. It is not required to be run by the Permittee's certified contract laboratory.

inspection shall also check for possible external blockage of ports by sand, silt, debris, or aquatic life. The Permittee shall submit to the Executive Officer for approval an Outfall Inspection Work Plan no later than **October 1, 2024**. The Permittee shall submit to the Executive Officer for approval a report within 90 days of completing the inspection and no later than **April 1, 2026** that includes the following:

- 9.5.1.1. A description of the of the outfall as originally constructed and maintenance history;
- 9.5.1.2. Documentation of the current outfall condition, including any observed cracks, breaks, leaks, plugged ports, and other actual or potential malfunctions;
- 9.5.1.3. Verification assessment to determine whether the current outfall condition is consistent with the underlying assumptions of the minimum initial dilution authorized in this Order and whether the approach and assumptions used to formulate the minimum initial dilution credit are still valid; and
- 9.5.1.4. A corrective action plan and schedule for addressing any maintenance or repairs necessary to return the outfall to satisfactory condition.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

- 10.1.1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

10.2. Self-Monitoring Reports (SMRs)

- 10.2.1. The Permittee 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/water_issues/programs/ciwqs/) (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provisions of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.
- 10.2.2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Permittee 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

Permittee 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.

10.2.3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.

10.2.4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. 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 month of sampling
Daily	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 month of sampling
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 month of sampling
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 month of sampling

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	First day of second calendar month following the month of sampling
Annually	January 1 following (or on) permit effective date>	January 1 through December 31	March 1, each year (with annual report)

10.2.5. **Reporting Protocols.** The Permittee shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

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

10.2.5.1. 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).

10.2.5.2. 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.

10.2.5.3. Sample results less than the laboratory’s MDL shall be reported as “Not Detected,” or ND.

10.2.5.4. The Permittee 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

10.2.6. The Permittee shall submit SMRs in accordance with the following requirements:

10.2.6.1. The Permittee 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 calculations of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee 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 Permittee shall electronically submit the data in a tabular format as an attachment.

10.2.6.2. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

10.2.6.2.1. Facility name and address;

10.2.6.2.2. WDID number;

10.2.6.2.3. Applicable period of monitoring and reporting;

10.2.6.2.4. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);

10.2.6.2.5. Corrective actions taken or planned; and

10.2.6.2.6. The proposed time schedule for corrective actions.

10.2.6.3. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>).

In the event that an alternate method for submittal of SMRs is required, the Permittee 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://waterboards.ca.gov/northcoast>.

10.2.6.4. At any time during the term of this permit, the Regional Water Board may notify the Permittee to electronically submit both technical and Self-Monitoring Reports (SMRs) to the State Water Board’s GeoTracker database in searchable Portable Document Format (pdf). In addition, analytical data will be required to be uploaded to the GeoTracker database under a site-specific global identification number that will be assigned to the Permittee. Information on the GeoTracker database is provided on the State Water Board website at: https://www.waterboards.ca.gov/resources/data_databases/groundwater.shtm

10.3. Discharge Monitoring Reports (DMRs)

10.3.1. DMRs are U.S. EPA reporting requirements. The Permittee 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 monthly on the first day of the second calendar month following the month of sampling. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring): (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

10.4. Other Reports

10.4.1. **Special Study Reports and Progress Reports.** Special study and progress reports shall be submitted in accordance with the following reporting requirements.

Table E-7. Reporting Requirements for Special Provisions Reports

Order Section	Special Provision Requirement	Reporting Requirement
Special Provision 6.3.2.1	Disaster Preparedness Assessment Report and Action Plan	April 1, 2025
Special Provision 6.3.2.2	Analysis of Influent Flow and Treatment Capacity	April 1, 2026
Special Provision 6.3.2.3	Effluent Discharge Study Work Plan	June 1, 2023
Special Provision 6.3.2.3	Effluent Discharge Study Report	March 1, 2026
Special Provision 6.3.3.1.2.5	Pollutant Minimization Program, Annual Facility Report	March 1 , annually, following development of Pollutant Minimization Program

Order Section	Special Provision Requirement	Reporting Requirement
Special Provision 6.3.4.1	King Range SWQPA Construction Activity Notification	180 days prior to construction resulting in new or altered discharge or habitat modification
Special Provision 6.3.5.2.1	Source Control Provisions, Annual Report	March 1 , annually
Special Provision 6.3.5.5	Adequate Capacity, Technical Report	Within 120 days of notification that the Facility will reach capacity within 4 years
MRP General Monitoring Provision 1.6	DMR-QA Study Report	Annually , per State Water Board instructions
MRP Effluent Monitoring Requirement 5.1.7	Verbal and written notification of chronic toxicity fail result	Within 72 hours (verbal) and 14 days (written) after receipt of a fail result.
MRP Effluent Monitoring Requirement 5.1.9.2	Notification of TRE/TIE Results	No later than 30 days from the completion of each aspect of the TRE/TIE analyses.
MRP Effluent Monitoring Requirement 5.1.9.2	TRE/TIE Results	Within 60 days of completion of TRE/TIE analyses
MRP Effluent Monitoring Requirement 5.2.1	TRE Work Plan review and update	Review by April 1, 2023 Update as necessary
MRP Effluent Monitoring Requirement 5.2.2	Detailed TRE Work Plan	Within 30 days of an accelerated monitoring test that results in "Fail"
MRP Other Monitoring Requirement 9.5.1	Outfall Inspection Work Plan	October 1, 2024
MRP Other Monitoring Requirement 9.5.1	Outfall Inspection Report	April 1, 2026
MRP Reporting Requirement 10.4.2	Annual Report	March 1 , annually
MRP Reporting Requirement 10.4.3	Annual Volumetric Report	April 30

Order Section	Special Provision Requirement	Reporting Requirement
MRP Reporting Requirement 10.4.5.1	Notification of spills and unauthorized discharges.	Oral reporting within 24 hours and written report within 5 days

10.4.2. **Annual Report.** The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site. In the event that a paper copy of the annual report is required, the Permittee shall submit the report to the email address in section 10.2.6.3, above. The report shall be submitted by **March 1st** of the following year. The report shall, at a minimum, include the following:

10.4.2.1. Where appropriate, tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee 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 in the SMR.

10.4.2.2. 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.

10.4.2.3. The names and general responsibilities of all persons employed at the Facility;

10.4.2.4. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and

10.4.2.5. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

10.4.2.6. **Source Control Activity Reporting.** The Permittee shall submit, as part of its Annual Report to the Regional Water Board, a description of the Permittee’s source control activities, as required by Special Provision VI.C.5.b, during the past year. This annual report is due on March 1st of each year, and shall contain:

10.4.2.6.1. A copy of the source control standards, including a table presenting local limits.

10.4.2.6.2. A description of the waste hauler permit system; if applicable.

- 10.4.2.6.3. A summary of the compliance and enforcement activities taken by the Permittee 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 Permittee, 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.
- 10.4.2.6.4. 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.
- 10.4.2.7. **Sludge Handling and Disposal Activity Reporting.** The Permittee shall submit, as part of its annual report to the Regional Water Board, a description of the Permittee's solids handling, disposal and reuse activities over the previous 12 months. At a minimum, the report shall contain:
- 10.4.2.7.1. Annual sludge production, in dry tons and percent solids;
- 10.4.2.7.2. Sludge monitoring results;
- 10.4.2.7.3. A schematic diagram showing sludge handling facilities (e.g., digesters, thickeners, drying beds, etc.), if any and a solids flow diagram;
- 10.4.2.7.4. Methods of final disposal of sludge:
- 10.4.2.7.4.1. For any portion of sludge discharged to a sanitary landfill, the Permittee 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.
- 10.4.2.7.4.2. For any portion of sludge discharged through land application, the Permittee 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.
- 10.4.2.7.4.3. For any portion of sludge further treated through composting, the Permittee 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.

- 10.4.2.7.5. 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.
- 10.4.2.8. **Storm Water Reporting.** The Permittee shall submit, as part of its annual report to the Regional Water Board, an evaluation of the effectiveness of the Permittee's best management practices (BMPs) to control the run-on of storm water to the Facility site, as well as activities to maintain and upgrade these BMPs.
- 10.4.2.9. **Sanitary System Reporting.** The Permittee shall submit as part of the annual report to the Regional Water Board, a description of the Permittee's activities to correct deficiencies and reduce inflow and infiltration (I&I) into the collection system. The report shall include, but not be limited to the following:
- 10.4.2.9.1. A description of any assessment work to characterize the collection system and identify deficiencies;
- 10.4.2.9.2. A description of replacement and rehabilitation of the collection system, including details about replaced/rehabilitated infrastructure, including pipeline, manholes, lift stations, etc.
- 10.4.2.9.3. A description of any changes in the Permittee's ordinances and programs to address I&I.
- 10.4.2.9.4. The financial resources spent on collection system assessment, rehabilitation, and repair work during the calendar year, and the amount of financial resources budgeted for the upcoming calendar year.
- 10.4.3. **Annual Volumetric Reporting.** The Permittee shall electronically certify and submit an annual volumetric report, containing monthly data in electronic format, to State Water Board's GeoTracker system **by April 30** of the following year. Required data shall be submitted to the GeoTracker database under a site-specific global identification number. The Permittee shall report in accordance with each of the items in Section 3 of the Policy for Water Quality Control for Recycled Water (Recycled Water Policy as described below):
- 10.4.3.1. **Influent.** Monthly volume of wastewater collected and treated by the Facility.
- 10.4.3.2. **Production.** Monthly volume of waster treated, specifying level of treatment.
- 10.4.3.3. **Discharge.** Monthly volume of treated wastewater discharged to each of the following, specifying level of treatment:
- 10.4.3.3.1. Inland surface waters, specifying volume required to maintain minimum instream flow, if any; and

10.4.3.3.2. Land, where beneficial use is not taking place, including evaporation or percolation ponds, overland flow, or spray irrigation disposal, excluding pasture or fields with harvested crops.

10.4.3.4. **Reuse.**

10.4.3.4.1. Monthly Volume of treated wastewater distributed.

10.4.3.4.2. Annual volume of treated wastewater distributed for beneficial use in compliance with California Code of Regulations, title 22 in each of the use categories listed below:

10.4.3.4.2.1. Agricultural irrigation: pasture or crop irrigation.

10.4.3.4.2.2. Landscape irrigation: irrigation of parks, greenbelts, and playgrounds; school yards; athletic fields; cemeteries; residential landscaping, common areas; commercial landscaping; industrial landscaping; and freeway, highway, and street landscaping.

10.4.3.4.2.3. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.

10.4.3.4.2.4. Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.

10.4.3.4.2.5. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.

10.4.3.4.2.6. Geothermal energy production: augmentation of geothermal fields.

10.4.3.4.2.7. Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments.

10.5. **Spill Notification**

10.5.1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges (except SSOs) that may endanger health or the environment shall be provided orally to the Regional Water Board⁷ **within 24**

⁷ 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-hour spill

hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided **within five days** of the time the Permittee becomes aware of the circumstances, in accordance with section 5.5 of Attachment D.

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

- 10.5.1.1. Name and contact information of caller;
 - 10.5.1.2. Date, time, and location of spill occurrence;
 - 10.5.1.3. Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;
 - 10.5.1.4. Surface water bodies impacted, if any;
 - 10.5.1.5. Cause of spill, if known at the time of the notification;
 - 10.5.1.6. Cleanup actions taken or repairs made at the time of the notification; and
 - 10.5.1.7. Responding agencies.
- 10.5.2. **Sanitary Sewer Overflows.** Notification and reporting of sanitary sewer overflows are 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.

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 2.2 of this Order, 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 Permittee. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittee.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	1B84086OHUM
Permittee	Humboldt County Resort Improvement District No. 1
Name of Facility	Shelter Cove Wastewater Treatment Facility
Facility Address	Lower Pacific Drive at Wave Drive Shelter Cove Road, Whitehorn, CA 95589 Humboldt County
Facility Contacts, Titles and Phones	Christopher Christianson, Chief Plant Operator, (707) 986-1411 Justin Robbins, General Manager, (707) 986-7015
Authorized Person to Sign and Submit Reports	Christopher Christianson, Chief Plant Operator, (707) 986-1411 or other District staff with proper signatory authority
Mailing Address	9126 Shelter Cove Road, Whitehorn, CA 95589
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	Producer, Distributor
Facility Permitted Flow	0.17 million gallons per day (mgd) (average dry weather treatment capacity) 0.77 mgd (peak daily wet weather treatment capacity)
Facility Design Flow	0.17 mgd (average dry weather treatment capacity) 0.77 mgd (peak daily wet weather treatment capacity)
Watershed	Cape Mendocino Hydrologic Unit
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean Waters

1.1. The Humboldt County Resort Improvement District No. 1 (hereinafter Permittee) is the owner and operator of the Shelter Cove Wastewater Treatment Facility (hereinafter Facility), a Publicly Owned Treatment Works (POTW).

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

The Permittee is authorized to discharge subject to waste discharge requirements (WDRs) in this Order at Discharge Location 001 described in Table 1 on the cover page of this Order. The Permittee may also complete the permitting process for the use of recycled water at Discharge Location 002 described in Table 1 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, this Order limits the effective period for the discharge authorized by this Order (see Order page 2). 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.

