ATTACHMENT F - FACT SHEET

TABLE OF CONTENTS

TABLE OF TABLES

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 F-1. Facility Information

WDID	1B8314OHUM
Permittee	City of Rio Dell
Name of Facility	City of Rio Dell Wastewater Treatment Facility
Facility Address	475 Hilltop Drive Rio Dell, CA 95562 Humboldt County
Facility Contact, Title and Phone	Derek Taylor, Wastewater Superintendent, (707) 764-5754
Authorized Person to Sign and Submit Reports	Kyle Knopp, City Manager, (707) 764-3532
Mailing Address	675 Wildwood Ave, Rio Dell, CA 95562
Billing Address	Same as mailing address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Not Applicable
Recycling Requirements	Producer, Distributer, User

Facility Permitted Flow	0.40 mgd (average dry weather flow capacity) 1.25 mgd (average monthly wet-weather flow capacity) 2.51 mgd (peak wet weather flow capacity)
Facility Design Flow	0.40 mgd (average dry weather flow capacity) 1.25 mgd (average monthly wet-weather flow capacity) 2.51 mgd (peak wet weather flow capacity)
Watershed	Eel River Hydrologic Unit, Ferndale Hydrologic Subarea
Receiving Water	Lower Eel River
Receiving Water Type	Inland Surface Waters

1.1. The City of Rio Dell (hereinafter Permittee) is the owner and operator of the City of Rio Dell Wastewater Treatment, Recycling and Disposal Facility (hereinafter Facility), a POTW.

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

1.2. The Facility discharges secondary treated wastewater to Lower Eel River, a water of the United States. The Permittee was previously regulated by Order No. R1-2017-0007 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0022748adopted on November 1, 2017 and expired on October 1, 2022. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

1.3. The Permittee filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on October 28, 2021. The application was deemed complete on September 26, 2022.

1.4. 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 municipal wastewater treatment facility (WWTF) and associated wastewater collection and disposal facilities that serve a population of 3,900 residential users in the Community of Rio Dell. The Facility discharges secondary treated wastewater from Discharge Point 001 to the Lower Eel River, just downstream of Highway 101 Bridge. The Facility also discharges disinfected

secondary-23 recycled water to an irrigation site located northwest of the Facility and west of the southbound Highway 101 Bridge, via Discharge Point 003.

2.1. Description of Wastewater and Biosolids Treatment and Controls

The Facility is located in the Ferndale Hydrologic Subarea of the Lower Eel River Hydrologic Area. The Facility is designed to treat an average dry weather flow of 0.40 mgd, an average monthly wet-weather flow of 1.25 mgd, and a peak wet weather flow of 2.51 mgd.

2.1.1. Collection System

The collection system includes two lift stations with dual pump systems and generators at each. The lift stations convey the wastewater to the headworks building via a North and South mainline.

2.1.2. Wastewater Treatment Facility

The raw sewage flows through a quarter inch opening automatic bar screen and grit removal system then discharges into the influent pump station wet well. A manual bar screen is also available as a backup.

The treatment system consists of headworks, Aero-Mod secondary treatment and solids stabilization system, chlorine disinfection in two chlorine contact tanks, and dechlorination using sodium bisulfite.

2.1.3. Recycled Water

The Permittee produces disinfected secondary recycled water. May 15 through September 30, the recycled water is used to irrigate hay grass and alfalfa at the Irrigation Site. The hay grass and alfalfa are harvested as fodder for beef cattle.

The use of the Irrigation Site commenced in 2014. The irrigation site was previously regulated as discharge to land under NPDES permit No. R1-2017-0007. In April 2022 discharge to Discharge Point 003 was reclassified as recycled water when the Division of Drinking Water approved the Rio Dell Title 22 Engineering Report. Operations at the Irrigation Site will not undergo substantial change due to reclassification.

2.1.4. Biosolids

Solids removed from the wastewater are stored and thickened in two aerated digesters and subsequently dewatered with a belt filter press. The dewatered biosolids are further processed through an indirect sludge dryer, which produces Class A biosolids that the Permittee gives away to a local farmer for use as a soil amendment.

2.2. **Discharge Points and Receiving Waters**

2.2.1. The Facility is located within the Ferndale Hydrologic Subarea of the Lower Eel River Hydrologic Area. The main tributaries to the Lower Eel River are the Van Duzen River, Yager Creek, Larabee Creek, Bull Creek, and Salmon Creek. The upper watershed is mountainous and vegetated by redwood and Douglas fir, interspersed with some hardwoods and meadows. Towards the coast, the river spreads out on a coastal plain where the Salt River joins the Eel River Estuary. The Eel River is designated a Critical Coastal Area by the Statewide Critical Coastal Areas Committee.

The Eel River Watershed Management Area (WMA) encompasses roughly 3,684 square miles in highly erodible soils in the steep coastal mountains of the Region, supporting a variety of water uses including municipal and agricultural supply systems, salmonid fisheries, and recreation. The Eel River WMA is a prime recreational area boasting numerous state and private campgrounds along its length with both water contact and non- contact uses such as boating and swimming. The Eel River is the third largest producer of salmon and steelhead in California and supports a large recreational fishing industry. The erodible soils, steep terrain, and other contributing factors evoke a high level of concern for the anadromous fishery resource. Coho salmon, a native species of the Eel River watershed, were listed as endangered under the federal Endangered Species Act in 1997.

2.2.2. During October 1 through May 14, effluent may be discharged to the Lower Eel River at Discharge Point 001 at 40° 29’ 48.7” N latitude and 124° 5’ 42.2” W longitude. The Lower Eel River is a water of the United States.

2.2.3. The City’s recycled water use is identified in Title 22, Section 60304(d) as surface irrigation of “fodder and fiber crops and pasture for animals not producing milk for human consumption.” The minimum recycled water quality allowed for this use is “undisinfected secondary recycled water” defined in Title 22, Section 60301.900. However, the Permittee discharges disinfected secondary-23 recycled water in practice which is treated to a level above what is required by Title 22.

2.2.4. The disinfected recycled water is discharged to a 23-acre irrigation site located northwest of the City and west of the southbound Highway 101 Bridge from May 15 to September 30 at Discharge Point 003 at 40° 30’ 47.79” N latitude and 124° 7’ 54.54” W longitude. Operation of the Irrigation Site was previously regulated as land disposal under NPDES permit Order No. R1-2017-0007.

2.2.5. The Permittee previously discharged treated wastewater to a percolation pond adjacent to the Lower Eel River at Discharge Point 002 during the period of May 15 to September 30. The percolation pond was seasonally constructed within the gravels of the active channel of the Lower Eel River. The Permittee has discontinued discharges to the percolation pond at Discharge Point 002.

This Order does not authorize discharges at Discharge Point 002.

2.3. Summary of Existing Requirements and SMR Data

Effluent limitations contained in Order No. R1-2017-0007 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order No. R1-2017-0007 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data[1]

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	--	7.2	11	11
BOD_5	% Removal	85	--	--	94.4[2]	--	94.4[2]
Total Suspended Solids (TSS)	mg/L	30	45	--	4	8	8
TSS	% Removal	85	--	--	95.9[2]	--	95.9[2]
pH	s.u.	--	--	6.5 – 8.5	--	--	6.40-7.93
Settleable Solids	ml/L	0.1	--	0.2	<0.1	--	<0.1
Chlorine, Total Residual[2]	mg/L	0.01	--	0.02	<0.01	--	<0.01
Chlorodibromomethane	µg/L	0.41	--	0.80	2.6	--	2.6
Dichlorobromomethane	µg/L	0.56	--	1.1	16.3	--	16.3
Total Trihalomethanes	µg/L	80	--	--	101.39	--	101.39
Haloacetic Acids	µg/L	60	--	--	109.1	--	109.1

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Nitrogen, Total (as N)	mg/L	10	--	--	0.14	--	0.14
Total Coliform Bacteria	MPN/100 mL	23[3]	--	240	66.5[3]	--	540
Acute Toxicity	% Survival	70[4]/90[5]	--	--	80[6]	--	80

Table Notes

1. Data represented in the table includes all relevant monitoring results from November 1, 2017 – August 30, 2022 at both EFF-001 and EFF-003.
2. Represents the minimum observed monthly average percent removal value.
3. Represents the median concentrations Most Probable Number (MPN) per 100 milliliters, using the bacteriological results of the last 30 calendar days for which analyses have been completed.
4. Minimum for any one bioassay.
5. Median for any three or more consecutive bioassays.
6. Represents the minimum observed percent survival.

2.4. **Compliance Summary**

2.4.1. The Permittee reported 17 sanitary sewer overflows from its collection system since January of 2018, as follows:

2.4.1.1. On January 24, 2018, during a period of heavy rainfall, 19,200 gallons of raw sewage was discharged from a sewer manhole on Painter Street and to the Eel River.

2.4.1.2. On March 19, 2018, during a period of heavy rainfall, 86,400 gallons of raw sewage was discharged from a sewer manhole on 780 Rigby Ave. and to the Eel River.

2.4.1.3. January 16, 2019, during a period of heavy rainfall, 4,600 gallons of raw sewage was discharged from a sewer manhole on Painter Street and to the Eel River. An estimated 750 gallons were recovered and treated at the Facility.

2.4.1.4. February 25, 2019, during a period of heavy rainfall, 28,000 gallons of raw sewage was discharged from a sewer manhole on Painter Street and to the Eel River. An estimated 17,400 gallons were recovered and treated at the Facility.

2.4.1.5. February 26, 2019, during a period of heavy rainfall, 2,100 gallons of raw sewage was discharged to land from a sewer manhole on Painter Street. An estimated 2,100 gallons were recovered and treated at the Facility.

2.4.1.6. On January 16, 2020, during a period of heavy rainfall, 9,300 gallons of raw sewage was discharged to land from a sewer manhole on Painter Street. An estimated 5,300 gallons were recovered and treated at the Facility.

2.4.1.7. On May 5, 2020, grease deposition in the collection system occurred, and 140 gallons of raw sewage was discharged from a sewer manhole on 104 Ogle Avenue and did not impact surface waters.

2.4.1.8. On January 26, 2021, during a period of heavy rainfall, 10,065 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 1,000 gallons were recovered and treated at the Facility.

2.4.1.9. On January 27, 2021, during a period of heavy rainfall, 28,750 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 4,800 gallons were recovered and treated at the Facility.

2.4.1.10. On December 15, 2021, debris and cloth build-up occurred, 525 gallons of raw sewage was discharged from a sewer manhole in the crosswalk on 2nd

Avenue and Davis Street and did not impact surface waters. An estimated 750 gallons were recovered.

2.4.1.11. On December 10, 2022, during a period of excessive rainfall, 585 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 1600 gallons were recovered.

2.4.1.12. The Permittee identified the location of these spills as a weak point in the collection system because this point in the collection system receives the flow from two lift stations that pump at maximum capacity during periods of sustained and/or heavy rainfall, and the pipe cannot convey the amount of sewage combined with infiltration and inflow that flows through it during these times.

2.4.1.13. On December 26, 2022, during a period of excessive rainfall, 40,675 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 26,300 gallons were recovered.

2.4.1.14. On December 30, 2022, during a period of excessive rainfall, 5,500 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 24,200 gallons were recovered.

2.4.1.15. On January 4, 2023, during a period of heavy rainfall, 150,100 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 25,300 gallons were recovered and treated at the Facility.

2.4.1.16. On January 7, 2023, during a period of heavy rainfall, 211,700 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 39,000 gallons were recovered and treated at the Facility.

2.4.1.17. On January 13, 2023, during a period of heavy rainfall, 53,550 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 32,000 gallons were recovered and treated at the Facility.

2.4.1.18. On January 14, 2023, during a period of heavy rainfall, 117,500 gallons of raw sewage was discharged from the same sewer manhole at Painter Street and to the Eel River. An estimated 49,700 gallons were recovered and treated at the Facility.

2.4.2. The Permittee was consistently unable to meet effluent limitations in the permit term of Order No. R1-2017-0007 for dichlorobromomethane, chlorodibromomethane, Total Trihalomethanes, and Haloacetic Acids. In response, the Regional Water Board Executive Officer issued Time Schedule Order (TSO) No. R1-2017-0045 on October 20, 2017 to address noncompliance with final effluent limitations for these constituents. The TSO

also addressed the Permittee's need to reduce excessive infiltration and inflow (I/I) and therefore prevent future SSO incidents.

2.4.3. The Permittee has consistently submitted progress reports and made good faith efforts to address the issues outlined in TSO No. R1-2017-0045. The Permittee will not be able to complete the final compliance requirement within the schedule outlined in TSO No. R1-2017-0045. Therefore, the Permittee shall comply with the compliance schedule outlined in Table 5 of this order.

