CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

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WATER QUALITY ORDER R1-2022-XXXX
NPDES NO. CA0024449

Waste Discharge Requirements for the City of Eureka, Elk River Wastewater Treatment Plant, Humboldt County

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

Permittee	**City of Eureka**
Name of Facility	**Elk River Wastewater Treatment Plant, Eureka**
Facility Address	**4301 Hilfiker Lane** **Eureka, CA 95503** **Humboldt County**

Table [SEQ Table * ARABIC \s 2]. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North-South)	Discharge Point Longitude (East-West)	Receiving Water
001	Secondary treated municipal wastewater	40º 46’ 24”	124º 12’ 45”	Humboldt Bay

This Order was adopted on:	**<Adoption Date>**
This Order shall become effective on:	**<Effective Date>**
This Order shall expire on:	**<Expiration Date>**

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: **<DATE>.** The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region have classified this discharge as follows: Major discharge.

I, <**Executive Officer**>, 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

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Regional Water Quality Control Board, North Coast Region, on the date indicated above.

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<**Executive Officer**>, Executive Officer

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1. FACILITY INFORMATION

Information describing the Elk River Wastewater Treatment Plant (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 serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Permittee to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

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 application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through H are also incorporated into this Order.

2.3. Provisions and Requirements Implementing State Law

The provisions/requirements in subsections 4.2, 4.3, and 5.2 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.

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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.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order R1-2016-0001 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous Order.

3. DISCHARGE PROHIBITIONS

3.1 The discharge of waste to Humboldt Bay is prohibited unless it complies with the State Water Board, Water Quality Control Policy for the Enclosed Bays and Estuaries of California (1974, 1995).

3.2 The discharge of any waste not disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.

3.3 Creation of pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.

3.4 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).

3.5 The discharge 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).

3.6 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.

3.7 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, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the CCR.

3.8 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.

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3.9 The discharge of waste from the Facility to the Elk River and its tributaries, and to seasonal and tidal marshes adjacent to the Facility is prohibited.

3.10 The peak dry weather flow of waste through the Facility in excess of 8.6 mgd is prohibited. Additionally, the peak daily wet weather flow of waste through the Facility in excess of 12 mgd is prohibited. Compliance with this prohibition shall be determined as defined in sections 7.10 and 7.11 of this Order.

Commented [ST1]: Justin, this prohibition has been retained from the existing permit. Would it be more appropriate to include average dry weather flow prohibition, consistent with other recently developed permits, or is this prohibition specific to the influent flow issues experienced by the facility.

3.11 The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited under Water Code section 13375.

3.12 The acceptance of septage to a location other than an approved septage receiving station is prohibited.

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Point 001

4.1.1. Final Effluent Limitations – Discharge Point 001

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Table [SEQ Table * ARABIC \s 2]. Effluent Limitations[1]

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L[REF _Ref33189164 \n * MERGEFORMAT]	30	45	60		
Total Suspended Solids	mg/L	30	45	60		
pH	standard units				6.0	8.5
alpha-Endosulfan	µg/L	0.0071		0.0143		
Ammonia Impact Ratio	mg/L	1.0		1.0		
Cyanide, Total (as CN)	µg/L	0.40		1.0		
Settleable Solids	mL/L	0.1		0.2		
Total Residual Chlorine	µg/L	6.1		12		
Turbidity	NTU	75	100			

Table Notes

1. See Definitions in Attachment A and Compliance Determination discussion in section 7 of this Order.
2. The Ammonia Impact Ratio (AIR) is calculated as the ratio of the ammonia concentration in the effluent and the applicable ammonia standard (AMEL and MDEL). Attachment H contains a PDF example of the calculator that will be sent to the Permittee to determine compliance with the AMEL/MDEL AIR. For each of the applicable ammonia standards, Attachment G includes two tables that provide the variable AMEL and MDEL ammonia standards used in calculating the AIR. The AIR is the ammonia effluent limit and must be reported in the self-monitoring reports in addition to ammonia, pH, salinity, and temperature values. Monitoring for ammonia, pH, salinity, and temperature

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
must be conducted concurrently in order for the AIR to be calculated properly. Compliance determination will be based on the receiving water data and ammonia effluent data taken on the same day. 3. See sections 7.12 and 7.13 of this Order regarding compliance with each AIR effluent limit.						

4.1.1.1. The Permittee shall maintain compliance with the above effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

4.1.1.2. **Percent Removal.** The average monthly percent removal of BOD_5 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 Humboldt Bay shall not contain fecal coliform bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001. Compliance with bacteriological limitations hall be determined in accordance with section 7.8 of this Order.

4.1.1.3.1. The Median concentration shall not exceed a Most Probably Number (MPN) of 14 per 100 milliliters (mL) in a calendar month; and

4.1.1.3.2. No sample shall exceed an MPN of 43 per 100 mL.

4.1.1.4. Chronic Toxicity. As measured at Monitoring Location EFF-001, there shall be no chronic toxicity in the effluent when discharging to Humboldt Bay at Discharge Point 001. Compliance with this narrative chronic toxicity effluent limitation shall be determined in accordance with section 7.9 of this Order and sections 5.2 and 5.3 of the MRP, Attachment E of this Order.

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. Recycling Specifications – Not Applicable

This Order does not authorize discharges of recycled water.

4.4. Other Requirements

4.4.1. The Permittee shall begin discharge prior to the outgoing tide, 45 minutes before slack tide and, when discharge volumes require use of the effluent pumps, the pumping rate shall be set to convey the stored volume within the limits of the discharge window[1].

4.4.2. There shall be no detectable levels of chlorine discharged to the Overflow Marsh, as measured at Monitoring Location INT-001, and as described in the MRP (Attachment E), using any analytical method with a minimum detection of 0.01 mg/L.

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan 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.

Discharges from the Facility shall not cause the following in the receiving waters:

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[1] The discharge window shall begin 45 minutes before slack tide conditions on the outgoing tide and end prior to the slack tide associated with the subsequent incoming tide.

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5.1.1. The discharge shall not cause the dissolved oxygen concentration of the receiving water to be depressed below 6.0 mg/L.

In those waterbodies for which the aquatic life-based DO requirements are unachievable due to natural conditions[2], site-specific background DO requirements can be applied[3] as water quality objectives by calculating the daily minimum DO necessary to maintain 85% DO saturation during the dry season and 90% DO saturation during the wet season under site salinity, site atmospheric pressure, and natural receiving water temperature[4]. In no event may controllable factors reduce the daily minimum DO below 6.0 mg/L.

For the protection of estuarine habitat (EST), the dissolved oxygen concentration of enclosed bays and estuaries shall not be depressed to levels adversely affecting beneficial uses as a result of controllable water quality factors.

5.1.2. The discharge shall not cause the pH of receiving waters to be depressed below natural background levels nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.2 units from that which occurs naturally.

5.1.3. The discharge shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

5.1.4. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

5.1.5. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

5.1.6. The discharge shall not cause receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

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[2] Natural conditions are conditions or circumstances affecting the physical, chemical, or biological integrity of water that are not influenced by past or present anthropogenic activities.

[3] Upon approval from the Regional Water Board Executive Officer.

[4] The method(s) used to estimate natural temperatures for a given waterbody or stream length must be approved by the Executive Officer and may include, as appropriate, comparison with reference streams, simple calculation, or computer models.

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5.1.7. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

5.1.8. The discharge shall not contain substances in concentrations that result in deposition of material in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

5.1.9. The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

5.1.10. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.

5.1.11. The natural receiving water temperature shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. The discharge shall not cause an increase of the receiving water by more than 5°F above natural receiving water temperature.

Commented [ST2]: Justin, this is different from what was included in the Arcata permit, and is based on both the Thermal Plan WQO for enclosed bays (Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses) and the Basin Plan WQO for inland surface waters, enclosed bays, and estuaries (At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature.)

5.1.12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge shall not cause bioaccumulation of pesticide concentrations in bottom sediments or aquatic life.

5.1.13. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.

5.1.14. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.

5.1.15. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

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5.1.16. The discharge shall not cause concentrations of chemical constituents to occur in excess of MCLs and secondary MCLs (SMCLs) established for these pollutants in title 22, division 4, chapter 15, articles 4, section 64431, article 5.5, section 64444, and article 16, section 64449 of the CCR.

5.1.17. The discharge shall not cause receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life, 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. Groundwater Limitations

5.2.1. The collection, treatment, storage, and disposal of wastewater shall not cause degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., Basin Plan) and reasonable best management practices (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 shall not cause alterations of groundwater that contain chemical concentrations in excess of the MCLs and SMCLs established for these pollutants in title 22, division 4, chapter 15, article 4, sections 64435 (Tables 2 and 3) 64431, and article 5.5, section 64444, and article 16 section 64449 and the Basin Plan.

5.2.3. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain levels of radionuclides in concentrations that cause nuisance or adversely affect beneficial uses, nor in excess of the MCLs and SMCLs established in title 22, division 4, chapter 15, article 5, sections 64442 and 64443 of the CCR.

5.2.4. The collection, treatment, storage, and disposal of wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

5.2.5. In groundwaters used for domestic or municipal supply (MUN), the collection, treatment, storage, and disposal of wastewater shall not cause the median of the most probable number of coliform organisms over any 7-day period to exceed 1.1 MPN/100 mL or 1 colony/100 mL.

5.2.6. Groundwaters shall not contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, or that adversely affects beneficial uses. This limitation applies regardless of whether the toxicity is caused by a single substance or the synergistic effect of multiple substances.

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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, 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 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).

6.2. 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

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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. **Water Effects Ratios (WERs) and Metal Translators.** Except for copper, which has a site-specific applied WER of 12.6, a default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable. If the Permittee performs studies to determine other site-specific WERs and/or site-specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with U.S. EPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.

6.3.1.6. **Mixing Zone Study.** Order No. R1-2009-0033 applied a 30:1 zone of initial dilution for the discharge based on Resolution 80-10 which relied upon a modeling study performed in 1979. The 1979 study demonstrated that discharge at ebb tide conveyed all effluent out of Humboldt Bay and into the Pacific Ocean. A zone of initial dilution was granted based upon design of the outfall diffuser and application of Ocean Plan criteria. Order No. R1-2009-0033 included a requirement for the Permittee to perform an updated effluent discharge study. The new study, *Effluent Discharge Study for the Elk River Wastewater Treatment Plant, January 7, 2014*, demonstrated that not all of the effluent is conveyed to the Pacific Ocean upon discharge, as previously concluded in the 1979 study (see section 2.3 of the Fact Sheet for details). Since a significant portion of the effluent remains in Humboldt Bay, the discharge of effluent from the Facility must comply with the SIP as opposed to the Ocean Plan. Based upon this new information, a zone of initial dilution consistent with the Ocean Plan was not retained in Order No. R1-2016-0001. Current analysis of likely compliance with copper, cyanide, and ammonia based upon a comparison of past treatment performance and effluent limitations contained in section 4 of this Order show that the Permittee can substantially comply with the effluent limitations without granting a mixing

Commented [ST3]: Justin, we included this provision largely from the existing permit for the purpose of retaining the history and rationale for including and removing mixing from the permit. Depending on what the RB determines with respect to Ammonia, this language may need to be revised.

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zone. Should the permittee wish to obtain future authorization for a mixing zone and associated dilution credit for the discharge into Humboldt Bay, a mixing zone study as specified in Section 1.4.2 of the SIP must be conducted. Upon concurrence that a future mixing zone is warranted, the Permittee would be required to submit a workplan for review and approval by the Regional Water Board Executive Officer prior to initiating a mixing zone study. Mixing zone study results would subsequently need to be submitted to the Regional Water Board for Executive Officer consideration. If approved, this Order may be accordingly revised.

6.3.1.7. **Nutrients.** This Order contains effluent limitations and monitoring requirements for ammonia. If new water quality objectives for nutrients are established, if monitoring data indicate the need for new or revised effluent limitations for ammonia, or if new or revised methods for compliance with effluent limitations for ammonia are developed, this Order may be reopened and modified to include new or modified effluent limitations or other requirements, as necessary

6.3.2. Special Studies, Technical Papers, and Additional Monitoring Requirements

6.3.2.1. **Source Control and Pretreatment Studies**

The Permittee shall review the existing sections in the pretreatment program and submit, for Executive Officer review and approval, a written description of the pretreatment program. The written description of the pretreatment program shall be submitted by **<DATE>** and consist of the following sections:

6.3.2.1.1. **Organizational and Multi-jurisdiction Implementation**

This section shall describe the overall program structure as well as contain descriptions of the Facility, collection system and the service area including political boundaries.

6.3.2.1.2. **Legal Authority**

This section shall contain a revised Sewer Use Ordinance (SUO) and all necessary multi-jurisdictional agreements to allow for the implementation of the pretreatment program. The SUO shall be submitted as a final draft ready for adoption and implementation pending approval of the local limits, described below, by the Regional Water Board Executive Officer.

6.3.2.1.3. **Local Limits**

This section shall describe the technical basis for the local limits and shall provide a work plan for conducting a Local Limits Study in accordance with U.S. EPA's July 2004 Local Limits Development Guidance (EPA 833-R-04-

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002A. and shall include a schedule for conducting the Local Limits Study and for public hearings and outreach.

The Permittee shall conduct a Local Limits Study to determine the pollutants of concern, collect and analyze data, calculate maximum allowable headworks loadings (MAHLs) for each pollutant of concern at the Facility and the maximum pollutant levels protective of the collection system, the method for allocating allowable loadings to users, and designate and implement technically-based local limits, where necessary, for industrial users discharging to the Permittee's collection system. The Local Limits can be numerical concentrations, loading limits, prohibitions or control strategies.

6.3.2.1.4. **Identification of Non-domestic Users**

This section shall contain the procedures to be used in the initial Industrial Waste Survey (IWS) as well as the procedures to be used for on-going updates. This section shall also include the current inventory of industrial users, by nondomestic sewer connection, and of the zero-discharging categorical industrial users who comply with their Federal standards by not discharging process wastewater.

The inventory must indicate the following for each industrial user and zero-discharging categorical industrial users:

6.3.2.1.4.1. Whether it qualifies as a significant industrial user;

6.3.2.1.4.2. The average and peak flow rates;

6.3.2.1.4.3. The SIC code;

6.3.2.1.4.4. The pretreatment-in-place, and

6.3.2.1.4.5. The local permit status

6.3.2.1.5. **Permits and Fact Sheets**

This section shall describe the permitting procedures and include a fact sheet and final draft permit for each significant industrial user to be issued upon approval of the local limits and revised SUO by the Regional Water Board Executive Officer. The fact sheets must indicate the following for each significant industrial user and zero-discharging categorical industrial user:

6.3.2.1.5.1. The industry name, owner or plant manager;

6.3.2.1.5.2. The permit expiration date (not to exceed five years in duration);

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6.3.2.1.5.3. A description of the facility including the products made or services provided, building names, the process in each building and when current operations began;

6.3.2.1.5.4. The identification of each sewer connection;

6.3.2.1.5.5. A description of the contributing waste streams that comprise each identified non-domestic discharge to the sewers;

6.3.2.1.5.6. The pretreatment-in-place for each identified non-domestic discharge to the sewers;

6.3.2.1.5.7. The classification by Federal point source category and the reasons justifying classification;

6.3.2.1.5.8. The applicable Federal categorical pretreatment standards, supporting production data (if necessary), and the compliance sampling point(s) where the standards apply;

6.3.2.1.5.9. The pollutants of concern and the compliance sampling point(s) where the local limits apply;

6.3.2.1.5.10. A site map indicating the locations of all compliance sampling point(s), sewer connections, and sewer laterals;

6.3.2.1.5.11. The sampling frequency by regulated pollutant for each compliance sampling point, and the supporting statistical rationale, to ensure that the sampling is representative of the wastewater discharge variability over the reporting period; and

6.3.2.1.5.12. The sampling protocol by regulated pollutant for each compliance sampling point to ensure that the samples collected to determine compliance with Federal standards are representative of the sampling day's discharge.

6.3.2.1.6. **Compliance Monitoring**

This section shall describe the industrial user self-monitoring program and the Permittees oversight monitoring program. The compliance monitoring program shall ensure that all sampling is representative over the reporting period and that each sample collected to determine compliance with Federal standards is representative of the sampling day's discharge. The

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compliance monitoring program must also set analytical detection limits to allow the determination of non-compliance.

6.3.2.1.7. **Enforcement**

This section shall establish the enforcement response plan (ERP) to be used to address, at a minimum, each of the following types of violations:

6.3.2.1.7.1. Isolated and chronic violations of permit effluent limitations;

6.3.2.1.7.2. Violations of permit effluent limitations that result in any adverse impacts upon the Facility such as pass-through, interference, sludge contamination, sewer line degradation, explosive or inflammability risks, or worker health and safety risks;

6.3.2.1.7.3. Failure to self-monitor or report;

6.3.2.1.7.4. The bypassing of pretreatment necessary to comply with Federal categorical pretreatment standards;

6.3.2.1.7.5. The bypassing of compliance sampling or the tampering with sampling equipment, and

6.3.2.1.7.6. Willful or negligent violations.

6.3.2.1.8. **Resources**

This section shall demonstrate that adequate budget, staffing and equipment is allocated to provide for the needs of the pretreatment program to ensure effective implementation.

6.3.2.1.9. **Public Participation and Confidentiality**

This section shall describe the administrative procedures required under 40 CFR 403.8(f)(1(vii) and 403.8(f)(2)(viii).

6.3.3. Best Management Practices and Pollution Prevention

6.3.3.1. **Pollutant Minimization Program**

The Permittee shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as "Detected, but Not Quantified" (DNQ) when the effluent limitation is less than the method detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of 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:

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6.3.3.1.1. A sample result is reported as DNQ and the effluent limitation is less than the reporting limit (RL); or

6.3.3.1.2. A sample result is reported as non-detect (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section 10.2.5.

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 including:

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 priority 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. **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.

6.3.4.2. **Operation and Maintenance Manual.** The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the operational

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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.

6.3.4.2.1. 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.

6.3.4.2.2. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

6.3.4.2.3. Description of laboratory and quality assurance procedures.

6.3.4.2.4. Process and equipment inspection and maintenance schedules.

6.3.4.2.5. 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.

6.3.4.2.6. 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.

6.3.4.3. **Septage Handling Requirements**

6.3.4.3.1. The Permittee shall implement any necessary legal authorities to monitor and enforce septage handling requirements, including restriction of discharges of toxic materials to the collection system and wastewater treatment facility and inspection of facilities connected to the system.

6.3.4.3.2. The Permittee shall maintain a waste hauler manifest that identifies the names of the hauler, county identification number, the date and time the waste load was transferred, and the volume and source of the waste.