1.2. The Facility discharges secondary treated wastewater to the Pacific Ocean, a water of the United States. The Permittee was previously regulated by Order No. R1-2015-0017 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0023027 adopted on May 7, 2015 and expired on June 30, 2020.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility. A site visit was conducted on June 9, 2021 by U.S. EPA inspectors to observe operations. U.S. EPA transmitted an inspection report to Regional Water Board staff on August 12, 2021, documenting the site visit.

- 1.3. The Permittee filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on December 31, 2019. Supplemental information to complete the ROWD was submitted on January 6, 2020 and August 22, 2021. The application was deemed complete on August 25, 2021.

2. FACILITY DESCRIPTION

The Permittee owns and operates the Facility, a domestic wastewater collection, treatment, water recycling, and disposal facility that serves a population of approximately 693 within the Humboldt County Resort Improvement District, No. 1 in Shelter Cove, California.

2.1. Description of Wastewater and Biosolids Treatment and Controls

2.1.1. Collection System

The Permittee's wastewater collection system consists of approximately 22 miles of 6-, 8-, and 10-inch gravity pipeline, 1 mile of pressurized force mains, 408 manholes, and 9 wastewater pump stations. Influent wastewater reaches the treatment system either by gravity from the north and east portions of the service area, or by force main from the central lift station located just south of the Facility. The central lift station ultimately receives wastewater emanating from the south and centrally located portions of the service area.

Seasonal population trends and large amounts of inflow and infiltration (I&I) to the collection system influence wastewater flows to the Facility. During the wet season (November through April), I&I accounts for the majority of the flow to the Facility, while the dry season (May through October) flows correspond to an increase in vacation residents and lower I&I. The Permittee instituted an I&I rehabilitation program in February 2008 as a compliance project in response to ACL Order No. R1-2007-0009. Per the Analysis of Influent Flow & Treatment Capacity in the ROWD, the Permittee continued to complete inspections and point repairs of the collection system during the term of Order No. R1-2015-0017 by implementing its annual program of sewer cleaning, video inspection, and repair of manholes, sewer mains, and collection system laterals on a periodic, rotating basis. Accordingly, the Facility remained below the design peak daily wet weather flow of 0.77 mgd for the past 5 years with a peak flow of 0.714 mgd that occurred on February 26, 2019 (see additional discussion in Fact Sheet section 2.2.2).

2.1.2. **Wastewater Treatment Facility**

The Facility treats domestic and commercial wastewater and has an average dry weather design treatment capacity of 0.17 mgd, an average wet weather treatment capacity of 0.27 mgd, and a peak daily wet weather treatment capacity of 0.77 mgd. The Facility is an extended aeration, activated sludge system comprised of two oxidation ditches, two clarifiers, chlorine contact chamber, and sulfur dioxide dechlorination.

The Facility also includes a tertiary treatment filtration system for effluent reused for irrigation of the Shelter Cove Golf Course. For this process, disinfected wastewater from the chlorine contact chamber is dosed with a polymer for coagulation then routed to the filter building for filtration through either of two continuous backwash up-flow silica sand media filters. Filtered wastewater is stored in the building clearwell and then chlorinated downstream of the clearwell prior to discharging the 3,500 lineal feet to the golf course irrigation storage pond (90,000 gallons).

This Order includes requirements for the production of recycled water but does not permit the use of recycled water at this time. The Permittee must complete tasks that include completion of a tracer study on the chlorine contact basin and potentially upgrade the Facility to meet recycled water requirements in title 22 of the California Code of Regulations. In addition, the Permittee needs to develop a Recycled Water Irrigation Management Plan that also includes an agronomic rate analysis for the recycled water use. After the Permittee receives approval from the State Water Board Division of Drinking Water (DDW) to resume the use of recycled water, the Permittee will need to enroll its use of recycled water under Order statewide Recycled Water General Order or this Order will need to be modified to include requirements for the use of recycled water, including any conditions for the production and use of recycled water included in a DDW acceptance letter.

During the winter period, all of the secondary treated effluent is discharged through Discharge Point 001 into the surf zone of the Pacific Ocean within the King Range National Conservation Area. During the spring, summer, and fall, some or all of the treated effluent has been discharged through Discharge Point 002 to a storage pond that supplies a spray irrigation system on the Shelter Cove Golf Course, a nine-hole golf course.

Digested stabilized sludge is dewatered using a proprietary 12-bag sludge drying unit. Sludge from the clarifiers is mixed with a polymer and placed in filter bags that allow the liquid to escape while retaining the solids. The filtrate is returned to the secondary treatment process, and dried sludge is taken to the Humboldt County solid waste transfer station for landfill disposal.

2.2. Discharge Points and Receiving Waters

The receiving water for Discharge Point 001 (near waters of the King Range National Conservation Area) was designated by the State Water Resources Control Board (State Water Board) as an Area of Special Biological Significance (ASBS)⁸ on March 21, 1974. The California Ocean Plan prohibits waste discharges to ASBS; however, in 1983, the Regional and State Water Boards conducted public hearings regarding the discharge of treated effluent through the Permittee's outfall into the ASBS. With the concurrence of U.S. EPA, the Regional and State Water Boards found that (1) the discharge of treated wastewater was not resulting in water quality impacts, and (2) there was no practical alternative to the continued discharge of treated and disinfected wastewater to the ASBS. The agencies determined that continued discharge in the ASBS should be permitted as long as no water quality impacts occur.

Resolution No. 83-81 was adopted on October 5, 1983 and allowed an exception for the Facility's discharge to the ASBS provided that: (1) The effluent is dechlorinated prior to discharge, (2) the discharge is limited to the [then] current design capacity, (3) effluent monitoring is performed; and (4) periodic evaluations of the marine environment are conducted.

On September 20, 2007, the Regional Water Board requested that the Permittee conduct an evaluation of the marine environment. Resolution No. 83-81 did not provide any specific guidance as to the requirements of the periodic evaluations; therefore, the September 20, 2007 letter included directives from the Regional Water Board. These directives were, in part, based upon a study conducted by the Permittee in 1983 which demonstrated that the Permittee was not impacting the marine environment. The Regional Water Board requested that a report be submitted which required effluent monitoring for Ocean Plan Table 3 pollutants, acute toxicity effluent analysis, a photographic survey of intertidal flora and fauna, an analysis of influent flow and treatment capacity, and an analysis of chlorination practices. The requested report was submitted by the Permittee in a September 2008 (2008 Report).

Based on the findings of the 2008 Report, the Regional Water Board determined that the requirements to allow the exception for the Facility's discharge to the ASBS had been satisfied. Those findings continue to be satisfied based on the following current information:

⁸ Effective January 1, 2003, all ASBS in California were reclassified as State Water Quality Protection Areas (SWQPA).

- 2.2.1. Prior to discharge to the ocean, the effluent is dechlorinated using sulfur dioxide. During the term of the 2015 permit, the minimum recorded contact time was 56 minutes based on the peak wet weather flow that occurred on February 26, 2019. Chlorine residual was not detected in the effluent at a detection level of 0.05 mg/L based on daily monitoring data collected between July 2015 and June 2021.
- 2.2.2. The Permittee’s Influent Flow and Treatment Capacity Analysis submitted with the ROWD provides an analysis of the design capacity of the Facility, comparing the design flows to actual 2015-2018 flows. Regional Water Board staff added the analysis of 2019 and 2020 flows. The analysis demonstrates that the discharge flow is within the design capacity of the Facility. Table F-2 summarizes the flow analysis completed by the Permittee through 2018 and by Regional Water Board staff through 2020.

Table F-2. Facility Design Criteria and Actual Discharge Flows

Flow	Units	Design	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Actual 2019	Actual 2020
Average Dry Weather	mgd	0.17	0.098	0.098	0.093	0.073	0.082	0.059	0.044
Peak Dry Weather	mgd	0.46	0.192	0.213	0.197	0.172	0.269	0.154	0.161
Average Wet Weather	mgd	--	0.13	0.141	0.174	0.155	0.089	0.114	0.066
Peak Wet Weather	mgd	0.77	0.552	0.541	0.537	0.538	0.509	0.714	0.318

As shown in Table F-2, the actual flows are well below the design flows. Census data shows that the population has grown over the years from 340 people in 2000, to 693 in 2010, to 774 in 2020, yet overall, flows have decreased. The Permittee’s Analysis of Influent Flow and Treatment Capacity submitted with the ROWD in January 2020 indicated that the peak dry weather flow in 2018 was likely erroneously high due to a malfunctioning influent flow meter. Since 2019, the chlorine contact chamber’s influent flow meter has been used to report plant flows until the malfunctioning influent flow meter issue is resolved. The Permittee installed a new influent flow meter in August 2021, and at the time of this writing is waiting for ordered parts to arrive to complete the activation of the meter. Global supply chain issues due to the COVID-19 pandemic have caused delays, thus, a definitive schedule for completing the activation of the influent

flow meter is unknown. The Permittee hopes that the meter will be activated before the end of 2021.

Furthermore, the discharge from the Facility is primarily a factor of I&I and not population, therefore, as I&I is reduced through the Permittee's on-going collection system assessment, maintenance, and repair efforts, wet weather flows are expected to decrease with time. The peak wet weather flow of 0.714 mgd on February 26, 2019 occurred during a period of intense rainfall that tested the collection system but did not cause an exceedance of the peak wet-weather flow capacity of 0.744 mgd.

- 2.2.3. Effluent monitoring data for Ocean Plan Table 3 pollutants to demonstrate compliance with water quality objectives was conducted in November 2015, 2016, 2017, 2018, 2019, and 2020. A reasonable potential analysis (RPA) was conducted on this data and the Regional Water Board determined that no reasonable potential exists for the discharge to exceed water quality standards based on effluent monitoring data, except for aldrin, which appeared in the 2015 Ocean Plan pollutant scan at a concentration of 0.014 ug/L. Since aldrin did not show up in pollutant scans for the following five years (2016-2020) and there are no known sources of aldrin in Shelter Cove, a determination of no reasonable potential has been made and effluent limitations have not been established for aldrin. Consistent with Order No. R1-2015-0017, this Order requires annual monitoring for most Ocean Plan Table 3 pollutants. Acute toxicity monitoring was not required and based on annual chronic toxicity monitoring conducted during the permit term, the effluent does not exhibit reasonable potential to cause or contribute to an exceedance of the Ocean Plan objective for chronic toxicity.
- 2.2.4. In a 1983 study conducted by the Permittee, some impacts to the marine environment had been noted; however, this was before the dechlorination equipment was added in 2000 which appears to have mitigated these impacts. As required by Order No. R1-2015-0017, the Permittee submitted the results of a photographic survey in their January 2, 2020 *Comparative Evaluation of the Indigenous Biota within the Vicinity of the Shelter Cove Wastewater Treatment & Disposal Facility's Outfall*. The photographic survey was conducted on December 23, 2019 using field assessment methods similar to those used to conduct the previous survey on July 15, 2014, though the ocean conditions during the 2019 survey were rough, and some areas observed during the 2014 survey were not accessible for comparative evaluation.

The photographic survey included four locations, two near the outfall and two control locations. The survey indicated that the intertidal flora and fauna were similar at all four sample locations, with slight differences in numbers and genera present, which the Permittee attributed to differences in cliff face orientation to prevailing swells and, in the case of the surge channel, its relatively protected location from direct wave impact. Many of the organisms

observed were also present and identified in the 1983 study, while some were not present in the previous assessment. The Permittee attributed differences in the numbers of intertidal flora and fauna genera between the July 2014 and December 2019 comparative evaluations to seasonality (the difference between summer and winter months) and specific weather conditions on the day the 2019 survey was conducted.

During the photographic survey, the Permittee did not notice any objectionable aquatic growths, grease or oil, and/or discoloration or degradation of cliff surfaces and indigenous biota attributable to the discharge. The only observation of an effect was the approximately 2 foot by 4-foot area where freshwater exiting the discharge directly hit the cliff surface. This small area, regularly exposed to freshwater, lacked marine intertidal algae and invertebrates. However, the north and south walls immediately adjacent to this small area supported the marine flora and fauna in the diversity and coverage consistent with the two control locations.