2.4.4. The Permittee sent a letter to the State Water Board's Division of Financial Assistance including a request to amend to the scope, schedule, and budget in response to the 6.4 magnitude earthquake on December 20, 2022. The Permittee noted severe damage to the collection system, which caused an increase in I/I. The damage assessment is not yet complete, but the damage caused by natural disaster will require a more extensive collection system upgrade that will require additional time to complete.

2.4.5. Due to the unforeseen challenges of the COVID-19 pandemic such as supply chain issues and lockdown safety measures, City of Rio Dell was unable to complete Tasks I though L of addressed in Table 1 of TSO No. R1-2017-0045 and complete tasks C and D of Table 2 of TSO No. R1-2017-0045. Furthermore, due to the damage inflicted by the natural disasters in December 2022 and January 2023 the Regional Water Quality Control Board finds that additional time is necessary to comply with the effluent limitations for dichlorobromomethane, chlorodibromomethane, Total Trihalomethanes, and Haloacetic Acids and to complete upgrades to comply with Order No. 2022-0103-DWQ, Statewide General WDRs for Sanitary Sewer Systems.

2.5. **Planned Changes**

2.5.1. The Permittee is evaluating chloramine disinfection as an alternative to chlorine disinfection to address disinfection byproduct formation in the treated effluent. Initial bench testing was favorable in terms of achieving compliance with effluent limitations for disinfection byproducts, bacteria, and ammonia. The City is now planning to complete a full-scale chloramine test to evaluate disinfection system effectiveness and ammonia concentrations under simulated discharge conditions. The full-scale test will be conducted during 2023 when treated effluent is applied at the Irrigation Site. The Permittee will install ammonia testing equipment, utilize chloramine at predicted dosages, and evaluate impacts to effluent quality. Upon completion the Permittee will report the results of the full-scale study to the Regional Water Board for approval by the Executive Officer, install permanent equipment, and incorporate any operational changes necessary to achieve compliance with effluent limitations for disinfection byproducts.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit authorizing the Permittee to discharge into waters of the United States at the discharge location described in Table 1, subject to the requirements in this Order. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260) and water recycling requirements pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13500).

3.2. California Environmental Quality Act (CEQA)

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

The Water Recycling Requirements of this Order are exempt from CEQA pursuant to California Code of Regulations, title 14, section 15301, (existing facilities) as this Order does not authorize an expansion or change of use of recycled water.

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

3.3.1. Water Quality Control Plan

The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Beneficial uses applicable to Lower Eel River are summarized in Table F-3, as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lower Eel River within the Ferndale Hydrologic Subarea of the Lower Eel River Hydrologic Area	Existing: Municipal and domestic supply (MUN); Agricultural supply (AGR); Industrial service supply (IND); Groundwater recharge (GWR); Freshwater replenishment (FRSH); Navigation (NAV); Water contact recreation (REC-1); Non-contact water recreation (REC-2); Commercial and Sport Fishing (COMM); Cold freshwater habitat (COLD); Wildlife habitat (WILD); Rare, threatened, or endangered species (RARE); Migration of aquatic organisms (MIGR); and Spawning, reproduction, and/or early development (SPWN); Shellfish Harvesting (SHELL); Native American Culture (CUL). Potential: Industrial process supply (PRO); Marine Habitat (MAR); Hydropower generation (POW), and Aquaculture (AQUA).
003	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).

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coast Basin. For the Eel River and its tributaries, no point source waste discharges are allowed during the period of May 15 through September 30, and for all other periods the receiving stream's flow must be at least 100 times greater than the waste flow

unless an exception to the requirement is granted by the Regional Water Board.

Requirements of this Order implement the Basin Plan.

3.3.2. 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.

3.3.3. 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 priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the 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, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

3.3.4. Domestic Water Quality

In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels implemented by the Basin Plan that are designed to protect human health and ensure that water is safe for domestic use.

3.3.5. 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*, (Compliance Schedule Policy) which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

The Order includes a compliance schedule for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and Haloacetic Acids effluent limitations to comply with the Basin Plan (Chapter 3) for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals). The compliance schedule is in accordance with the Compliance Schedule Policy as further discussed in section 6.2.11 of this Fact Sheet.

3.3.6. 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 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 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 68-16.

3.3.7. 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) 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. 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.

3.3.8. Endangered Species Act Requirements

This Order does not authorize any 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, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 151 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the state. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

3.3.9. Sewage Sludge and Biosolids

This Order does not authorize any act that results in violation of requirements administered by U.S. EPA to implement 40 C.F.R. Part 503, Standards for the

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

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

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies every two years.

In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The CWA requires development of a total maximum daily load (TMDL) or alternate program of implementation for each 303(d) listed pollutant and water body to remedy the impairment. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On June 9, 2021, the U.S. EPA provided final approval of the 2018 303(d) List of Impaired Water Bodies prepared by the state. The list identifies the entire Eel River watershed as impaired by sedimentation/siltation and temperature, and the Lower Eel River as impaired by dissolved oxygen and aluminum. Pursuant to CWA section 303(d), the Regional Water Board will develop TMDLs to address the impairments, which will be implemented through various programs, including through provisions of NPDES permits.

Regarding temperature, on December 18, 2007, the North Coast Regional Water Board adopted the Lower Eel River TMDL for temperature and sediment that concludes that most sources of heat in the Lower Eel River are from diffuse, nonpoint sources and result from such factors as removal of stream shade, longer travel time, changes in timing and volume of natural stream flow due to water diversions and impoundments, and increased sediment loads that cause widening of streams. As the critical time period for temperature is in the summer, the TMDL was established for that critical time period, which is also the time period when point source discharges from the Facility are prohibited. The TMDL concludes that, because of the summer discharge prohibition, area facilities such as the Facility do not contribute to temperature loadings to the Lower Eel River Watershed during critical periods, and therefore, the TMDL establishes a "zero" waste load allocation (WLA) to mean that, as long as the Permittee adheres to the

summer discharge prohibition, it will be in compliance with the approved TMDL for temperature.

With regard to sediment, the TMDL establishes a maximum loading of 125 percent of the natural sediment loading for the watershed and further defines that loading rate as 2.5 tons of sediment per square mile of watershed per day on a long-term basis. The TMDL found that nonpoint sources were primarily responsible for excessive sediment loadings to the Lower Eel River, and the TMDL established WLAs for wastewater treatment facilities at levels corresponding to existing permit limitations for suspended and settleable solids. In order to be protective of the Basin Plan water quality objectives for sediment in the Lower Eel River Watershed, this Order retains effluent limitations for TSS and settleable solids from Order No. R1-2017-0007.

Regarding dissolved oxygen, the Permittee monitors the Eel River for dissolved oxygen immediately upstream and downstream of its discharge to the Eel River. Dissolved oxygen monitoring data collected between November 2017 and August 2022 reveal that concentrations range between 9.5 and 11.5 mg/L and that there is little change between the upstream and downstream monitoring data. Regional Water Board therefore concludes that the Permittee's discharge is not expected to contribute to the dissolved oxygen impairment.

Regarding aluminum, the Permittee does not use any aluminum-containing chemicals in its wastewater treatment process, therefore, the Regional Water Board does not anticipate that the Permittee's discharge will contribute to the aluminum impairment. Nevertheless, to confirm this assertion, this Order establishes effluent and receiving water monitoring for aluminum to inform Regional Water Board staff of the reasonable potential for the Permittee to exceed water quality objectives when discharging to the South Fork Eel River.

3.5. Other Plans, Polices and Regulations

3.5.1. On December 6, 2022, the State Water Board adopted State Water Board Order No. 2022-0103-DWQ, Statewide General WDRs for Sanitary Sewer Systems. Order No. 2022-0103-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDRs. The Permittee applied for coverage and is subject to the requirements of Order No. 2022-0103-DWQ and any future revisions thereto for operation of its wastewater collection system. Coverage under the State Water Board Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (Industrial Storm Water General Permit) is not required because the design flow of the Facility is less than 1 mgd.

3.5.2. In 1996, the State Water Board and the California Department of Health Services (now State Water Board Division of Drinking Water or DDW) set forth principles, procedures, and agreements to which the agencies committed

themselves relative to the use of recycled water in California, in a document titled Memorandum of Agreement between the Department of Health Services and the State Water Resources Control Board on the Use of Reclaimed Water (MOA). This Order is consistent with the MOA.

3.5.3. On February 3, 2009, the State Water Board adopted Resolution No. 2009-0011, Adoption of a Policy for Water Quality Control for Recycled Water (Recycled Water Policy) (Revised December 11, 2018, effective April 8, 2019) for the purpose of increasing the use of recycled water from municipal wastewater sources in a manner that implements state and federal water quality laws. The Recycled Water Policy provides direction to the regional water boards regarding the appropriate criteria to be used in issuing permits for recycled water projects and describes permitting criteria intended to streamline, and provide consistency for, the permitting of the vast majority of recycled water projects. Pertinent provisions and requirements of the Policy have been incorporated into this Order to address conditions specific to the Permittee's plan to implement water recycling.

The Recycled Water Policy recognizes the fact that some groundwater basins in the state contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt or nutrients. The Recycled Water Policy further recognizes that these conditions can be caused by natural soils/conditions, discharges of waste, irrigation using surface water, groundwater or recycled water, and water supply augmentation using surface or recycled water, and that regulation of recycled water alone will not address these conditions. It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional Salt and Nutrient Management Plans (SNMPs) rather than through imposing requirements solely on individual recycled water projects. This Order is consistent with the requirements of the Recycled Water Policy to implement an SNMP. This Order is consistent with the requirements of the Recycled Water Policy to implement a SNMP. The Recycled Water Policy currently requires monitoring for priority pollutants annually. This Order implements this requirement through the annual CTR priority pollutant monitoring requirement in the MRP that is required of the Permittee pursuant to the SIP.

3.5.4. 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 Land Reclamation Activities. The Order requires the Permittee to obtain coverage under Order No. 2004-0012-DWQ prior to any

removal of biosolids from the Facility that will be land disposed on property owned or controlled by the Permittee.

3.5.5. When applicable, state law requires dischargers to file a petition with the State Water Board, Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of the watercourse. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits.

There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exists.

4.1. Discharge Prohibitions

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

This prohibition has been retained from Order No. R1-2017-0007 and is based on the Basin Plan and State Water Board Order No. WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No. WQO 2002-0012, the State Water Board found that this prohibition is acceptable in Orders but should be interpreted to apply only to constituents that are either not disclosed by the Permittees, or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Permittees. It specifically does not apply to constituents in the discharge that do not have "reasonable potential" to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were "*disclosed to the permitting authority and…can be reasonably contemplated.*" [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002) Order No. WQO 2002-0012, p. 24]. In

that Order, the State Water Board cited a case which held the Permittee is liable for the discharge of pollutants "*not within the reasonable contemplation of the permitting authority…whether spills or otherwise…*" [*Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland* (4th Cir. 2001) 268 F. 3d 255, 268.] Thus, the State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Permittees and (2) can be reasonably contemplated by the Regional Water Board.

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

This prohibition has been retained from Order No. R1-2017-0007 and is based on section 13050 of the Water Code and section 5411 of the California Health and Safety Code.

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

This prohibition has been retained from Order No. R1-2017-0007 and is based on restrictions on the disposal of sewage sludge found in federal regulations [40 C.F.R. part 503 (Biosolids), part 527, and part 258] and title 27 of the CCR.

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

This prohibition has been retained from Order No. R1-2017-0007 and is based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and the intent of the Water Code sections 13260 through 13264 relating to the discharge of waste to waters of the state without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

4.1.5. **Discharge Prohibition 3.5.** The discharge of waste to land that is not owned by the Permittee, governed by City ordinance, or under agreement to use by the Permittee, or for which the Permittee has explicitly permitted such use, is prohibited.

This prohibition is retained from Order No. R1-2017-0007. Land used for the application of wastewater must be owned by the Permittee or be under the control of the Permittee by contract (user agreement) so that the Permittee maintains a means for ultimate disposal of treated wastewater.

4.1.6. **Discharge Prohibition 3.6.** The discharge of recycled wastewater to any point not addressed in a DDW-accepted Title 22 Recycled Water Engineering Report is prohibited.

This prohibition is newly established by this Order and is necessary to ensure that the Permittee only discharges recycled water in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

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

This prohibition has been retained from Order No. R1-2017-0007. This prohibition is a general prohibition that allows the Permittee to discharge waste only in accordance with WDRs. It is based on sections 301 and 402 of the federal CWA and section 13263 of the Water Code.