6.3.4.3.3. The Permittee shall accept the discharge of septage only during business hours and when the Permittee's operations staff is on site.

6.3.4.3.4. The Permittee shall accept septage only at an approved septage receiving station/location.

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6.3.4.3.5. The Permittee shall collect representative grab samples of septage loads in accordance with the MRP (Attachment E).

6.3.5. Special Provisions for Publicly-Owned Treatment Works (POTWs)

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. **Pretreatment of Industrial Waste**

6.3.5.2.1. The Permittee shall be responsible for the performance of all pretreatment requirements contained in 40 C.F.R. part 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the U.S. EPA or other appropriate parties as provided in the CWA, as amended (33 U.S.C. 1351 et seq.). The Permittee shall implement and enforce its approved Facility Pretreatment Program. The Permittee's approved Facility Pretreatment Program is hereby made an enforceable condition of this Order. U.S. EPA may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the CWA.

6.3.5.2.2. The Permittee shall enforce the requirements promulgated under section 307(b), 307(c), 307(d), and 402(d) of the CWA. The Permittee shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.

6.3.5.2.3. The Permittee shall perform the pretreatment functions as required in 40 C.F.R. part 403, including, but not limited to:

6.3.5.2.3.1. Implement the necessary legal authorities as provided in 40 C.F.R. section 403.8(f)(1);

6.3.5.2.3.2. Enforce the pretreatment requirements under 40 C.F.R. sections 403.5 and 403.6;

6.3.5.2.3.3. Implement the programmatic functions as provided in 40 C.F.R. section 403.8(f)(2); and

6.3.5.2.3.4. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 C.F.R. section 403.8(f)(3).

6.3.5.2.4. The Permittee shall implement, as more completely set forth in 40 C.F.R. section 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system:

6.3.5.2.4.1. Wastes that create a fire or explosion hazard in the treatment works;

6.3.5.2.4.2. Wastes that will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is specially designed to accommodate such wastes;

6.3.5.2.4.3. Solid or viscous wastes in amounts that cause obstruction to flow in sewers, or that cause other interference with proper operation of treatment works;

6.3.5.2.4.4. Any waste, including oxygen demanding pollutants (BOD_5, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works, and subsequent treatment process upset and loss of treatment efficiency;

6.3.5.2.4.5. Heat in amounts that inhibit or disrupt biological activity in the treatment works, or that raise influent temperatures above 40°C (104°F);

6.3.5.2.4.6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

6.3.5.2.4.7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the treatment works in a quantity that may cause acute worker health and safety problems; and

6.3.5.2.4.8. Any trucked or hauled pollutants, except at points predesignated by the Permittee, and consisting of waste that can be adequately treated at the Facility.

6.3.5.2.5. The Permittee shall implement, as more completely set forth in 40 C.F.R. section 403.5, the legal authorities, programs, and controls necessary to ensure that indirect discharges do not introduce pollutants into the sewerage system that, either alone or in conjunction with a discharge or discharges from other sources:

6.3.5.2.5.1. Flow through the system to the receiving water in quantities or concentrations that cause a violation of this Order, or

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6.3.5.2.5.2. Inhibit or disrupt treatment processes, treatment system operations, or sludge processes, use, or disposal and either cause a violation of this Order or prevent sludge use or disposal in accordance with this Order.

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 advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Biosolids refers to sludge that has been treated, tested, and demonstrated to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

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.

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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.

6.3.5.4. **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 the Division of Drinking Water (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-

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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 and effluent limitations contained in sections 3 and 4 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.

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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.

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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 (Fecal Coliform Bacteria)**

7.8.1. **Single Sample Maximum.** All single sample results are compared to single sample maximum limitations. Single sample results are only compared to the median, geometric mean, six-week rolling geometric mean, and statistical threshold value when sampling is required at the frequency required to properly assess compliance, as further stated in 7.8.2. through 7.8.5, below. Compliance with a single annual sample is determined in comparison to single sample maximum limitations only. If single sample maximums are routinely exceeded, the Regional Water Board may require additional sampling to assess whether the Permittee's discharge is the source of the exceedance in the receiving water.

7.8.2. **Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking any ND concentrations lowest,

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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.

7.9. **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 5.2 and 5.3).

7.10. **Peak Dry Weather Flow**

Compliance with the peak dry weather flow prohibition in section 3.10 of this Order will be determined once each calendar year by evaluating all flow data collected a Monitoring Location INF-001 in the calendar year. The flow through the Facility, measured continuously and averaged monthly, must be 8.6 mgd or less for the months without precipitation. If the calculated peak dry weather flow exceeds 8.6 mgd the discharge does not comply with Prohibition 3.10 of this Order.

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 3.10 of this Order will be determined daily by measuring the daily average flow at Monitoring Location INF-001. If the measured daily average flow exceeds 12 mgd, the discharge does not comply with Prohibition 3.10 of this Order.

7.12. **Ammonia Impact Ratio AMEL**

Compliance with the ammonia impact ratio average monthly effluent limitation in section 4.1.1 of this Order will be determined based on the monthly average of the receiving water pH, temperature and salinity samples. If more than one monthly ammonia sample is taken in the month, the average of the ammonia samples will be used in conjunction with the average of the receiving water samples. If the AIR is greater than 1.0 then the Permittee is considered out of compliance with the AIR AMEL.

7.13. **Ammonia Impact Ratio AMEL**

Compliance with the ammonia impact ratio maximum daily effluent limitation in section 4.1.1 of this Order will be determined based on the receiving water pH, temperature and salinity samples taken on the same day as the ammonia sample in the effluent. If the AIR is greater than 1.0 then the Permittee is considered out of compliance with the AIR MDEL.

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ATTACHMENT A - DEFINITIONS

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:

$$\text{Arithmetic mean } (\mu) = \frac{\Sigma x}{n}$$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

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

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

Carcinogenic Pollutants
Substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is 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

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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.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Dilution Credit is 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.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as wasteload allocation (WLA) as used in U.S. EPA guidance (*Technical Support Document For Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

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

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait

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downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

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).

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 $n/2+1$).

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Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Attachment B.

Minimum Level (ML)
ML is 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
Mixing Zone is 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.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Persistent Pollutants
Persistent pollutants are 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 a priority pollutant(s) 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
Pollution Prevention means 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 Water Resources Control Board (State Water Board) or Regional Water Board

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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.

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger 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 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. 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.

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Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
A measure of variability that is calculated as follows:

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

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

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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)
TRE is 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.)

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.

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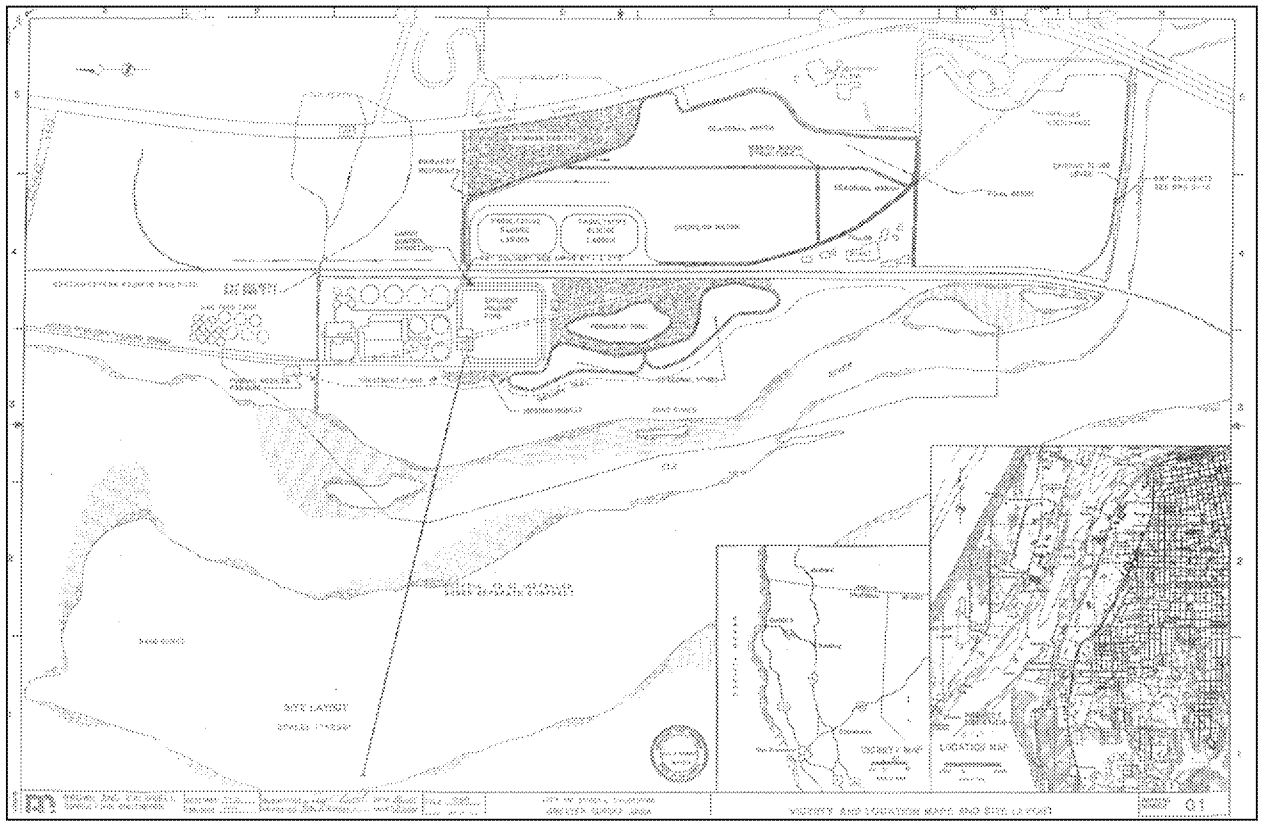
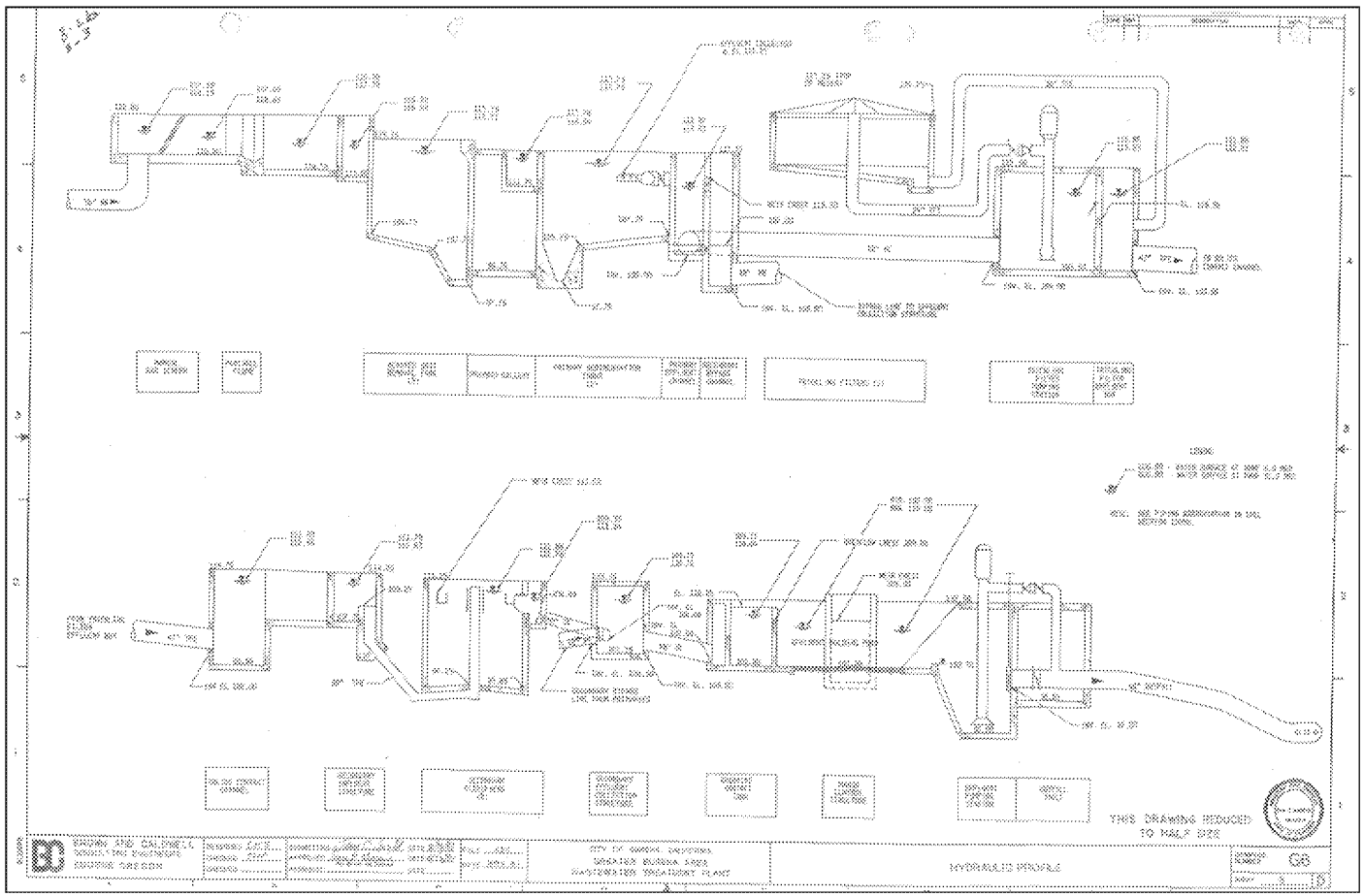
ATTACHMENT B - MAP



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 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 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).)

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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 1.7.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

1.7.4. Burden of Proof. In any enforcement proceeding, the permittee seeding 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. 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 V.E 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

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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 permitted 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).)

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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, subchapter N. 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, subchapter N. 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, subchapter N 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, subchapter N, 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).)

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

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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

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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

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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. As of December 21, 2016, 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, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or 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 report shall also

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be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The report 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, 2023, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board Name and 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:

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 permitted 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 permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

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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).)

5.7. Anticipated Noncompliance

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

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. 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, 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)).

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ATTACHMENT E - MONITORING AND REPORTING PROGRAM

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TABLE OF TABLES

[TOC \t "Caption,1" \b "AttachmentE" \h]

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 also authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

1. GENERAL MONITORING PROVISIONS

1.1 **Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.

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.

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.

1.5. **Minimum Levels (ML) and Reporting Levels (RL).** Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed in Table 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

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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 ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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

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 [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description[1]
	INF-001	Influent wastewater prior to treatment and following all significant input of waste to the treatment system and consisting of wastewater from both the collection system and septage receiving station.
	INT-001	Effluent prior to discharge to the Overflow Marsh.
	INT-002	Wastewater bypassing secondary treatment.
001	EFF-001	Location where representative samples of treated wastewater, to be discharged to Humboldt Bay at Discharge Point 001, can be collected at a point after treatment and before contact with the receiving water. Latitude: 40.77333° Longitude: -124.21250°
	RSW-001	CeNCOOS Humboldt Shore Station[2].
	SEP-001	Septage receiving station after complete mixing of septage wastes and prior to INF-001.
	BIO-001	A representative sample of the sludge or biosolids generated when removed for disposal.

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Table Notes

1. The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.
2. The Humboldt shore station is located on the Chevron dock and is maintained by Humboldt State University. This station has been active since November 2012 and is the replacement system of the previous water quality station at Dock B. - Additional information related to the Humboldt Shore Station can be accessed at the following website. [HYPERLINK "http://www.cencoos.org/data/shore/humboldt"]. Should the Permittee choose to do so, they may propose and participate in group monitoring for the receiving water after receiving written approval from the Executive Officer.

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 [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 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	24-hr Composite	Weekly[2]	Part 136[3]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	Weekly[2]	Part 136[3]

Table Notes

1. Each month, the Permittee shall report the daily average and monthly average flows.
2. Monitoring of BOD_5 and TSS in influent shall coincide with monitoring of these parameters in effluent.
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

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
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 treated effluent at Monitoring Location EFF-001 during periods of discharge as follows.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Effluent Monitoring – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow[1]	mgd	Meter	Continuous	
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	24-hr Composite	Weekly[2,3]	Part 136[4]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	Weekly[2,3]	Part 136[4]
Settleable Solids	mL/L	Grab	Daily[5]	Part 136[4]
Turbidity	NTU	Grab	Daily[5]	Part 136[4]
Total Residual Chlorine[4]	ug/L	Meter4	Continuous[6]	Part 136[4]
pH	standard units	Grab	Daily[7]	Part 136[4]
Temperature	°C	Grab	Monthly[7]	Part 136[4]
Cyanide, Total (as CN)	µg/L	24-hr Composite	Monthly[8]	Part 136[4]
alpha-Endosulfan	µg/L	24-hr Composite	Monthly[8]	Part 136[4]
Fecal Coliform Bacteria	MPN/100 mL	Grab	Twice Weekly	Part 136[4]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Ammonia Nitrogen, Total (as N)	mg/L	24-hr Composite	Monthly[7,8]	Part 136[4]
Ammonia Impact Ratio[10]	Ratio	Calculate	Monthly[7,8]	Part 136[4]
CTR Priority Pollutants[9]	µg/L	24-hr Composite[10]	Annually[11]	Part 136[4,12]
Acute Toxicity[13]	% Survival, Pass or Fail, and % Effect	24-hr Composite	Quarterly	See Section 5.1 below
Chronic Toxicity[13]	Pass or Fail, % Effect	24-hr Composite	Quarterly	See Section 5.2 below

Table Notes

1. Each month, the Permittee shall report the daily average and monthly average flows.
2. Monitoring of BOD_5 and TSS in influent shall coincide with monitoring of these parameters in effluent.
3. 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.
4. 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).
5. Accelerated Monitoring (daily monitoring frequency). 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 of 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.
6. Samples shall be collected at points immediately prior to dechlorination and immediately following dechlorination. All chlorine measurements shall be reported as total residual chlorine. The Permittee shall monitor total residual chlorine in the effluent continuously using a method with a reporting limit as low as technically feasible. Benchtop measurements of effluent chlorine residual shall also be performed at least weekly using equipment capable of achieving a detection limit of 1.2 µg/L as a routine check of daily monitoring results. Should the Permittee

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
determine that existing continuous monitoring equipment is unreliable, the Permittee may request, in writing for a specified time, Executive officer approval to collect hourly grab samples during WWTP operational hours for laboratory analysis. Such an approval would serve as an interim measure until new continuous monitoring could be reasonably installed. 7. pH and temperature monitoring must coincide with monthly monitoring for ammonia. 8. Accelerated Monitoring (monthly frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance. 9. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38. The Permittee is not required to sample and analyze for asbestos. Hardness shall be monitored concurrently with the priority pollutant sample. Holding times for unpreserved cyanide shall not exceed one hour. 10. CTR priority pollutant samples shall be collected using 24-hour composite sampling, except for pollutants that are volatile. Samples for volatile pollutants may be collected as a grab sample. 11. Effluent, and receiving water monitoring for CTR priority pollutants shall be conducted concurrently. 12. Analytical methods shall achieve the minimum levels (ML) specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result. 13. Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements in section 5 of this MRP.				

5. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

5.1. Acute Toxicity Testing

The Permittee shall conduct acute whole effluent toxicity (WET) testing in accordance with the following acute toxicity testing requirements.

5.1.1. Test Frequency. The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Points 001, as summarized in Table E-3 above.

5.1.2. Discharge In-stream Waste Concentration (IWC) for Acute Toxicity. The IWC for this discharge is 100 percent effluent.[5]

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. No more than 36 hours (holding time) shall elapse before the conclusion of sample collection and test initiation.

5.1.4. Test Species and Test Methods. The Permittee shall conduct the following acute toxicity tests using an invertebrate and a vertebrate in accordance with the species and test methods in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received. Species and test methods shall be selected from the following:

5.1.4.1. A 96-hour static renewal or 96-hour static non-renewal toxicity test with an invertebrate, the mysid shrimp, *Mysidopsis bahia* (Survival Test Method 2007.0).

5.1.4.2. A 96-hour static renewal or 96-hour static non-renewal toxicity test with a vertebrate, the sheepshead minnow, *Cyprinodon variegatus* (Survival Test Method 2004.0).

5.1.5. Species Sensitivity Screening. Species sensitivity screening shall be conducted during this Order's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct two acute toxicity tests using an invertebrate and a fish 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[6] "Percent (%) Effect" at the

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[5] The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001.

[6] 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

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discharge IWC during species sensitivity screening shall be used for routine acute toxicity monitoring during the permit term.

5.1.6. Quality Assurance and Additional Requirements. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual referenced in section 5.1.4 above. Additional requirements are specified below.

5.1.6.1. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from acute toxicity tests using the Test of Significant Toxicity (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_o) for the TST approach is: mean discharge IWC response ≤ 0.80 × 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: ((mean control response – mean discharge IWC response) ÷ mean control response) × 100.

5.1.6.2. If the effluent toxicity test does not meet the minimum effluent test acceptability criteria (TAC) specified in the referenced test method, then the Permittee shall resample and re-test within 7 days.

5.1.6.3. Dilution water and control water 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. Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the U.S. EPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

5.1.6.5. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

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

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5.1.7. Notification. The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing 14 days after receipt of test results exceeding the acute toxicity trigger of 90% during regular or accelerated monitoring. The notification shall describe actions the Permittee has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

5.1.8. Accelerated Monitoring Requirements. If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all TAC, the Permittee shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three-sample median minimum limitation (90 percent survival), the Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section 5.3 of the MRP. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all TAC, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

5.1.9. Reporting. The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test (WET report). The WET report shall be prepared using the format and content of section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), including:

5.1.9.1. The toxicity test results in percent (%) survival for the 100 percent effluent sample.

5.1.9.2. The toxicity test results for the TST approach, reported as "Pass" or "Fail" and "Percent (%) Effect" at the acute toxicity IWC for the discharge.

5.1.9.3. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

5.1.9.4. TRE/Toxicity Identification Evaluation (TIE) results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

5.1.9.5. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

5.2. Chronic Toxicity Testing

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

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5.2.1. **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.

5.2.2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 100 percent[7] effluent.

5.2.3. **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.

5.2.4. **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 West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine prepared from natural seawater shall be used to increase sample salinity. In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

5.2.4.1. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0).

5.2.4.2. 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* (Embyro-Larval Shell Development Test Method).

5.2.4.3. A static non-renewal toxicity test with the giant kelp, (Germination and Growth Test Method 10009.0).

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[7] The chronic toxicity test shall be conducted using a series of five dilutions and a control. The series shall consist of the following dilutions: 12.5, 25, 50, 75, and 100 percent. Compliance determination will be based on the IWC (100 percent effluent) and a control as further described in Fact Sheet section 4.3.5.2.

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5.2.5. **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 term[8].

5.2.6. 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.

5.2.6.1. 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 (Ho) for the TST approach is: Mean discharge IWC response ≤ 0.75 × 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: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. The IWC for the chronic toxicity test is 2 percent effluent.

5.2.6.2. 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.

5.2.6.3. 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.

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

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5.2.6.4. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.

5.2.6.5. 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).

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

5.2.6.6.1. 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.

5.2.6.6.2. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

5.2.6.6.3. 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.

5.2.6.6.4. 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.

5.2.7. **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.

5.2.8. **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

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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.

5.2.9. **Reporting**

5.2.9.1. **Routine Reporting.** Chronic toxicity monitoring results for effluent at Monitoring Location EFF 001 shall be submitted with the quarterly self-monitoring report (SMR) for the quarter in which chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:

5.2.9.1.1. 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:

5.2.9.1.1.1. 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);

5.2.9.1.1.2. The source and make-up of the lab control/diluent water used for the test;

5.2.9.1.1.3. Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

5.2.9.1.1.4. Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUc, and IC25;

5.2.9.1.1.5. Identification of any anomalies or nuances in the test procedures or results;

5.2.9.1.1.6. WET test results shall include, at a minimum, for each test:

5.2.9.1.1.6.1. Sample date(s);

5.2.9.1.1.6.2. Test initiation date;

5.2.9.1.1.6.3. Test species;

5.2.9.1.1.6.4. 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

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833-R-10-003, 2010). The "Percent Effect" shall be calculated as follows:

"Percent Effect" (or Effect, in %) = ((Control mean response – IWC mean response) ÷ Control mean response)) x 100

5.2.9.1.1.6.5. End point values for each dilution (e.g., number of young, growth rate, percent survival);

5.2.9.1.1.6.6. NOEC value(s) in percent effluent;

5.2.9.1.1.6.7. IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) in percent effluent;

5.2.9.1.1.6.8. TUc values (100/NOEC);

5.2.9.1.1.6.9. Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);

5.2.9.1.1.6.10. NOEC and LOEC values for reference toxicant test(s);

5.2.9.1.1.6.11. IC50 or EC50 value(s) for reference toxicant test(s);

5.2.9.1.1.6.12. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia);

5.2.9.1.1.6.13. Statistical methods used to calculate endpoints;

5.2.9.1.1.6.14. The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and

5.2.9.1.1.6.15. 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.

5.2.9.2. **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.

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5.3. Toxicity Reduction Evaluation (TRE) Process

5.3.1. **TRE Work Plan.** The Permittee submitted a TRE Work Plan to the Regional Water Board on **<DATE>**. By **<DATE>**, the Permittee's TRE Work Plan shall be reviewed 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.

5.3.2. 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:

5.3.2.1. 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.

5.3.2.2. 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.

5.3.2.3. 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).

5.3.3. **Preparation and Implementation of a Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in sections 5.1.8 or 5.2.8 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 sections 5.1.8 or 5.2.8 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:

5.3.3.1. Further actions by the Permittee to investigate, identify, and correct causes of toxicity.

5.3.3.2. Actions the Permittee will take to mitigate effects of the discharge and prevent the recurrence of toxicity.

5.3.3.3. A schedule for these actions, progress reports, and the final report.

5.3.4. **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.

5.3.5. 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.

5.3.6. 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.

5.3.7. 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 – NOT APPLICABLE

This Order does not authorize discharge of recycled water.

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Monitoring Location RSW-001

8.1.1. The Permittee shall monitor Humboldt Bay at the California & Northern California Ocean Observing Systems (CeNCOOS) Shore Station Monitoring Location RSW-001 as follows:

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Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Receiving Water Monitoring – Monitoring Location RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chlorophyll	µg/L	Sensor[1]	Monthly[2]	
Dissolved Oxygen	mg/L	Sensor[1]	Monthly[2]	
pH	standard units	Sensor[1]	Monthly[2]	
Salinity	PSS[3]	Sensor[1]	Monthly[2]	
Temperature	°C	Sensor[1]	Monthly[2]	
Turbidity	NTU	Sensor[1]	Monthly[2]	

Table Notes

1. Receiving water monitoring data is collected by sensors, in real-time, through the CeNCOOS program at the Humboldt Bay Shore Station.
2. Each month the Permittee shall report the median monthly value for each monitored parameter.
3. Practical Salinity Scale of 1978 (PSS-78)

Commented [ST6]: Justin, the existing permit included "Median" as the Sample Type. It seems to me that the sample type would more accurately be represented as a sensor, so we've included "Sensor" in the table, with a table note describing the monitoring set-up and another table note directing the Permittee to report the median monthly values for each parameter. Please review these table notes and verify that they accurately captures the monitoring and required reporting.

8.1.2. Biological Survey. The Permittee shall conduct a comparative evaluation of indigenous biota in the vicinity of the outfall using a qualified aquatic biologist, at least once every 5 years. The biologist shall prepare a report of observations, including objectionable aquatic growths, floating particulates or grease and oil, aesthetically undesirable discoloration of the ocean surface, color of fish or shellfish, and any evidence of degradation of indigenous biota attributable to the rate of deposition of inert solids, settleable material, nutrient materials, increased concentrations of organic materials, or increased concentrations of pollutants of concern such as CTR pollutants. The Permittee shall submit to the Regional Water Board Executive Officer for approval, a Biological Survey work plan no later than **<Date>**, in order to complete the survey and prepare a final report by the due date for receipt of an application for permit renewal. The final report shall be submitted no later than **<Date>**.

8.1.3. Groundwater Monitoring – Not Applicable

This Order does not require groundwater monitoring at this time.

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9. OTHER MONITORING REQUIREMENTS

9.1. Disinfection Process Monitoring – Monitoring Location INT-001

During periods of high influent flow, the Permittee shall monitor effluent, from the effluent holding pond, to be discharged to the Overflow Marsh at Monitoring Location INT-001 as follows:

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Disinfection Process Monitoring – Monitoring Location INT-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[1]	mgd	Meter	Continuous	
Total Chlorine Residual	mg/L	Grab	Daily	Part 136[2]

Table Notes

1. The Permittee shall report maximum daily and average daily flows.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration). Testing for total residual chlorine must be performed using equipment capable of achieving a detection limit of 1.2 µg/L or lower.

Commented [ST7]: Justin, the existing permit requires reporting of daily maximum and average daily flows. For consistency with other recently developed RB1 permits should we require daily average and monthly average flow reporting?

9.2. Bypass Monitoring – Monitoring Location INT-002

Commented [ST8]: Justin, we've included rationale in the Fact Sheet for inclusion of this monitoring location. The rationale was largely based on the CDO (R1-2016-0012, as amended in 2020), but please review and ensure it accurately captures the intent.

During periods of high influent flow, the Permittee shall monitor effluent bypassing secondary treatment and entering the effluent holding pond at Monitoring Location INT-002 as follows:

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Bypass Monitoring – Monitoring Location INT-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[1]
Flow[1]	mgd	Meter	Continuous	
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	24-hr Composite	Weekly[2]	Part 136[3]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[1]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	Weekly[2]	

Table Notes

1. The Permittee shall report maximum daily and average daily flows.
2. Monitoring of BOD_5 and TSS in influent shall coincide with monitoring of these parameters in effluent at Monitoring Location EFF-001.
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).

Commented [ST9]: Justin, the existing permit requires reporting of daily maximum and average daily flows. For consistency with other recently developed RB1 permits should we require daily average and monthly average flow reporting?

9.3. Septage Station Monitoring – Monitoring Location SEP-001

9.3.1. For each septage load delivered to the Facility, the Permittee shall require the hauler to collect and report a pH value representative of the load.

9.3.2. The Permittee shall estimate, prior to the beginning of a quarterly and semiannual monitoring period, the number of anticipated septage deliveries for the given monitoring frequency and generate a random load number from this total. When the delivery corresponding to the pre-chosen random number is received, the Permittee will collect a representative septage sample and have the samples analyzed in accordance with Table E-7 and with standard sample collection and handling procedures. Each sample shall be analyzed in accordance with the following table.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Septage Station Monitoring – Monitoring Location SEP-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[1]
pH	standard units	Grab	Weekly	Part 136[1]
Chemical Oxygen Demand	mg/L	Grab	Quarterly	Part 136[1]
Oil and Grease	mg/L	Grab	Quarterly	Part 136[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[1]
Metals and Trace Elements	µg/L	Grab	Quarterly	Part 136[1]
Purgeable Organic Compounds[2]	µg/L	Grab	Semiannually	Part 136[1]
Semivolatile Organic Compounds[3]	µg/L	Grab	Semiannually	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).
2. Purgeable organic compounds shall include the parameters listed in U.S. EPA Method 624.
3. Semivolatile organic compounds shall include the parameters listed in U.S. EPA Method 625.

9.4. Septage Hauler Tracking

9.4.1. For any month when septage is received by the Facility, the source(s) of the waste shall be documented. A summary table of all septage discharged to the Facility shall be submitted with each quarterly monitoring report and shall include:

9.4.1.1. Date and time of discharge;

9.4.1.2. Name, County identification number, and District identification number of the hauler;

9.4.1.3. Volume discharged;

9.4.1.4. Source(s) of the waste; and

9.4.1.5. pH of the septage load.

9.5. Sludge Monitoring – Monitoring Location BIO-001

9.5.1. Sludge sampling shall be conducted according to the requirements specified by the location and type of disposal activities undertaken.

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9.5.2. 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.

9.6. Visual Monitoring – Monitoring Locations EFF-001 and RSW-001

Visual observations of the discharge (Monitoring Location EFF-001) and the receiving water (Monitoring Location RSW-001) 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 quarterly SMRs.

9.7. Outfall Inspection

9.7.1. Divers shall visually inspect the outfall structure, including all diffuser ports, at least once during the life of his permit, to verify the operational status of the outfall. The Permittee shall submit to the Regional Water Board Executive Officer for approval, an Outfall Inspection Work Plan no later than **<DATE>**. A report shall be submitted within 90 days of completing the inspection and no later than **<DATE>** that includes the following:

9.7.1.1. A description of the outfall as originally constructed;

9.7.1.2. Documentation of the current outfall condition, including any observed cracks, breaks, and malfunctions;

9.7.1.3. Verification that the current outfall condition is consistent with the underlying assumptions of the minimum initial dilution authorized in this Order; and

9.7.1.4. 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 electronically submit electronic Self-Monitoring Reports (SMRs) using the State Water Board's [HYPERLINK "http://www.waterboards.ca.gov/water_issues/programs/ciwqs/"] (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS

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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 quarterly, semiannual, and annual 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 [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. 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	Submit with quarterly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	Submit with quarterly SMR

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Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Twice Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with quarterly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with quarterly SMR
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	Submit with quarterly SMR
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 end of each quarter (February 1, May 1, August 1, November 1)
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	September 1 each year, March 1 each year
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

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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 (± 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.

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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 ([HYPERLINK "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 [HYPERLINK "file://wb-rb1-file-01.ca.epa.local/users$/chunt/Accessibility%20Work/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 [HYPERLINK "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 Discharger. Information on the GeoTracker database is provided on the State Water Board website at: [HYPERLINK "https://www.waterboards.ca.gov/resources/data_databases/groundwater.shtml"]

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 quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, November 1) and annually on March 1 each year. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [HYPERLINK "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.** As specified in the Special Provisions contained in section 6 of the Order and in the MRP, special study and progress reports shall be submitted in accordance with the following reporting requirements.

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Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Reporting Requirements for Special Provisions Reports

Order Section	Special Provision Requirement	Reporting Requirement
Special Provision 6.3.2.1	Source Control and Pretreatment Studies	**<DATE>**
Special Provision 6.3.3.1.2.5	Pollutant Minimization Program, Annual Facility 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 acute toxicity result exceedance of 90% trigger	**Within 72 hours** (verbal) and **14 days** (written) after receipt of a fail result.
MRP Effluent Monitoring Requirement 5.2.7	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 5.2.9.2	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 5.2.9.2	TRE/TIE Results	**Within 60 days** of completion of TRE/TIE analyses
MRP Effluent Monitoring Requirement 5.3.1	TRE Work Plan review and update (as necessary)	**<DATE>**
MRP Effluent Monitoring Requirement 5.3.3	Detailed TRE Work Plan	**Within 30 days** of an accelerated monitoring test that results in “Fail”
MRP Receiving Water Monitoring Requirement 8.1.2	Biological Survey Work Plan	**<DATE>**
MRP Receiving Water Monitoring Requirement 8.1.2	Biological Survey Final Report	**<DATE>**

Order Section	Special Provision Requirement	Reporting Requirement
MRP Other Monitoring Requirement 9.7.1	Outfall Inspection Work Plan	**<DATE>**
MRP Other Monitoring Requirement 9.7.1	Outfall Inspection Report	**<DATE>**
MRP Reporting Requirement 10.4.2	Annual Report	**March 1**, annually
MRP Reporting Requirement 10.4.3	Annual Pretreatment Report	**March 1**, annually
MRP Reporting Requirement 10.4.4	Annual Biosolids Report	**March 1**, annually
MRP Reporting Requirement 10.5.1	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. **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:

10.4.2.6.1. Annual sludge production, in dry tons and percent solids;

10.4.2.6.2. Sludge monitoring results;

10.4.2.6.3. A schematic diagram showing sludge handling facilities (e.g., digesters, thickeners, drying beds, etc.), if any and a solids flow diagram;

10.4.2.6.4. Methods of final disposal of sludge:

10.4.2.6.4.1. 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.

10.4.2.6.4.2. 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.

10.4.2.6.4.3. 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.

10.4.2.6.5. 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.

10.4.2.7. **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.

10.4.2.8. **Septage Monitoring and Reporting.** The results of septage monitoring shall be provided as follows:

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10.4.2.8.1. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the septage monitoring program. The narrative shall be sufficiently detailed to verify compliance with waste discharge requirements and this MRP.

10.4.2.8.2. A summary table of all discharges of septage to the Facility. At a minimum, the table shall include: the name, County identification number, and District identification number of each hauler discharging to the Facility over the past calendar year.

10.4.2.8.3. A summary table of analytical results for all samples of septage collected in compliance with waste discharge requirements and this MRP. When directed by the Regional Water Board, the Permittee shall also append analytical reports, chains of custody, and other documentation necessary to confirm the validity of the monitoring samples

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 Pretreatment Reporting Requirements. The Permittee shall submit annually a report to the Regional Water Board, with copies to the U.S. EPA Region 9 and the State Water Board, describing the Permittee's pretreatment activities over the previous 12 months. In the event that the Permittee is not in compliance with any conditions or requirements of this Order, including noncompliance inspection requirements, then the Permittee shall also include the reasons for noncompliance and state how and when the Permittee shall comply with such conditions and requirements.