Regional Board staff have determined that the photographic surveys to date have demonstrated that the discharge has little to no impact on the flora and fauna and because effluent quality has remained consistent over the years that this Facility has been permitted, the photographic survey requirement is being reduced to a once every other permit term requirement (once every ten years). ***Thus, this Order does not require the Permittee to conduct the photographic survey. Regional Water Board staff will include the requirement in the permit renewal that occurs five years after the adoption of this Order.***

2.3. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order No. R1-2015-0017 for discharges from Discharge Point 001 (Monitoring Location 001) and representative monitoring data from the term of Order No. R1-2015-0017 are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data – Monitoring Location EFF-001 (From July 2015 – June 2021)

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	0.17 ¹	--	0.77 ³	0.075 ²	--	0.714 ⁴
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	60	14	14	14
BOD ₅	lbs/day ⁵	43	64	85	20	20	20
BOD ₅	Percent Removal	85	-	-	75 ⁶	-	-
Total Suspended Solids (TSS)	mg/L	30	45	60	9.6	9.6	9.6
TSS	lbs/day ⁵	43	64	85	4.8	4.8	4.8
TSS	Percent Removal	85	-	-	92 ⁶	-	-
pH	standard units	-	-	6.0 – 9.0 ⁷	-	-	5.74 – 7.5
Oil and Grease	mg/L	25	40	75 ⁸	Not Detected (<4.8)	Not Detected (<4.8)	Not Detected (<4.8)
Settleable Solids	mL/L	0.1	-	0.2	Not Detected (<0.1)	Not Detected (<0.1)	Not Detected (<0.1)

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Coliform Bacteria	MPN/100 mL	23 ⁹	-	240 ¹⁰	17 ¹¹	-	540
Total Residual Chlorine	µg/L	-	-	0	-	-	Not Detected (<0.05)
Turbidity	NTU	75	100	225 ⁸	2.8	4.2	16
Copper, Total Recoverable	µg/L	53 ¹²	-	512/1,430 ⁸	Not Reported, but <38 ¹³	-	38
TCDD Equivalentents ¹⁴	µg/L	2.0x10 ⁻⁷	-	-	9.7x10 ⁻⁷	-	-

Table Notes

1. Average dry weather design flow
2. Highest average dry weather flow (May 2017)
3. Peak daily wet weather design flow
4. Highest peak daily wet weather flow (February 26, 2019)
5. Mass-based effluent limitations are based on the average dry weather design flow of 0.17 mgd.
6. Represents the minimum observed percent removal.
7. Applied as instantaneous minimum and instantaneous maximum effluent limits.
8. Applied as an instantaneous maximum effluent limitation.
9. The median value of total coliform bacteria shall not exceed an MPN of 23 per 100 mL in a calendar month.
10. No single sample shall exceed an MPN of 240 per 100 mL.
11. Expressed as a monthly median.

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
12. Applied as a 6-month median effluent limitation.							
13. Represents the maximum observed 6-month median.							
14. All data either J-flagged and/or there were detects in the QA/QC Blank.							

Table F-4. Historic Effluent Limitations and Monitoring Data – Monitoring Location REC-001 (From July 2015 – November 30, 2019)

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	10	15	20	8.2	8.2	8.2
Total Suspended Solids (TSS)	mg/L	10	15	20	22	22	22
pH	SU	--	--	6-9 ¹	--	--	6.11-8.02
Nitrate	mg/L	--	--	10	--	--	19-38 ²
Total Coliform	MPN/100 mL	2.2 ³	--	23 ⁴ /240 ⁵	2.2	--	920
Total Dissolved Solids ⁶	mg/L	--	--	--	--	--	330-620 ²
Sodium ⁷	mg/L	--	--	--	--	--	25-39 ²

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Chloride ⁸	mg/L	--	--	--	--	--	43-67 ²
Boron ⁹	mg/L	--	--	--	--	--	0.24-0.38 ²

Table Notes

1. Applied as instantaneous minimum and instantaneous maximum effluent limits.
2. Data range provided for nitrate, total dissolved oxygen, sodium, chloride, and boron
3. The median value of total coliform bacteria shall not exceed an MPN of 2.2 per 100 mL in a calendar month.
4. The number of coliform bacteria shall not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period.
5. No single sample shall exceed an MPN of 240 per 100 mL.
6. Three of 23 samples exceeded the secondary MCL of 500 mg/L
7. No sample results exceeded the Agricultural Water Quality Goal of 69 mg/L.
8. No sample results exceeded the secondary MCL of 250 mg/L
9. No sample results exceeded the Agricultural Water Quality Goal of 0.7 mg/L.

2.4. **Compliance Summary**

On October 19, 2016, the Executive Officer issued Administrative Civil Liability (ACL) Complaint No. R1-2016-0032 for one violation of effluent limitations for 5-day biochemical oxygen demand (BOD₅), in Order No. R1 2015-0017. The ACL Complaint assessed a penalty of \$3,000 for this violation. The Permittee signed the Acceptance of Conditional Resolution and Waiver of Right to Hearing (Acceptance and Waiver) agreeing pay \$3,000 and waiving the right to a hearing before the Regional Water Board to dispute the allegations of violations.

The Permittee reported exceedances of effluent limitations while discharging to the Pacific Ocean during the term of Order No. R1-2015-0017, including one total coliform, one BOD₅, and two instantaneous minimum pH violations. The Permittee also exceeded total coliform one time and total nitrate 33 times while discharging to the recycled water system. Prior to being permitted to use recycled water, the Permittee must complete a nutrient agronomic analysis of its recycled water in order to determine whether the concentrations of nitrogen in the recycled water are within the nutrient agronomic needs of the turf at the Shelter Cove Golf or whether nitrogen concentrations in the recycled water need to be reduced.

2.5. **Planned Changes**

The Facility currently uses chlorine gas and sulfur dioxide gas for chlorination and dechlorination. Receiving deliveries of the gases has proven difficult and extremely costly. Along with the treacherous and at-times weather-dependent road, safety and emergency response pose significant issues, as the nearest emergency responders, in the event of a leak or other emergency, are two hours away. The Permittee is, therefore investigating converting from gaseous chlorination and dechlorination to a liquid or tablet system.

The Permittee is also investigating the possibility of converting sections of the oxidation ditches into anoxic denitrification zones in order to remove nitrate from the effluent if this is necessary for water recycling.

The Permittee is in the process of replacing the V-notch overflow weirs on both of the secondary clarifiers and installing and programming a new SCADA system for the wastewater treatment plant and collection system.

3. **APPLICABLE PLANS, POLICIES, AND REGULATIONS**

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

3.1. **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 Permittee to discharge into waters of the U.S. at the discharge location described in Table 1 subject to the WDRs in this Order. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260) and water recycling requirements pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13500).

3.2. **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.

The recycling section of this permit is not, however, addressed by an NPDES permit and is regulated under waste discharge requirements under State law only. That portion of this Order is exempt from CEQA pursuant to section 15301 of title 14 of the California Code of Regulations (CCR), which exempts from CEQA the permitting of existing public structures, facilities, mechanical equipment, etc. involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination.

3.3. **State and Federal Laws, Regulations, Policies, and Plans**

3.3.1. **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 Permittee. Requirements in this Order implement the Basin Plan.

Beneficial uses applicable to the Pacific Ocean are summarized in Table F-5, as follows:

Table F-5. 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 service supply (IND); Industrial process supply (PRO); and Preservation of Areas of Special Biological Significance (ASBS).</p>
002	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>

3.3.2. Thermal Plan

The State Water Board adopted the *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 Permittee does not discharge thermal waste; therefore, the

Order does not include effluent limitations for temperature in response to the requirements of the Thermal Plan.

3.3.3. 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, 2015, and 2019. The State Water Board adopted the latest amendment on August 7, 2018, and it became effective on February 4, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized in Table 6, below:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	<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 spawning; and Shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

3.3.4. 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*. This Policy became effective on August 27, 2008. Section III.G of the Ocean Plan authorizes compliance schedules in accordance with the provisions of Resolution No. 2008-0025. This Order does not include any compliance schedules or interim effluent limitations.

3.3.5. 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 4.4.2 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.

3.3.6. 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. Some effluent limitations from the previous Order have been removed or are less stringent than those in the previous Order. As discussed in detail in section 4.4.1 of this Fact Sheet, removal or relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

3.3.7. 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 to 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. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.8. Sewage Sludge and Biosolids

This Order does not authorize any act that results in violation of requirements administered by U.S. EPA to implement 40 C.F.R. Part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or

disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Permittee is responsible for meeting all applicable requirements of 40 C.F.R. Part 503 that are under U.S. EPA's enforcement authority.

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

Section 303(d) of the federal CWA requires states to identify waterbodies 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 Waterbodies every two years.

In addition to identifying the waterbodies 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 wasteload 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 June 9, 2021, the U.S. EPA provided final approval of the 2018 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.

3.5. Other Plans, Policies and Regulations

- 3.5.1. On October 5, 1983, with Resolution No. 83-81, the State Water Board approved an exception to the California Ocean Plan's prohibition regarding discharges to Areas of Special Biological Significance, thereby allowing continued discharges from the Facility to the King Range ASBS. With the concurrence of the U.S. EPA, the Regional and State Water Boards found that (1) the discharge of treated wastewater was not resulting in water quality impacts, and (2) there was no practical alternative to the continued discharge of treated and disinfected wastewater to the ASBS. The agencies determined that continued discharge in the ASBS should be permitted as long as no water quality impacts occur. Resolution No. 83- 81 was adopted on October 5, 1983 and allowed an exception for the Facility's discharge to the ASBS provided that: The effluent is dechlorinated prior to discharge; the discharge is limited to the [then] current design capacity; effluent monitoring is performed; and periodic evaluations of the marine environment are conducted. These terms have been incorporated into this Order.

- 3.5.2. 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. The deadline for dischargers to apply for coverage was November 2, 2006. The Permittee applied for coverage and is subject to the requirements of Order Nos. 2006-0003-DWQ and WQ 2013-0058-EXEC and any future revisions thereto for operation of its wastewater collection system.
- 3.5.3. 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).
- 3.5.4. In 1996, the State Water Board and the California Department of Health Services (now State Water Board Division of Drinking Water) set forth principles, procedures, and agreements to which the agencies committed themselves relative to the use of recycled water in California, in a document titled Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water (MOA). This Order is consistent with the MOA.
- 3.5.5. On February 3, 2009, the State Water Board adopted Resolution 2009-0011, Adoption of a Policy for Water Quality Control for Recycled Water (Recycled Water Policy) (Revised December 11, 2018, effective April 8, 2019) for the purpose of increasing the use of recycled water from municipal wastewater sources in a manner that implements state and federal water quality laws. The Recycled Water Policy provides direction to the Regional Water Boards regarding the appropriate criteria to be used in issuing permits for recycled water projects and describes permitting criteria intended to streamline, and provide consistency for, the permitting of the vast majority of recycled water projects. Pertinent provisions and requirements of the Policy have been incorporated into this Order to address conditions specific to the Permittee's plan to implement water recycling.

4. 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 exists.

4.1. Discharge Prohibitions

- 4.1.1. **Discharge Prohibition 3.1.** The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.

This prohibition has been retained from Order No. R1-2015-0017 and 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.

- 4.1.2. **Discharge Prohibition 3.2.** Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.

This prohibition has been retained from Order No. R1-2015-0017 and is based on section 13050 of the Water Code and section 5411 of the California Health and Safety Code.

- 4.1.3. **Discharge Prohibition 3.3.** The discharge of sludge or digester supernatant is prohibited, except as authorized under section 6.3.5.3 of this Order (Sludge Disposal and Handling Requirements).

This prohibition has been retained from Order No. R1-2015-0017 and 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.

- 4.1.4. **Discharge Prohibition 3.4.** The discharge or recycling use of untreated or partially treated waste (receiving a lower level of treatment than described in section 2.1 of the Fact Sheet) from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provisions 1.7 (Bypass) and 1.8 (Upset).

This prohibition has been retained from Order No. R1-2015-0017 with a minor modification. The term “reclamation” has been replaced with the term “recycling.” 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.

- 4.1.5. **Discharge Prohibition 3.5.** 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 that creates pollution, contamination, or nuisance, as defined in Water Code section 13050(m) is prohibited.

This prohibition is retained from Order No. R1-2015-0017. 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 3.5 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 based on the prevalence of high groundwater in the North Coast Region, and this Region's reliance on groundwater as a drinking water source.

- 4.1.6. **Discharge Prohibition 3.6.** The discharge of waste to land that is not owned by the Permittee, governed by District ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited.

This prohibition is retained from Order No. R1-2015-0017. Land used for the application of wastewater must be owned by the Permittee or be under the control of the Permittee by contract (user agreement) so that the Permittee maintains a means for ultimate disposal of treated wastewater.

- 4.1.7. **Discharge Prohibition 3.7.** The discharge of waste at any point not described in Finding 2.2 of the Fact Sheet or authorized by a permit issued by the State Water Board or another Regional Water Board is prohibited.

This prohibition has been retained from Order No. R1-2015-0017. This prohibition is a general prohibition that allows the Permittee 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.

- 4.1.8. **Discharge Prohibition 3.8.** The discharge of recycled, filtered wastewater to any use not addressed in a DDW-accepted title 22 Recycled Water Engineering Report is prohibited.

This prohibition is retained from Order No. R1-2015-0017 with minor modifications and is necessary to ensure recycled water is only used in areas that have been approved by DDW.

- 4.1.9. **Discharge Prohibition 3.9.** The average dry weather flow (ADWF) of waste through the Facility shall not exceed 0.17 million gallons per day (mgd), measured daily and averaged over a calendar month. The peak average daily wet weather flow of waste through the Facility shall not exceed an average daily wet weather flow of 0.77 mgd, measured daily. Compliance with this prohibition shall be determined as defined in sections 7.10 and 7.11 of this Order.

The average dry weather flow prohibition is retained from Order No. R1-2015-0017 with a minor modification to the averaging period from 30 consecutive days to a calendar month and is based on the engineering design of the Facility.

The peak daily wet weather flow prohibition is also retained from Order No. R1-2015-0017 and based on the peak wet weather treatment capacity of the Facility as stated in the ROWD.

- 4.1.10. **Discharge Prohibition 3.10.** The discharge of any radiological, chemical, or biological warfare agent into waters of the state or the Pacific Ocean is prohibited.