4.1.8. **Discharge Prohibition 3.8.** The average dry weather flow of waste through the Facility shall not exceed 0.40 mgd. The average monthly wet weather flow of waste through the Facility shall not exceed 1.25 mgd. The peak daily wet weather flow of waste through the Facility shall not exceed 2.51 mgd. Compliance with this prohibition shall be determined as defined in sections 7.10 and 7.11 of this Order.

The average dry weather flow prohibition is retained from Order No. R1-2017-0007 and is based on the engineering design of the Facility. The peak daily wet weather flow prohibition is also retained from Order No. R1-2017-0007 and based on the peak wet weather treatment capacity of the Facility as stated in the ROWD.

4.1.9. **Discharge Prohibition 3.9.** The discharge of waste to the Lower Eel River and its tributaries is prohibited during the period from May 15 through September 30 of each year.

This prohibition is retained from Order No. R1-2017-0007 and is required by the Basin Plan. The Basin Plan prohibits discharges to the Lower Eel River and its tributaries during the period May 15 through September 30 (Chapter 4, Waste Discharge prohibitions for the North Coastal Basin).

4.1.10. **Discharge Prohibition 3.10.** During the period from October 1 through May 14, discharges of treated wastewater to the Lower Eel River shall not exceed one percent of the flow of the Lower Eel River, as measured at United States

Geological Survey (USGS) Gage No. 11477000 in the Lower Eel River near Scotia. For the purposes of this Order, compliance with this discharge prohibition shall be determined as follows:

The discharge of secondary treated wastewater shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of the Lower Eel River. Daily flow shall be based on flow meter comparisons reasonably read between the hours of 12:01 am and 12:00 midnight.

In no case shall the total volume of secondary treated wastewater discharged in a calendar month exceed one percent of the total volume of the Lower Eel River's flow that occurs in the same calendar month, as measured per Section 3.11. At the beginning of the discharge season, the monthly flow volume comparison shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume comparison shall be based on the first day of the calendar month to the date when the discharge ceases for the season.

This prohibition has been retained from Order No. R1-2017-0007 and is required by the Basin Plan (Chapter 4, North Coastal Basin Discharge Prohibition No. 3). The Basin Plan prohibits discharges to the Eel River and its tributaries when the waste discharge flow is greater than one percent of the receiving water's flow. Basin Plan Prohibition No. 3 does not specify how compliance to the one-percent flow requirement will be determined. This prohibition, set forth in Provision 3.11 of this Order, specifies that the discharge may comply with the one percent requirement as a monthly average for the surface water discharge season if USGS Station 11477000 is read at least once daily, and the discharge flow rate shall not be set for greater than one percent of the flow of the river at the time of the daily reading.

4.1.12. **Discharge Prohibition 3.11.** The discharge of any radiological, chemical, or biological warfare agent into waters of the state under Water Code section 13375.

This prohibition is retained from Order No. R1-2017-0007 and is based on the discharge prohibitions contained in and Water Code section 13375.

4.1.13. **Discharge Prohibition 3.12.** The acceptance of septage to a location other than an approved septage receiving station and in accordance with a septage management program approved by the Regional Water Board Executive Officer is prohibited.

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

4.2. Technology-Based Effluent Limitations

4.2.1. Scope and Authority

4.2.1.1. 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 and Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

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

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

Based on this statutory requirement, U.S. EPA developed secondary treatment regulations, which are specified in 40 C.F.R. part 133. These technology-based regulations apply to all municipal wastewater treatment facilities and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD_5, TSS, and pH, as follows:

4.2.1.1.1. **BOD_5 and TSS**

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

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

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

4.2.1.1.2. **pH**

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

4.2.1.1.2.2. The more stringent effluent limitation for pH of 6.5 to 8.5 required by this Order is necessary to meet the water quality objective for hydrogen ion concentration (pH) ~~is~~ contained in the Basin Plan, Table 3-1.

4.2.1.2. In addition, 40 C.F.R. section 122.45(f) requires the establishment of mass-based effluent limitations for all pollutants limited in Orders, except for 1) pH,

temperature, radiation, or other pollutants which cannot be appropriately expressed by mass, 2) when applicable standards and limitations are expressed in terms of other units of measure, and 3) where the permit limitation is established on a case-by-case basis under 40 C.F.R. section 125.3 and limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation, and permit conditions ensure that dilution will not be used as a substitute for treatment.

Technology-based effluent limitations may be set on a case-by-case basis under section 402(a)(1) of the CWA to the extent that EPA-promulgated effluent limitations are inapplicable based upon the available information and unique factors related to the applicant. A combination of EPA-promulgated effluent limitations and effluent limitations developed under a case-by-case basis scenario may be applied to carry out the provisions of the CWA. "Best Practicable Control Technology" (BPT) requirements may be established by a permitting authority on a case-by-case basis considering the appropriate factors listed at 40 C.F.R. section 125.3(d)(1). Factors to be considered for BPT requirements include:

4.2.1.2.1. The total cost of application of the technology in relation to the effluent reduction benefits to be achieved from such application;

4.2.1.2.2. The age of equipment and facilities involved;

4.2.1.2.3. The process employed;

4.2.1.2.4. The engineering aspects of the application of various types of control techniques;

4.2.1.2.5. Process changes; and

4.2.1.2.6. Non-water quality environmental impacts (including energy requirements).

4.2.2. Applicable Technology-Based Effluent Limitations

The effluent limitations in this Order for BOD_5, TSS, and pH not only meet the technology-based requirements for secondary treatment set forth in section 133.102, but they also are required to meet the water quality-based requirements set forth in the Basin Plan.

4.2.2.1. **BOD_5 and TSS.** 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- and TSS, including the percent removal requirements, are retained from Order No. R1-2017-0007 and reflect the secondary treatment standards at 40 C.F.R. part 133.

4.2.2.2. **pH.** The secondary treatment regulations at 40 C.F.R. part 133 require that pH be maintained between 6.0 and 9.0 standard units. This technology based effluent limitation is applied to discharges from the treatment system at Discharge Point 001. Note that a more stringent effluent limitation range of 6.5 – 8.5 for pH is required to meet the water quality objective for hydrogen ion concentration (pH) in the Lower Eel River contained in Basin Plan, Table 3-1.

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

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

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

4.2.2.3.2. pH and settleable solids, because these parameters cannot appropriately be expressed by mass.

Table F-4. Summary of Technology Based Effluent Limitations – Discharge Point 001 (Monitoring Location EFF-001)

Parameter	Unit	Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @20°C (BOD_5)	mg/L	30	45	--	--
BOD5	% Removal	85	--	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	--
TSS	% Removal	85	--	--	--
pH	standard units	--	--	6.5[1]	8.5[1]

Table Notes

1. This Order includes final instantaneous minimum and maximum effluent limitations for pH of 6.5 and 8.5, respectively, based on the more stringent water quality criteria.

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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of secondary treatment, is discussed in section 4.3.3 of this Fact Sheet.

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.** 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 the Eel River and its tributaries. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as applicable water quality criteria the MCLs established by the State Water Board, Division of Drinking Water (DDW) for the protection of public water supplies at title 22 of the CCR 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. section 131.38; and the NTR, established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

The SIP, which is described in section 3.3.3 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.

Aquatic life freshwater and saltwater criteria are identified in the CTR and NTR 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. Aquatic life freshwater criteria were used for the Reasonable Potential Analysis

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 consumption of drinking water, fish and shellfish. The criteria from the “water and organisms” column of CTR were used for the RPA because the Basin Plan identifies that the receiving water, the Eel River, has the beneficial use designation of municipal and domestic supply.

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.

For WQBELs for toxic pollutants, Section 5.2.3 of the EPA Technical Support Document for Water Quality-based Toxic Controls states "in lieu of an Average Weekly Limit (AWL) for POTWs, EPA recommends establishing a Maximum Daily Limit (MDL) (or a maximum test result for chronic toxicity) for toxic pollutants and pollutant parameters in water quality permitting. This is appropriate for at least two reasons. First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge's potential for causing acute toxic effects would be missed. A MDL, which is measured by a grab sample, would be toxicologically protective of potential acute toxicity impacts."

Section 1.4 of the SIP states that maximum daily effluent limitations (MDEL) shall be used for POTWs in place of average weekly effluent limitations (AWEL) for WQBELs. The SIP procedure of calculating an AMEL and an MDEL applies to all CTR pollutants, both those that are for protection of aquatic life and those that are for the protection of human health.

The RPA for discharges to the Lower Eel River at Discharge Point 001 was conducted as follows.

4.3.3.1. **Non-Priority Pollutants**

4.3.3.1.1. **pH.** The effluent limitation for pH of 6.5 to 8.5 is retained from Order No. R1-2017-0007. This limitation is based on the water quality objective for all surface waters established in chapter 3, Table 3-1 of the Basin Plan. Federal technology-based requirements prescribed in 40 C.F.R. part 133 are not sufficient to meet these Basin Plan water quality standards.

4.3.3.1.2. **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 freshwater aquatic life in

Quality Criteria for Water 1986 (The Gold Book, 1986, EPA 440/5-86-001). The chronic and acute criterion established for residual chlorine are 0.011 mg/L and 0.019 mg/L, respectively. Consistent with Order No. R1-2017-0007, the water quality criteria for total chlorine residual recommended by U.S. EPA have been translated to an AMEL of 0.01 mg/L and an MDEL of 0.02 mg/L in this Order.

4.3.3.1.3. **Total Coliform Bacteria.** Coliform bacteria are a pollutant of concern in all wastewaters of domestic origin, and therefore this Order retains the effluent limitations for total coliform bacteria from Order No. R1-2017-0007. Compliance with these effluent limitations will ensure that water quality objectives for bacteria, as established by Chapter 3 of the Basin Plan, will be maintained. These effluent limitations reflect standards for secondary treated water in the Basin Plan (Section 4, Implementation Plans) and as established for secondary-23 recycled water by DDW at title 22, division 4, chapter 3 of the CCR.

4.3.3.1.4. **Settleable Solids.** High levels of settleable solids can have an adverse effect on aquatic habitat. Untreated or improperly treated wastewater can contain high amounts of settleable solids. The Lower Eel River and its tributaries are listed as impaired for sediment and settleable solids. Monthly average and maximum daily effluent limitations for settleable solids of 0.1 ml/L and 0.2 ml/L have been retained from Order No. R1-2017-0007. These limitations reflect levels of treatment attainable by secondary treatment facilities. This limitation is necessary to comply with 303(d) list where the Lower Eel River is determined to be impacted by sediment. Furthermore, the Basin Plan prohibits discharge resulting in bottom deposits for all surface waters of the North Coast Region.

4.3.3.1.5. **Nitrogen Compounds.** 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 the receiving stream and inadequate or incomplete denitrification may result in the discharge of nitrate to the receiving stream. The Facility is designed to use nitrification to remove ammonia from the waste stream and denitrification to remove nitrate from the waste stream, culminating in an overall reduction in total nitrogen.

4.3.3.1.5.1. **Total Nitrogen.** The Basin Plan contains a narrative water quality objective for biostimulatory substances that states, “[w]aters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.” The Regional Water Board is increasingly concerned about the biostimulatory properties of discharges to surface water in the North Coast Region. Stimulation of biological growth can

deplete dissolved oxygen in receiving water below Basin Plan objectives. The Permittee sampled its discharge at Monitoring Location EFF-001 monthly during periods of discharge between November 2017 and May 2022. Monitoring results for total nitrogen ranged between 0.23 mg/L and 8.9 mg/L based on 30 samples. In order to protect water quality and ensure proper operation of the Facility, an AMEL of 10 mg/L for total nitrogen has been retained from Order No. R1-2017-0007.

4.3.3.1.5.2. **Nitrate.** Nitrate is known to cause adverse health effects in humans. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by DDW for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for nitrate (10 mg/L as N) is therefore applicable as a water quality criterion. The Permittee sampled its treated wastewater monthly during November 2017 through May 2022. Effluent water monitoring results for nitrate as N ranged between 0.23 mg/L and 7.2 mg/L based on 30 samples. Because nitrate levels in effluent have been measured at concentrations lower than 10 mg/L N, the Regional Water Board concludes that discharges from the Facility do not have a reasonable potential to cause or contribute to exceedances of the applicable water quality criterion for the receiving water for nitrate.

4.3.3.1.5.3. **Ammonia.** 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 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).

The 2013 Freshwater Criteria recommends acute and chronic water quality criteria for the protection of aquatic life, including salmonids and sensitive freshwater mussel species in the Family Unionidae that are more sensitive to ammonia than salmonids. Like the 1999 Freshwater Criteria document, the 2013 Freshwater Criteria document recommends acute (1-hour average) criteria based on pH and the presence/absence of salmonids and chronic (30 day average) criteria based on pH and temperature and that no 4-day average concentration should exceed 2.5 times the 30-day chronic criterion. In addition, the 2013 Freshwater

Criteria document recommends these same criteria for sensitive mussel species.