An annual report shall be submitted by **March 1st** of the following year and include at least the following items.

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10.4.3.1. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTWs influent and effluent for those pollutants U.S. EPA has identified under section 307(a) of the CWA which are known or suspected to be discharged by industrial users. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as influent and effluent sampling and analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The Permittee shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass-Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 C.F.R. part 136 and amendments thereto.

10.4.3.2. A discussion of Upset, Interference, or Pass-Through incidents, if any, at the treatment plant, which the Permittee knows or suspects were caused by industrial users of the POTW. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of, the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent Pass-Through, Interference, or noncompliance with sludge disposal requirements.

10.4.3.3. The cumulative number of industrial users that the Permittee has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

10.4.3.4. An updated list of the Permittee's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The Permittee shall also list the noncategorical industrial users that are subject only to local discharge limitations. The Permittee shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:

10.4.3.4.1. complied with baseline monitoring report requirements (where applicable);

10.4.3.4.2. consistently achieved compliance;

10.4.3.4.3. inconsistently achieved compliance;

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10.4.3.4.4. significantly violated applicable pretreatment requirements as defined by 40 C.F.R. section 403.8(f)(2)(vii);

10.4.3.4.5. complied with schedule to achieve compliance (include the date final compliance is required);

10.4.3.4.6. did not achieve compliance and not on a compliance schedule; and

10.4.3.4.7. compliance status unknown.

10.4.3.5. A summary of the inspection and sampling activities conducted by the Permittee during the past year to gather information and data regarding the industrial users. The summary shall include:

10.4.3.5.1. The names and addresses of the industrial users subjected to surveillance and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and

10.4.3.5.2. The conclusions or results from the inspection or sampling of each industrial user.

10.4.3.6. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:

10.4.3.6.1. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations.

10.4.3.6.2. Administrative orders regarding the industrial users noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

10.4.3.6.3. Civil actions regarding the industrial users' noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.

10.4.3.6.4. Assessment of monetary penalties. For each industrial user identify the amount of the penalties.

10.4.3.6.5. Restriction of flow to the POTW.

10.4.3.6.6. Disconnection from discharge to the POTW.

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10.4.3.7. A description of any significant changes in operating the pretreatment program which differ from the information in the Permittee's approved Pretreatment Program including, but not limited to, changes concerning: the program's administrative structure, local industrial discharge limitations, monitoring program or monitoring frequencies, legal authority or enforcement policy, funding mechanisms, resource requirements, or staffing levels.

10.4.3.8. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

10.4.4. **Annual Biosolids Reporting.** The Permittee shall electronically certify and submit an annual biosolids report to U.S. EPA by **March 1st** each year using U.S EPA's Central Data Exchange (CDX) Web Site ([HYPERLINK "https://cdx.epa.gov/"]). Information regarding registration and use of U.S. EPA's CDX system is also available at the Web Site.

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 Board[9] within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) 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;

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

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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 is 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.

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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 Permittees 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 [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Facility Information

WDID	1B82151OHUM
Permittee	City of Eureka
Name of Facility	Elk River Wastewater Treatment Plant
Facility Address	4301 Hilfiker Lane Eureka, CA 95503 Humboldt County
Facility Contact, Title and Phone	Michael Hansen, Deputy Public Works Director, 707-441-4360
Authorized Person to Sign and Submit Reports	Brian Gerving, Director of Public Works Director, 707-441-4152
Mailing Address	531 K Street Eureka CA 95501
Billing Address	Same as mailing address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	Not Applicable

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Facility Permitted Flow	8.6 million gallons per day (mgd) (peak dry weather treatment capacity) 12 mgd (peak wet weather treatment capacity)
Facility Design Flow	5.24 mgd (average dry weather treatment capacity)
Watershed	Eureka Plain Hydrologic Unit
Receiving Water	Humboldt Bay
Receiving Water Type	Enclosed Bay

1.1. The City of Eureka (hereinafter Permittee) is the owner and operator of the Elk River Wastewater Treatment Plant (hereinafter Facility), a Publicly-Owned Treatment Works (POTW).

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

1.2. The Facility discharges wastewater to Humboldt Bay, a water of the United States, within Eureka Plain Hydrologic Unit. The Permittee was previously regulated by Order No. R1-2016-0001 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0024449 adopted on June 16, 2016 and expired on July 31, 2021. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

1.4. The Permittee filed a report of waste discharge and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on **December 1, 2020**. The application was deemed complete on **<DATE>**.

1.5. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. However, pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Permittee complies with all federal NPDES requirements for continuation of expired permits.

2. FACILITY DESCRIPTION

The Permittee owns and operates a wastewater collection, treatment, and disposal facility that serves a population of approximately 46,583 from the City of Eureka and unincorporated areas within the Humboldt Community Services District. The Facility treats domestic, commercial, and industrial wastewater as well as treated groundwater from remediation projects and septage from local area haulers. The Facility is located at 4301 Hilfiker Lane in Eureka, Humboldt County, California.

2.1. Description of Wastewater and Biosolids Treatment and Controls

2.1.1. Collection System

Wastewater is conveyed to the Facility through an extensive sanitary sewer system consisting of 125 miles of sewer mains, 9,500 service laterals, 17 lift stations, 3 pump stations, interceptor lines, collection lines, and manholes. The system collects and conveys over 1.5 billion gallons of wastewater per year, including infiltration and inflow (I&I).

Excessive I&I to the collection system has historically contributed to exceedances of the Facility's hydraulic capacity, resulting in the Facility bypassing secondary treatment when influent flows exceed the trickling filter capacity, and blending primary treated effluent with secondary treated effluent in the storage pond. This practice is prohibited in the current permit, so Cease and Desist Order (CDO) R1-2016-0012 includes requirements to evaluate the collection system and identify and address deficiencies to reduce I&I. Accordingly, the Permittee has developed a Wet Weather Improvement Plan to reduce unnecessary flows to the Facility, and has begun implementing the plan by repairing older, leaking manholes, mains, and laterals and has removing abandoned laterals and manholes to prevent future I&I entering the system from these areas.

The Facility also accepts and treats septage from local area haulers.

2.1.2. Wastewater Treatment System

The Facility has an average dry weather treatment capacity of 5.24 mgd, a peak dry weather treatment capacity of 8.6 mgd, and a peak wet weather secondary treatment capacity of 12 mgd. Wastewater entering the facility undergoes primary treatment with mechanical bar screens, grit removal, and primary clarification. Biological secondary treatment is accomplished using two trickling filters, followed by secondary clarification, and chlorine disinfection. The chlorinated effluent is stored in a holding pond then dechlorinated and discharged at Discharge Point 001 to Humboldt Bay in conjunction with ebb tide cycles.

During periods of high flows, excess treated wastewater from the effluent holding pond can be directed to the 13-acre freshwater holding marsh (Overflow Marsh) and pumped back to the effluent holding pond once flows subside. The Overflow Marsh is a component of the Facility, as described in the "*Final Environmental Impact Report – Wastewater Management Plan for the Greater Eureka Area*" (July 10, 1980), and as established in Waste Discharge Requirements Order No. 81-1 adopted for the Facility by the Regional Water Board on January 22, 1981.

Solids are treated by anaerobic digestion and may be processed on site using a centrifuge or stored in one of two facultative sludge lagoons.

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2.2. Discharge Points and Receiving Waters

Effluent is discharged at Discharge Point 001 via an outfall structure consisting of a 48-inch diameter pipe, 4,100 feet in length, and equipped with a multiple discharge port diffuser. Effluent is discharged in conjunction with ebb tides at Discharge Point 001 into Humboldt Bay at 40° 46' 24" N latitude and 124° 12' 45" W longitude. Humboldt Bay, an enclosed bay, is a water of the United States. The existing outfall was constructed in conjunction with the Facility in the early 1980s. Discharge at this outfall location was permitted with the stipulation that the discharge of effluent would be allowed only during ebb-tide, thereby using the outgoing tide to convey the effluent to the Pacific Ocean.

2.3. Facility Permitting and Discharge History

2.3.1. Effluent Discharge Study. The discharge of treated effluent via the outfall in Humboldt Bay was permitted in 1981 based upon mathematical modeling, tidal monitoring, and a dye study completed in 1979, which indicated that discharging at ebb tide was expected to convey all effluent to the Pacific Ocean. Based upon findings from these 1979 studies completed by the Permittee, the Regional Water Board concluded in Resolution No. 80-10 that the ebb discharge concept was a viable alternative to ocean outfall as a means of implementing the statewide Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Policy) adopted in 1974. Resolution No. 80-10 was ratified by the State Water Board in Resolution No. 80-87, which found that the ebb tide currents in Humboldt Bay were sufficient in strength to carry the proposed Greater Eureka Area Wastewater discharges out of the Humboldt Bay to the Pacific Ocean. Thus, if effluent were released only on ebb tide, it was believed possible to have no Bay discharge. Based upon these findings, Resolution 80-87 found the ebb-tide discharge to be consistent with the intent of the Enclosed Bays and Estuaries Policy.

Order No. R1-2009-0033 required the Permittee to perform an effluent discharge study to assess the transport and fate of pollutants discharged from the Facility as well as the potential impacts to beneficial uses associated with the ebb-tide discharge. In compliance with Order No. R1-2009-0033, on January 8, 2014, the Permittee submitted the *Effluent Discharge Study for the Elk River Wastewater Treatment Plant* (2014 Effluent Discharge Study). The study utilized two models to simulate effluent transport: (1) advanced circulation (ADCIRC) as the primary model to predict currents within the Humboldt Bay that are the dominant mechanism of conveying effluent out to the ocean; and (2) particle tracking model (PTM) as a secondary model to track particles of effluent released by the Facility (utilizing currents predicted by ADCIRC). For baseline simulations, discharges began at slack tide and continued through the designated discharge window. Simulations were then conducted to determine the fate of effluent discharged under various tidal and Facility flow conditions. The 2014 Effluent Discharge Study modeling analysis shows that under all simulations the effluent is never completely conveyed to the ocean, and under

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certain conditions, up to 90% of the effluent remains in the Humboldt Bay. Thus, the findings of the original 1979 studies are contradicted by the 2014 Effluent Discharge Study results. Based on the conclusions of the 2014 Effluent Discharge Study, the discharge is not consistent with the findings of Resolutions 80-10 and 80-87 since a significant portion of the Facility's effluent remains in the Humboldt Bay.

Regional Water Board staff finds that the 2014 Effluent Discharge Study is representative of current conditions and more accurately describes the discharge compared to the 1979 studies. Consequently, the Regional Water Board has determined that the discharge does not qualify as an ocean discharge subject to the Ocean Plan but rather a bay discharge subject to the Enclosed Bays and Estuaries Policy.

The method to comply with the Enclosed Bays and Estuaries Policy has not yet been determined, but is likely to require extended time to achieve. During the interim, this Order, consistent with Order No. R1-2016-001, requires the following:

2.3.1.1. Regulation of the Facility in accordance with the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP); and

2.3.1.2. Modification of the discharge timing to coincide with findings of the 2014 Effluent Discharge Study, which shows that the Permittee must begin discharging 45 minutes prior to slack high tides (45 minutes prior to ebb tide) in order for the maximum volume of effluent to be carried out into the ocean.

2.3.2. Feasibility Analysis for Treating Peak Wet Weather Discharges. Federal regulations at 40 C.F.R section 122.41(m) define bypass as an "intentional diversion of waste streams from any portion of a treatment facility." These regulations further state that bypasses are prohibited unless: (1) they are unavoidable to prevent severe property damage or personal injury; (2) there are no feasible alternatives to bypass; and (3) the NPDES authority was notified. 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 above. U.S. EPA strongly discourages reliance on peak wet weather flow diversions around secondary treatment units as a long-term wet weather management approach1. As contemplated by U.S. EPA's 2005 proposed policy, a utility analysis must demonstrate that there are no feasible alternatives to bypass, which includes multiple approaches to resolve the bypass condition and an evaluation of a Permittee's ability to finance associated costs.

Order No. R1-2009-0033 required the Permittee to complete a comprehensive analysis to determine whether it is feasible to eliminate anticipated wet weather bypasses of its secondary treatment units. In response to this requirement, on

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January 8, 2014, the City submitted *Feasibility Analysis for Treating Peak Wet Weather Discharges* (Utility Analysis). The Utility Analysis provided an overview of existing hydraulic conditions at the Facility. Review of the Utility Analysis indicates that upgrades are necessary to better measure flows, improve secondary treatment capacity, manage or otherwise provide temporary storage for influent flows, and reduce I&I into the collection system to minimize or prevent bypass of secondary treatment during routine wet weather flow conditions. The Permittee has indicated that they are conducting I&I reduction work on the collection system. However the work done to date has not eliminated bypass occurrences. Further, the Permittee has not documented that alternatives to bypass, such as the use of auxiliary treatment facilities or retention of untreated wastes are infeasible.

Although the Regional Water Board has authorized bypass at the Facility in past Orders dating back to 1984, this Order recognizes that ebb tide currents in North Bay and entrance channels of Humboldt Bay are not sufficient in strength to carry effluent discharges out of Humboldt Bay and prohibits discharges to Humboldt Bay that do not receive full biological secondary treatment. Elimination of bypass conditions is necessary for the protection of Humboldt Bay because: (1) Humboldt Bay is an enclosed bay subject to the Enclosed Bays and Estuaries Policy; (2) the Enclosed Bays and Estuaries Policy allows wastewater discharges to enclosed bays "only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge"; (3) the Enclosed Bays and Estuaries Policy prohibits the discharge or by-passing of untreated wastes; (4) Humboldt Bay hosts the largest oyster production area in the country; and (5) oysters are filter feeders and subject to bioaccumulation of toxics and pathogens that may be present at higher levels in effluent that does not receive full treatment.

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

Effluent limitations contained in the existing Order No. R1-2016-0001 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the Order No. R1-2016-0001 are as follows:

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Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Historic Effluent Limitations and Monitoring Data (From September 2016 to June 2021)

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	30	45	60	14	19	19
Biochemical Oxygen Demand 5- day @ 20°C (BOD_5)	lbs/day[1]	2,151	3,227	4,303	1,118	2,067	2,067
Biochemical Oxygen Demand 5- day @ 20°C (BOD_5)	lbs/day[2]	3,002	4,503	6,005	1,118	2,067	2,067
Biochemical Oxygen Demand 5- day @ 20°C (BOD_5)	% Removal	85			98.4[4]		
Total Suspended Solids (TSS)	mg/L	30	45	60	17	20	20
Total Suspended Solids (TSS)	lbs/day[1]	2,151	3,227	4,303	1,211	2,398	2,398
Total Suspended Solids (TSS)	lbs/day[2]	3,002	4,503	6,005	1,211	2,398	2,398
Total Suspended Solids (TSS)	% Removal	85			98.4[3]		
pH	standard units			6.0-8.5[4]			6.0-7.4

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
2,3,7,8 - TCDD Equivalents[5]	µg/L	1.4×10^{-8}		2.8×10^{-8}			$<2.09 \times 10^{-7}$
Ammonia, Total (as N)	mg/L	4.1		10	13		18
Copper, Total Recoverable	µg/L	43.2		61.3			42
Cyanide, Total (as CN)	µg/L	0.50		1.0	1.9		2.9
Fecal Coliform Bacteria	MPN/100 mL	14[6]		43[7]	17[8]		900
Settleable Solids	mg/L	0.1		0.2	0.10		0.2
Total Residual Chlorine	µg/L	6.1		12			<1.2
Turbidity	NTU	75	100	225[9]	20	13	36

Table Notes

1. Mass-based effluent limitations are based on the peak dry weather design flow of 8.6 mgd.
2. These alternate mass-based limitations apply during periods of high infiltration/inflow when influent flow to the Facility exceed 8.6 mgd for the limitation period (daily, weekly, or monthly), and are based on the secondary treatment capacity of the Facility (12.0 mgd).
3. Represents the minimum observed percent removal.
4. Applied as instantaneous minimum and instantaneous maximum effluent limits.
5. Equivalents, also known as the TEQ, is a calculated value which reflects the combined effect of dioxin and furan compounds (congeners).

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
6. The median value of fecal coliform bacteria shall not exceed a Most Probable Number (MPN) of 14 per 100 mL in a calendar month. 7. No samples shall exceed an MPN of 43 per 100 mL. 8. Represents the maximum calculated monthly median. 9. Applied as an instantaneous maximum effluent limitation.							

2.5. Compliance Summary

2.5.1. On July 07, 2015, the Executive Officer issued ACL Complaint No. R1-2015-0047 for violations of Order No. R1-2009-0033 for copper, total residual chlorine and fecal coliform effluent limitations violations, during the period from March 1, 2014, through December 31, 2014. The ACL Complaint assessed a penalty of $54,000 for these violations. On august 06, 2015, the Permittee waived the 90-day hearing requirement in order to engage in settlement discussions. The permittee requested the Regional Board to delay the hearing so that the permittee and the prosecution team can discuss settlement.

On April 12, 2016, the Executive Officer issued a Settlement Agreement and Stipulation for Entry of ACL Order No. R1-2015-0047 requiring the Permittee to pay $54,000 in administrative civil liability. The permittee will apply a portion of these penalties towards the cost of completing the Supplemental Environmental Project with the goal of supporting and enhancing watershed education programs at Sequoia Park Zoo.

2.5.2. On May 23, 2017, the Assistant Executive Officer issued Administrative Civil Liability (ACL) Complaint No. R1-2017-0029 for violations of Order No. R1-2009-0033 for copper, and pH effluent limitations violations, from October 1, 2015 (end of period included in Stipulation Order No. R1-2016-0005), to July 31, 2016 (expiration date of WDR s Order No. R1-2009-0033). The Assistant Executive Officer also issued Administrative Civil Liability (ACL) Complaint No. R1-2017-0029 for violations of Order No. R1-2016-0001 for violations of fecal coliform and ammonia, total (as N) effluent limitations from October 1, 2015 (end of period included in Stipulation Order No. R1-2016-0005), to July 31, 2016.The ACL Complaint assessed a penalty of $27,000 for these violations. The Regional Water Board entered into a settlement agreement and stipulation (Order R1-2018-0016) for entry of administrative civil liability order.

2.5.3. From June 16, 2016, through July 31, 2021, the Permittee had 64 effluent limitation violations for the following parameters: ammonia, total (as N) (29), cyanide (9), fecal coliform (25), and settleable solids (1). These effluent limitation violations are currently under review for future enforcements actions.

2.6. Planned Changes

Consistent with Order No. R1-2016-0001, this Order prohibits the discharge of wastewater that does not receive full biological secondary treatment. The 2014 Effluent Discharge Study committed to implementing a long-term, sustainable approach to limiting infiltration and inflow through projects like collection system improvements, trickling filter pump station rehabilitation, and primary diversion overflow weir improvements.