This prohibition is retained from Order No. R1-2015-0017 and is based the discharge prohibitions contained in section 13375 of the Water Code and section 13375 of the Water Code and 33 U.S. Code section 1311.

- 4.1.11. **Prohibition 3.11.** The discharge of sludge directly into the ocean or into a waste stream that discharges to the ocean is prohibited.

This prohibition is retained from Order No. R1-2015-0017 and is based on the discharge prohibitions contained in section III.I of the 2019 Ocean Plan.

- 4.1.12. **Prohibition 3.12.** The bypassing of untreated or partially treated wastes containing concentrations of pollutants in excess of those of Ocean Plan Tables 3 or 4 (2019) is prohibited.

This prohibition is retained from Order No. R1-2015-0017 with a minor modification to include bacteria water quality objectives and is based on the discharge prohibitions contained in section III.I. of the 2019 Ocean Plan.

- 4.1.13. **Discharge Prohibition 3.13.** The acceptance of septage to a location other than an approved septage receiving station and in accordance with a septage management program approved by the Regional Water Board Executive Officer 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.

4.2. **Technology-Based Effluent Limitations**

4.2.1. **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.

In addition, 40 C.F.R. section 122.45(d)(2) states that technology-based permit limits shall be stated as average weekly and average monthly discharge limitations, unless impracticable, for POTWs. 40 C.F.R. section 103.102 provides detailed specifications for establishing effluent limitations for the technology-based constituents, BOD₅, TSS, and pH. Effluent limitations for BOD₅, TSS, and pH in Effluent Limitations 4.1.1.1, Table 2 and 4.1.1.2 of this Order were established as required by 40 C.F.R. section 103.102 and have been retained in this Order.

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 BOD₅, TSS, and pH, as follows:

4.2.1.1. **BOD₅ and TSS**

4.2.1.1.1. The 30-day average shall not exceed 30 mg/L.

4.2.1.1.2. The 7-day average shall not exceed 45 mg/L.

4.2.1.1.3. The 30-day average percent removal shall not be less than 85%.

4.2.1.2. **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 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, which cannot be appropriately expressed by mass, 2) when applicable standards and limitations are expressed in terms of other units of measure.

4.2.2. **Applicable Technology-Based Effluent Limitations**

4.2.2.1. **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 requirement for TSS, are retained from Order No. R1-2015-0017 and reflect the secondary treatment standards at 40 C.F.R. part 133.

4.2.3. **Ocean Plan Table 4 Effluent Limitations (Oil and Grease, TSS, Settleable Solids, Turbidity, and pH).** The State Water Board, in Table 4 of the Ocean Plan, has established technology-based requirements for oil and grease, TSS, settleable solids, turbidity, and pH. Table 4 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 4 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 4 of the Ocean Plan are applicable to the Permittee.

Consistent with Order No. R1-2015-0017, this Order includes effluent limitations for oil and grease, turbidity, and pH based on Table 4 of the Ocean Plan. Table 4 of the Ocean Plan includes effluent limitations for oil and grease and turbidity of 75 mg/L and 225 NTU, respectively, not to be exceeded at any time. To be consistent with the averaging period specified in Table 4 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 4 of the Ocean Plan (i.e., 75 percent); therefore, consistent with Order No. R1-2015-0017, this Order includes percent removal requirements for TSS based on the secondary treatment standards at 40 C.F.R. part 133.

As described below, this Order includes effluent limitations for settleable solids that are more stringent than the effluent limitations in Table 4 of the Ocean Plan.

4.2.3.1. **Settleable Solids.** Effluent limitations for settleable solids have been retained from Order No. R1-2015-0017. Settleable solids generally constitute 40 to 65 percent of the suspended solids in domestic wastewaters and are measured volumetrically by quiescent settling of a 1 liter sample for 1 hour in an Imhoff cone (and thereafter expressed as mL/L-hr). Method SM 2540F for the analysis of settleable solids describes a lower limit of measurement of

settleable solids at 0.1 mL/L-hr, and therefore the monthly average limitation established by this Order, reflects, in effect, a non-detectable (100 percent removal efficiency) level of settleable solids in the discharge. Secondary treatment should remove settleable solids to non-detect levels. Effluent limitations for this parameter are necessary to ensure efficient operation of the treatment facility in addition to ensuring protection of aquatic life from adverse impacts of settleable material in the discharge.

- 4.2.3.2. **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 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 exceptions in 40 C.F.R. section 122.45(f)(1)(i) and (ii):

- 4.2.3.2.1. BOD₅ and TSS, because these two parameters are expressed in terms of concentration and percent removal;
- 4.2.3.2.2. Oil and grease, because this parameter is expressed in terms of concentration; and
- 4.2.3.2.3. Settleable solids, turbidity, and pH, because these parameters cannot appropriately be expressed by mass.

4.3. Water Quality-Based Effluent Limitations (WQBELs)

4.3.1. 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.

4.3.2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives**

4.3.2.1. **Beneficial Uses.** Beneficial use designations for receiving waters for discharges from the Facility are presented in section 3.3.1 and 3.3.3 of this Fact Sheet.

4.3.2.2. **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 5.1 of the Order. Table 3 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 3 toxic pollutants.

4.3.2.3. **Minimum Initial Dilution**

In accordance with the Ocean Plan, WQBELs reflect the minimum initial dilution of the effluent as it reaches the receiving water. The minimum initial dilution can be estimated by experimental observation (e.g., dye studies, etc.) and/or computer simulation. The Ocean Plan requires that dilution estimates be based on the assumption of no currents; unless an alternative method of calculating dilution is found to be acceptable to the Regional Water Board. For the purpose of this and previous Orders, minimum initial dilution was determined with a series of dye studies in 1982 to conservatively estimate dilution in and around the rocky cove where the Permittee's ocean outfall discharges. The dilution evaluation is described in the January 1985 *Final Project Report, Shelter Cove Wastewater Facilities Plan* prepared by Questa Engineering Corporation. The dye studies conducted in January, April, and July 1982 were conducted during periods of slack tide that occurred between

both high and low tides. Effluent flows ranged from 18,200 gallons per day in July 1982 to 55,700 gallons per day in January 1982. The study demonstrated that the minimum initial dilution adjacent to the outfall is 50 to 1 and that the dilution quickly increases 1 to 2 orders of magnitude in the near field and 2 to 3 orders of magnitude within the far field area that was studied (up to one half mile away from the discharge outfall).

The Regional Water Board finds that the 50 to 1 dilution ratio is valid for use in this Order because the Permittee's discharge is well under the flows used for estimating the dilution ratio.

This Order uses a minimum initial dilution of 50 to 1 (i.e., 50 parts ocean water to 1 part effluent) for its reasonable potential analysis and effluent limitation calculations. However, based on the fact that 40 years have passed since the dye study was conducted, methods for conducting mixing zone analyses have greatly improved, and the discharge flows from the facility are typically 3 to 4 times higher than the discharge flows at the time of the study (but still less than the permitted flows identified in Table F-1 of this Order), Order section 6.3.2.3 includes a requirement for the Permittee to conduct a special study to evaluate whether the results of the 1982 dye study are still representative or whether a revised study is needed to verify and/or modify the minimum initial dilution.

4.3.3. **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 that will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard.

- 4.3.3.1. **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 3 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 Resources Control Board has developed a reasonable potential calculator, which is available at [this link to the State Water Board's Reasonable Potential Calculator](#) (scroll to bottom of this linked page). The calculator (RPcalc 2.2) was used in conducting the RPA and considers several pathways in the determination of reasonable potential.

4.3.3.1.1. 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.

4.3.3.1.2. 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.

4.3.3.1.3. 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.

4.3.3.1.4. 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.

- 4.3.3.1.4.1. 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.
- 4.3.3.1.4.2. 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.)

4.3.3.1.5. 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.

4.3.3.2. Reasonable Potential Determination

The RPA for the effluent was conducted using annual effluent monitoring data generated from monitoring events for all Ocean Plan Table 3 parameters in November 2015, 2016, 2017, 2018, 2019, and 2020 (with an emphasis on 2016 through 2020 data) and from routine monitoring events conducted between July 2015 and June 2021 for ammonia, chlorine residual, copper, chloroform, and TCDD equivalents as required by the Monitoring and Reporting Program for Order No. R1-2015-0017. Results from the RPA have been used to determine the need for effluent limitations for Table 3 parameters given in the Ocean Plan.

For the RPA conducted for this permit renewal, pollutant concentrations were adjusted to account for the calculated initial dilution of 50 parts seawater per part wastewater. The adjustment for dilution is consistent with previous orders for this Facility and is not precluded by the Permittee's 1983 Ocean Plan exception (State Water Board Resolution No. 83-81). However, Ocean Plan exceptions granted by the State Water Board (for example Bodega Marine Laboratory in 2007 and the for Telonicher Marine Laboratory in 2011) required that waste discharge meet water quality objectives for Table 3 pollutants at the end-of-the-pipe (i.e., with no adjustment for dilution). Should the State Water Board revoke and reissue the Permittee's Ocean Plan exception with direction to meet water quality objectives for Table 3 pollutants at the end-of-the-pipe, the RPA conducted for the renewed permit would not account for the minimum probable initial dilution currently granted for the discharge.

The table below identifies the RPA endpoint for each Table 3 parameter detected in the effluent and shows the analysis reached an Endpoint 3 for most of the parameters analyzed. An Endpoint 3 RPA is inconclusive and results when a majority of the effluent data is reported as ND (not detected). In these circumstances, the Regional Water Board views the "inconclusive" result as an indication of no concern for a particular pollutant; however, additional monitoring will be required for those parameters during the term of the permit.

The RPA conducted for the Facility demonstrated no reasonable potential (Endpoint 2) for discharges from the Facility to cause or contribute to exceedances of applicable water quality criteria.

Tables F-7 through F-9 summarize the RPA for each priority pollutant that was reported in detectable concentrations in the effluent. The MECs, most stringent water quality objectives (WQO), and background concentrations (B) used in the RPA are presented, along with the RPA results for each toxic pollutant analyzed. No other pollutants with applicable numeric water quality criteria from the Ocean Plan were measured above detectable concentrations or analyzed for during the monitoring events conducted by the Permittee.

Attachment F-1 to this Order includes a summary of RPA results for all priority toxic pollutants with water quality criteria/objectives that are applicable to the Pacific Ocean.

Table F-7. Summary of Reasonable Potential Analysis Results – Objectives for Protection of Marine Aquatic Life

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs ¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L) ² X-obs	RPA Results, Comment
Arsenic	8	4	3	3	0.41	2.9	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chromium VI	2	4	3	0	5.5	0.11	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Copper	3	52	0	2	38	2.5 ³	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
Lead	2	4	0	0	0.185	0.0068 ³	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs ¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L) ² X-obs	RPA Results, Comment
Nickel	5	4	0	0	3.25	0.064	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
Selenium	15	4	2	0	0.604	0.012	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Zinc	20	5	0	8	115	12 ³	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
Ammonia (as N)	600	36	32	0	190	3.7	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
Chronic Toxicity (TUc)	1	5	0	0	50	0.98	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs ¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L) ² X-obs	RPA Results, Comment
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Table Notes

1. Background (Cs) is zero (0) for all pollutants except those with background concentrations specified in Table 5 of the Ocean Plan.
2. Represents the maximum concentration after complete mixing, calculated according to Step 4 of Appendix VI of the Ocean Plan using the permitted dilution ratio (Dm) of 50 as follows: $X\text{-obs} = (C_e + D_m * C_s) / (D_m + 1)$, unless otherwise noted. The calculated maximum concentration is compared to the most stringent water quality objective to determine if effluent limitations are required. Effluent limitations are then calculated as described in Fact Sheet section 4.3.4, below. Since reasonable potential was not found for any Ocean Plan Table 3 pollutants, there are no calculations in Fact Sheet section 4.3.4 of this Order.
3. Represents the one-sided, upper 95% confidence bound for the 95th percentile of the effluent distribution after complete mixing (i.e., the lognormal UCB) calculated per Step 9 of Appendix VI of the Ocean Plan. This was compared to the most stringent water quality objective in lieu of X-obs because 1) X-obs is less than the water quality objective (Step 5), 2) there are three or more detected observations (Step 6), and 3) the data consists entirely of detected values or the data is censored by 80% or less (Steps 7 and 8).

Table F-8. Summary of Reasonable Potential Analysis Results – Objectives for Protection of Human Health (Noncarcinogens)

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs ¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L) ² X-obs	RPA Results, Comment
Antimony	1,200	4	0	0	0.565	0.062 ³	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.

Table Notes

1. Background (Cs) is zero (0) for all pollutants except those with background concentrations specified in Table 5 of the Ocean Plan.
2. Represents the maximum concentration after complete mixing, calculated according to Step 4 of Appendix VI of the Ocean Plan using the permitted dilution ratio (Dm) of 50 as follows: $X\text{-obs} = (C_e + D_m * C_s) / (D_m + 1)$, unless otherwise noted. The calculated maximum concentration is compared to the most stringent water quality objective to determine if effluent limitations are required. Effluent limitations are then calculated as described in Fact Sheet section 4.3.4, below. Since reasonable potential was not found for any Ocean Plan Table 3 pollutants, there are no calculations in Fact Sheet section 4.3.4 of this Order.
3. Represents the one-sided, upper 95% confidence bound for the 95th percentile of the effluent distribution after complete mixing (i.e., the lognormal UCB) calculated per Step 9 of Appendix VI of the Ocean Plan. This was compared to the most stringent water quality objective in lieu of X-obs because 1) X-obs is less than the water quality objective (Step 5), 2) there are three or more detected observations (Step 6), and 3) the data consists entirely of detected values or the data is censored by 80% or less (Steps 7 and 8).