Adequate information is not available to determine if these freshwater mussels are present in the receiving water.

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 concentration in the effluent to the applicable 2013 Freshwater Criteria which is based on the receiving water pH and temperature at the time that each effluent sample is collected. See Attachment I of this Order for a sample log to help calculate and record the AIR values and Attachment H for applicable pH- and temperature-dependent criteria.

Receiving water pH of 9.8 and temperature of 20.1°C at Monitoring Location RSW-001 were used to calculate acute and chronic criteria of 0.37 mg/L and 0.15 mg/L, respectively, using the assumptions that salmonids and mussels are both present.

The most stringent water quality objective, as shown in the calculations in the paragraph preceding this, is 0.15 mg/L. The maximum observed effluent ammonia concentration from the Facility was 0.26 mg/L, based on 1 sample collected between November 2017 and August 2022.

Because ammonia in the treated wastewater has been measured at a concentration greater than EPA's 2013 Freshwater Criteria at Monitoring Location EFF-001, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of the Basin Plan's applicable narrative water quality criterion for toxicity. Therefore, this Order includes effluent limitations for ammonia for the protection of aquatic life. This Order establishes an average monthly effluent limitation (AMEL) of 1.0 and a maximum daily effluent limitation of 1.0 as an AIR. Attachment G provides calculations of the ammonia AMEL and MDEL.

4.3.3.1.6. **Biostimulatory Substances (Phosphorus and Nitrogen).** The Basin Plan contains a narrative water quality objective for biostimulatory substances that states "[w]aters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses." The Regional Water Board is increasingly concerned about the biostimulatory properties of discharges to surface waters in the North Coast Region. Nutrients, such as phosphorus and nitrogen containing compounds, in treated wastewater stimulate the growth rate of photosynthetic bacteria, algae, and other aquatic plants. The overabundance of nitrogen and phosphorus compounds

in surface water bodies can result in the excessive growth and decay of these organisms, thus accelerating the process of eutrophication. These phenomena cause dissolved oxygen levels to drop below concentrations needed for the survival and health of fish and aquatic life, which in turn negatively affects the aesthetic quality of water bodies and impairs beneficial uses.

At present, for interpretation of the Basin Plan's narrative water quality objective for biostimulatory substances, U.S. EPA has established recommended water quality criteria for nutrients in *Nutrient Criteria Documents for Lakes and Rivers and Nutrient Criteria Documents for Rivers and Streams*. U.S. EPA has defined 14 "ecoregions" and further categorized surface waters as lakes and reservoirs or rivers and streams for purposes of defining applicable numeric water quality criteria for nutrients. The State and Regional Water Boards continue to examine other methods of interpreting the Basin Plan's narrative water quality objective for biostimulatory substances. When the Boards determine that U.S. EPA's recommended criteria are appropriate for implementing the Basin Plan objectives, or when a more appropriate and meaningful method is established, the need for limiting nutrients in relation to biostimulatory properties, including phosphorus and nitrogen-containing compounds, in all discharges in the Region will be reassessed. In the meantime, the RPA for nutrients in relation to biostimulatory properties, performed for development of this Order, is inconclusive. The Order retains monitoring requirements for phosphorus and nitrogen containing compounds in discharges from the Facility to allow a determination of reasonable potential analysis at such time as the State and Regional Water Boards select an appropriate method for interpretation of the Basin Plan's narrative objective.

4.3.3.1.7. **Pathogens (*E. coli* bacteria).** 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 result in the exceedance of the following objectives:

4.3.3.1.7.1. The concentration of *E. coli* bacteria shall not exceed 100 colony forming units (cfu) per 100 milliliters (mL) as a six-week rolling geometric mean, calculated weekly.

4.3.3.1.7.2. A statistical threshold value (STV) of 320 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.

This Order includes effluent limitations for total coliform bacteria based on standards set forth in CCR, title 22, section 60301.225 for disinfected secondary-23 recycled water. Discharges to surface water in compliance with these effluent limitations for recycled water, which are more stringent than the *E*. *coli* standards set forth in the Statewide Bacteria Standards, will ensure that bacterial standards for water contact recreation are maintained throughout the receiving water.

4.3.3.1.8. **Chlorodibromomethane (CDBM**). The CTR establishes a water quality objective for the protection of human health for CDBM of 0.41 µg/L. The Permittee sampled the effluent for CDBM 20 times during the term of Order No. R1-2017-0007 with results ranging from ND (<1 µg/L) to 2.6 µg/L. CDBM was not detected in the receiving water based on one sample. A determination of reasonable potential has been made based on the MEC of the 2.6 µg/L and 11 additional results exceeding the most stringent water quality objective of 0.41 µg/L. Therefore, this order establishes an average monthly effluent limitation of 0.41 µg/L for chlorodibromomethane and a daily maximum limitation of 0.89 µg/L at monitoring locations EFF-001. Fact Sheet section 4.4.4 provides calculations of the CDBM AMEL and MDEL.

4.3.3.1.9. **Dichlorobromomethane (DCBM).** The CTR establishes a water quality objective for the protection of human health for DCBM of 0.56 µg/L. The Permittee sampled the effluent for DCBM 20 times during the term of Order No. R1-2017-0007 with results ranging from ND (<1 µg/L) to 16 µg/L. DCBM was not detected in the receiving water based on one sample. A determination of reasonable potential has been made based on the MEC of 15 µg/L and 17 additional results exceeding the most stringent water quality objective of 0.56 µg/L. Therefore, this order establishes an average monthly effluent limitation of 0.56 µg/L for dichlorobromomethane and a daily maximum limitation of 1.1 µg/L at monitoring locations EFF-001. Fact Sheet section 4.4.4 provides calculations of the DCBM AMEL and MDEL.

4.3.3.1.10. **4,4-DDT.** The CTR establishes a water quality objective for the protection of human health for 4,4-DDT of 0.00059 µg/L. The Permittee sampled the effluent and receiving water for 4,4-DDT on March 23, 2021. The results for effluent were 0.023 µg/L and ND, respectively. A determination of reasonable potential has been made based on the MEC of 0.023 µg/L exceeding the most stringent water quality objective of 0.00059 µg/L. Therefore, this order establishes an average monthly effluent limitation of 0.00059 µg/L for 4,4-DDT and a daily maximum limitation of 0.00118 µg/L at monitoring locations EFF-001. Fact Sheet section 4.4.4 provides calculations of the 4,4-DDT AMEL and MDEL.

4.3.3.1.11. **Antimony**. Antimony is known to cause adverse health effects in humans. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by DDW for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for Antimony (6 µg/L) is therefore applicable as a water quality criterion. The effluent and receiving water were sampled for Antimony on March 23, 2021, with a result of 11 µg/L and 10 µg/L, respectively. Because antimony levels in effluent and receiving waters have been measured at concentrations higher than 6 µg/L, the Regional Water Board concludes that the discharge from the Facility does have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water for Antimony. Therefore, this order establishes an average monthly effluent limitation of 6 µg/L for Antimony and a daily maximum limitation of 12 µg/L at monitoring locations EFF-001. Fact Sheet section 4.4.4 provides calculations of the antimony AMEL and MDEL.

4.3.3.1.12. **Aluminum**. The 2018 Aluminum Criteria reflect the latest science and allow for development of criteria reflecting the impact of local receiving water chemistry on aluminum toxicity to aquatic life. The updated criteria account for the site-specific bioavailability of aluminum in receiving waters, which is dependent on pH, dissolved organic carbon, and hardness. Due to a lack of sufficient receiving water information (pH, dissolved organic carbon, and hardness) for calculating criteria, the 2018 NAWQC criteria has not been implemented in this permit. Instead, the MRP includes requirements to monitor effluent for aluminum and receiving water for aluminum, pH, dissolved organic carbon, and hardness in order to obtain sufficient data to evaluate for aluminum toxicity based on the 2018 NAWQC.

4.3.3.1.13. **Total Trihalomethanes.** Total trihalomethanes include bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane. The CTR does not establish water quality objectives for total trihalomethanes. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by DDW for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for total trihalomethanes (80 µg/L) is therefore applicable as a water quality criterion. The Permittee sampled the effluent for total trihalomethanes 22 times during the term of Order No. R1-2017-0007 with results ranging from 24.7 µg/L to 101.39 µg/L. The highest result occurred on March 18, 2020 and calculation of the maximum total trihalomethane effluent concentration of 101.39 µg/L is shown in the following table.

Table F-5. Effluent Trihalomethane Concentrations on March 18, 2020 Sample

Parameter	Effluent Concentration (µg/L)
Bromoform	<0.5
Chlorodibromomethane	1.29
Chloroform	85.6
Dichlorobromomethane	14.5
Sum of Trihalomethanes	101.39

Total Trihalomethanes were not detected in the receiving water based on one sample. A determination of reasonable potential has been made based on the MEC of 101.39 µg/L exceeding the most stringent water quality objective of 80 µg/L. Therefore, this Order establishes an average monthly effluent limitation for total trihalomethanes based on the Primary MCL.

4.3.3.1.14. **Haloacetic Acids.** Haloacetic Acids include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, and Dibromoacetic Acid. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts the MCLs, established by DDW for the protection of public water supplies at title 22 of the CCR, sections 64431 (Inorganic Chemicals) and 64444 (Organic Chemicals), as applicable water quality criteria. The MCL for Haloacetic Acids (60 µg/L) is therefore applicable as a water quality criterion. The Permittee sampled the effluent for Haloacetic Acids five times during the term of Order No. R1-2017-0007, with results ranging from 26 µg/L to 170 µg/L. The highest result occurred on November 23, 2021, and calculation of the maximum total Haloacetic Acids effluent concentration of 170 µg/L is shown in the following table.

Table F-6. Effluent Haloacetic Acid Concentrations on November 23, 2021 Sample

Parameter	Effluent Concentration (µg/L)
Monochloroacetic Acid	5.3
Dichloroacetic Acid	60
Trichloroacetic Acid	100
Monobromoacetic Acid	<1
Dibromoacetic Acid	<1
Unidentified Haloacetic Acid	4.7
Sum of Haloacetic Acids	170

Because Haloacetic Acid levels in the effluent have been measured at concentrations greater than 60 µg/L, 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 the receiving water for Haloacetic Acids. Therefore, this Order establishes an

average monthly effluent limitation for Total Haloacetic Acids based on the Primary MCL.

4.3.3.2. 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. During the term of Order No. R1-2017-0007, priority pollutant sampling on effluent water was conducted on March 23, 2021 at Monitoring Location EFF-001. Additionally, priority pollutant sampling on receiving water was conducted on March 23, 2021 at Monitoring Location RSW-001. These data were used to conduct the RPA.

Hardness: The CTR and the NTR contain water quality criteria for seven metals 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. The hardness-dependent metal criteria include cadmium, copper, chromium (III), lead, nickel, silver, and zinc. The Permittee sampled its receiving water during November 2017 through August 2022. Effluent water monitoring for hardness results ranged between 73 mg/L and 170 mg/L based on 32 samples. The minimum observed receiving water hardness of 73 mg/L was used to calculate the criteria.

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

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 119 of the 126 priority pollutants.

Table F-7 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 concentrations during the monitoring events conducted by the Permittee. Attachment F-1 to this Order summarizes the RPA for all 126 priority pollutants.

Table F-7. Summary of Reasonable Potential Analysis Results for Priority Pollutants, Ammonia, and Title 22 Pollutants

CTR No.	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL[1]	B or Minimum DL	RPA Result[2]
1	Antimony, Total Recoverable	µg/L	6	11	10	Yes
6	Copper, Total Recoverable	µg/L	64[3]	3.8	1.9	No
23	Chlorodibromomethane	µg/L	0.41	2.6	<0.24	Yes
26	Chloroform	µg/L	80	90.7	<0.33	Yes
27	Dichlorobromomethane	µg/L	0.56	16.3	<0.32	Yes
39	Toluene	µg/L	150	0.65	<0.16	No

CTR No.	Pollutant	Unit	C or Most Stringent WQO/WQC	MEC or Minimum DL[1]	B or Minimum DL	RPA Result[2]
13	Zinc, Total Recoverable	µg/L	91	30	<2.7	No
108	4,4-DDT	µg/L	0.00059	0.023	<0.0046	Yes
112	alpha-Endosulfan	µg/L	0.056	0.0042	<0.002	No
N/A	Aluminum	µg/L	50	--	--	Ud
N/A	Ammonia (as N)	mg/L	0.15[4]	0.26	--	Yes
N/A	Nitrate (as N)	mg/L	10	7.2	--	No

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. 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).
3. Copper WQO calculated with a water effect ratio (WER) of 8.75 and the most stringent WQO from the CTR using the lowest receiving water hardness of 73 mg/L (8.75 x 7.3 µg/L = 64 µg/L).
4. Ammonia criteria are determined on a sliding scale based upon temperature and pH. The criterion represented in this table is based upon chronic exposure and a temperature of 20.1°C and a pH of 9.8.