In addition to these collection and treatment system improvements, Order No. R1-2016-0001 required the Permittee to conduct an inspection of the outfall structure and diffuser ports. The Permittee developed Ocean Outfall Evaluation, Elk River Wastewater Treatment Plant (dated June 30, 2021) which includes an evaluation of the existing outfall and proposed port diffuser upgrades and effluent sandpipe protection improvements.

Further, the report explores the feasibility of utilizing alternative ocean discharge outfalls, which could result in significant changes to the Facility.

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. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Permittee to discharge into waters of the United States 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 California Water Code (commencing with section 13260).

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.

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.

The Basin Plan designates a beneficial use of municipal and domestic supply (MUN) to Humboldt Bay. In addition, the Basin Plan implements 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 MUN. Salinity in Humboldt Bay in the vicinity of the discharge has been reported as high as 50,000 µS/cm, which well exceeds the salinity threshold 5,000 µS/cm included in Resolution No. 88-63. Therefore, this Order does not apply the MUN

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designation when considering Humboldt Bay in the vicinity of Discharge Point 001. Requirements in this Order implement the Basin Plan.

Beneficial uses applicable to Humboldt Bay (an estuarine environment), within the Eureka Plain Hydrologic Unit, are summarized in Table F-3, below:

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Humboldt Bay	Existing: Municipal and Domestic Water Supply (MUN) – not applied Agricultural Supply (AGR), Industrial Service Supply (IND),Freshwater Replenishment (FRSH),Navigation (NAV),Water Contact Recreation (REC-1),Non-Contact Water Recreation (REC-2),Commercial and Sport Fishing (COMM),Aquaculture (AQUA),Cold Freshwater Habitat (COLD),Marine Habitat (MAR),Wildlife Habitat (WILD),Preservation of Rare, Threatened, or Endangered Species (RARE),Migration of Aquatic Organisms (MIGR),Spawning, Reproduction, and/or Early Development (SPWN),Shellfish Harvesting (SHELL),Estuarine Habitat (EST),and Native American Culture (CUL). Potential: Hydropower Generation (POW), Industrial Process Supply (PRO).
--	Groundwater	Existing: Municipal and domestic supply (MUN), Agricultural supply (AGR), Industrial service supply (IND), and Native American Culture (CUL). Potential Industrial Process Supply (PRO), and Aquaculture (AQUA).

3.3.2. Enclosed Bays and Estuaries Policy

The State Water Board adopted State Water Board Resolution No. 74-43, *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* (Enclosed Bays and Estuaries Policy) on May 16, 1974. The Enclosed Bays and

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Estuaries Policy prohibits new discharges[10] of municipal wastewaters to enclosed bays and estuaries, which are not consistently treated and discharged in a manner that would enhance the quality of receiving waters above that which would occur in the absence of the discharge. Regional Water Board Resolution No. 80-10 and State Water Board Resolution No. 80-87 concluded that the discharge to Humboldt Bay at ebb tide at a point near the mouth of Humboldt Bay is consistent with the intent of State Water Board Resolution 74-43. However, as described in section 2.3 of this Fact Sheet, based on the Permittee's Effluent Discharge Study, modeling indicates that the discharge is not completely conveyed to the ocean and thus the Permittee's discharges to Humboldt Bay are not consistent with the Enclosed Bays and Estuaries Policy. This Order requires discharges to Humboldt Bay be conducted in a manner consistent with the Enclosed Bays and Estuaries Policy.

3.3.3. 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.

3.3.4. National Toxics Rule (NTR) and California Toxics Rule (CTR)

U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

3.3.5. State Implementation Policy

On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the CTR priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the CTR priority pollutant

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[10] The Enclosed Bays and Estuaries Policy defines a new discharge as one for which the Regional Board had not received a report of waste discharge by or which was not in existence prior to May 16, 1974.

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objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the CTR priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, which became effective on July 13, 2005. The SIP establishes implementation provisions for CTR priority pollutant criteria and objectives and provisions for chronic toxicity control.

Section 1.2 of the SIP allows the Regional Water Board to adjust the criteria/objective for metals with Permittee-specific Water Effect Ratios (WERs) established in accordance with U.S. EPA guidance – *Interim Guidance on Determination and Use of Water Effect Ratios for Metals* (EPA-823-B-94-001) or *Streamlined Water-Effect Ratio Procedure for Discharges of Copper* (EPA-822-R-01-005) (Streamlined Procedure). The Streamlined Procedure determines site-specific values for a WER, a criteria adjustment factor accounting for the effect of site-specific water characteristics on pollutant bioavailability and toxicity to aquatic life. Requirements of this Order implement the SIP.

3.3.6. Compliance Schedules and Interim Requirements.

The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

This Order does not include any compliance schedules or interim effluent limitations.

3.3.7. Antidegradation Policy

Federal regulation 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 (*Statement of Policy with Respect to Maintaining High Quality Waters of California*). 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.

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3.3.8. 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.

3.3.9. Endangered Species Act Requirements

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

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 April 6, 2018, the U.S. EPA provided final approval of the 2014 and 2016 303(d) List of Impaired Water Bodies prepared by the state. The list identifies Humboldt Bay (Eureka Plain Hydrologic Unit) as impaired by dioxin toxic equivalents and polychlorinated biphenyls (PCBs). Pursuant to CWA section 303(d), the Regional Water Board will develop a TMDL or alternate program of

implementation to address these impairments, which will be implemented through various programs, including through provisions of NPDES permits. The Regional Water Board expects to adopt TMDLs for dioxin toxic equivalents and PCBs by 2025.

3.5. Sewage Sludge and Biosolids

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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 Discharger is responsible for meeting all applicable requirements of 40 C.F.R. Part 503 that are under U.S. EPA's enforcement authority.

3.6. Other Plans, Polices and Regulations

3.6.1. On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-1.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 Permittees 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.

3.6.2. 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) does not require facilities to obtain coverage if storm water is captured and treated and/or disposed of within the facility's NPDES permitted process wastewater or if storm water is disposed of in evaporation ponds, percolation ponds, or combined sewer systems. All storm water falling within the Facility is routed to the Facility headworks for treatment and disposal under this Order. Therefore, coverage under the Industrial Storm Water General Permit is not required for this Facility.

3.6.3. The discharge of waste other than hazardous waste to land for treatment, storage and disposal in waste management units is regulated pursuant to title 27 of the CCR, except when expressly exempted. With respect to domestic sewage, section 20090 of title 27 of the CCR specifies the available exemption as follows:

Exemptions. (C15: section 2511): The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity

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meets, and continues to meet, all preconditions listed: (a) Sewage – Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

The applicable provisions of division 2 (Solid Waste) include prescriptive waste containment unit siting criteria, waste unit construction standards, and liner requirements. The waste containment units for digested sludge at the Facility have been permitted for use since the commencement of the operation of the Facility in 1984.

3.6.4. On July 22, 2004, the State Water Board adopted State Water Board Order No. 2004 0012 DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Recycled Water Activities. The Order acknowledges that the Permittee is regulated under the General Order for land application of Class B biosolids on City property.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source Permittees 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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

4.1. Discharge Prohibitions

4.1.1. Discharge Prohibition 3.1. The discharge of waste to Humboldt Bay is prohibited unless it complies with the State Board, Water Quality Control Policy for the Enclosed Bays and Estuaries of California (1974, 1995).

This prohibition is retained from Order. No. R1-2016-0001. However, as described in section 2.3 of this Fact Sheet, based on the Permittee's 2014 Effluent Discharge Study, the discharge is not completely conveyed to the Pacific Ocean and thus is not currently in compliance with the Enclosed Bays and Estuaries Policy or this prohibition.

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Discharge Prohibition 3.2. The discharge of any waste not disclosed by the Permittee and not within the reasonable contemplation of the Regional Water Board is prohibited.

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

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

4.1.2. **Discharge Prohibition 3.3.** 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. R1-2016-0001 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 3.4.** The discharge of sludge or digester supernatant is prohibited, except as authorized under section VI.C.5.c of the Order. (Solids Disposal and Handling requirements).

This prohibition is retained from Order No. R1-2016-0001 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 3.5.** The discharge 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 is retained from Order No. R1-2016-0001 and is based on the Basin Plan and Bays and Estuaries Policy 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.

The Regional Water Board adopted Resolution No. 80-10 which concluded that the Permittee's ebb-tide discharge to Humboldt Bay implements the Basin Plan and the Enclosed Bays and Estuaries Policy because all effluent was conveyed to the Pacific Ocean. This Resolution was based on modeling and tidal monitoring with a dye study completed in 1979. Thus, since 1981, the Regional Water Board has viewed the practice of blending at the Facility as a permissible exception to the bypass prohibition. The Permittee has bypassed secondary treatment when influent flows exceed the trickling filter capacity (approximately 12 mgd). When this occurs, the water surface elevation in the primary effluent channel rises allowing primary effluent to spill over a long weir into the bypass channel. This effluent is diverted around secondary treatment and then is recombined with secondary effluent, disinfected, and stored prior to discharge.

40 C.F.R. section 122.41(m) defines a bypass as "*...the intentional diversion of waste streams from any portion of a treatment facility*." Further, 40 C.F.R. section 122.41(m)(2) states that bypass may only be allowed under the condition that it "*...does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation*." Chapter III, section 7 of the Bays and Estuaries Policy states, "*The discharge or by-passing of untreated waste to bays and estuaries shall be prohibited*." The current operations at the Facility include the intentional diversions around the secondary treatment portion of the treatment facility (including the trickling filters, solids contact, and secondary clarification units). Further, these intentional diversions are not for the essential maintenance of the treatment facility, but instead are used to manage peak hydraulic flows to the Facility. The Permittee's January 7, 2014 *Feasibility Analysis for Treating Peak Wet Weather Discharges* (Feasibility Analysis) acknowledges the significant increase in the Facility's peak wet weather flows as a result of rainfall-derived infiltration and inflow.

In accordance with the NPDES regulations at 40 C.F.R. section 122.41(m) and chapter III, section 7 of the Bays and Estuaries Policy, this Order, consistent

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with Order No. R1-2016-001, does not allow bypass of peak wet weather flows above 12 mgd when recombined with secondary treatment flows and discharge. It is recognized that the Permittee will be in immediate noncompliance with this prohibition, and as a result discharges from the Facility during times of peak flow when blending occurs will be managed outside of this Order.

4.1.5. Discharge Prohibition 3.6. 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. R1-2016-0001. 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 2006- 003-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. This prohibition is necessary because of 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 3.7.** 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, except for use for fire suppression as provided in title 22, sections 60307(a) and 60307(b) of the CCR.

This prohibition is newly established in this Order to prohibit unauthorized discharges to land. Land used for the application of wastewater must be owned by the Permittee or be under the control of the Permittee by contract so that the Permittee maintains a means for ultimate disposal of treated wastewater.

4.1.7. Discharge Prohibition 3.8. 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.

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This prohibition is retained from Order No. R1-2016-0001. 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 3.9. The discharge of waste from the Facility to the Elk River and its tributaries, and to seasonal and tidal marshes adjacent to the Facility is prohibited.

This prohibition is retained from Order No. R1-2016-0001 and is based on the Bays and Estuaries Policy, which prohibits discharges to enclosed bays, with certain exceptions. As the Elk River is directly tributary to Humboldt Bay, discharges to the Elk River are prohibited. This prohibition also expressly prohibits any discharge of waste to the seasonal or tidal marshes located adjacent to the Facility. This prohibition applies to the existing facility configuration and does not in itself preclude future enhancement options that may be considered for climate change resiliency and compliance with Enclosed Bays and Estuaries Policy, the Basin Plan, or the SIP. In order for the Regional Water Board to consider a discharge that incorporated additional areas beyond the existing Facility for enhancement or mitigation, several criteria would need to be met including, but not limited to, an antidegradation analysis and any actions to secure all necessary permits from the Regional Water Board and other regulatory agencies for altered use of the existing wetlands.

4.1.9. Discharge Prohibition 3.10. The peak dry weather flow of waste through the Facility in excess of 8.6 mgd is prohibited. Additionally, the peak daily wet weather flow of waste through the Facility in excess of 12 mgd is prohibited. Compliance with this prohibition shall be determined as defined in sections 7.10 and 7.11 of this Order.

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This prohibition is retained from Order No. R1-2016-0001, with minor clarification of language, and is based on the engineering design and historic reliable treatment capacity of the Facility. This prohibition limits the peak dry weather flow to the peak dry weather design flow of the Facility and peak wet weather flow to the secondary treatment capacity of the Facility. Flows exceeding the design capacities may result in a lower achievement of compliance with water quality objectives established in this Order.

4.1.10. Discharge Prohibition 3.11. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into waters of the state is prohibited.

This prohibition is retained from Order No. R1-2016-0001 and is based on the discharge prohibitions contained in section 13375 of the Water Code.

4.1.11. Discharge Prohibition 3.12. The discharge of septage to a location other than an approved septage receiving station is prohibited.

This prohibition is retained from Order No. R1-2016-0001 and is necessary to ensure that the Permittee is aware of all discharges of septage into the treatment system so 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 BOD_5, TSS, and pH. Effluent limitations for BOD_5, TSS, and pH in Effluent Limitations in section 4.1.1, Table 2 of this Order were established as required by 40 C.F.R. 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 Permittees 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 biochemical oxygen demand (BOD5), total suspended solids (TSS), and pH, as follows:

4.2.1.1. BOD_5 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.

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

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, and 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 (BOD_5, 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 BOD_5, TSS, and pH. Numeric effluent limitations for BOD_5, TSS, and the lower end of the range for pH, including the percent removal requirements for BOD_5 and TSS, are retained from Order No. R1-2016-0001 and reflect the secondary treatment standards at 40 C.F.R. part 133.

4.2.2.2. **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 section 40 C.F.R. section 122.45(f)(1)(i), which states "*for pH, temperature, and radiation, or other pollutants which cannot appropriately be expressed by mass*" and 40 C.F.R. section 122.45(f)(1)(ii), which states "*when applicable standards and limitations are expressed in terms of other units of measure*."

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):

4.2.2.2.1. BOD_5 and TSS, because these two parameters are expressed in terms of concentration and percent removal;

4.2.2.2.2. pH, because these parameters cannot appropriately be expressed by mass.

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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, water quality-based effluent limitations (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 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 CTR and NTR.

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 of this Fact Sheet.

4.3.2.2. **Basin Plan Water Quality Objectives.** In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, including Humboldt Bay. For waters designated for use as MUN, the Basin Plan establishes, as applicable water quality criteria, the MCLs established by the State Water Board, DDW for the protection of public water supplies at title 22 of the California Code of Regulations section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).

4.3.2.3. **SIP, CTR, and NTR.** Water quality criteria and objectives applicable to this receiving water are established by the CTR, established by the U.S. EPA at 40 C.F.R. 131.38, and the NTR, established by the U.S. EPA at 40 C.F.R.

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131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and NTR.

The SIP, which is described in section 3.3.5 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires Permittees to submit data sufficient to do so.

At title 22, division 4, chapter 15 of the CCR, DDW has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply. As described in section 3.3.1 of this Fact Sheet, the MUN use is not applicable to the receiving water in the vicinity of the discharge.

Aquatic life freshwater and saltwater criteria are identified as criterion maximum concentrations (CMC) and criterion continuous concentrations (CCC). The CTR defines the CMC as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects and the CCC as the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The CMC is used to calculate an acute or 1-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation.

Human health criteria are further identified as "water and organisms" and "organisms only". "Water and organism" criteria are designed to address risks to human health from multiple exposure pathways. As stated in section 3.3.1 of this Fact Sheet, the municipal and domestic supply use is not applicable to the receiving water in the vicinity of the discharge; therefore, the "water and organisms" criteria do not apply and the "organisms only" criteria were used for the RPA.

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. Non-Priority Pollutants

4.3.3.1.1. Fecal Coliform

Order No. R1-2016-0001 specified that the disinfected effluent discharged through Discharge Points 001 shall not contain concentrations of fecal coliform bacteria exceeding the following limitations:

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4.3.3.1.1.1. The median concentration shall not exceed a Most Probable Number (MPN) of 14 organisms per 100 mL in a calendar month, and

4.3.3.1.1.2. No samples shall exceed an MPN of 43 per 100 mL.

These effluent limitations for fecal coliform bacteria have been retained from Order No. R1-2016-0001 and reflect water quality objectives for bacteria established by the Basin Plan for the protection of shellfish harvesting areas. Because Humboldt Bay is home to large shellfish harvesting operations, it is appropriate to continue to retain fecal coliform limitations for the protection of shellfish harvesting areas. The Basin Plan criteria are based on recommendations from the National Shellfish Sanitation Program's Fecal Coliform Standard for Adverse Pollution Conditions in the 2003 *Guide for the Control of Mulluscan Shellfish, Model Ordinance for Shellstock Growing Areas* (U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration).

4.3.3.1.2. **Enterococci Coliform**

On August 7, 2018, the State Water Board adopted Part 3 of the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Bacteria Provisions and a Water Quality Standards Variance Policy* (Statewide Bacteria Provisions), which establishes water quality objectives for reasonable protection of people that recreate within all surface waters, enclosed bays, and estuaries of the state that have the water contact recreation beneficial use (REC-1). In accordance with the water quality objectives outlined in the Statewide Bacteria Provisions for the protection of freshwaters used for water contact recreation, disinfected effluent shall not contain *enterococci* bacteria exceeding the following limitations:

4.3.3.1.2.1. The concentration of enterococci shall not exceed 30 colony forming units (cfu) per 100 milliliters (mL) as a six-week rolling geometric mean, calculated weekly.

4.3.3.1.2.2. A statistical threshold value (STV) of 110 cfu/100 mL shall not be exceeded by more than 10 percent of the samples collected in a calendar month and calculated in a static manner.

As discussed in section 4.3.3.1.1 above, this Order contains effluent limitations for fecal coliform bacteria that reflect standards for the protection of shellfish harvesting areas. Because enterococci is a subset of the total coliform group, the enterococci limitations established in the Statewide Bacteria Provisions are not as stringent as the Basin Plan fecal coliform standards implemented in this Order.

Section IV.E.1 of the Statewide Bacteria Provisions states that "where a permit, WDR, or waiver of WDR includes an effluent limitation or discharge

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requirement derived from a water quality objective, guideline, or other requirement to control bacteria that is a more stringent value than the applicable bacteria water quality objective, the bacteria water quality objective shall not be implemented in the permit, WDR, or waiver of WDR."

The effluent limitations established for fecal coliform will ensure that bacterial standards for water contact recreation are maintained throughout the receiving water.