Table F-9. Summary of Reasonable Potential Analysis Results – Objectives for Protection of Human Health (Carcinogens)

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs ¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L) ² X-obs	RPA Results, Comment
Aldrin	0.000022	4	3	0	0.014 ³	0.0003	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-ethylhexyl) Phthalate	3.5	6	2	0	1.3	0.0255	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorodibromomethane	8.6	6	1	0	1.8	0.13 ⁴	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
Chloroform	130	24	0	0	87	3.1 ⁴	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L)² X-obs	RPA Results, Comment
Dichlorobromomethane	6.2	6	0	0	8.8	0.32 ⁴	Endpoint 2 - An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.
TCDD Equivalents	3.9e-9	6	0	0	<0.97e-6	<1.9e-8	Endpoint 3 - RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table 3 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Background Conc (µg/L) Cs¹	Max Effluent Conc. (µg/L) Ce	Calculated Max Conc. (µg/L)² X-obs	RPA Results, Comment
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Table Notes

1. Background (Cs) is zero (0) for all pollutants except those with background concentrations specified in Table 5 of the Ocean Plan.
2. Represents the maximum concentration after complete mixing, calculated according to Step 4 of Appendix VI of the Ocean Plan using the permitted dilution ratio (Dm) of 50 as follows: $X\text{-obs} = (C_e + D_m * C_s) / (D_m + 1)$, unless otherwise noted. The calculated maximum concentration is compared to the most stringent water quality objective to determine if effluent limitations are required. Effluent limitations are then calculated as described in Fact Sheet section 4.3.4, below. Since reasonable potential was not found for any Ocean Plan Table 3 pollutants, there are no calculations in Fact Sheet section 4.3.4 of this Order.
3. This result occurred in 2015. Since then, there were five results measured at <0.0016 ug/L. RPA's usually consider the most recent five-year data set.
4. Represents the one-sided, upper 95% confidence bound for the 95th percentile of the effluent distribution after complete mixing (i.e., the lognormal UCB) calculated per Step 9 of Appendix VI of the Ocean Plan. This was compared to the most stringent water quality objective in lieu of X-obs because 1) X-obs is less than the water quality objective (Step 5), 2) there are three or more detected observations (Step 6), and 3) the data consists entirely of detected values or the data is censored by 80% or less (Steps 7 and 8).

4.3.3.3. **Non-Table 3 Water Quality Objectives**

- 4.3.3.3.1. **Total Residual Chlorine.** Effluent limitations for total residual chlorine at Discharge Point 001 are retained from Order No. R1-2015-0017. The Ocean Plan includes total chlorine residual objectives for ocean waters for protection of marine aquatic life. Table 3 of the Ocean Plan includes 6-month median, daily maximum, and instantaneous maximum effluent limitations of 2 µg/L, 8 µg/L, and 60 µg/L, respectively, for total residual chlorine. Effluent monitoring data submitted by the Permittee between July 1, 2015 and June 30, 2021 demonstrated that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the water quality objectives in the Ocean Plan. However, Resolution No. 83-81 allows an exception for the Facility's discharge to the ASBS provided that the effluent is dechlorinated prior to discharge.

Therefore, consistent with Resolution No. 83-81 and Order No. R1-2015-0017, this Order includes an effluent limitation for total residual chlorine requiring that there be no detectable levels of chlorine in effluent discharged to the Pacific Ocean through Discharge Point 001 using the spectrophotometric DPD method 4500-CL G or equivalent.

- 4.3.3.3.2. **Bacteria (Fecal Coliform Bacteria, Enterococci, and Total Coliform Bacteria)**

The Ocean Plan was amended in 2019 to revise the bacterial objectives for ocean waters used for water contact recreation and shellfish harvesting. Receiving water limitations based on the revised objectives in the Ocean Plan have been established in this Order as further discussed in sections 4.3.3.3.2.1 and 4.3.3.3.2.2, below. Effluent limitations for bacteria are necessary to protect the water contact recreation and shellfish harvesting beneficial uses of the receiving water, as further discussed below.

- 4.3.3.3.2.1. **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 structure is a pipe-opening on the cliff face above the ocean surface 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 WQBELs are required.

To comply with the Ocean Plan, and instead of requiring receiving water monitoring and direct determination of compliance with water quality objectives 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 or enterococci because the total coliform limit that has been retained from Order No. R1-2015-0017 is more stringent and will allow for assessment of compliance with the Ocean Plan fecal coliform and enterococcus limitations.

4.3.3.3.2.2. **Shellfish Standards**

The Ocean Plan includes bacterial standards for total coliform bacteria for protection of ocean waters used for water contact recreation. Shellfish harvesting standards for total coliform bacteria must be maintained throughout the water column. The median concentration of total coliform bacteria shall not exceed an MPN of 70 organisms per 100 mL in a calendar month; and no samples shall exceed an MPN of 230 organisms per 100 mL.

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:

- 4.3.3.3.2.2.1.1. Conditions are suitable for shellfish to be present in the vicinity of the outfall. According to the January 2, 2020 *Comparative Evaluation of the Indigenous Biota within the Vicinity of the Shelter Cove Wastewater Treatment & Disposal Facility's Outfall*, California mussels (*Mytilus californianus*) have been confirmed as present in the vicinity of the discharge.

- 4.3.3.3.2.2.1.2. The Ocean Plan specifies that shellfish standards shall be maintained through the water column (i.e., without dilution credit).
- 4.3.3.3.2.2.1.3. Total coliform bacteria have been shown to be present in the discharge. For the period from July 2015 through June 2021, the maximum reported effluent concentration of total coliform bacteria was 540 MPN/100 mL at Monitoring Location EFF-001. This occurred one time in July 2015. All other total coliform monitoring complied with the shellfish standard with a maximum concentration of 33 MPN/100 mL (also in July 2015). Most total coliform results were <1.8 MPN/100 mL with the second highest result being 7.8 MPN/100 mL.
- 4.3.3.3.2.2.1.4. The Permittee collects effluent grab samples once per week, presenting an incomplete representation of the daily effluent quality.
- 4.3.3.3.2.2.1.5. Receiving water monitoring data are not available for the area in the vicinity of the discharge, and
- 4.3.3.3.2.2.1.6. 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:

4.3.3.3.2.2.1.7. **Total Coliform Bacteria**

Effluent limitations for total coliform bacteria at Discharge Point 001 are retained from Order No. R1-2015-0017. The median concentration shall not exceed an MPN of 23 organisms per 100 mL in a calendar month; and no sample shall exceed an MPN of 240 organisms per 100 mL. These limits are based on requirements contained in title 22, division 4, chapter 3 of the CCR.

These effluent limitations can reasonably be expected to be achieved with the Facility's current facilities because all but one total coliform result complied with this effluent limitation between July 1, 2015 and June 30, 2021. These effluent limitations will ensure that bacterial standards for both shellfish harvesting and water contact recreation are maintained throughout the water column. Therefore, in lieu of receiving water bacterial monitoring, the Permittee is required to meet the title 22 total coliform standard at the end of the discharge outfall. Since the title 22 total coliform effluent limitations in this Order are

more stringent than the Ocean Plan water contact recreation and shellfish harvesting standards, compliance with the title 22 standards ensures compliance the Ocean Plan total coliform, fecal coliform and enterococcus limitations.

4.3.3.3. **TCDD Equivalents.** Order No. R1-2015-0017 included effluent limitations for TCDD equivalents. As shown in Table F-9, above, the RPA conducted according to the procedures in Appendix VI of the Ocean Plan using data collected during the term of Order No. R1-2015-0017 resulted in Endpoint 3 (inconclusive). For RPA results of Endpoint 3, Appendix VI of the Ocean Plan states that an existing limitation for the pollutant shall remain in the permit. However, the Ocean Plan, Appendix VI, also states, “The Regional Water Board may use an alternative approach for assessing reasonable potential such as an appropriate stochastic dilution model that incorporates both ambient and effluent variability. The permit fact sheet or statement of basis will document the justification or basis for the conclusions of the reasonable potential assessment.” Results obtained during monitoring events during the term of Order No. R1-2015-0017 demonstrated that TCDD equivalents were not detected in the effluent during one sampling event. There are also no known industrial users or other known potential sources of TCDD equivalents in the Permittee’s service area. Based on this alternative approach for assessing reasonable potential, taking into consideration updated monitoring data and information regarding the service area of the Permittee, the Regional Water Board concludes that TCDD equivalents does not exhibit reasonable potential to cause or contribute to an exceedance of the Ocean Plan water quality objectives.

4.3.4. **WQBEL Calculations**

Based on results of the RPA, performed in accordance with methods of the Ocean Plan for discharges to the Pacific Ocean, the Regional Water Board is not establishing WQBELs for any additional Ocean Plan Table 3 pollutants.

4.3.5. **Whole Effluent Toxicity (WET)**

Monitoring triggers for chronic toxicity protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in 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 Permittee to conduct WET testing for chronic toxicity, as specified in the MRP (Attachment E, section 5).

The Permittee conducted annual chronic toxicity testing using *Menidia beryllina* (*M. beryllina*), *Macrocystis pyrifera* (*M.pyrifera*), and *Stronglycentrotus purpuratus* (*S. purpuratus*). The following table summarizes the chronic toxicity testing results for the effluent collected at Monitoring Location EFF-001 between May 2016 and June 2021.

Table F-10. Summary of Chronic Toxicity Results (TUc) – 2016 through 2021

Date	<i>M. beryllina</i> Growth	<i>M. beryllina</i> Survival	<i>M.pyrifera</i> Growth	<i>M.pyrifera</i> Germination	<i>S. purpuratus</i> Development
May 16, 2016	50	50	50	50	50
May 15, 2017	Not Reported ¹	Not Reported ¹	--	--	--
May 14, 2018	Not Reported ¹	Not Reported ¹	--	--	--
May 24, 2019	Not Reported ¹	Not Reported ¹	--	--	--
June 1, 2020	Not Reported ¹	Not Reported ¹	--	--	--
June 7, 2021	Not Reported ¹	Not Reported ¹	--	--	--

Table Notes:

- Order No. R1-2015-0017 required reporting of chronic toxicity results using the TST approach as summarized in Table F-12, below.

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 that fall below 100:1 are required to conduct chronic toxicity testing. This Order allows for a Dm of 50 for the chronic condition. As shown in Table F-7 of this Fact Sheet, the RPA conducted for the Facility was inconclusive for chronic toxicity (Endpoint 3). In addition, the Ocean Plan, Appendix VI, states, “The Regional Water Board may use an alternative approach for assessing reasonable potential such as an appropriate stochastic dilution model that incorporates both ambient and effluent

variability. The permit fact sheet or statement of basis will document the justification or basis for the conclusions of the reasonable potential assessment.” As discussed further below, the seawater discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the water quality objective for chronic toxicity based on the Test of Significant Toxicity (TST) approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). Therefore, this Order does not contain WET limitations. However, in accordance with the terms provided in State Water Board Resolution No. 2013-0006 and the Ocean Plan (section III.C, Implementation Provisions for Table 3), this Order retains chronic toxicity monitoring requirements for the discharge of treated wastewater at Discharge Point 001.

4.3.5.1. **Test of Significant Toxicity**

The Ocean Plan establishes a daily maximum chronic toxicity objective of 1.0 TU_c = 100/NOEC, using a five-concentration hypothesis test, and a daily maximum acute toxicity objective of 0.3 TU_a = 100/LC50, using a point estimate model. In 2010, U.S. EPA endorsed the peer-reviewed Test of Significant Toxicity (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 Permittee 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.

On December 1, 2020, the State Water Board adopted a toxicity amendment to the *Water Quality Control Plan for Inland Surface Waters, 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. At the time this permit is being developed, the Toxicity Provisions are awaiting approval from the U.S. EPA.

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 17, 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). The U.S. EPA withdrew the approval and notified State Water Board in a memo dated February 11, 2015. In a letter dated November 25, 2020, the State Water Board submitted a new ATP request to U.S. EPA Region 9. At the time this permit is being developed, the State Water Board is awaiting a response from U.S. EPA. The permit may be modified, if necessary, to incorporate new statewide toxicity criteria established by the toxicity amendment.

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 Permittee, lab, and permit manager. This Order requires application of the TST for statistical analysis of whole effluent toxicity data.

Test of Significant Toxicity 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 2%. 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:

$$H_0: \text{Mean response (100\% effluent)} \leq 0.75 \text{ mean response (control)}$$

The Permittee conducted chronic toxicity testing at the IWC of 2% during the term of Order No. R1-2015-0017. As shown in the following table, all effluent chronic toxicity tests collected between December 2015 and June 2021 resulted in “Pass” at the IWC of 2%, indicating that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for chronic toxicity using the TST approach. Therefore, this Order does not include an effluent limitation for chronic toxicity.