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

4.3.3.3.1. **Copper.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. The criteria for copper are expressed 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 freshwater are 0.96 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 the point of discharge. The Permittee's study concluded that a site-specific WER of 8.75 for total recoverable copper applies to the discharge. Using the worst-case

measured hardness from the receiving water (73 mg/L), the U.S. EPA recommended dissolved-total translator of 0.96, and the site-specific WER of 8.75, the applicable chronic criterion (maximum 4-day average concentration) is 64 µg/L and the applicable acute criterion (maximum 1-hour average concentration) is 92 µg/L. The Permittee sampled the effluent and receiving water for copper once during the term of Order No. R1-2017-0007. Copper was detected in the effluent sample, 3.8 µg/L. Copper was detected in the single receiving water sample at 1.9 µg/L. A determination of no reasonable potential has been made based on the MEC of 3.8 µg/L not exceeding the most stringent water quality objective of 64 µg/L.

4.3.3.3.2. **Alpha-endosulfan.** The CTR establishes a water quality objective for the protection of freshwater aquatic life for alpha-endosulfan. The applicable chronic criterion (maximum 4-day average concentration) is 0.056 µg/L and as the applicable acute criterion (maximum 1- hour average concentration) is 0.22 µg/L. The Permittee sampled the effluent and receiving water for alpha-endosulfan on March 23, 2021. The results for effluent were <0.002 µg/L and, <0.0042 µg/L respectively. A determination of no reasonable potential has been made based on the MEC of 0.0042 µg/L not exceeding the most stringent water quality objective of 0.056 µg/L.

4.3.3.3.3. **Zinc**. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. The criteria for zinc are expressed in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The U.S. EPA default conversion factors for zinc in freshwater are 0.978 for acute criteria and 0.986 for chronic criteria. Using the worst-case measured hardness from the receiving water (73 mg/L), the applicable chronic criterion (maximum 4-day average concentration) is 91 µg/L and the applicable acute criterion (maximum 1- hour average concentration) is 92 µg/L. The Permittee sampled the effluent and receiving water for zinc once during the term of Order No. R1-2017-0007. Zinc was detected in the effluent in the effluent sample, 30 µg/L. Zinc was reported in the single receiving water sample at <2.7 µg/L. A determination of no reasonable potential has been made based on the MEC of 30 µg/L not exceeding the most stringent water quality objective of 91 µg/L.

4.3.4. WQBEL Calculations

Final WQBELs have been determined using the methods described in section 1.4 of the SIP.

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).

Step 2: For each ECA based on an aquatic life criterion/objective, 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 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 reasonable potential analysis described in Fact Sheet section 4.3.3 did not identify the need to calculate effluent limitations for any pollutants with aquatic life criteria, therefore Steps 2 and 3 are included to describe the procedure that would be used in the future if reasonable potential is found for any pollutant(s) with aquatic life criteria.

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 sampling frequency is set equal to 4 (n = 4) for the acute criterion and chronic 4-day criterion. 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. Since reasonable potential was not found for any pollutants with aquatic life criterion/objectives, no effluent limitations were calculated for this permit.

Step 4: When the most stringent water quality criterion/objective is a human health criterion/objective (as for chlorodibromomethane, dichlorobromomethane, total trihalomethanes, Haloacetic Acids, antimony, and 4,4-DDT), the AMEL is set equal to the ECA. From Table 2 of the SIP, when CV = 0.6 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 3.11, and the AMEL multiplier at the 95th percentile

occurrence probability equals 1.55 (for 4,4-DDT and antimony). The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier. Final WQBELs for chlorodibromomethane, dichlorobromomethane, total trihalomethanes, Haloacetic Acids, antimony, and 4,4-DDT are determined as follows.

Table F-8. Determination of Final WQBELs Based on Human Health Criteria

Pollutant	ECA (µg/L)	MDEL/AMEL	MDEL (µg/L)	AMEL (µg/L)
Chlorodibromomethane	0.41	2.16	0.89	0.41
Dichlorobromomethane	0.56	1.71	1.1	0.56
Total Trihalomethanes[1]	80	1.53	122.5	80
Haloacetic Acids[1]	60	1.93	116	60
Antimony	6	2.0	12	6
4,4-DDT	0.00059	2.0	0.0012	0.00059

Table Notes:

1. This Order establishes an AMEL only for Total Trihalomethanes and Haloacetic Acids because the drinking water MCL for these pollutants is based on a long-term average.

4.3.5. Whole Effluent Toxicity (WET)

Effluent limitations for whole effluent 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 in this Order are derived from the CWA, and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Plan). The Plan establishes objectives for water quality and sediment quality that apply to all inland surface waters, enclosed bays, and estuaries and coastal lagoons of the state, including both waters of the United States and surface waters of the state. For compliance with the Plan's water quality objective, this Order requires the Permittee to conduct WET testing for chronic toxicity, as specified in the MRP (Attachment E, section 5).

Test of Significant Toxicity (TST). 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) mean response of regulatory management concern—than the NOEC hypothesis-testing approach. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the acute (0.20 or more) mean responses of regulatory management concern—than the No Observed Effect Concentration (NOEC) approach previously used to establish effluent limitations for acute toxicity.

In a letter dated February 12, 2014, the State Water Board submitted an ATP request to USEPA Region 9 for the statewide use of a two-concentration toxicity test design when using the Test of Significant Toxicity (TST) approach. This two-concentration test design is composed of a single effluent concentration and a control concentration. USEPA approved the ATP request on March 17th, 2014. In June 2014, the approval was challenged in court on procedural grounds under the Administrative Procedures Act by the Southern California Alliance of Publicly Owned Treatment Works (SCAP) and the Central Valley Clean Water Association (CVCWA). The U.S. EPA withdrew the approval and notified State Water Board in a memo dated February 11th, 2015.

It is important to note that U.S. EPA's rescission of its approval of the ATP is not based on the substantive TST statistical analysis or the scientific validity of a two-concentration test design. The withdrawal letter also states that currently there is a proposed rulemaking to change the language in the ATP regulations at Code of Federal Regulations, title 40, section 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 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. Toxicity test shall be run using a multi-concentration test design in accordance with Code of Federal Regulations, title 40, section 136.3, and the TST shall be utilized with the biological responses from the permitted 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 TST for statistical analysis of whole effluent aquatic toxicity data

Test of Significant Toxicity Design. The TST's null hypothesis for chronic toxicity is:

H0: 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 (H0) and regulatory management decision (b value) of 0.75 for the chronic toxicity methods in the MRP. The null hypothesis for this discharge is:

H0: Mean response (100% effluent) ≤ 0.75 mean response (control)

Results shall be analyzed using the TST hypothesis testing approach in the MRP. For any chronic aquatic toxicity test method with both lethal and sub-lethal endpoints, the sub-lethal endpoint shall only be required. Compliance with this chronic toxicity limitation is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

When one MDEL or MMEL is not met, but not two in a calendar month, the Permittee must perform an Additional Routine Monitoring Test as specified in the MRP (Attachment E, section 5). If any combination of two or more MDEL or MMEL are not met within a single calendar month or within two successive calendar months, the Permittee will be required to conduct a TRE, as described by the MRP.

Notification requirements for aquatic toxicity testing include a 24-hour notification requirement if test results do not meet an applicable MDEL or MMEL, per the Toxicity Provisions. Verbal notification of aquatic toxicity test results may be left by voice mail if the Regional Water Board staff person is not immediately available by telephone.

4.3.5.1. **Acute Aquatic Toxicity**

Order No. R1-2017-0007 included an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival. Furthermore, the permittee was subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from acute toxicity using the Test of Significant Toxicity (TST) approach. The sensitivity species screening conducted during the term of Order No. R1-2017-0007 concluded that the most sensitive species for acute toxicity testing is the water flea (*Ceriodaphnia dubia)*. Acute aquatic toxicity test results for the term of Order No. R1-2017-0007 are summarized in Table F-9 below:

Table F-9. Summary of Acute Toxicity Results (Water Flea)

Date	Pass/Fail	Percent Effect (Survival)
4/2/2018	Pass	No Effect
2/25/2019	Pass	5%
2/10/2020	Pass	No Effect
3/2/2020	Pass	No Effect
1/4/2021	Pass	No Effect
1/26/2022	Pass	6.6%

The Toxicity Provisions identify that a discharge has reasonable potential to cause or contribute to an excursion above the acute aquatic toxicity water quality objectives if any of the acute aquatic toxicity tests results in a 'fail" at the in-stream waste concentration (IWC), or if any of the acute aquatic toxicity tests have a percent effect at the IWC greater than 10 percent. As shown in Table F-9, acute aquatic toxicity testing did not result in a "fail" and that no resulting percent effect exceeded 10%. As such, it has been determined that a discharge from this Facility does not have reasonable potential to cause or contribute to an exceedance of the water quality objectives for acute toxicity.

4.3.5.2. **Chronic Aquatic Toxicity**

For Order No. R1-2017-0007, the SIP required the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Under this monitoring, the Permittee was subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from chronic toxicity using the Test of Significant Toxicity (TST) approach. The sensitivity species screening conducted during the term of Order No. R1-2017-0007 concluded that the most sensitive species for chronic toxicity testing is water flea (*Ceriodaphnia dubia)*. Chronic aquatic toxicity test results for the term of Order No. R1-2017-0007 are summarized in Table F-10 below:

Table F-10. Summary of Chronic Toxicity Results (Water Flea)

Date	Pass/Fail	Percent Effect (Survival)	Percent Effect (Reproduction)
4/9/2018	Fail	No Effect	53%
5/2/2018	Fail	No Effect	85.3%

Date	Pass/Fail	Percent Effect (Survival)	Percent Effect (Reproduction)
12/10/2018	Pass	No Effect	-11%
4/15/2019	Fail	10%	47.8%
2/10/2020	Fail	No Effect	95.4%
3/2/2020	Fail	No Effect	95.4%
3/16/2020	Fail	No Effect	25.2%
3/17/2020	Fail	No Effect	24.1%
3/30/2020	Fail	No Effect	30.3%
3/30/2020	Pass	No Effect	16.7%
4/15/2020	Pass	No Effect	12.9%
4/29/2020	Fail	No Effect	42.3%
1/4/2021	Pass	No Effect	-7.6%
2/1/2021	Pass	20%	5.5%
2/15/2021	Pass	No Effect	11.6%
1/26/2022	Fail	No Effect	38.7%

The Toxicity Provisions identify that a discharge has reasonable potential to cause or contribute to an excursion above the chronic aquatic toxicity water quality objectives if any of the chronic aquatic toxicity tests results in a 'fail" at the IWC, of if any of the chronic aquatic toxicity tests have a percent effect at the IWC greater than 10 percent. As shown in Table F-10, chronic aquatic toxicity testing 10 samples resulted in a "fail" result and 13 samples resulted in a percent effect for growth that exceeded 10% (a negative percent effect indicates that the effluent sample performed better than the control sample). As such, it has been determined that a discharge from this Facility does have reasonable potential to cause or contribute to an exceedance of the water quality objectives for chronic toxicity and corresponding MDEL and MMEL have been included in this Order, as required by the Toxicity Provisions. Attachment E of this Order requires annual chronic WET monitoring to demonstrate compliance with the Toxicity Provisions and the MDEL and MMEL established in this Order.

4.4. **Final Effluent Limitation Considerations**

4.4.1. **Anti-Backsliding Requirements**

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) prohibit backsliding in NPDES permits. These anti-

backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order with the exception of the effluent limitation for total nitrogen and acute toxicity. As previously discussed in section 4.4.3.1.5.1 and 4.4.5.1, respectively. The updated effluent data constitutes new information, which permits the removal of effluent limitations consistent with CWA section 402(o)(2)(B). Therefore, the Order does not retain the effluent limitations for acute toxicity and total nitrogen.

4.4.2. **Antidegradation Policies**

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

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

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. R1-2017-0007.