4.3.3.1.3. **pH**

Chapter 3, Table 3-1 of the Basin Plan includes site-specific water quality objectives for pH applicable to Humboldt Bay, which specify that the pH shall not be depressed below natural background levels nor raised above 8.5. This Order includes an instantaneous minimum effluent limitation for pH of 6.0 based on the secondary treatment standards at 40 C.F.R. part 133 and an instantaneous maximum effluent limitation for pH of 8.5 based on the site-specific maximum water quality objective for Humboldt Bay established in chapter 3, Table 3-1 of the Basin Plan. The federal technology-based maximum requirement prescribed in the secondary treatment standards at 40 C.F.R. part 133 is not sufficient to meet the Basin Plan water quality standard.

4.3.3.1.4. **Ammonia**

Untreated domestic wastewater contains ammonia nitrogen. Nitrification is a biological process that converts ammonia to nitrite and nitrate. Denitrification is a process that converts nitrate to nitrogen gas, which is then released to the atmosphere. Inadequate or incomplete nitrification may result in the discharge of ammonia to Humboldt.

Ammonia is known to cause toxicity to aquatic organisms in surface waters. The Basin Plan establishes a narrative water quality objective for toxicity, stating that *"[a]ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life*." Due to concerns regarding ammonia toxicity, the Regional Water Board relies on U.S. EPA's recommended water quality criteria for ammonia to interpret the Basin Plan's narrative objective for toxicity. For saltwater, the recommended criteria are from the April 1989 *Ambient Water Quality Criteria for Ammonia*, EPA-440/5-88-004 (1989 Saltwater Criteria). For freshwater, the recommended criteria are from the April 2013 *Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater*, EPA 822-R-13-001 (2013 Freshwater Criteria). The 2013 Freshwater Criteria is an update to the December 1999 *Update of Ambient Water Quality Criteria for Ammonia* (1999 Freshwater Criteria).

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The 1989 Saltwater Criteria document includes three tables of recommended criteria for receiving water salinities of 10 g/kg, 20 g/kg, and 30 g/kg. Based on samples collected at the receiving water in the vicinity of the discharge between September 2016 and June 2021, the receiving water salinity was ranged from 28 ppt to 34 ppt. Therefore, the table for receiving waters with salinity of 30g/kg was used. The acute (1-hour average) and chronic (4-day average) criteria are based on pH and temperature.

Effluent monitoring results ranged from 0.30 mg/L to 18 mg/L based on 129 samples collected at Monitoring Location EFF-001 between September 2016 and June 2021. Monitoring for ammonia in the receiving water was not conducted over the term of Order No. R1-2016-0001. Because ammonia levels in the effluent have been measured at concentrations greater than EPA's 1989 Saltwater Criteria, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for toxicity.

For this Order, the Regional Water Board has changed its approach for evaluating ammonia toxicity. This Order establishes an Ammonia Impact Ratio (AIR) for determining compliance with ammonia effluent limitations. The AIR is calculated as the ratio of the ammonia value in the effluent to the applicable 1989 Saltwater Criteria. See Attachment H of this Order for a sample log to help calculate and record the AIR values and Attachment G for applicable pH, temperature and salinity dependent criteria.

Therefore, this Order includes effluent limitations for ammonia for the protection of aquatic life. This Order establishes an average monthly effluent limitations (AMEL) and maximum daily effluent limitations (MDEL) for total ammonia, expressed as N, through the use of an AIR at Discharge Point 001 based on EPA's 1989 Saltwater Criteria. Calculations of the applicable multipliers are included in section 4.3.4 of this Fact Sheet.

4.3.3.1.5. **Chlorine Residual**

The Basin Plan establishes a narrative water quality objective for toxicity which states *"[a]ll waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life*." The Regional Water Board considers any chlorinated discharge as having the reasonable potential to cause or contribute to exceedances of this water quality objective for toxicity, and therefore this Order includes effluent limitations for chlorine. U.S. EPA has established the following criteria for chlorine-produced oxidants for protection of saltwater aquatic life in *Quality Criteria for Water* 1986 (The Gold Book, 1986, EPA440/5-86-001).

Chronic Criterion	Acute Criterion
0.0075 mg/L	0.013 mg/L

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Consistent with Order No. R1-2016-0001, the water quality criteria for total chlorine residual recommended by U.S. EPA have been translated to an AMEL of 6.1 µg/L and an MDEL of 12 µg/L in this Order.

4.3.3.1.6. **Settleable Solids**

Effluent limitations for settleable solids are retained from Order No. R1-2016-0001 and reflect levels of treatment attainable by secondary treatment facilities. This limitation is based on the Basin Plan water quality objective prohibiting bottom deposits for all surface waters of the North Coast Region. Consistent with Order No. R1 2016 0001, this Order applies the effluent limitations for settleable solids at Discharge Point 001.

4.3.3.2. **CTR Priority Pollutants**

The SIP establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants showing reasonable potential.

Section 1.3 of the SIP requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. For this Order, the Regional Water Board has conducted an RPA for discharges to Humboldt Bay at Discharge Point 001 using monitoring data collected at Monitoring Location EFF-001. During the term of Order No. R1-2016-0001, CTR priority pollutant sampling was conducted annually between September 01, 2016, and June 30, 2021, at Monitoring Location EFF-001. In addition, the Permittee conducted monthly monitoring for copper, and quarterly monitoring for cyanide, and TCDD-equivalents. All of this data was used to complete the RPA. No CTR priority pollutant data was available for the receiving water.

Hardness: The CTR and the NTR contain water quality criteria for seven metals (cadmium, copper, chromium (III), lead, nickel, silver, and zinc) that vary as a function of hardness; the lower the hardness, the lower the water quality criteria. The SIP requires water quality criteria be properly adjusted for hardness, using the hardness of the receiving water. 40 C.F.R. section 131.38(c)(4)(i) states, "For waters with a hardness of over 400 mg/L as calcium carbonate, a hardness of 400 mg/L shall be used with a default Water-Effect Ratio (WER) of 1, or the actual hardness of the ambient surface water shall be used with a WER." For the RPA, a hardness of 400 mg/L and a WER of 1 was used to calculate the criteria for all hardness-dependent metals

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except copper because saline waters found in estuaries typically have hardness concentrations in excess of 400 mg/L. For copper, the RPA identified the U.S EPA saltwater criteria as most protective in Humboldt Bay. The U.S EPA saltwater criteria for copper is not hardness dependent. The Permittee conducted a WER study for copper. As a result the RPA for copper has been conducted with the copper WER of 12.6.

To conduct the RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background (B) concentration for each priority, toxic pollutant from effluent and receiving water data provided by the Permittee, and compared this information to the most stringent applicable water quality criterion (C) for each pollutant with applicable water quality criteria from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

Trigger 1. If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC> ND), there is reasonable potential, and an effluent limitation is required.

Trigger 3. After a review of other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

4.3.3.3. Reasonable Potential Determination

The RPA demonstrated reasonable potential for discharges of cyanide, and alpha-Endosulfan from the Facility to cause or contribute to exceedances of applicable water quality criteria. Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for 124 of the 126 CTR priority pollutants.

Table F-4 summarizes the RPA for each pollutant that was reported in detectable concentrations in the effluent or the receiving water. The MECs, most stringent water quality objectives/water quality criteria (WQO/WQCs), and background concentrations (B) used in the RPA are presented, along with the RPA results (Yes or No and which trigger) for each toxic pollutant analyzed. No other pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan were measured above detectable

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concentrations during the monitoring events conducted by the Permittee. Attachment F-1 to this Order summarizes the RPA for all 126 CTR priority pollutants.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Summary of Reasonable Potential Analysis Results

CTR#	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL[1]	B or Minimum DL[1,2]	RPA Results[3]
1	Antimony	µg/L	No Criteria	19	Not Available	No
2	Arsenic	µg/L	36	2	Not Available	No
3	Beryllium	µg/L	No Criteria	0.78	Not Available	No
5b	Chromium (V)	µg/L	11	1.4	Not Available	No
6	Copper[4]	µg/L	47	42	Not Available	No
9	Nickel	µg/L	8	5	Not Available	No
10	Selenium	µg/L	5	3.8	Not Available	No
11	Silver	µg/L	2.2	1.3	Not Available	No
13	Zinc	µg/L	86	70	Not Available	No
14	Cyanide	µg/L	1.0	2.9	Not Available	Yes (Trigger 1)
23	Chlorodibromomethane	µg/L	No Criteria	2.1	Not Available	No
26	Chloroform	µg/L	No Criteria	5.5	Not Available	No
27	Dichlorobromomethane	µg/L	No Criteria	5	Not Available	No
34	Methyl Bromide	µg/L	No Criteria	0.6	Not Available	No

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CTR#	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL[1]	B or Minimum DL[1,2]	RPA Results[3]
35	Methyl Chloride	µg/L	No Criteria	0.25	Not Available	No
39	Toluene	µg/L	No Criteria	0.62	Not Available	No
68	Bis(2-Ethylhexyl) Phthalate	µg/L	No Criteria	3.2	Not Available	No
109	4,4'-DDE	µg/L	No Criteria	0.02	Not Available	No
112	alpha-Endosulfan	µg/L	0.0087	0.0089	Not Available	Yes (Trigger 1)
	Ammonia (mg/L)	mg/L	1.33	18	Not Available	Yes (Trigger 1)

Table Notes

1. The Maximum Effluent Concentration (MEC) or maximum background concentration (B) is the actual detected concentration unless it is preceded by "<", in which case the value shown is the minimum detection level as the analytical result was reported as not detected (ND).
2. The MEC or B is "Not Available" when there is no monitoring data for a constituent.
3. RPA Results:
   = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected.
   = No, if MEC and B or < WQO/WQC or all effluent data are undetected.
   = Undetermined (UD).
4. Copper WQO calculated with a WER of 12.6 and the most stringent WQO from the CTR using a hardness of 400 mg/L (12.6 x 3.73 = 47 µg/L).
5. The saltwater criterion represented in this table is based upon chronic exposure and a temperature of 14°C, a pH of 8.1, and a salinity value of 28 g/kg

4.3.3.3.1. Additional details regarding CTR priority pollutant constituents for which reasonable potential was found are included in the following paragraphs:

4.3.3.3.1.1. **Cyanide.** Order No. R1-2016-0001 included effluent limitations for cyanide. The CTR establishes a water quality objective for the protection of saltwater aquatic life of 1.0 µg/L and a water quality objective for the protection of freshwater aquatic life of 5.2 µg/L for cyanide. The Permittee sampled the effluent for cyanide 27 times during the term of Order No. R1-2016-0001. Cyanide was detected in 9 of the effluent samples, with

results ranging from 1.1 µg/L to 2.9 µg/L. A determination of reasonable potential has been made for discharges from Discharge Point 001 based on the MEC of 2.9 µg/L exceeding the most stringent water quality objective of 1.0 µg/L. Effluent limitations for cyanide will be applied at Discharge Point 001.

4.3.3.3.1.2. **Alpha-Endosulfan.** Order No. R1-2016-0001 did not include effluent limitations for alpha-Endosulfan at Discharge Point 001. The CTR establishes a most stringent saltwater chronic water quality objective for alpha-Endosulfan for the protection of aquatic life of 0.0087 µg/L. The Permittee sampled the effluent for alpha-Endosulfan 4 times during the term of Order No. R1-2016-0001. Alpha-Endosulfan was detected in the effluent in one sample, with a result of 0.0089 µg/L. Receiving water monitoring for alpha-Endosulfan was not conducted over the term of Order No. R1-2016-0001. A determination of reasonable potential has been made for discharges from Discharge Points 001 based on the MEC of 0.0089 µg/L exceeding the most stringent water quality objective of 0.0087 µg/L. Effluent limitations for alpha-Endosulfan will be applied at Discharge Point 001.

4.3.3.3.2. Additional details regarding CTR priority pollutant constituents for which reasonable potential was not found but warrant further explanation are included in the following paragraphs:

4.3.3.3.2.1. **Copper.** Order No. R1-2016-0001 included effluent limitations for copper. The CTR includes criteria for the protection of saltwater aquatic life and hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper is in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The U.S. EPA default conversion factors for copper in saltwater are 0.83 for both the acute and the chronic criteria. The default WER used for calculating criteria for copper is 1.0. The Permittee has conducted a WER study to determine the site-specific toxicity of copper in the receiving water at Discharge Point 001. The Permittee's study concluded that a site specific WER of 12.6 for total recoverable copper applies to the discharge. Using a receiving water hardness of 400 mg/L, the U.S. EPA recommended dissolved-total translator of 0.83, and the site-specific WER, the applicable chronic criterion (maximum 4-day average concentration) is adjusted to 47 µg/L and the applicable acute criterion (maximum 1-hour average concentration) is adjusted to 73 µg/L. The Permittee sampled the effluent for copper 65 times during the term of Order No. R1-2016-0001. Copper was detected in all 65 effluent samples, with results ranging from 15 µg/L to 42 µg/L. Since the MEC was less than the applicable water quality objective for copper, a determination of no reasonable potential has been made, and effluent limitations have not been retained in this Order.

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4.3.3.3.2.2. **2,3,7,8-TCDD.** Order No. R1-2016-0001 included effluent limitations for TCDD-equivalents. The CTR establishes a water quality criterion for the protection of human health for 2,3,7,8-TCDD of 1.3 x 10-8 µg/L. As stated in section 3.3.1 of this Fact Sheet, the MUN use is not applicable to the receiving water in the vicinity of the discharge; therefore, for human health, the "water and organisms" criteria do not apply and the "organisms only" criteria were used for the RPA. The Permittee sampled the effluent for 2,3,7,8-TCDD 13 times during the term of Order No. R1-2016-0001. All sample concentrations were non-detect, so a determination of no reasonable potential has been made for 2,3,7,8-TCDD and effluent limitations have not been retained in this Order.

4.3.4. WQBEL Calculations

Final WQBELs for ammonia, chlorine, cyanide, and alpha-endosulfan have been determined using the methods described in section 1.4 of the SIP.

4.3.4.1. **Step 1:** To calculate the effluent limits, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

ECA = C + D (C – B),

Where:

C = the applicable water quality criterion (adjusted for effluent hardness and expressed as the total recoverable metal, if necessary)

D = dilution credit (here D= 0, as the discharge does not qualify for a dilution credit)

B = background concentration

Here, no credit for dilution is allowed, which results in the ECA being equal to the applicable criterion (ECA=C).

4.3.4.2. **Step 2:** For each ECA based on an aquatic life criterion/objective (copper, cyanide, and ammonia), the long-term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is

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reported as ND, the CV is set equal to 0.6. Derivation of the multipliers is presented in section 1.4 of the SIP.

The SIP procedure assumes a 4-day averaging period for calculating the LTA. However, U.S. EPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA for ammonia corresponding to the 30-day CCC was calculated assuming a 30-day averaging period.

From Table 1 in the SIP, the ECA multipliers for calculating LTAs at the 99th percentile occurrence probability for cyanide are 0.206 (acute multiplier) and 0.377 (chronic multiplier). The ECA multipliers for alpha-endosulfan are 0.321 (acute multiplier) and 0.527 (chronic multiplier).

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Determination of Long-Term Averages

Pollutant	Units	Acute ECA	Chronic ECA	Acute ECA Multiplier	Chronic ECA Multiplier	Acute LTA	Chronic LTA
Cyanide, Total (as CN)	µg/L	1.0	1.0	0.206	0.377	0.21	0.38
alpha-Endosulfan	µg/L	0.034	0.0087	0.321	0.527	0.011	0.0046

4.3.4.3. **Step 3:** WQBELs, including an AMEL and MDEL, are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. The CV is set equal to 0.99 for cyanide, and 0.60 for alpha-endosulfan. The sampling frequency is set equal to 4 (n = 4) for both the acute and chronic criteria. The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. From Table 2 of the SIP, the MDEL multiplier for cyanide is 4.84 and the AMEL multiplier is 1.93. From Table 2 of the SIP, the MDEL multiplier for alpha-endosulfan is 3.11 and the AMEL multiplier is 1.55. Final WQBELs for cyanide and alpha endosulfan are determined as follows.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Determination of Final WQBELs Based on Aquatic Life Criteria

Pollutant	Units	LTA	MDEL Multiplier	AMEL Multiplier	MDEL	AMEL

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Cyanide, Total (as CN)	µg/L	0.21	4.84	1.93	1.00	0.40
alpha-Endosulfan	µg/L	0.0046	3.11	1.55	0.0143	0.0071

Final WQBELs for ammonia are determined by calculating the AIR for each of the ammonia standards (AMEL and MDEL). Attachment H of this Order includes two tables that display the AMEL and MDEL ammonia standards.

The ammonia standards are calculated by taking the variable ammonia criteria and multiplying it by the ECA multiplier and the appropriate AMEL and MDEL multiplier.

The 1989 Ambient Water Quality Criteria for ammonia are dependent on the pH, temperature, and salinity of the receiving water. For example:

$$\boldsymbol{AMEL\ Ammonia\ Standard} = (1989\ Chronic\ Ammonia\ Criteria\ (ECA) * AMEL\ Multiplier\ (1.55) * ECA\ Multiplier\ (0.53)$$

$$\boldsymbol{MDEL\ Ammonia\ Standard} = (1989\ Chronic\ Ammonia\ Criteria\ (ECA) * MDEL\ Multiplier\ (3.11) * ECA\ Multiplier\ (0.53)$$

The AIR, or final WQBEL, is determined by dividing the ammonia sample by the appropriate ammonia standard (AMEL and MDEL). If the AIR is greater than 1.0 then the Permittee is not in compliance with the AIR effluent limitation.

4.3.4.4. **Step 4:** As discussed earlier in this Fact Sheet, RPAs were conducted and effluent limitations were calculated using the SIP procedures. The table below contains the final summary of WQBELs applicable to this Facility.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Summary of Water Quality Based Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units				6.0	8.5
Ammonia Total (as N)	mg/L	1.0[1]		1.0[1]		
Cyanide, Total (as CN)	µg/L	0.40		1.00		
alpha-Endosulfan	µg/L	0.0071		0.0143		

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Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Fecal Coliform Bacteria	MPN/100 mL	14[1]		43[2]		

Table Notes

1. The Ammonia Impact Ratio (AIR) is calculated as the ratio of the ammonia concentration in the effluent and the applicable ammonia standard (AMEL and MDEL). Attachment H contains a PDF example of the calculator that will be sent to the Permittee to determine compliance with the AMEL/MDEL AIR. For each of the applicable ammonia standards, Attachment G includes two tables that provide the variable AMEL and MDEL ammonia standards used in calculating the AIR. The AIR is the ammonia effluent limit and must be reported in the self-monitoring reports in addition to ammonia, pH, salinity, and temperature values. Monitoring for ammonia, pH, salinity, and temperature must be conducted concurrently in order for the AIR to be calculated properly. Compliance determination will be based on the receiving water data and ammonia effluent data taken on the same day.
2. The median value of fecal coliform bacteria shall not exceed 14 MPN/100 mL.
3. No samples shall exceed 43 MPN/100 mL.