Table F-11. Summary of Chronic Toxicity Results (TST Approach)

Date	IWC ¹	<i>M. beryllina</i> Growth ²	<i>M. beryllina</i> Survival ²	<i>M.pyrifera</i> Growth ²	<i>M.pyrifera</i> Germination ²	<i>S. purpuratus</i> Development ²
May 16, 2016	2	Pass 2.8%	Pass 2.5%	Pass 0%	Pass 0%	Pass 0%
May 15, 2017	2	Pass 9.1%	Pass 0%	--	--	--
May 14, 2018	2	Pass 0%	Pass 0%	--	--	--
May 24, 2019	2	Pass 2.3%	Pass 0%	--	--	--
June 1, 2020	2	Pass -4.5%	Pass 0%	--	--	--
June 7, 2021	2	Pass 2.9%	Pass 5%	--	--	--

Table Notes

1. IWC = In=Stream Waste Concentration (% Effluent).
2. Results are presented as “Pass or Fail” and percent effect. Note that negative percent effect numbers mean that the effluent test performed better than the control.

This Order requires annual monitoring for chronic toxicity at Monitoring Location EFF-001. Results shall be analyzed using the TST hypothesis testing approach

in section 5.1.6.1 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 Permittee must initiate accelerated monitoring as specified in the MRP (Attachment E, section 5). After accelerated monitoring, if conditions of chronic toxicity are found to persist, the Permittee 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 Permittee 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 retains the requirement for the Permittee 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.

4.4. Final Effluent Limitation Considerations

4.4.1. 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R1 2015-0017, with the exception of mass-based and daily maximum concentration-based effluent limitations for BOD₅ and TSS, and effluent limitations for copper, and TCDD equivalents.

Order No. R1-2015-0017 established final mass-based effluent limitations for BOD₅ and TSS. Historically, the Regional Water Board routinely incorporated mass-based limits (in addition to concentration-based limits) for BOD₅ and TSS in NPDES permits to encourage correction of I&I. Applied in this way, mass-

based limitations effectively restrict a POTW's wet weather influent flows to less than or equal to the Facility's design capacity in situations where POTWs experience excessive I&I as a result of climate conditions and/or aging infrastructure. The application of mass-based effluent limitations for BOD₅ and TSS is not necessary to limit wet weather inflow to the Facility because the Order includes flow limitations (Discharge Prohibition 3.9) that require the Permittee to control influent flow to stay below the design capacity of the Facility, and because the Permittee had demonstrated diligence in conducting annual collection system inspections and maintenance, which has resulted in declining I&I impacts.

Mass limitations for BOD₅ and TSS for discharges of treated wastewater have been removed because Regional Water Board staff misinterpreted the exception of 40 C.F.R. section 122.45(f)(2), which states that mass limitations are not required "*when applicable standards and limitations are expressed in terms of other units of measure.*" Secondary treatment standards for BOD₅ and TSS in 40 C.F.R. section 133.102, on which the effluent limitations in previous permits were based, are expressed in terms of concentration and percent removal (i.e., other units of measure). The relaxation of effluent limitations for BOD₅ and TSS in this Order is permissible under CWA section 402(o)(2)(B)(ii), because Regional Water Board staff has determined that mass-based limitations for BOD₅ and TSS were applied in the previous permits as a result of a mistaken interpretation of law when issuing those previous permits.

In addition, Regional Water Board staff previously held that anti-backsliding regulations prevented the removal of mass-based limitations for BOD₅ and TSS because they were appropriate and necessary to protect water quality and prevent water quality degradation in receiving waters. While it is conceivable that the absence of mass-based limitations for these pollutants may result in an increased pollutant loading to surface waters, recent self-monitoring reports indicate that compliance with concentration-based effluent limitations for BOD₅ and TSS effectively maintain the Permittee's mass emission rates for BOD₅ and TSS well below permitted mass-based limitations. In addition, even if there is a resulting increase in pollutant loading, there is no evidence that the increase will result in degradation of water quality. Therefore, relaxation of effluent limitations for BOD₅ and TSS in this Order is also permissible under CWA section 402(o)(2)(B)(i), based on new information available to the Regional Water Board.

Effluent limitations for BOD₅ and TSS are not as stringent as the previous Order in that the daily maximum concentration-based effluent limitations for both of these pollutants have been omitted in this Order. Historically, the Regional Water Board established average monthly, average weekly, and maximum daily effluent limitations for BOD₅ and TSS in NPDES permits for all municipal wastewater treatment plants even though daily maximum limits are not

specifically required to meet the minimum level of effluent quality that must be attained by the application of secondary treatment which is the permit requirement for discharges to the Pacific Ocean. The federal regulations at 40 CFR 133.102 only establish 30-day and 7-day limit, not maximum daily limits.). The relaxation of effluent limitations to remove the maximum daily limit for BOD₅ and TSS in this Order is permissible under CWA section 402(o)(2)(B)(ii), because Regional Water Board staff has determined that maximum daily limitations for BOD₅ and TSS were applied in the previous permits as a result of a mistaken interpretation of law when issuing those previous permits. This permit change is also governed by 40 CFR 122.44(l)(1), which provides that relaxations in effluent limitations are permitted where the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification under 40 CFR 122.62. Among the several enumerated grounds identified in 40 CFR 122.62 under which a permit may be modified is where new information becomes available.

Here, daily maximum limits are not necessary at this Facility because the information provided by the 72 BOD₅ and TSS samples collected during the term of Order No. R1-2015-0017 demonstrates that the treated effluent consistently met the daily maximum effluent limitation with results well below the limit of 60 mg/L (maximum 14 mg/L for BOD₅ and 9.6 mg/L for TSS). The permit will also retain tertiary treatment requirements for water recycling that are more stringent than the average weekly and average monthly effluent limitation requirements from section 133.102 for BOD₅ and TSS. If future monitoring shows exceedance of the weekly limitation, staff will evaluate the need to reinstate the daily maximum effluent limitation for BOD₅ and TSS.

Order No. R1-2015-0017 established final effluent limitations for copper. As shown in Table F-7, effluent data demonstrate that the discharge no longer demonstrates reasonable potential to cause or contribute to an exceedance of the water quality objectives. The updated effluent data for copper constitutes new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). Therefore, the Order does not retain the effluent limitations for copper.

Order No. R1-2015-0017 established final effluent limitations for TCDD equivalents. As discussed in section 4.3.3.3.3 of this Fact Sheet, results obtained during monitoring events during the term of Order No. R1-2015-0017 demonstrated that TCDD equivalents were not detected in the effluent during one sampling event and there are also no known industrial users or other known potential sources of TCDD equivalents in the Permittee's service area. The updated effluent data for TCDD equivalents constitutes new information, which permits the removal of effluent limitations consistent with CWA section

402(o)(2)(B). Therefore, the Order does not retain the effluent limitations for TCDD equivalents.

4.4.2. **Antidegradation Policies**

State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality Waters in California (the Antidegradation Policy) requires that disposal of waste into waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters is higher than established by adopted policies and that higher quality water shall be maintained to the maximum extent possible consistent with the Antidegradation Policy. The Antidegradation Policy requires that (1) higher quality water will be maintained until it has been demonstrated to the state that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the policies; and (2) any activity that produces a waste or may produce waste or increased volume or concentration of waste and discharges to existing high quality water will be required to meet waste discharge requirements that will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure 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.

Discharges from the Facility are required to maintain protection of the beneficial uses of the receiving water and comply with applicable provisions of the Basin Plan.

As discussed in this section and the fourth paragraph of Fact Sheet section 4.4.1, above, this Order is consistent with applicable federal and state antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater beyond that which was permitted to discharge in accordance with Order No. R1-2015-0017.

4.4.3. **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, TSS, settleable solids, and turbidity. Restrictions on these pollutants are discussed in section 4.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

In addition, this Order contains effluent limitations for chlorine residual that are more stringent than the minimum, federal technology-based requirements but

are necessary to meet water quality standards. These requirements are discussed in section 4.3.3.3.1 of the Fact Sheet.

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.

4.5. **Interim Effluent Limitations – Not Applicable**

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

4.6. **Land Discharge Specifications – Not Applicable**

This Order does not authorize discharges to land.

4.7. **Water Recycling Specifications and Requirements**

The Permittee has a recycled water system to irrigate the Shelter Cove Golf Course. Historically, the Permittee has used the recycled water system during the spring, summer, and fall. The Permittee is in the process of developing a title 22 Recycled Water Engineering Report for approval by DDW. DDW has identified work that the Permittee needs to complete in order to determine whether or not the chlorination system meets title 22 disinfection requirements. The Permittee must conduct a tracer study on the disinfection system and may need to upgrade portions of the water recycling Facility in order to meet title 22 requirements. Since the Permittee is uncertain how long it will take to complete this work combined with the fact that the Permittee has not used the recycled water system for two years in a row (2020 and 2021), this Order is being adopted without recycled water use requirements. Prior to any future water recycling, the Permittee must submit a title 22 Recycled Water Engineering Report that has been approved by DDW and obtain permitting either through a modification of this Order or by enrolling its recycled water use under State Water Board Order DWQ 2016-0068-DDW (or any subsequent revision). All of the water recycling specifications for the

production of recycled water in this Order are based on the technical capabilities of the tertiary wastewater treatment system and levels required by the Basin Plan and title 22.

4.7.1. **Scope and Authority**

Section 13263 of the Water Code requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material changes in an existing discharge based upon the conditions of the disposal area or receiving waters upon or into which the discharge is made or proposed. The prescribed requirements shall implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241. In prescribing requirements, the Regional Water Board is not obligated to authorize the full waste assimilation capacities of the receiving water.

Water Code section 13241 requires the Regional Water Board to establish water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and prevention of nuisance, recognizing that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. The Basin Plan establishes water quality objectives specific to the North Coast Region for the protection of past, present, and probable future beneficial uses of water. Factors required for consideration during development of applicable water quality objectives, such as the characteristics of the hydrographic unit under consideration, economic considerations, and other factors required in accordance with section 13241 were considered during the Basin Planning and adoption process.

Here, the Regional Water Board considered all of these factors when developing the waste discharge requirements for the recycled water discharge to the Shelter Cove Golf Course at Discharge Point 002. Limitations for BOD₅, pH, TSS, nitrate and total coliform were derived based upon the treatment capability of the Facility and levels required by the Basin Plan and title 22 in order to implement water quality objectives that protect the beneficial uses of both surface and groundwater. Both beneficial uses and the water quality objectives have been approved pursuant to state law, and then submitted to and approved by U.S. EPA. In addition, discharge prohibitions were included to prohibit the use of untreated or partially treated wastewater for recycling.

The Regional Water Board considered the factors set forth in Water Code section 13241, including the consideration of past, present, and probable future beneficial uses of the receiving water, which the Regional Water Board anticipates to be the same as set forth in the Basin Plan. The Regional Water Board considered the environmental characteristics, including water quality of

the Mattole River Hydrologic Area, the coordinated control of all factors that affect water quality in the area, and the need to develop and use recycled water, which this Order supports.

4.7.2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives**

4.7.2.1. **Beneficial Uses.** Beneficial use designations for groundwater established in the Basin Plan include MUN, AGR, IND, and CUL.

4.7.2.2. **Basin Plan Water Quality Objectives.** The Basin Plan contains narrative objectives for taste and odor, bacteria, radioactivity, and chemical constituents (including those chemicals that adversely affect agricultural water supply) that apply to groundwater.

4.7.3. **Determining the Need for Requirements for Water Recycling**

Section 4.3 of this Order contains Water Recycling Specifications and Requirements to ensure that the recycled water produced by this Facility meets minimum recycled water production requirements for the protection of groundwater and surface water as established in title 22, division 4, chapter 3 of the CCR. The Permittee is required to comply with applicable state and local requirements regarding the production of recycled wastewater, including requirements of Water Code sections 13500 – 13577 (Water Reuse) and DDW regulations at title 22, sections 60301 – 60357 of the CCR (Water Recycling Criteria). The requirement to comply with title 22 requirements is retained from Order No. R1-2015-0017.

4.7.3.1. **BOD₅ and TSS.** Consistent with Order No. R1-2015-0017, this Order includes discharge specifications for BOD₅ and TSS that consist of a monthly average of 10 mg/L, and a weekly average of 15 mg/L. The levels established in this Order are technically achievable based on the capability of the tertiary treatment system. These specifications are included in the Order to ensure that discharges to the recycled water system receive proper treatment.

4.7.3.2. **pH.** Consistent with Order No. R1-2015-0017, this Order includes instantaneous minimum and maximum effluent limitations for pH of 6.0 and 9.0, respectively, based on the technology-based effluent limitations required by U.S. EPA pursuant to 40 C.F.R. part 133. These pH limitations are included in the Order to ensure that pH levels are appropriate for the protection of groundwater when discharging to the recycled water system.

4.7.3.3. **Coliform Bacteria.** Consistent with Order No. R1-2015-0017, this Order includes recycled water specifications for total coliform bacteria that reflect standards for tertiary treated recycled water adopted by DDW in title 22 of the CCR and are included to ensure that recycled water quality is protective of human health. Recycled water from this Facility will meet the highest title 22

treatment and disinfection standards and will be suitable for the broad range of recycled water uses identified in title 22, including irrigation of urban landscapes and crops produced for human consumption.