Table F-11. Summary of Effluent Limitations – Discharge Point 001 (Monitoring Location EFF-001)

Parameter	Unit	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Maximum Daily Effluent Limitation	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation	Basis [1]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	30	45	--	--	--	TT
BOD_5	% Removal	85	--	--	--	--	CFR
Total Suspended Solids (TSS)	mg/L	30	45	--	--	--	TT
TSS	% Removal	85	--	--	--	--	CFR
pH	Standard Units	--	--	--	6.5	8.5	BP
Ammonia Impact Ratio	Ratio	1	--	1	--	--	NAWQC
Total Coliform Bacteria	MPN/100 mL	--	23 [2]	240	--	--	Title 22
Discharge Rate[3]	%	--	--	--	--	1	BP
Chronic Toxicity	% Effect	--	--	--	--	50%	BP
Settleable Solids	ml/L	0.1	--	0.2	--	--	BP
Chlorine, Total Residual	mg/L	0.01	--	0.02	--	--	BP
Chlorodibromomethane	µg/L	0.41	--	0.80	--	--	CTR
Dichlorobromomethane	µg/L	0.56	--	1.1	--	--	CTR
Total Trihalomethanes	µg/L	80	--	--	--	--	BP
Haloacetic Acids	µg/L	60	--	--	--	--	BP
Nitrogen, Total (as N)	mg/L	10	--	--	--	--	Title 22

Parameter	Unit	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Maximum Daily Effluent Limitation	Instantaneous Minimum Effluent Limitation	Instantaneous Maximum Effluent Limitation	Basis [1]
4,4-DDT	ug/L	0.00059	--	0.00118	--	--	CTR
Antimony, Total Recoverable	ug/L	6	--	12	--	--	BP

Table Notes

1. Definitions of acronyms in Table F-11:

BP - Basin Plan

CFR – 40 C.F.R. part 133

CTR – California Toxics Rule

NAWQC – National Ambient Water Quality Criteria

TP - Toxicity Provisions

TT - Based on the treatment capability of the Facility.

Title 22 - Based on DDW Reclamation Criteria, CCR, Division 4, Chapter 3 (title 22).

2. The number of total coliform bacteria shall not exceed a Most Probable Number (MPN) of 23 per 100 milliliters (mL), in more than one sample in any 30-day period.
3. During the period from October 1 through May 14, discharge of treated wastewater shall not exceed 1 percent (1:100) of the upstream receiving water flow. For purposes of this Order, the flow in the Lower Eel River shall be measured at USGS Gauge No. 1147000 .

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 and TSS. 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 ammonia, pH, and total coliform bacteria 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.

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. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 11.38. The procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on May 18, 2000. 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 11.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order were approved by U.S. EPA and are applicable water quality standards pursuant to section 11.21(c)(2). 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**

4.5.1. **Concentration Based Effluent Limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids.** Interim effluent limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids for this Order are derived based on Facility performance using available effluent monitoring data at Discharge Point 001, the point of discharge to the Eel River. This performance-based effluent limitation was calculated using statistical methodology described in the U.S. EPA Technical Support Document for Water Quality-based Toxics Control

(TSD) and a statistical tool, RP Calc, developed by State Water Resources Control Board staff to assist State and Regional Water Board staff in the development of interim effluent limitations. The 95th percentile concentration for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids was calculated at the 95 percent confidence level to determine the interim effluent limitation. The calculated interim effluent limitations in Table 3 were rounded to the nearest decimal for data collected during the term of the previous permit, WDRs Order No. R1-2017-0007.

4.5.2. Despite diligent efforts to comply with the time schedule, the City of Rio Dell was unable to complete Tasks I though L addressed in Table 1 of Order No. R1-2017-0045 by their respective compliance dates. Progress was delayed due to unforeseen challenges including supply chain breakdowns and lockdown safety measures during the statewide COVID-19 emergency response. Furthermore, damage inflicted by the December 20, 2022 earthquake centered along coastal Humboldt County and prolonged flooding impacting the area in December 2022 and January 2023 delayed compliance projects. As a result, the Regional Water Board finds that it is reasonable to provide additional time to comply with the effluent limitations for dichlorobromomethane, chlorodibromomethane, Total Trihalomethanes, and Haloacetic Acids.

4.5.3. The compliance schedules established in this Order are intended to be as short as possible. The compliance schedule for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids accounts for the interrelationship between ammonia, bacteria, and disinfection byproducts, the time necessary to complete construction, testing, and fine tuning of the Permittee's new phased Chloramine Disinfection Project. The Regional Water Board recommends that the Permittee continue to evaluate resources to identify a means to shorten the time frame for achieving compliance with effluent limitations for these pollutants.

4.6. **Land Discharge Specifications**

This Order does not authorize discharges of waste to land.

4.7. **Recycling Specifications**

This Order authorizes the Permittee to discharge treated municipal wastewater to the Irrigation Site (Discharge Point 003) that complies with the Water Recycling Specifications and Requirements contained in section 4.3 of the Order. Water recycling specifications are based on the technical capabilities of the wastewater treatment system and standards required by the Basin Plan and Title 22.

4.7.1. **Scope and Authority**

Section 13263 of the Water Code requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material change in an existing discharge based upon the conditions of the

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

Here, the Regional Water Board considered all of these factors when developing the WDRs for the recycled water discharge. Limitations for BOD_5, TSS, and pH were scientifically derived to implement water quality objectives that protect beneficial uses. Both beneficial uses and the water quality objectives have been approved pursuant to state law. In addition, discharge prohibitions were included to prohibit the discharge of untreated or partially treated waste, in order to protect public health and prevent nuisance.

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

The Permittee did not submit any evidence regarding whether the waste discharge requirements for recycled water discharges would interfere with the development of needed housing within the region or the costs of compliance, particularly anything to show that the costs of compliance with the Order would be unmanageable.

Groundwater monitoring conducted semi-annually between November 2017 and August 2022 does not reveal any evidence of impacts to groundwater from the Permittee's recycled water discharge. The Permittee has not proposed any changes in discharge practices for the term of this Order.

4.7.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

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

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

4.7.3. Determining the Need for Requirements for Water Recycling

4.7.3.1. The Water Recycling Specifications are established in this Order to conform to requirements contained in the California Code of Regulations, title 22, division 4, chapter 3 for the production of disinfected secondary recycled water. The Permittee is required to comply with applicable state and local requirements regarding the production and use of recycled water, including requirements of Water Code sections 13500 – 13577 (Water Reclamation) and DDW regulations at title 22, sections 60301 – 60357 of the California Code of Regulations (Water Recycling Criteria). The requirement is newly established in this Order.

4.7.3.2. **BOD_5 and TSS.** Consistent with Order No. R1-2017-0007, this Order establishes discharge limitations for BOD_5 and TSS based on technology-based effluent limitations that consist of a monthly average of 30 mg/L and a weekly average of 45 mg/L. These levels are technically achievable based on the capability of the secondary wastewater treatment system. These limits are included in the Order to ensure that discharges to the water recycling system receive proper treatment.

4.7.3.3. **Coliform Bacteria.** The Order includes effluent limitations for total coliform bacteria of 23 MPN/100 mL as a monthly median and 240 MPN/100 mL as a daily maximum. These limitations are based on regulations for secondary-23 recycled water contained in title 22, division 4, chapter 3 of the CCR to ensure that the quality of the water discharged to land is protective of human health. Although discharge to the irrigation site only requires undisinfected secondary recycled water based to meet the requirements for fodder for non-dairy producing livestock, coliform limitations established in this Order are appropriate for this use to ensure protection of groundwater beneficial use (MUN). These limitations can be reasonably achieved through proper operation of the Permittee's wastewater treatment facilities.

4.7.3.4. **pH.** Consistent with Order No. R1-2017-0007, this Order includes instantaneous minimum and maximum effluent limitations for pH of 6.5 and 8.5, Note that a more stringent effluent limitation range of 6.5 – 8.5 for pH is required to meet the water quality objective for hydrogen ion concentration (pH) in the South Fork Eel River contained in Basin Plan, Table 3-1.

4.7.3.5. **Nitrate and Total Nitrogen.** Nitrate is known to cause adverse health effects in humans. For waters designated as domestic or municipal supply, the Basin Plan (Chapter 3) adopts MCLs, established by DDW for the protection of public water supplies at title 22, section 64431 (Inorganic

Chemicals) and 64444 (Organic Chemicals) of the CCR, as applicable water quality criteria. The MCL for nitrate (10 mg/L) is therefore applicable as a water criterion.

The Permittee sampled its discharge at Monitoring Location EFF-003 monthly during periods of land application between June 2018 and June 2022. Monitoring results for nitrate ranged between 0.48 mg/L and 9.0 mg/L based on 10 samples and for total nitrogen ranged between 1 mg/L and 10 mg/L. These monitoring results reveal that discharges to the land application site met total nitrogen and nitrate land specifications in Order No. R1-2017-0007 for the entire period of record.

Nitrate and total nitrogen results were also analyzed for periods of discharge to surface waters in section 4.4.3.1.5 of this Fact Sheet. In addition, the antidegradation analysis described in section 3.3.6 of this Fact Sheet relied on the recycled water application discharge not exceeding a total nitrogen concentration of 10 mg/L. To retain consistency and in order to protect water quality and ensure proper operation of the Facility, an AMEL of 10 mg/L for total nitrogen from Order No. R1-2017- 0007 has been retained in this order for discharges to the Irrigation Site.

4.7.3.6. In addition, the MRP in Attachment E of this Order requires ongoing groundwater monitoring for nitrogen, salts and coliform bacteria to ensure that concentrations of pollutants will not adversely impact beneficial uses of groundwater.

4.7.3.7. This Order is consistent with the maximum benefit to people of the State because it allows continued operation of an existing wastewater treatment system, and it requires monitoring of groundwater to assess potential impacts from the recycled water use.

4.7.4. Other Requirements

The Order contains additional specifications that apply to the Facility regardless of the disposal method (surface water discharge or water recycling), including:

4.7.5. **Residual Chlorine.** Consistent with Order No. R1-2017-0007, this Order requires the Permittee to maintain a chlorine residual concentration that ensures the discharge meets the total coliform effluent limitations at the end of the disinfection process so that adequate pathogen reduction is continuously achieved at Discharge Points 001 and 003.

Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous

monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitation prescribed in section 4.1.1.1, Table 2, provided that the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

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.

5.2. Groundwater

5.2.1. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters.

5.2.2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

5.2.3. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater.

5.2.4. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in CCR, title 22, division 4, chapter 15, article 4.1, section 64431, and article 5.5, section 64444.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

6.1.1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the Order. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42. The rationale for the special conditions contained in the Order is provided in section 6.2, below.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

6.1.2. **Regional Water Board Standard Provisions**

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

6.1.2.1. Order Provision 6.1.2.1 identifies the state's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations (e.g., 40 C.F.R. sections 122.41(j)(5) and (k)(2)).

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

6.2. **Special Provisions**

6.2.1. **Reopener Provisions**

6.2.1.1. **Standard Revisions (Special Provision 6.3.1.1).** Conditions that necessitate a major modification of a permit are described in 40 C.F.R. section 122.62, which include the following:

6.2.1.1.1. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or

amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.

6.2.1.1.2. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.

6.2.1.2. **Reasonable Potential (Special Provision 6.3.1.2).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Permittee governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.

6.2.1.3. **Species Sensitivity Screening (Special Provision 6.3.1.3).** This provision allows the Regional Water Board to modify this Order if the species sensitivity screening identifies a most sensitive species that is different than the most sensitive species already identified in the Order.

6.2.1.4. **Whole Effluent Toxicity (Special Provision 6.3.1.4).** 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.

6.2.1.5. **Acute Aquatic Toxicity (Special Provision 6.3.1.5).** This provision allows the Regional Water Board to reopen this Order to include a MDEL and MMEL for acute aquatic toxicity, based on the reevaluation of the reasonable potential for the Permittee to cause or contribute to an exceedance of the acute aquatic toxicity water quality objective.

6.2.1.6. **303(d)-Listed Pollutants (Special Provision 6.3.1.6).** 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.

6.2.1.7. **Water Effects Ratios (WERs) and Metal Translators (Special Provision 6.3.1.7).** 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.

6.2.1.8. **Nutrients (Special Provision 6.3.1.8).** This Order contains effluent limitations for ammonia and effluent monitoring for nutrients (ammonia, nitrate, nitrite, organic nitrogen, and 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.

6.2.1.9. **Salt and Nutrient Management Plans (Special Provision 6.3.1.9).** This provision allows the Regional Water Board to reopen this Order if it adopts a regional or subregional SNMP that is applicable to the Permittee.

6.2.1.10. **Title 22 Recycled Water Engineering Report (Special Provision 6.3.1.10).** This provision allows the Regional Water Board to reopen this Order to adequately implement title 22, if necessary, based on the Permittee's title 22 engineering report.