4.3.5. Whole Effluent Toxicity (WET)

Monitoring triggers for acute and 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 acute and chronic toxicity, as specified in the MRP (Attachment E, section 5).

4.3.5.1. Acute Aquatic Toxicity

Consistent with Order No. R1-2009-0033, this Order includes effluent monitoring for acute toxicity. The Order implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity

Testing Programs) by requiring the Permittee to conduct acute toxicity tests on a fish species and on an invertebrate species to determine the most sensitive species. According to the U.S. EPA manual, *Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/600/4-90/-27F), the acceptable vertebrate species for the acute toxicity test is the sheepshead minnow, *Cyprinodon variegatus*. The acceptable invertebrate species for the acute toxicity test is the mysid shrimp, *Mysidopsis bahia*. This Order requires the Permittee to conduct a screening test using a vertebrate and invertebrate species. After the screening test is completed, monitoring can be reduced to the most sensitive species. Attachment E of this Order requires quarterly acute WET monitoring.

4.3.5.2. **Test of Significant Toxicity**

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 previously.

On December 1, 2020, the State Water Board adopted resolution No. 2020-0044, establishing the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries* (ISWEBE Plan) and adopting statewide numeric water quality objectives for both acute and chronic toxicity and a program of implementation to control toxicity, which are collectively known as the Toxicity Provisions. The Toxicity Provisions will standardize the regulation of aquatic toxicity for all non-oceanic surface waters. U.S. EPA's TST approach is an essential component of Toxicity Provisions 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.

Commented [ST12]: Justin, we've included some revised language discussing the adoption of the statewide toxicity provisions, that varies from the typical standard language. Please review this language.

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.

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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) ≤ 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 100%. The chronic toxicity trigger for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (b value) of 0.75 for the chronic toxicity methods in the MRP. The null hypothesis for this discharge is:

H_0: Mean response (100% effluent) ≤ 0.75 mean response (control)

Results shall be analyzed using the TST hypothesis testing approach in section 5.2.6.1 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

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persist, the Permittee will be required to conduct a TRE, as described by the MRP.

Notification requirements for acute and 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.

The Permittee conducted acute toxicity testing at the IWC of 100% during the term of Order No. R1-2016-0001. As shown in the following table, the effluent exhibited acute toxicity to *A. bahia* survival once. However, low dissolved oxygen (i.e., <4.0 mg/L) was observed in the effluent treatment of this test, confounding the interpretation of test results. Consistent with Order No. R1-2016-0001, this Order does not include limits for acute toxicity.

The Permittee conducted chronic toxicity testing at the IWC of 100% during the term of Order No. R1-2016-0001. As shown in the following table, the effluent exhibited chronic toxicity to *M. pyrifera* germination and growth four times each, indicating that the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives for chronic toxicity using the TST approach. Therefore, this Order establishes a narrative effluent limitation for chronic toxicity.

Table [STYLEREF 2 \s]-[SEQ Table * ARABIC \s 2]. Summary of Chronic Toxicity Results

Test Date	IWC[REF _Ref39912665 \n * MERGEFORMAT]	*M. pyrifera* Growth	*M. pyrifera* Germination
November 30, 2016	100	Pass	Pass
February 15, 2017	100	Pass	Pass
May 2, 2017	100	Pass	Pass
July 25, 2017	100	Pass	Fail
October 19, 2017	100	Pass	Pass
January 23, 2018	100	Fail	Pass
July 31, 2018	100	Pass	Pass

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Test Date	IWC[REF _Ref39912665 \n * MERGEFORMAT]	*M. pyrifera* Growth	*M. pyrifera* Germination
February 7, 2019	100	Fail	Fail
April 17, 2019	100	Pass	Pass
September 12, 2019	100	Pass	Pass
November 6, 2019	100	Pass	Pass
February 19, 2020	100	Fail	Fail
March 18, 2020	100	Pass	Pass
March 31, 2020	100	Pass	Pass
April 15, 2020	100	Pass	Pass
May 1, 2020	100	Pass	Pass
August 5, 2020	100	Fail	Fail
September 9, 2020	100	Pass	Pass
September 23, 2020	100	Pass	Pass
October 7, 2020	100	Pass	Pass
October 21 2020	100	Pass	Pass
February 24, 2021	100	Pass	Pass
June 4, 2021	100	Pass	Pass

Table Notes

1. IWC = In=Stream Waste Concentration (% Effluent).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.

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. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of mass-based

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effluent limitations for BOD_5 and TSS and effluent limitations for copper and 2,3,7,8-TCDD.

Order No. R1-2016-0001 established final mass-based effluent limitations for BOD_5 and TSS. Mass limitations for BOD_5 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 BOD_5 and TSS in 40 C.F.R. section 133.102, on which the effluent limitations in previous permits were based, are expressed in concentration and percent removal (i.e., other units of measure). The relaxation of effluent limitations for BOD_5 and TSS in this Order is permissible under CWA section 402(o)(2)(B), because Regional Water Board staff has determined that mass-based limitations for BOD_5 and TSS were applied in the previous permits as a result of a mistaken interpretation of law when issuing those previous permits.

Historically, the Regional Water Board routinely incorporated mass-based limits (in addition to concentration-based limits) for BOD_5 and TSS in NPDES permits to encourage correction of Inflow & Infiltration (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 treatment facility's design capacity in situations where POTW's experience excessive I&I as a result of climate conditions and/or aging infrastructure.

In addition, Regional Water Board staff previously held that anti-backsliding regulations prevented the removal of mass-based limitations for BOD_5 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, 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 BOD_5 and TSS in this Order is also permissible under CWA section 402(o)(2)(B), based on new information available to the Regional Water Board.

Regional Water Board staff conducted an I&I analysis utilizing the definitions of excessive I&I in the federal regulations at 40 C.F.R. sections 35.2005(b) and 133.103(d). Using influent flow data collected between September 2016 and June 2021 and a population of 46,583 as reported in the ROWD, the Regional Water Board conducted an analysis of per capita flows for comparison with the definitions of "excessive I&I" in 40 C.F.R section 35.2005(b)(28) and 133.103(d) (i.e., greater than 275 gpd per capita per day). Effluent flows exceeded 275 gpd per capita on 28 occasions.

In addition, the methodology in a report titled Recommended Standards for Wastewater Treatment Facilities, Policy for the Design, Review, and Approval of

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Plans and Specifications for Wastewater Collection and Treatment Facilities, 2014 Edition, A Report of the Wastewater Committee of the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers was used to calculate a peaking factor, above which excessive infiltration is indicated. Using Figure 1 of this methodology report, a peaking factor of 2.3 is the maximum rate of wastewater flow that is calculated for a population of 46,583. The analysis revealed 36 exceedances of the peaking factor, with exceedances ranging from 2.34 to 5.31.

As discussed in section 2.1.1 of this Fact Sheet, the Permittee is actively addressing I&I to the facility.

Order No. R1-2012-0031 included effluent limitations for copper and 2,3,7,8-TCDD at Discharge Point 001 based on the CTR human health criterion for waters from which both water and organisms are consumed. Based on receiving water salinity monitoring conducted by the Discharger, salinity in Humboldt Bay in the vicinity of the discharge exceeds the salinity threshold in Resolution No. 88-63. Therefore, this Order does not apply the MUN designation to Humboldt Bay and only the CTR human health criteria for waters from which organisms are consumed are applicable to the discharge. As shown in Table F-6 of this Fact Sheet, effluent monitoring data for copper and 2,3,7,8-TCDD indicates that the discharge does not demonstrate reasonable potential to cause or contribute to an exceedance of the applicable CTR human health criterion. The updated effluent copper and 2,3,7,8-TCDD data and the updated receiving water salinity data constitute new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). Therefore, this Order does not retain effluent limitations for copper and 2,3,7,8-TCDD at Discharge Point 001.

4.4.2. Antidegradation Policies

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. R1-2016-0001.

4.4.3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5, TSS, and pH. 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 fecal coliform, pH, ammonia, total residual chlorine, settleable solids, cyanide, and alpha-endosulfan 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 of the Fact Sheet.

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Water quality-based effluent limitations 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. Recycling Specifications – Not Applicable

This Order does not authorize discharges of recycled water.

4.8. Other Requirements

4.8.1. This Order requires the Permittee to begin discharge 45 minutes before slack tide. This requirement has been retained from Order No. R1-2016-001 because the Permittee's Effluent Discharge Study determined that this was the optimal timing to maximize the volume of effluent that is conveyed to the Pacific Ocean. Given the current circumstances of the discharge, discharging under this scenario provides the greatest level of consistency with the State Board, Water Quality Control Policy for Enclosed Bays and Estuaries of California (1974, 1995) and the intent of State Water Board Resolution 80-87 which requires that all effluent be discharged to the Pacific Ocean.

4.8.2. This Order contains discharge specifications for total chlorine residual that apply to treated wastewater discharged from the effluent storage pond to the Overflow Marsh. In accordance with this provision, discharges of treated wastewater to the Overflow Marsh must have no detectable chlorine residual. U.S. EPA has established a chronic criterion of 0.011 mg/L and an acute criterion of 0.019

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mg/L for chlorine produced oxidants for protection of fresh water aquatic life. [Quality Criteria for Water 1986 (The Gold Book, 1986, EPA 440/5/-86-001)].

In order to ensure compliance with protection of fresh water aquatic life criteria, this dish discharge specification shall be determined using a total chlorine detection method with a minimum detection level of 0.01 mg/L. This provision is consistent with the effluent daily maximum effluent limit of 0.01 mg/L for total chlorine residual contained in all previous Orders for discharges to the Wildlife Management Area. The purpose of the limitation was to ensure that the treated wastewater discharged to the Wildlife Management Area for the purpose of enhancing wetland and riparian habitat and for temporary storage of treated effluent would not contain concentrations of residual chlorine that could impair the function of the Wildlife Management Area.

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 Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan.

The Basin Plan states that "*[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses*." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity. Chemical and biological survey data are necessary to ensure compliance with Basin Plan objectives.

The dissolved oxygen limitation in this Order reflects the new Basin Plan dissolved oxygen limit that was adopted by the Regional Water Board on June 18, 2015, and effective beginning April 24, 2017, after receiving approval from U.S. EPA. The new Basin Plan dissolved oxygen limitation specifies limits for the WARM, COLD, and SPWN beneficial uses. The COLD and SPWN beneficial uses occur in Humboldt Bay and its tributaries. This Order includes only the SPWN limitations because it is the most restrictive and protective limit and the SPWN beneficial use is present throughout the entire discharge season.

5.2. Groundwater

Groundwater limitations are included in this 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

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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 Basin Plan further 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)).

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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. **Water Effects Ratios (WERs) and Metal Translators (Special Provision 6.3.1.5).** This provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Permittee provide new information and justification for applying a WER or metal translator to a water quality objective for one or more priority pollutants.

6.2.1.6. **Mixing Zone Study(Special Provision 6.3.1.6).** This provision allows the Regional Water Board to reopen this Order if a future mixing zone study undertaken by the Permittee provides new information and justification for granting a mixing zone to the Facility.

6.2.1.7. **Nutrients (Special Provision 6.3.1.7).** This Order contains effluent limitations for ammonia, nitrate, nitrite, total nitrogen, and total phosphorus and effluent monitoring for nutrients (ammonia, unionized ammonia, nitrate, nitrite, organic nitrogen, and total phosphorus). This provision allows the Regional Water Board to reopen this Order if future monitoring data indicates the need for new or revised effluent limitations for any of these parameters.

6.2.2. Special Studies and Additional Monitoring Requirements

6.2.2.1. **Source Control and Pretreatment Studies.** As discussed further in section 6.3.2.1 of this Fact Sheet, this Order requires the Permittee to update its pretreatment program that conforms to Federal regulations. Thus, in order to prevent interference with the POTW or pass through of pollutants to the receiving water, this Order requires the Permittee to update their approved pretreatment program by conducting a local limits study and review and update, if necessary, their sewer use ordinances, legal authority, enforcement response plan and list of industrial users.

6.2.3. Best Management Practices and Pollution Prevention

6.2.3.1. **Pollutant Minimization Program (Special Provision 6.3.3.1).** This provision is included in this Order pursuant to section 2.4.5 of the SIP. 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.

6.2.4. Construction, Operation, and Maintenance Specifications

6.2.4.1. **Operation and Maintenance (Special Provisions 6.3.4.1 and 6.3.4.2).** 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 6.3.4.2 of this Order, is an integral part of a well-operated and maintained facility.

6.2.4.2. **Septage Handling Requirements (Special Provision 6.3.4.3).** The Permittee currently accepts and treats septage at the Facility. Domestic septage is 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 only domestic septage. Septage is characterized by high organic strength, high solids content, high odor potential, high vector attraction potential, and

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high potential to pollute groundwater. Septage may be 6 to 80 times more concentrated than typical municipal wastewater and may also contain heavy metals and illicitly dumped hazardous materials. Septage has the potential to upset treatment plant operations or process performance or both if the plant is not designed to handle septage. Some of the impacts of septage addition to WWTFs include: potential toxic shock to biological processes; increased odor emissions; increased volume of grit, scum, screenings, and sludge; increased organic loading to biological processes; and increased housekeeping requirements. This Order requires the Permittee to manage septage accepted at the Facility in a manner that ensures that pollutants associated with domestic septage do not pass through or interfere with the operation or performance of the Facility.

6.2.5. Special Provisions for Publicly-Owned Treatment Works (POTWs)

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

6.2.5.1.1. **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. Pretreatment of Industrial Waste (Special Provision 6.3.5.2). Section 402(b)(8) of the CWA requires that POTWs receiving pollutants from significant industrial sources subject to section 307(b) standards establish an industrial pretreatment program to ensure compliance with these standards. The implementing regulations at 40 C.F.R. section 403.8(a) state, "*any POTW (or*

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combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (mgd) and receiving from industrial users pollutants which pass through or interfere with operation of the POTW or are otherwise subject to pretreatment standards will be required to establish a POTW pretreatment program unless the NPDES State exercises its option to assume local responsibilities as provided in 403.10(e)." The Facility is subject to pretreatment standards as described in section 307(b) of the CWA and 40 C.F.R. section 403.8(a).

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 also requires the Permittee to comply with the State's regulations relating to the discharge of biosolids to the land. The discharge of biosolids through land application is not regulated under this Order. The Permittee has obtained coverage under the State Water Board Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (General Order). Coverage under the General Order, as opposed to coverage under this NPDES permit or individual WDRs, implements a consistent statewide approach to regulating this waste discharge.

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 because all storm water falling within the Facility is routed to the Facility headworks for treatment.

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

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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 BOD_5 and TSS are retained from Order No. R1-2016-0001 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. R1-2016-0001 and are necessary to determine compliance with Discharge Prohibition 3.10 of this Order.

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, BOD_5, TSS, settleable solids, turbidity, total residual chlorine, pH, temperature, cyanide, fecal coliform bacteria, and ammonia at Monitoring Location EFF-001 have been retained from Order No. R1-2016-0001.

7.2.1.2. Effluent monitoring data collected during the term of Order No. R1-2016-0001 indicates that the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives for alpha-endosulfan at Monitoring Location EFF-001; therefore, this Order establishes monthly monitoring requirements for alpha-endosulfan at Monitoring Location EFF 001.

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7.2.1.3. Effluent monitoring data collected during the term of Order No. R1-2016-0001 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 monitoring requirements for TCDD equivalents.

7.2.1.4. Effluent monitoring data collected during the term of Order No. R1-2016-0001 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 effluent monitoring requirements for copper.

7.2.1.5. Consistent with Order No. R1-2016-0001, this Order requires annual CTR priority pollutant monitoring in order to generate adequate data to perform an RPA.

7.3. Whole Effluent Toxicity Testing Requirements

WET monitoring requirements are retained from Order No. R1-2016-0001 and are included in this 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. This Order retains quarterly monitoring requirements for acute toxicity and chronic toxicity.

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. Recycling Monitoring Requirements

This Order does not authorize discharges of recycled water.

7.6. Receiving Water Monitoring

7.6.1. Surface Water

Receiving water monitoring requirements have been retained from Order No. R1-2016-0001 to better characterize the receiving water. Receiving water monitoring is conducted using equipment currently in place at the Chevron dock,

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accessed from the CeNCOOS website (http://www.cencoos.org/data/shore/humboldt). Additional bay monitoring will be evaluated at a future date based upon data collected from this monitoring station and other information submitted during the term of this Order. Should they so choose, and after they receive approval from the Executive Officer, the Permittee may propose and participate in group monitoring of the receiving water with other Permittee's discharging to Humboldt Bay.

7.6.2. Groundwater – Not Applicable

This order does not require groundwater monitoring at this time.

7.7. Other Monitoring Requirements

7.7.1. Disinfection System Monitoring. During periods when high influent flow exceeds the hydraulic capacity of the Facility, excess flow from the effluent holding pond can be directed to a 13-acre freshwater holding marsh (Overflow Marsh) and pumped back to the effluent storage pond once flows subside. Although the Overflow Marsh is a component of the Facility, monitoring of treated wastewater from the effluent storage pond to the Overflow Marsh is required to ensure that the discharge does not contain concentrations of residual chlorine that could impair the biological function of the marsh, which provides beneficial wildlife habitat. The requirement that the discharge to this area contains no detectable level of chlorine, using a minimum detection limit of 0.01 mg/L, is retained from Order No. R1-2016-0001.

7.7.2. Bypass Monitoring. During periods when high influent flow exceeds the hydraulic capacity of the Facility, effluent bypassing secondary treatment overflows into the effluent holding pond, in violation of Discharge Prohibitions 3.1 and 3.5 established in Order No. R1-2016-0001. The Permittee could not, feasibly, comply with these Discharge Prohibitions in a short period of time as new or modified control measures are dependent on the completion of a series of studies, so the Regional Water Board issued CDO No. R1-2016-0012 (as amended by Modification Order No.R1-2020-0021), establishing compliance schedules for the Permittee to achieve compliance with Discharge Prohibitions 3.1 and 3.5. The compliance schedule established in the CDO accounted for the considerable uncertainty in determining effective measures necessary to achieve compliance with Order No. R1-2016-0001 and was based on reasonably expected times needed to evaluate potential compliance measures in a step-wise manner. The CDO provides until July 1, 2028 for the Permittee to come into compliance with Discharge Prohibition 3.5, so monitoring of primary treated wastewater bypassing secondary treatment is required in this Order to monitor the volume of partially treated wastewater and concentrations of BOD_5 and TSS combining with the stored, secondary-treated effluent.