4.8. Other Requirements

This Order contains additional specifications that apply to the production of recycled water, including:

- 4.8.1. **Filtration Rate.** Consistent with Order No. R1-2015-0017, section 4.4.1.1 of the Order requires that wastewater being treated for recycled water use be filtered at a rate that does not exceed 5 gallons per minute per square foot of filter surface area, and is based on the definition of filtered wastewater found in title 22 section 60301.320 of the CCR. The title 22 definition is used as a reasonable performance standard to demonstrate that tertiary treated recycled water has been coagulated and adequately filtered for removal of pathogens and for conditioning of water prior to the disinfection process.
- 4.8.2. **Turbidity.** Consistent with Order No. R1-2015-0017, section 4.4.1.2 of this Order specifies that the turbidity of the filtered wastewater being treated for recycled water use not exceed an average of 2 NTU during any 24 hour period; 5 NTU more than 5 percent of the time within a 24 hour period, and 10 NTU at any time, and is based on the definition of filtered wastewater found in title 22 section 60301.320 of the CCR. The title 22 definition is used as a reasonable performance standard to ensure adequate removal of turbidity upstream of the recycled water disinfection facilities. The Permittee also uses chemical addition to supplement filtration to ensure that turbidity limits are met. Properly designed and operated effluent filters will meet this standard. The point of compliance for the turbidity requirements is a point following the tertiary wastewater treatment process and before discharge to the tertiary disinfection system.
- 4.8.3. **Disinfection Process Requirements for the Chlorine Disinfection System.** Chlorine disinfection process requirements in Order section 4.4.2, which include total residual chlorine requirements and CT, are retained from Order No. R1-2015-0017. The Order also requires compliance with a modal contact time requirement of 90 minutes to comply with title 22 requirements. These requirements are necessary to ensure that the disinfection process achieves effective pathogen reduction and to determine compliance with requirements for recycled wastewater systems established at title 22, division 4, chapter 3 of the CCR.
- 4.8.4. **Storage Ponds.** Storage pond requirements are included in section 4.4.3 of the Order to ensure that future storage ponds are constructed in a manner that protects groundwater.

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

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, relevant to Discharge Point 001, reflect all applicable, general water quality objectives of the Ocean Plan, and the terms and conditions required by State Water Board Resolution No. 2007-0058.

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, Ocean Plan Table 3 parameters, nutrient materials, radioactive wastes, and biological characteristics.

5.2. Groundwater

Groundwater limitations in this Order have been retained from the previous Order with minor modification to reflect revised sections of title 22. Groundwater limitations are included in the Order to protect the beneficial uses of the underlying groundwater. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater. Groundwater data must be evaluated using appropriate statistical tools to determine when groundwater degradation is occurring.

The Order includes a new groundwater toxicity limitation that was adopted by the Regional Water Board on June 18, 2015, and effective beginning July 18, 2016 after receiving approval from the California Office of Administrative Law. This new Basin Plan limit requires that 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.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

6.1.1. 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 Permittee 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 6.2, 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).

6.1.2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the Permittee shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions 6.1.2 of the Order.

- 6.1.2.1. Order Provision 6.1.2.1 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)).
- 6.1.2.2. Order Provision 6.1.2.2 requires the Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person.

6.2. Special Provisions

6.2.1. Reopener Provisions

- 6.2.1.1. **Standard Revisions (Special Provision 6.3.1.1).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, which include the following:
- 6.2.1.1.1. 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.
 - 6.2.1.1.2. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.
- 6.2.1.2. **Reasonable Potential (Special Provision 6.3.1.2).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Permittee 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.
- 6.2.1.3. **Whole Effluent Toxicity (Special Provision 6.3.1.3).** This Order requires the Permittee 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 chronic toxicity limitation, new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.
- 6.2.1.4. **303(d)-Listed Pollutants (Special Provision 6.3.1.4).** This provision allows the Regional Water Board to reopen this Order to modify existing effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.
- 6.2.1.5. **Ocean Plan Exception (Special Provision 6.3.1.5).** This provision allows the Regional Water Board to modify, or revoke and reissue this Order if, as a result of a review by the State Water Board, the State Water Board decides to revoke or reissue the 1983 exception to the Ocean Plan prohibition of discharges from the Facility to the King Range ASBS.
- 6.2.1.6. **Title 22 Recycled Water Engineering Report (Special Provision 6.3.1.6).** This provision allows the Regional Water Board to reopen this Order to adequately implement title 22, if necessary, based on the Permittee's title 22 engineering report.

6.2.2. **Special Studies and Additional Monitoring Requirements**

- 6.2.2.1. **Disaster Preparedness Assessment Report and Action Plan (Special Provisions 6.3.2.1).** 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 Permittee to submit a Disaster Preparedness Assessment Report and Action Plan.
- 6.2.2.2. **Analysis of Influent Flow and Treatment Capacity (Special Provisions 6.3.2.2).** Consistent with Order No. R1-2015-0017, this provision is included in this Order to provide supporting information to determine impacts of the discharge from the Facility's ocean outfall on the King Range ASBS.
- 6.2.2.3. **Effluent Discharge Evaluation (Special Provisions 6.3.2.3).** This Order includes a new requirement for the Permittee to conduct a special study to evaluate whether the results of the 1982 dye study used to establish the dilution ratio of 50:1 are still representative or whether a revised study is needed to verify and/or modify the minimum initial dilution. This new requirement is included due to the fact that 40 years have passed since the 1982 dye study was conducted, methods for conducting mixing zone analyses have greatly improved, and the discharge flows from the Facility are typically 3 to 4 times higher than the discharge flows at the time of the 1982 dye study (but still less than the permitted flows identified in Table F-1 of this Order).
- 6.2.3. **Best Management Practices and Pollution Prevention**
- 6.2.4. **Pollutant Minimization Program (Special Provision 6.3.3.1).** This provision is included in this Order pursuant to section III.C.9 of the Ocean Plan. The Regional Water Board includes standard provisions in all NPDES permits requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.
- 6.2.5. **Construction, Operation, and Maintenance Specifications**
- 6.2.5.1. **King Range SWQPA Construction Activity Notification (Special Provision 6.3.4.1).** Consistent with Order No. R1-2015-0017, this Order requires the Permittee to notify the Regional Water Board 180 days prior to any Facility-related construction activity that could result in any new or altered discharge or habitat modification in the King Range SWQPA.

6.2.5.2. **Operation and Maintenance (Special Provisions 6.3.4.2, 6.3.4.3, and 6.3.4.4).** 40 C.F.R. section 122.41(e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision 6.3.4.3 of this Order, is an integral part of a well-operated and maintained facility.

6.2.6. **Special Provisions for Municipal Facilities (POTWs Only)**

6.2.6.1. **Wastewater Collection Systems (Special Provision 6.3.5.1)**

6.2.6.1.1. **Statewide General WDRs for Sanitary Sewer Systems.** On May 2, 2006, the State Water Board adopted General Waste Discharge Requirements 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 one 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.

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 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 addressed compliance and enforceability of the Monitoring and Reporting Program and superseded the amendments in Order No. WQ-2008-0002-EXEC. Notification and reporting of SSOs is conducted in accordance with the requirements of Order Nos. 2006-0003-DWQ and WQ 2013-0058-EXEC, and any revisions thereto for operation of its wastewater collection system.

6.2.6.2. **Source Control Provisions (Special Provision 6.3.5.2).** Pursuant to Special Provision 6.3.5.2.1, the Permittee 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.

6.2.7. **Sludge Disposal and Handling Requirements (Special Provision 6.3.5.3).** 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.

This provision includes new monitoring and reporting requirements specified by U.S. EPA to demonstrate compliance with the EPA Part 503 Biosolids Rule requirements and also requires the Permittee to comply with the state's regulations relating to the discharge of biosolids to land. The discharge of biosolids through land application is not currently regulated under this Order. In the event that the Permittee wishes to discharge biosolids to land, the Permittee is required to either submit a report of waste discharge or dispose of biosolids at another permitted facility.

6.2.8. **Operator Certification (Special Provision 6.3.5.4).** 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.

6.2.9. **Adequate Capacity (Special Provision 6.3.5.5).** The goal of this provision is to ensure appropriate and timely planning by the Permittee to ensure adequate capacity for the protection of public health and water quality.

6.2.10. **Other Special Provisions**

6.2.10.1. **Storm Water (Special Provision 6.3.6.1).** This provision requires the Permittee, 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 Order requires the Permittee 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.

6.2.11. **Compliance Schedules – Not Applicable**

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

7. **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.

7.1. Influent Monitoring

- 7.1.1. Influent monitoring requirements at Monitoring Location INF-001 for BOD₅ and TSS are retained from Order No. R1-2015-0017 and are necessary to determine compliance with the Order's 85 percent removal requirement for these parameters.
- 7.1.2. Influent monitoring requirements for flow at Monitoring Location INF-001 are retained from Order No. R1-2015-0017 and are necessary to determine compliance with Discharge Prohibition 3.9.

7.2. Effluent Monitoring

- 7.2.1. 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.
 - 7.2.1.1. Effluent monitoring frequencies and sample types for flow, BOD₅, TSS, pH, oil and grease, settleable solids, turbidity, total coliform bacteria, total residual chlorine, ammonia, and chronic toxicity at Monitoring Location EFF-001 have been retained from Order No. R1-2015-0017.
 - 7.2.1.2. The 8-hour composite sample type for BOD₅, TSS, and Oil and Grease has been retained from Order No. R1-2015-0017 to allow for manual collection of samples during operating hours.
 - 7.2.1.3. Effluent monitoring data collected during the term of Order No. R1-2015-0017 indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for TCDD equivalents. Therefore, this Order discontinues effluent the semi-annual monitoring requirements for TCDD equivalents. TCDD-equivalent monitoring will continue to occur as part of the annual Ocean Plan Table 3 monitoring requirement included in Table E-3 of the MRP.
 - 7.2.1.4. Effluent monitoring data collected during the term of Order No. R1-2015-0017 indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for copper. Therefore, this Order discontinues monthly effluent monitoring requirements for copper.

Copper monitoring will continue to occur as part of the annual Ocean Plan Table 3 monitoring requirement included in Table E-3 of the MRP.

- 7.2.1.5. The RPA conducted for Order No. R1-2015-0017 demonstrated reasonable potential (Endpoint 1) for discharges from the Facility to cause or contribute to exceedances of applicable water quality criteria for chloroform. However, the Regional Water Board found that the November 6, 2012 result was not representative of the effluent for purposes of conducting the RPA, because the analytical laboratory reported that the chloroform recoveries for the matrix spike was outside of acceptance limits. Order No. R1-2015-0017 established monthly monitoring for chloroform, to be reduced to annual monitoring following the first year of sampling, to provide the necessary information to perform an RPA for chloroform. The RPA for chloroform was inconclusive (Endpoint 3), so annual monitoring for chloroform has been retained in this Order as part of the annual Ocean Plan Table 3 monitoring requirement.
- 7.2.1.6. This Order eliminates the effluent monitoring requirement for title 22 pollutants due to the fact that monitoring during the term of Order No. R1-2015-0017 demonstrated that no title 22 pollutants were detected in notable concentrations in the effluent.
- 7.2.1.7. Consistent with Order No. R1-2015-0017, effluent monitoring requirements for Ocean Plan Table 3 pollutants is required annually to generate adequate data to perform an RPA.

7.3. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (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.(4)) requires only chronic testing where the minimum initial dilution of the effluent is below 100:1. Because this Order allows for a Dm of 50 for the Facility, WET monitoring shall consist of chronic toxicity testing. 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 Order No. R1-2015-0017, this Order requires annual chronic toxicity testing.

In addition to routine toxicity monitoring, this Order requires the Permittee to maintain and update their TRE Work Plan, in accordance with appropriate U.S. EPA guidance to ensure that the Permittee has 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.

7.4. Land Discharge Monitoring Requirements – Not Applicable

This Order does not authorize discharges to land.

7.5. Recycled Water Monitoring Requirements (Order section 4.3)

7.5.1. This Order requires the Permittee to comply with applicable state and local requirements regarding the production and use of recycled water. These requirements are only in effect when the Permittee is utilizing the water recycling system.

7.5.1.1. Recycled water monitoring requirements at Monitoring Location REC-001 (prior to recycled water storage) for flow, BOD₅, TSS, pH, total coliform bacteria, total residual chlorine, and turbidity have been retained from Order No. R1-2015-0017 to ensure that recycled water quality is maintained to meet tertiary and title 22 requirements

7.5.1.2. Recycled water monitoring requirements at Monitoring Location REC-001 (following recycled water storage) for nitrate, nitrite, ammonia, total organic nitrogen have been retained from Order No. R1-2015-0017 to determine the total nitrogen concentration of the recycled water in order to ensure application of recycled water at nutrient agronomic rates.

7.5.1.3. Recycled water monitoring requirements at Monitoring Location REC-001 for total dissolved solids (TDS) have been retained from Order No. R1-2015-0017 as TDS was detected in the effluent at Monitoring Location REC-001 in concentrations above the applicable discharge limitation (500 mg/L) thus ongoing monitoring is necessary to assess whether TDS concentrations could pose a threat to groundwater quality.