6.2.1.11. **Mixing Zone Study**. (Special Provision 6.3.1.11) This provision allows the Regional Water Board to reopen this Order if the Permittee demonstrates to the satisfaction of the Regional Water Board Executive Officer that it has evaluated all reasonable alternatives for compliance with human health-based effluent limitations, if imposed, and conducts a mixing zone study that provides a basis for determining that permit conditions (i.e. effluent limitations and receiving water monitoring locations) should be considered for modification.

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

6.2.2.1. **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.

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

6.2.3.1. **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. **Special Provisions for Publicly Owned Treatment Works (POTWs)**

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

6.2.4.1.1. **Statewide General WDRs for Sanitary Sewer Systems.** On December 6, 2022, the State Water Board adopted General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2022-0103-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. The Permittee has enrolled under the General Order as required.

6.2.4.2. **Source Control Provisions (Special Provision 6.3.5.2).** Pursuant to Special Provision 6.3.5.2.1, the Permittee shall implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system, and inspect facilities connected to the system.

40 C.F.R. section 403.8(a) requires POTWs with a total design flow greater than 5 mgd and receiving pollutants which pass through or interfere with the operation of the POTW to establish a POTW Pretreatment Program. The Regional Water Board may also require that a POTW with a design flow of 5 mgd or less develop a POTW Pretreatment Program if the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference or pass through. The Permittee did not report any known industrial wastes subject to regulation under the NPDES Pretreatment Program being discharged to the Facility in section 4 of EPA Application Form 2A and the permitted flow of the Facility is less than 5 mgd; therefore, the Order does not require the Permittee to develop a pretreatment program that conforms to federal regulations. However, in order to prevent interference with the POTW or pass through of pollutants to the receiving water, the Order requires the Permittee to implement a source control program.

Water Code section 13263.3(d)(1) allows the Regional Water Board to require a discharger to complete and implement a pollution prevention plan if pollution prevention is necessary to achieve a water quality objective, to include, pursuant to Water Code section 13263.3(d)(3), an analysis of the methods that could be used to prevent the discharge of the pollutants into the POTW. These methods can include application of local limits to industrial or commercial dischargers, pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of pollutants to the POTW. The analysis also shall identify sources, or potential sources, not within the ability or authority of the POTW to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible. This Order includes requirements for the Permittee to implement a source identification and reduction program.

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

6.2.4.2.1. Water and sewer billing records

6.2.4.2.2. Applications for sewer service

6.2.4.2.3. Local telephone directories

6.2.4.2.4. Chamber of Commerce and local business directories

6.2.4.2.5. Business license records

6.2.4.2.6. POTW and wastewater collection personnel and field observations

6.2.4.2.7. Business associations

6.2.4.2.8. The internet

6.2.4.2.9. Industrial and non-residential sewer use permit records

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

6.2.5. **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.

6.2.6. **Biosolids Management (Special Provision 6.3.5.4).** This provision 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 is required to obtain 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.

6.2.7. **Operator Certification (Special Provision 6.3.5.5).** 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.

6.2.8. **Adequate Capacity (Special Provision 6.3.5.6).** 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.

6.2.9. **Other Special Provisions**

6.2.9.1. **Storm Water (Special Provision 6.3.6.1).** This provision requires the Permittee, if applicable, to obtain coverage under the State Water Board's Water Quality Order No. 2014-0057-DWQ, NPDES General Permit No. CAS000001, General Permit for Storm Water Discharges Associated with Industrial Activities (or subsequent renewed versions of the NPDES General Permit CAS000001). Currently, the Facility is exempted from these requirements based on the size of the Facility (less than 1 mgd). In addition, all storm water that falls within the Facility is captured, treated, and disposed of within the Facility's NPDES permitted wastewater process.

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

6.2.10. **Compliance Schedules**

6.2.10.1. Compliance schedule for the final effluent limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids (Special Provision 6.3.6.2). Consistent with Order No. R1-2023-0030, this Order includes a compliance schedule for the Permittee to achieve compliance with final effluent limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids. The compliance schedule is needed because the Order includes final effluent limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids that will require the Permittee to implement actions, such as designing and constructing facilities or implementing new or significantly expanded programs and securing financing to comply with the permit limitations that are included in this Order to implement water quality objectives.

6.2.10.2. The compliance schedule is in accordance with the State Water Board Compliance Schedule Policy based on the Permittee providing written documentation demonstrating that it needs additional time to complete tasks needed to comply with the more stringent final dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids limitations. The Permittee needs time to design facilities and/or develop a program and secure financing for final upgrades. Regional Water Board staff determined that the Permittee should be able to complete the proposed tasks in a period of six years if the Permittee finds chloramination to be

effective during the full-scale testing period. If the full-scale testing report concludes that final compliance cannot be achieved using chloramination, then an additional four years have been granted to determine and implement an alternate strategy to comply with final effluent limitations. The compliance schedule authorized in Order No. R1- 2023-0031 and continued in this Order now provides a total of ten years for the Permittee to achieve compliance with the final effluent limitation for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids. The compliance schedule in this Order authorizes interim effluent limitations set forth in Table 3, because the Permittee has continued to make diligent efforts to quantify pollutant levels in the discharge and implement effective process control. The compliance schedule will result in the highest discharge quality that can be achieved until final compliance is attained. The compliance schedules established in this Order provides the shortest time possible to achieve the final effluent limitations for dichlorobromomethane, chlorodibromomethane, total trihalomethanes, and haloacetic acids given the challenges in implementing facility improvements, and/or alternative strategies that will result in compliance with final disinfection byproduct limitations. No interim compliance dates exceed one year.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping 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. R1-2017-0007 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. R1-2017-0007 and are necessary to determine compliance with Discharge Prohibition 3.9.

7.2. Effluent Monitoring

7.2.1. Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Monitoring at Monitoring Location EFF-001 is necessary to demonstrate compliance with

effluent limitations and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

7.2.1.1. Effluent monitoring frequencies and sample types for flow, BOD_5, TSS, pH, temperature, total coliform bacteria, hardness, ammonia, residual chlorine, dissolved oxygen, nitrate, chlorodibromomethane, dichlorobromomethane, total trihalomethanes, Haloacetic Acids, and phosphorus at Monitoring Location EFF-001 have been retained from Order No. R1-2017-0007.

7.2.1.2. This Order includes a prohibition of discharges that exceed one percent of the flow of the Lower Eel River. Therefore, this Order requires the Permittee to calculate and report the discharge flow rate as a percentage of receiving water flow.

7.2.1.3. Effluent monitoring for *E. coli* bacteria has been established at Monitoring Location EFF-001 in this Order to inform Regional Water Board staff of the reasonable potential for the Permittee to exceed water quality objectives when discharging to Lower Eel River.

7.2.1.3.1. There are 5 distinct six-week periods between October 1 through May 14 and the Order establishes a monitoring regime that allows the Discharger to select a minimum of three six-week periods annually over the authorized discharge period to monitor its effluent and the receiving water to determine compliance with the bacteria objectives. This monitoring regime allows the Discharger to monitor the receiving water for approximately 60 percent of the discharge season instead of monitoring every week over the 32-week discharge season, reducing the cost of permit compliance for a disadvantaged community, and allowing the Discharger to plan and implement its monitoring program more efficiently.

7.2.1.4. Monitoring data collected over the term of Order No. R1-2017-0007 demonstrated that the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality criteria for antimony, and 4,4-DDT. Therefore, this Order establishes monitoring requirements for antimony, and 4,4-DDT at Monitoring Location EFF-001 to determine compliance with the applicable effluent limitations.

7.2.1.5. This Order is consistent with the requirements of the Recycled Water Policy to implement a SNMP. The Recycled Water Policy currently requires monitoring for priority pollutants annually. This Order requires the Permittee to monitor priority pollutants once per permit term.

7.2.1.6. This Order requires calculation of BOD_5 and TSS percent removal, in order to assess compliance with the BOD and TSS percent removal effluent limitations in Effluent Limitation sections 4.1.1.2 of the Order.

7.3. Toxicity Testing Requirements

Effluent monitoring data collected during the term of Order No. R1-2017-0007 indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for acute aquatic toxicity. Therefore, this Order discontinues quarterly effluent monitoring requirements for acute aquatic toxicity. Effluent data indicates that the discharge exhibits reasonable potential to cause or contribute to an exceedance of water quality objectives for chronic aquatic toxicity. This Order includes annual effluent monitoring requirements for chronic aquatic toxicity, as required by the Toxicity Provisions.

In addition to routine chronic toxicity monitoring, this Order requires the Permittee to maintain and update its 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 routine and MMEL testing for chronic aquatic toxicity.

The Toxicity Provisions allow the Regional Water Broad to use a species sensitivity screening generated within ten years prior to the renewal of this Permit when the data are representative of the effluent, the Regional Water Board accepts use of the data, the data are analyzed using the TST, and the data are from chronic aquatic testing of, at minimum, one vertebrate, one invertebrate, and one plant/algae from Table 1 of Section IV.B.1.b. of the Toxicity Provisions. The Regional Water Board has determined that the species sensitivity screening conducted between March 9 and 13 of 2018, meets the above requirements, and the species used for chronic toxicity monitoring shall be *Ceriodaphnia dubia*.

7.4. Recycled Water Monitoring Requirements

This Order requires that the Permittee comply with applicable state and local requirements regarding the production of recycled water.

Recycled water monitoring requirements at Monitoring Location EFF-003 for flow, BOD_5, TSS, total coliform bacteria, and pH have been retained from Order No. R1-2017-0007.

7.5. Receiving Water Monitoring

7.5.1. Surface Water Monitoring

7.5.1.1. Receiving water monitoring is required to demonstrate compliance with the Receiving Water Limitations.

7.5.1.2. Monitoring requirements at Monitoring Location RSW-001 for flow, BOD_5, pH, hardness, temperature, turbidity, nitrate, phosphorus, and CTR priority pollutants have been retained from Order No. R1-2017-0007.

7.5.1.3. Monitoring Requirements at Monitoring Location RSW-002 for pH, temperature, dissolved oxygen, electrical conductivity, total dissolved solids, and turbidity have been retained from Order No. R1-2017-0007.

7.5.1.4. Receiving water monitoring for *E. coli* bacteria has been established in this Order to determine background levels of *E. coli* in the receiving water and to determine compliance with bacteria water quality objectives.

7.5.1.4.1. There are 5 distinct six-week periods between October 1 through May 14 and the Order establishes a monitoring regime that allows the Discharger to select a minimum of three six-week periods annually over the authorized discharge period to monitor its effluent and the receiving water to determine compliance with the bacteria objectives. This monitoring regime allows the Discharger to monitor the receiving water for approximately 60 percent of the discharge season instead of monitoring every week over the 32-week discharge season, reducing the cost of permit compliance for a disadvantaged community, and allowing the Discharger to plan and implement its monitoring program more efficiently. Receiving water monitoring requirements include three monitoring events concurrent with effluent monitoring to provide a representative characterization of effluent and receiving water conditions at the time of discharge.

7.5.2. **Groundwater Monitoring**

7.5.2.1. Monitoring requirements at Monitoring Locations MW-001 through MW-004 for depth to groundwater, nitrate, total coliform, chloroform, and total dissolved solids have been retained from Order No. R1-2017-0007.

7.5.2.2. The Regional Water Board finds that this Order's effluent monitoring requirement for the title 22 pollutants that have been identified in the effluent, will provide sufficient information to characterize the impacts of the discharge to groundwater. Therefore, monitoring requirements at Monitoring Locations MW-001 through MW-004 have been added for 4,4-DDT, and antimony because these pollutants were detected at concentrations in excess of applicable MCLs in effluent and/or groundwater in title 22 monitoring conducted between November 2017 and August 2022.

7.6. **Other Monitoring Requirements**

7.6.1. **Monitoring Location INT-001.** Internal monitoring at the end of the chlorine contact chamber is required to measure chlorine residual in lieu of daily coliform monitoring to assure adequate disinfection on a daily basis by demonstrating that the appropriate chlorine residual concentration is maintained in the effluent at INT-001 at all times.

7.6.2. **Visual Monitoring (Monitoring Locations EFF-001 and RSW-001).** Visual monitoring requirements are retained from the previous Order and are

necessary to ensure compliance with Receiving Water Limitations sections 5.1.6, 5.1.7, 5.1.0, 5.1.10, 5.1.11, and 5.1.16 of this Order.

7.6.3. **Sludge Monitoring (MRP section 9.4).** Sludge monitoring requirements at Monitoring Location BIO-001 serve as a basis for the Permittee to develop the Sludge Handling and Disposal Activity Report that is required as part of the Annual Report pursuant to section 10.4.3.7 of the MRP.