Commented [ST13]: Justin, please review this language to ensure it accurately captures the rationale for including monitoring at Monitoring Location INT-002.

7.7.3. Septage Station Monitoring. The Permittee currently accepts and treats septage at the Facility. Consistent with Order No. R1-2016-0001, this Order

includes septage monitoring requirements, at Monitoring Location SEP-001, to characterize discharges of septage into the treatment system and to ensure that pollutants associated with domestic septage do not pass through or interfere with the operation or performance of the Facility.

7.7.4. Sludge Monitoring. 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 9.5.2 of the MRP.

7.7.5. Visual Monitoring. Visual monitoring requirements for the effluent (Monitoring Location EFF-001) and the receiving water (Monitoring Location RSW-001) have been added to ensure compliance with receiving water limitations in section 5 of the Order.

7.7.6. Outfall Inspection. Consistent with Order No. R1-2016-0001, 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.

7.7.7. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), U.S. EPA requires major and selected minor 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.

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7.7.8. Accelerated Monitoring Requirements. Table E-3 of the MRP includes accelerated monitoring requirements for parameters that are required to be monitored daily, weekly, and monthly.

7.7.9. Flow Monitoring. Section 1.4 of the MRP requires proper installation, calibration, operation, and maintenance of flow metering devices.

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

8. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (North Coast Regional Water Board) is considering the issuance of WDRs that will serve as an NPDES permit for the City of Eureka, Elk River Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

8.1. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe WDRs 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: [HYPERLINK "http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml"] and through publication in the **<publication>** on **<DATE>**.

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 [HYPERLINK "file://wb-rb1-file-01.ca.epa.local/users$/chunt/Accessibility%20Work/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 [HYPERLINK "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 **<DATE>**.

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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: **<DATE>**
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

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

Please be aware that dates and venues may change. Our Web address is [HYPERLINK "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 [HYPERLINK "mailto:waterqualitypetitions@waterboards.ca.gov"]

For [HYPERLINK "http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml"], see the Water Quality Petitions Website at 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. Copying of documents may be arranged through the Regional Water Board 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 Justin McSmith at 707-576-2082.

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Attachment F-1. Wastewater Treatment Facility RPA Summary

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
Antimony	µg/L	=	19			No Criteria								No
Arsenic	µg/L	=	2			36	340	150	69.00	36.00				No
Beryllium	µg/L	=	0.78			No Criteria								No
Cadmium	µg/L	<	0.2			7.3	21.6	7.3	42.25	9.36				No
Chromium (III)	µg/L					644	5404.6	644.2						No
Chromium (VI)	µg/L	=	1.4			11	16	11	1107.75	50.35				No
Copper	µg/L	=	42			47	651[3]	384[3]	72.87[3]	47.06[3]				No
Lead	µg/L	<	0.2			8.5	476.8	18.58	221	8.52				No
Mercury	µg/L	<	0.045			No Criteria								No
Nickel	µg/L	=	5			8	1515.9	168.5	75	8.3				No
Selenium	µg/L	=	3.8			5		5	291	71				No
Silver	µg/L	=	1.3			2.2	44.0		2.24					No
Thallium	µg/L	<	0.2			No Criteria								No
Zinc	µg/L	=	70			86	387.8	387.8	95	85.6				No
Cyanide	µg/L	=	2.9			1.0	22	5.20	1.00	1.00				Yes
Asbestos	µg/L					No Criteria								No
2,3,7,8 TCDD	µg/L	<	2.09E-07			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
Acrolein	µg/L	<	0.33			No Criteria								No
Acrylonitrile	µg/L	<	0.19			No Criteria								No
Benzene	µg/L	<	0.28			No Criteria								No
Bromoform	µg/L	<	0.32			No Criteria								No
Carbon Tetrachloride	µg/L	<	0.44			No Criteria								No
Chlorobenzene	µg/L	<	0.2			No Criteria								No
Chlorodibromomethane	µg/L	=	2.1			No Criteria								No
Chloroethane	µg/L	<	0.13			No Criteria								No
2-Chloroethylvinyl ether	µg/L					No Criteria								No
Chloroform	µg/L	=	5.5			No Criteria								No
Dichlorobromomethane	µg/L	=	5			No Criteria								No
1,1-Dichloroethane	µg/L	<	0.29			No Criteria								No
1,2-Dichloroethane	µg/L	<	0.32			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
1,1-Dichloroethylene	µg/L	<	0.33			No Criteria								No
1,2-Dichloropropane	µg/L	<	0.25			No Criteria								No
1,3-Dichloropropylene	µg/L	<	0.47			No Criteria								No
Ethylbenzene	µg/L	<	0.2			No Criteria								No
Methyl Bromide	µg/L	=	0.6			No Criteria								No
Methyl Chloride	µg/L	=	0.25			No Criteria								No
Methylene Chloride	µg/L	<	0.14			No Criteria								No
1,1,2,2-Tetrachloroethane	µg/L	<	0.16			No Criteria								No
Tetrachloroethylene	µg/L	<	0.23			No Criteria								No
Toluene	µg/L	=	0.62			No Criteria								No
1,2-Trans-Dichloroethylene	µg/L	<	0.26			No Criteria								No
1,1,1-Trichloroethane	µg/L	<	0.31			No Criteria								No
1,1,2-Trichloroethane	µg/L	<	0.31			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
Trichloroethylene	µg/L	<	0.25			No Criteria								No
Vinyl Chloride	µg/L	<	0.07			No Criteria								No
2-Chlorophenol	µg/L	<	0.53			No Criteria								No
2,4-Dichlorophenol	µg/L	<	0.7			No Criteria								No
2,4-Dimethylphenol	µg/L	<	0.59			No Criteria								No
2-Methyl- 4,6-Dinitrophenol	µg/L	<	0.74			No Criteria								No
2,4-Dinitrophenol	µg/L	<	0.51			No Criteria								No
2-Nitrophenol	µg/L	<	0.5			No Criteria								No
4-Nitrophenol	µg/L	<	0.55			No Criteria								No
3-Methyl 4-Chlorophenol	µg/L	<	0.67			No Criteria								No
Pentachlorophenol	µg/L	<	0.97			7.90	16	12	13	7.9				No
Phenol	µg/L	<	0.5			No Criteria								No
2,4,6-Trichlorophenol	µg/L	<	0.71			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
Acenaphthene	µg/L	<	0.27			No Criteria								No
Acenaphthylene	µg/L	<	0.011			No Criteria								No
Anthracene	µg/L	<	0.029			No Criteria								No
Benzidine	µg/L	<	0.5			No Criteria								No
Benzo(a)Anthracene	µg/L	<	0.023			No Criteria								No
Benzo(a)Pyrene	µg/L	<	0.03			No Criteria								No
Benzo(b)Fluoranthene	µg/L	<	0.03			No Criteria								No
Benzo(ghi)Perylene	µg/L	<	0.029			No Criteria								No
Benzo(k)Fluoranthene	µg/L	<	0.029			No Criteria								No
Bis(2-Chloroethoxy) Methane	µg/L	<	0.55			No Criteria								No
Bis(2-Chloroethyl) Ether	µg/L	<	0.5			No Criteria								No
Bis(2-Chloroisopropyl) Ether	µg/L	<	0.5			No Criteria								No
Bis(2-Ethylhexyl) Phthalate	µg/L	=	3.2			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
4-Bromophenyl Phenyl Ether	µg/L	<	0.5			No Criteria								No
Butylbenzyl Phthalate	µg/L	<	1.2			No Criteria								No
2-Chloronaphthalene	µg/L	<	0.5			No Criteria								No
4-Chlorophenyl Phenyl Ether	µg/L	<	0.5			No Criteria								No
Chrysene	µg/L	<	0.028			No Criteria								No
Dibenzo(a,h)Anthracene	µg/L	<	0.027			No Criteria								No
1,2-Dichlorobenzene	µg/L	<	0.19			No Criteria								No
1,3-Dichlorobenzene	µg/L	<	0.18			No Criteria								No
1,4-Dichlorobenzene	µg/L	<	0.23			No Criteria								No
3,3 Dichlorobenzidine	µg/L	<	0.5			No Criteria								No
Diethyl Phthalate	µg/L	<	0.54			No Criteria								No
Dimethyl Phthalate	µg/L	<	1.1			No Criteria								No
Di-n-Butyl Phthalate	µg/L	<	0.73			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
2,4-Dinitrotoluene	µg/L	<	0.59			No Criteria								No
2,6-Dinitrotoluene	µg/L	<	0.77			No Criteria								No
Di-n-Octyl Phthalate	µg/L	<	0.72			No Criteria								No
1,2-Diphenylhydrazine	µg/L	<	0.5			No Criteria								No
Fluoranthene	µg/L	<	0.033			No Criteria								No
Fluorene	µg/L	<	0.15			No Criteria								No
Hexachlorobenzene	µg/L	<	0.5			No Criteria								No
Hexachlorobutadiene	µg/L					No Criteria								No
Hexachlorocyclopentadiene	µg/L	<	0.5			No Criteria								No
Hexachloroethane	µg/L	<	0.5			No Criteria								No
Indeno(1,2,3-cd)Pyrene	µg/L	<	0.035			No Criteria								No
Isophorone	µg/L	<	0.55			No Criteria								No
Naphthalene	µg/L	<	0.018			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
Nitrobenzene	µg/L	<	0.52			No Criteria								No
N-Nitrosodimethylamine	µg/L	<	0.5			No Criteria								No
N-Nitrosodi-n-Propylamine	µg/L	<	0.5			No Criteria								No
N-Nitrosodiphenylamine	µg/L	<	0.71			No Criteria								No
Phenanthrene	µg/L	<	0.012			No Criteria								No
Pyrene	µg/L	<	0.04			No Criteria								No
1,2,4-Trichlorobenzene	µg/L					No Criteria								No
Aldrin	µg/L	<	0.0016			1.30	3		1.3					No
alpha-BHC	µg/L	<	0.0016			No Criteria								No
beta-BHC	µg/L	<	0.0018			No Criteria								No
gamma-BHC	µg/L	<	0.0014			0.160	0.95		0.16					No
delta-BHC	µg/L	<	0.0014			No Criteria								No
Chlordane	µg/L	<	0.02			0.004	2.4	0.0043	0.09	0.004				No
4,4'-DDT	µg/L	<	0.001			0.001	1.1	0.001	0.13	0.001				No
4,4'-DDE	µg/L	=	0.02			No Criteria								No

Pollutant	Units	Qualifier	MEC	Qualifier	B	C	CMC[1]	CCC[1]	CMC[2]	CCC[2]	Water & Org	Org Only	MCL	Reasonable Potential
4,4'-DDD	µg/L	<	0.0024			No Criteria								No
Dieldrin	µg/L	<	0.0015			0.0019	0.24	0.056	0.71	0.0019				No
alpha-Endosulfan	µg/L	=	0.0089			0.009	0.22	0.056	0.034	0.0087				Yes
beta-Endolsulfan	µg/L	<	0.00092			0.009	0.22	0.056	0.034	0.0087				No
Endosulfan Sulfate	µg/L	<	0.0018			No Criteria								No
Endrin	µg/L	<	0.0019			0.002	0.086	0.036	0.037	0.0023				No
Endrin Aldehyde	µg/L	<	0.002			No Criteria								No
Heptachlor	µg/L	<	0.0018			0.0036	0.52	0.0038	0.053	0.0036				No
Heptachlor Epoxide	µg/L	<	0.0012			0.0036	0.52	0.0038	0.053	0.0036				No
PCBs sum	µg/L	<	0.05			0.014		0.014		0.03				No
Toxaphene	µg/L	<	0.038			0.00020	0.73	0.0002	0.21	0.0002				No
Ammonia	mg/L	=	18			1.33			8.85	1.33				Yes
TCDD Equivalents	µg/L	<	0.000000178			No Criteria								No

Table Notes

1. Water quality criteria for the protection of freshwater aquatic life.
2. Water quality criteria for the protection of saltwater aquatic life.
3. Water quality criteria calculated using a WER of 12.6 for Discharge Point 001.

ATTACHMENT G - AMEL AND MDEL AMMONIA STANDARDS BASED ON THE 1989 SALTWATER ACUTE CRITERIA

Table G-[LISTNUM OutlineDefault \l 3 \s 1] pH, Salinity, and Temperature Dependent AMEL Ammonia Standards

	Temperature, °C							
pH	0	5	10	15	20	25	30	35
	Salinity = 10 g/kg							
7.0	30	21	15	10	6.9	4.8	3.2	2.3
7.2	19	13	8.8	6.4	4.3	3.0	2.0	1.5
7.4	12	8.8	5.7	3.9	2.7	1.9	1.3	0.88
7.6	7.3	5.3	3.7	2.5	1.8	1.2	0.88	0.61
7.8	4.8	3.4	2.3	1.6	1.1	0.80	0.55	0.39
8.0	3.0	2.1	1.5	1.0	0.71	0.50	0.34	0.25
8.2	2.0	1.3	1.0	0.64	0.45	0.32	0.23	0.17
8.4	1.2	0.88	0.59	0.41	0.30	0.21	0.15	0.12
8.6	0.80	0.55	0.39	0.27	0.20	0.15	0.11	0.08
8.8	0.50	0.37	0.25	0.18	0.13	0.10	0.08	0.06
9.0	0.32	0.23	0.17	0.12	0.10	0.07	0.06	0.05
	Salinity = 20 g/kg							
7.0	32	22	15	10	7.1	4.8	3.4	2.3
7.2	20	14	9.5	6.6	4.5	3.2	2.2	1.5
7.4	13	8.8	5.9	4.1	3.0	2.0	1.4	0.95
7.6	8.0	5.5	3.9	2.5	1.8	1.2	0.88	0.61
7.8	5.0	3.4	2.5	1.7	1.2	0.80	0.57	0.39
8.0	3.2	2.2	1.5	1.1	0.73	0.53	0.37	0.25
8.2	2.0	1.4	0.95	0.69	0.48	0.34	0.23	0.18
8.4	1.3	0.88	0.61	0.43	0.32	0.22	0.16	0.12

	Temperature, °C							
8.6	0.80	0.57	0.41	0.30	0.20	0.15	0.11	0.09
8.8	0.53	0.37	0.27	0.19	0.14	0.10	0.08	0.06
9.0	0.34	0.25	0.18	0.13	0.10	0.07	0.06	0.05
	Salinity = 30 g/kg							
7.0	34	23	16	11	8.0	5.3	3.7	2.5
7.2	21	15	10	7.1	4.8	3.4	2.3	1.6
7.4	14	9.5	6.4	4.1	3.0	2.1	1.5	1.0
7.6	8.8	5.9	4.1	2.7	2.3	1.3	0.95	0.66
7.8	5.5	3.7	2.5	1.8	1.2	0.88	0.59	0.41
8.0	3.4	2.3	1.6	1.2	0.80	0.55	0.39	0.27
8.2	2.2	1.5	1.0	0.73	0.50	0.37	0.25	0.18
8.4	1.4	0.95	0.66	0.45	0.32	0.23	0.17	0.12
8.6	0.88	0.61	0.43	0.30	0.22	0.16	0.12	0.09
8.8	0.57	0.39	0.27	0.20	0.15	0.11	0.08	0.07
9.0	0.37	0.25	0.19	0.14	0.10	0.08	0.06	0.05

Table G-[LISTNUM OutlineDefault \l 3 \] pH, Salinity, and Temperature Dependent MDEL Ammonia Criteria

	Temperature, °C							
pH	0	5	10	15	20	25	30	35
	Salinity = 10 g/kg							
7.0	75	53	36	25	17	12	8.0	5.6
7.2	47	33	22	16	11	7.5	5.1	3.6
7.4	31	22	14	9.6	6.7	4.7	3.3	2.2
7.6	18	13	9.1	6.2	4.4	3.1	2.2	1.5
7.8	12	8.6	5.6	4.0	2.7	2.0	1.4	0.96

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	Temperature, °C							
8.0	7.5	5.3	3.6	2.5	1.8	1.3	0.86	0.62
8.2	4.9	3.3	2.4	1.6	1.1	0.80	0.56	0.42
8.4	3.1	2.2	1.5	1.0	0.75	0.53	0.38	0.29
8.6	2.0	1.4	0.96	0.67	0.49	0.36	0.27	0.20
8.8	1.3	0.91	0.62	0.46	0.33	0.25	0.20	0.15
9.0	0.80	0.56	0.42	0.31	0.24	0.18	0.15	0.13
	Salinity = 20 g/kg							
7.0	80	55	38	25	18	12	8.6	5.6
7.2	49	35	24	16	11	8.0	5.5	3.8
7.4	33	22	15	10	7.5	4.9	3.5	2.4
7.6	20	14	10	6.2	4.6	3.1	2.2	1.5
7.8	13	8.6	6.2	4.2	2.9	2.0	1.4	0.96
8.0	8.0	5.5	3.8	2.7	1.8	1.3	0.91	0.62
8.2	5.1	3.5	2.4	1.7	1.2	0.86	0.56	0.44
8.4	3.3	2.2	1.5	1.1	0.80	0.55	0.40	0.29
8.6	2.0	1.4	1.0	0.75	0.51	0.36	0.27	0.22
8.8	1.3	0.91	0.67	0.47	0.35	0.25	0.20	0.15
9.0	0.86	0.62	0.44	0.33	0.24	0.18	0.15	0.13
	Salinity = 30 g/kg							
7.0	86	56	40	27	20	13	9.1	6.2
7.2	53	36	25	18	12	8.6	5.6	4.0
7.4	35	24	16	10	7.5	5.3	3.6	2.5
7.6	22	15	10	6.7	5.6	3.3	2.4	1.6
7.8	14	9.1	6.2	4.4	3.1	2.2	1.5	1.0
8.0	8.6	5.6	4.0	2.9	2.0	1.4	0.96	0.67

	Temperature, °C							
8.2	5.5	3.8	2.5	1.8	1.3	0.91	0.62	0.46
8.4	3.5	2.4	1.6	1.1	0.80	0.56	0.42	0.31
8.6	2.2	1.5	1.1	0.75	0.55	0.40	0.29	0.22
8.8	1.4	0.96	0.67	0.49	0.36	0.27	0.20	0.16
9.0	0.91	0.62	0.47	0.35	0.25	0.20	0.15	0.13

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ATTACHMENT H - EXAMPLE AMMONIA IMPACT RATIO (AIR) CALCULATOR

A	B	C	D	E	F	G	I
Date of Sample	Ammonia Value in Effluent (mg/L N)	Receiving Water pH	Receiving Water Temperature (°C)	Receiving Water Salinity (g/kg)	Ammonia Standard as determined from Ammonia Criteria Tables	MDEL Ammonia Impact Ratio (Column B/ Column F)	AMEL Ammonia Impact Ratio (Column B/ Column F)

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