7.5.1.4. Recycled water monitoring data collected during the term of Order No. R1-2015-0017 indicates that the recycled water does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for chloride, sodium, or boron for the protection of groundwater. Therefore, this Order discontinues recycled water monitoring requirements for chloride, sodium, and boron.

7.6. Receiving Water Monitoring – Not Required

This Order does not require surface water or groundwater monitoring at this time. Compliance with receiving water limitations in section 5 of the Order is based on the following:

- 7.6.1. Effluent monitoring data showing that the effluent meets many of the receiving water limits (bacteria, pH, solids removed, Ocean Plan Table 3 pollutants (no priority pollutants found), and chronic toxicity (all pass)). See additional discussion in Fact Sheet section 4.3.3.3.2.1
- 7.6.2. The photographic surveys that have been conducted every five years have shown no significant impacts to the flora and fauna and no indication that receiving water objectives are not being met.
- 7.6.3. The dilution factor of 50 “minimizes the concentrations of substances not removed in treatment”. (Receiving Water limit 5.1.1.6.4).

Future surface water monitoring may be required if future effluent monitoring or other information provides evidence that surface water beneficial uses or water quality may be impacted by the discharge.

7.7. Other Monitoring Requirements

- 7.7.1. **Filtration Process Monitoring (MRP sections 9.1).** Monitoring of the surface loading rate at Monitoring Location INT-001A is necessary during periods of water recycling to demonstrate compliance with technology requirements set forth in DDW’s Alternative Treatment Technology Report for Recycled Water (September 2014 or subsequent). Monitoring of effluent turbidity of the tertiary filters at Monitoring Location INT-001B is required to demonstrate compliance with section 60301.320 of title 22 CCR filtration requirements for disinfected tertiary recycled water.
- 7.7.2. **Disinfection Process Monitoring for the Chlorine Disinfection System (MRP section 9.2).** For discharges at Discharge Points 001 and 002, chlorine disinfection system monitoring requirements at Monitoring Locations INT-002 and INT-003 are included to ensure effective pathogen reduction. For discharges at Discharge Point 001, internal monitoring at the end of the chlorine contact chamber (Monitoring Location INT-002) is required to demonstrate that the appropriate chlorine residual concentration is maintained in the effluent at all times. During periods of discharge at Discharge Point 002 (water recycling) internal monitoring following filtration and chlorination is required to measure chlorine residual to assure adequate disinfection on a daily basis.
- 7.7.3. **Sludge Monitoring (MRP section 9.4).** Sludge monitoring requirements at Monitoring Location BIO-001 serve as a basis for the Permittee to develop the Sludge Handling and Disposal Activity Report that is required as part of the Annual Report pursuant to section 10.4.2.7 of the MRP.
- 7.7.4. **Outfall Inspection (MRP section 9.5).** Consistent with Order No. R1-2015-0017, this Order requires the Permittee to inspect the outfall location to determine the structural integrity and operational status of the outfall structure at

least once during the term of the permit. This requirement is required to demonstrate proper operation and maintenance of the POTW as required by 40 C.F.R. section 122.4, and to ensure that the calculated minimum probable initial dilution is not compromised as a result of unanticipated structural or operational changes in the outfall structure.

- 7.7.5. **Discharge Monitoring Report Quality Assurance (DMR-QA) Study Program (MRP section 1.6).** Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires all 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 Permittee 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 Permittee 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 Permittee 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.
- 7.7.6. **Flow Monitoring.** Section 1.4 of the MRP requires proper installation, calibration, operation, and maintenance of flow metering devices.
- 7.7.7. **Spill Notification (MRP section 10.5).** 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 and any future revisions. Requirements for reporting tertiary recycled water spills has been removed from this Order due to the fact that this Order does not currently allow the use of recycled water. This requirement may be added back if and when this Order modified to allow recycled water use, or may be included as part of a future enrollment of the recycled water use under the statewide Recycled Water General Order

8. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (North Coast Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination

System (NPDES) permit for the Shelter Cove Wastewater Treatment Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Regional Water Board notified the Permittee 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.

8.2. 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 DCD) 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 **December 3, 2021**.

8.3. Public Hearing

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

Date: **February 3-4, 2022**
Time: 8:30 a.m. or as announced in the Regional Water Board's agenda
Location: Regional Water Board Hearing Room
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

As a result of the COVID-19 emergency and the Governor's Executive Orders to protect public health by limiting public gatherings and requiring social distancing, this meeting occurred solely via remote presence.

Interested persons were invited to attend/participate. 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.

8.4. Waste Discharge Requirements and Petitions

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see the at [Water Quality Petitions Website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

8.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. During the COVID-19 emergency and pursuant to the Governor's Executive Order N-22-30, appointments are required for document review and can be made by calling (707) 576-2220.

8.6. 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.

8.7. Additional Information

Requests for additional information or questions regarding this order should be directed to Matthew Herman at Matthew.Herman@waterboards.ca.gov or (707) 576-2683.

Attachment F-1. Resort Improvement District No. 1, Shelter Cove Wastewater Treatment Facility RPA Summary

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint
Arsenic	µg/L	=	0.41	6	5	8	3	2.9	3
Cadmium	µg/L	<	0.128	6	6	1	0	<0.0025	3
Chromium VI	µg/L	=	5.5	6	5	2	0	0.11	3
Copper	µg/L	=	38	76	0	3	2	2.5 ⁶	2
Lead	µg/L	=	0.185	6	2	2	0	0.0068 ⁶	2
Mercury	µg/L	<	0.0453	6	6	0.04	0.0005	<0.0014	3
Nickel	µg/L	=	3.25	6	2	5	0	0.064	2
Selenium	µg/L	=	0.604	6	4	15	0	0.012	3
Silver	µg/L	<	0.111	6	6	0.7	0.16	<0.1590	3
Zinc	µg/L	=	115	7	0	20	8	12 ⁶	2
Cyanide	µg/L	<	7	6	5	1	0	<0.1373	3
Ammonia (as N)	µg/L	=	190	53	47	600	0	3.7	2
Chronic Toxicity	TUc	=	50	6	0	1 TUc	0	0.98	3
Phenolic Compounds (non-chlorinated)	µg/L	<	0.5	6	6	30	0	<0.0098	3
Chlorinated Phenolics	µg/L	<	0.53	6	6	1	0	<0.0104	3
Endosulfan	µg/L	<	0.0023	6	6	0.009	0	<0.00005	3
Endrin	µg/L	<	0.0019	6	6	0.002	0	<0.00004	3
HCH	µg/L	<	0.0018	6	6	0.004	0	<0.00004	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint
Acrolein	µg/L	<	2	6	6	220	0	<0.0392	3
Antimony	µg/L	=	0.565	6	2	1,200	0	0.062 ⁶	2
Bis(2-chloroethoxy) methane	µg/L	<	0.55	6	6	4.4	0	<0.0108	3
Bis(2-chloroisopropyl) ether	µg/L	<	0.5	6	6	1,200	0	<0.0098	3
Chlorobenzene	µg/L	<	1	6	6	570	0	<0.0196	3
Chromium (III)	µg/L	<	5	2	2	190,000	0	<0.0980	3
Di-n-butyl Phthalate	µg/L	<	0.73	6	6	3,500	0	<0.0143	3
Dichlorobenzenes	µg/L	<	1	6	6	5,100	0	<0.0196	3
Diethyl Phthalate	µg/L	<	0.54	6	6	33,000	0	<0.0106	3
Dimethyl Phthalate	µg/L	<	1.1	6	6	820,000	0	<0.0216	3
4,6-dinitro-2-methylphenol	µg/L	<	0.74	6	6	220	0	<0.0145	3
2,4-dinitrophenol	µg/L	<	0.51	6	6	4	0	<0.0100	3
Ethylbenzene	µg/L	<	1	6	6	4,100	0	<0.0196	3
Fluoranthene	µg/L	<	0.033	5	5	15	0	<0.0006	3
Hexachlorocyclopentadiene	µg/L	<	0.5	6	6	58	0	<0.0098	3
Nitrobenzene	µg/L	<	0.52	6	6	4.9	0	<0.0102	3
Thallium	µg/L	<	0.101	6	6	2	0	<0.0020	3
Toluene	µg/L	<	1	6	6	85,000	0	<0.0196	3
Tributyltin	µg/L	<	0.0029	6	6	0.0014	0	<0.00006	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint
1,1,1-trichloroethane	µg/L	<	1	6	6	540,000	0	<0.0196	3
Acrylonitrile	µg/L	<	2	6	6	0.1	0	<0.0392	3
Aldrin	µg/L	=	0.014 ⁶	6	5	0.000022	0	0.0003	1
Benzene	µg/L	<	1	6	6	5.9	0	<0.0196	3
Benzidine	µg/L	<	0.5	6	6	0.000069	0	<0.0098	3
Beryllium	µg/L	<	0.29	6	6	0.033	0	<0.0057	3
Bis(2-chloroethyl) Ether	µg/L	<	0.5	6	6	0.045	0	<0.0098	3
Bis(2-ethylhexyl) Phthalate	µg/L	=	1.3	6	4	3.5	0	0.0255	3
Carbon Tetrachloride	µg/L	<	1	6	6	0.9	0	<0.0196	3
Chlordane	µg/L	<	0.034	6	6	0.000023	0	<0.0007	3
Chlorodibromomethane	µg/L	=	1.8	6	3	8.6	0	0.13 ⁷	2
Chloroform	µg/L	=	78	31	0	130	0	3.1 ⁷	2
DDT	µg/L	<	0.001	6	6	0.00017	0	<0.00002	3
1,4-Dichlorobenzene	µg/L	<	1	6	6	18	0	<0.0196	3
3,3'-Dichlorobenzidine	µg/L	<	1	6	6	0.0081	0	<0.0196	3
1,2-Dichloroethane	µg/L	<	1	6	6	28	0	<0.0196	3
1,1-Dichloroethylene	µg/L	<	1	6	6	0.9	0	<0.0196	3
Dichlorobromomethane	µg/L	=	8.8	6	0	6.2	0	0.32 ⁷	2
Dichloromethane	µg/L	<	2	6	6	450	0	<0.0392	3
1,3-Dichloropropene	µg/L	<	1	6	6	8.9		<0.0196	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint
Dieldrin	µg/L	<	0.0018	6	6	0.00004	0	<0.00004	3
2,4-Dinitrotoluene	µg/L	<	0.59	6	6	2.6	0	<0.0116	3
1,2-Diphenylhydrazine	µg/L	<	0.5	6	6	0.16	0	<0.0098	3
Halomethanes	µg/L	<	1	6	6	130	0	<0.0196	3
Heptachlor	µg/L	<	0.0018	6	6	0.00005	0	<0.00004	3
Heptachlor Epoxide	µg/L	<	0.0015	6	6	0.00002	0	<0.00003	3
Hexachlorobenzene	µg/L	<	0.5	6	6	0.00021	0	<0.0098	3
Hexachlorobutadiene	µg/L		--	--	--	14	0	--	--
Hexachloroethane	µg/L	<	0.5	6	6	2.5	0	<0.0098	3
Isophorone	µg/L	<	0.55	6	6	730	0	<0.0108	3
N-Nitrosodimethylamine	µg/L	<	0.5	6	6	7.3	0	<0.0098	3
N-Nitrosodi-N-Propylamine	µg/L	<	0.5	6	6	0.38	0	<0.0098	3
N-Nitrosodiphenylamine	µg/L	<	0.71	6	6	2.5	0	<0.0139	3
PAHs	µg/L	<	0.011	5	5	0.0088	0	<0.0002	3
PCBs	µg/L	<	0.5	6	6	0.000019	0	<0.0098	3
TCDD equivalents	µg/L	<	0.97e-6	6	1	3.9e-9	0	<0.000000019	3
1,1,2,2-Tetrachloroethane	µg/L	<	1	6	6	2.3	0	<0.0196	3
Tetrachloroethylene	µg/L	<	1	6	6	2	0	<0.0196	3
Toxaphene	µg/L	<	0.052	6	6	0.00021	0	<0.0010	3
Trichloroethylene	µg/L	<	1	6	6	27	0	<0.0196	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint
1,1,2-Trichloroethane	µg/L	<	1	6	6	9.4	0	<0.0196	3
2,4,6-Trichlorophenol	µg/L	<	0.71	6	6	0.29	0	<0.0139	3
Vinyl Chloride	µg/L	<	1	6	6	36	0	<0.0196	3

Table Notes

1. MEC = Maximum Effluent Concentration
2. ND = Non-Detects
3. Co = The concentration (water quality objective) to be met at the completion of initial dilution (from Table 3 of the 2019 Ocean Plan).
4. Cs = The background seawater concentrations (from Table 5 of the 2019 Ocean Plan).
5. X-obs = The maximum concentration after complete mixing, calculated according to Step 4 of Appendix VI of the Ocean Plan using the permitted dilution ratio (Dm) of 50 as follows: $X\text{-obs} = (C_e + D_m * C_s) / (D_m + 1)$, unless otherwise noted.
6. The Ocean Plan establishes the following RPA 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.
7. The 2015 sample result was 0.014 ug/L. Sample results for the most recent five year period, 2016-2020, were all <0.0016 ug/L.
8. Represents the one-sided, upper 95% confidence bound for the 95th percentile of the effluent distribution after complete mixing (i.e., the lognormal UCB) calculated per Step 9 of Appendix VI of the Ocean Plan.