7.6.4. **Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program (MRP section 1.6).** Under the authority of section 308 of the CWA (33 U.S.C. § 118), U.S. EPA requires major and selected minor dischargers 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 Discharger 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 Discharger 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 Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

7.6.5. **Accelerated Monitoring Requirements.** Table E-4 includes accelerated monitoring requirements for parameters that are required to be monitored weekly, monthly, quarterly, and annually. Accelerated monitoring is required for all pollutants with effluent limitations.

7.6.6. **Flow Monitoring.** Sections 1.4 and 10.4.3.5 of the MRP require proper installation, calibration, operation, and maintenance of flow metering devices.

7.6.7. **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. 2022-0103-DWQ.

7.6.8. **Notification and Reporting for Recycled Water Spills.** Section 10.5.4 of the MRP includes reporting requirements for spills of secondary treated water in excess of 50,000 gallons. This requirement implements Water Code section 13529.2.

7.6.9. **Disaster Preparedness Assessment Report and Action Plan (**MRP section 10.4.2**)**. Natural disasters, extreme weather events, sea level rise, and shifting precipitation patterns, some of which are projected to intensify due to climate change, have significant implications for wastewater treatment and operations. Some natural disasters are expected to become more frequent and extreme according to the current science on climate change. In order to ensure that Facility operations are not disrupted, compliance with conditions of this Order are achieved, and receiving waters are not adversely impacted by permitted and unpermitted discharges, this Order requires the Permittee to submit a Disaster Preparedness Assessment Report and Action Plan and implement the necessary control measures in accordance with an approved schedule of implementation.

8. PUBLIC PARTICIPATION

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

8.1. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following posting on the Notification was provided through the following posting on the Regional Water Board's site at: (https://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs/).

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's site at: (https://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs/).

8.2. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs as provided through the notification process. Comments were due to the Regional Water Board Executive Office electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DCD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at (https://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 **June 18, 2023**.

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: **August 3, 2023**
Time: 9:00 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. On the Regional Water Board website (https://www.waterboards.ca.gov/northcoast/) you can access the current agenda for changes in dates and locations.

8.4. Reconsideration of Waste Discharge Requirements

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

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

Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see the at Water Quality Petitions Website
(http://www.waterboards.ca.gov/public_notices/petitions/waterquality/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 Sabrina Cegielski at Sabrina.Cegielski@waterboards.ca.gov or (707) - 543-7126.

Table F-12. Wastewater Treatment Facility RPA Summary

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
Antimony, Total Recoverable	ug/L		11		10	6	--	--	14	4300	6	Yes
Arsenic, Total Recoverable	ug/L	<	6.9	<	6.9	10	340	150	--	--	10	No
Beryllium, Total Recoverable	ug/L	<	0.42	<	0.42	4	--	--	--	--	4	No
Cadmium, Total Recoverable	ug/L	<	0.55	<	0.55	1.9	3.2	1.9	--	--	5	No
Copper, Total Recoverable	ug/L		3.8		1.9	7.1	10	7.1	1300	--	1000	No
Lead, Total Recoverable	ug/L	<	2.9	<	2.9	15	55	2.1	--	--	15	No
Mercury, Total Recoverable	ug/L	<	0.16	<	0.16	2	--	--	--	--	2	No
Nickel, Total Recoverable	ug/L		3.1	<	3.1	40	360	40	610	4600	100	No
Selenium, Total Recoverable	ug/L	<	9.5	<	9.5	5	20	5	170	4200	50	Uo
Silver, Total Recoverable	ug/L	<	2.8	<	--	100	--	--	--	--	100	No
Silver, Total Recoverable	ug/L	<	--	<	2.8	2.4	2.4	--	--	--	100	Uo
Thallium, Total Recoverable	ug/L	<	3.4	<	3.4	1.7	--	--	1.7	6.3	2	Uo
Zinc, Total Recoverable	ug/L		30	<	2.7	92	92	92	7400	26000	5000	No
Cyanide, Total (as CN)	mg/L	<	0.0007	<	0.0007	5.2	22	5.2	700	220000	150	No

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
Asbestos	MFL	<	0.18	<	0.18	7	--	--	7	--	7	No
2,3,7,8-TCDD (Dioxin)	pg/L	<	0.368	<	0.368	0.013	--	--	0.013	0.013	0.00003	Uo
Acrolein	ug/L	<	0.71	<	0.71	3	3	3	320	780	--	No
Acrylonitrile	ug/L	<	0.19	<	0.19	0.059	--	--	0.059	0.66	--	Uo
Benzene	ug/L	<	0.28	<	0.28	1	--	--	1.2	71	1	No
Bromoform	ug/L	<	0.32	<	0.32	4.3	--	--	4.3	360	80	No
Carbon tetrachloride	ug/L	<	0.44	<	0.44	0.25	--	--	0.25	4.4	0.5	Uo
Chlorobenzene	ug/L	<	0.2	<	0.2	70	--	--	680	21000	70	No
Chlorodibromo-methane	ug/L		2.6	<	0.24	0.41	--	--	0.41	34	80	Yes
Chloroethane	ug/L	<	0.13	<	0.13	No Criteria	--	--	--	--	--	No
2-Chloroethylvinyl Ether	ug/L	<	0.33	<	0.33	No Criteria	--	--	--	--	--	No
Chloroform	ug/L		90.7	<	0.33	80	--	--	--	470	80	Yes
Dichlorobromo-methane	ug/L		16.3	<	0.32	0.56	--	--	0.56	46	80	Yes
1,1-Dichloroethane	ug/L	<	0.29	<	0.29	5	--	--	--	--	5	No
1,2-Dichloroethane	ug/L	<	0.32	<	0.32	0.38	--	--	0.38	99	0.5	No
1,1-Dichloroethylene	ug/L	<	0.33	<	0.33	0.057	--	--	0.057	3.2	6	Uo
1,2-Dichloropropane	ug/L	<	0.25	<	0.25	0.52	--	--	0.52	39	5	No
1,3-Dichloropropylene	ug/L	<	0.17	<	0.17	0.5	--	--	10	1700	0.5	No
Ethylbenzene	ug/L	<	0.2	<	0.2	300	--	--	100	29000	300	No

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
Methyl Bromide	ug/L	<	0.24	<	0.24	48	--	--	48	4000	--	No
Methyl Chloride	ug/L	<	0.15	<	0.15	No Criteria	--	--	--	--	--	No
Methylene Chloride	ug/L	<	0.14	<	0.14	4.7	--	--	4.7	1600	5	No
1,1,2,2-Tetrachloroethane	ug/L	<	0.16	<	0.16	0.17	--	--	0.17	11	1	No
Tetrachloroethylene	ug/L	<	0.23	<	0.23	0.8	--	--	0.8	8.85	5	No
Toluene	ug/L		0.65	<	0.16	150	--	--	6800	200000	150	No
trans-1,2-Dichloroethylene	ug/L	<	0.26	<	0.26	10	--	--	700	140000	10	No
1,1,1-Trichloroethane	ug/L	<	0.31	<	0.31	200	--	--	--	--	200	No
1,1,2-Trichloroethane	ug/L	<	0.21	<	0.21	0.6	--	--	0.6	42	5	No
Trichloroethylene	ug/L	<	0.25	<	0.25	2.7	--	--	2.7	81	5	No
Vinyl Chloride	ug/L	<	0.07	<	0.07	0.5	--	--	2	525	0.5	Uo
2-Chlorophenol	ug/L	<	1.8	<	1.9	120	--	--	120	400	--	No
2,4-Dichlorophenol	ug/L	<	2.2	<	2.2	93	--	--	93	790	--	No
2,4-Dimethylphenol	ug/L	<	1.6	<	1.6	540	--	--	540	2300	--	No
2-Methyl-4,6-Dinitrophenol	ug/L	<	6	<	6	13.4	--	--	13.4	765	--	No
2,4-Dinitrophenol	ug/L	<	14	<	14	70	--	--	70	14000	--	No

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
2-Nitrophenol	ug/L	<	1.8	<	1.9	No Criteria	--	--	--	--	--	No
4-Nitrophenol	ug/L	<	8	<	8	No Criteria	--	--	--	--	--	No
4-Chloro-3-methylphenol	ug/L	<	1.9	<	1.9	No Criteria	--	--	--	--	--	No
Pentachlorophenol	ug/L	<	23	<	23	0.28	5.28	4.05	0.28	8.2	1	Uo
Phenol, Single Compound	ug/L	<	0.9	<	0.93	21000	--	--	21000	5E+06	--	No
2,4,6-Trichlorophenol	ug/L	<	2.1	<	2.1	2.1	--	--	2.1	6.5	--	Uo
Acenaphthene	ug/L	<	1.8	<	1.8	1200	--	--	1200	2700	--	No
Acenaphthylene	ug/L	<	1.6	<	1.7	No Criteria	--	--	--	--	--	No
Anthracene	ug/L	<	2.0	<	2.0	9600	--	--	9600	110000	--	No
Benzidine	ug/L	<	22	<	22	0.00012	--	--	0.00012	0.0005	--	Uo
Benzo(a)anthracene	ug/L	<	1.5	<	1.5	0.0044	--	--	0.0044	0.049	--	Uo
Benzo(a)pyrene	ug/L	<	2.3	<	2.3	0.0044	--	--	0.0044	0.049	0.2	Uo
Benzo(b)fluoranthene	ug/L	<	2.6	<	2.6	0.0044	--	--	0.0044	0.049	--	Uo
Benzo(ghi)perylene	ug/L	<	1.7	<	1.7	No Criteria	--	--	--	--	--	No
Benzo(k)fluoranthene	ug/L	<	2	<	2	0.0044	--	--	0.0044	0.049	--	Uo
Bis (2-Chloroethoxy) Methane	ug/L	<	1.7	<	1.7	No Criteria	--	--	--	--	--	No
Bis (2-Chloroethyl) Ether	ug/L	<	2.3	<	2.3	0.01	--	--	0.01	1.4	--	Uo

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
Bis (2-Chloroisopropyl) Ether	ug/L	<	4	<	4	1400	--	--	1400	170000	--	No
Bis (2-Ethylhexyl) Phthalate	ug/L	<	2	<	2	1.8	--	--	1.8	5.9	4	Uo
4-Bromophenyl Phenyl Ether	ug/L	<	1.7	<	1.7	No Criteria	--	--	--	--	--	No
Butylbenzyl Phthalate	ug/L	<	1.6	<	1.6	3000	--	--	3000	5200	--	No
2-Chloronaphthalene	ug/L	<	1.8	<	1.8	1700	--	--	1700	4300	--	No
4-Chlorophenyl Phenyl Ether	ug/L	<	1.7	<	1.7	No Criteria	--	--	--	--	--	No
Chrysene	ug/L	<	1.8	<	1.8	0.0044	--	--	0.0044	0.049	--	Uo
Dibenzo(a,h)anthracene	ug/L	<	1.9	<	1.9	0.0044	--	--	0.0044	0.049	--	Uo
1,2-Dichlorobenzene	ug/L	<	2.1	<	2.1	600	--	--	2700	17000	600	No
1,3-Dichlorobenzene	ug/L	<	2	<	2	400	--	--	400	2600	--	No
1,4-Dichlorobenzene	ug/L	<	2.3	<	2.3	5	--	--	400	2600	5	No
3,3-Dichlorobenzidine	ug/L	<	1.8	<	1.8	0.04	--	--	0.04	0.077	--	Uo
Diethyl Phthalate	ug/L	<	2.0	<	2.0	23000	--	--	23000	120000	--	No
Dimethyl Phthalate	ug/L	<	1.9	<	1.9	13000	--	--	13000	3E+06	--	No
Di-n-butyl Phthalate	ug/L	<	2.1	<	2.2	2700	--	--	2700	12000	--	No
2,4-Dinitrotoluene	ug/L	<	1.9	<	1.9	0.11	--	--	0.11	9.1	--	Uo
2,6-Dinitrotoluene	ug/L	<	2	<	2.1	No Criteria	--	--	--	--	--	No
Di-n-octyl Phthalate	ug/L	<	7.7	<	7.9	No Criteria	--	--	--	--	--	No
1,2-Diphenylhydrazine	ug/L	<	0.9	<	0.9	0.04	--	--	0.04	0.54	--	Uo

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
Fluoranthene	ug/L	<	2.1	<	2.1	300	--	--	300	370	--	No
Fluorene	ug/L	<	1.9	<	2	1300	--	--	1300	14000	--	No
Hexachlorobenzene	ug/L	<	2.3	<	2.3	0.00075	--	--	0.00075	0.0008	1	Uo
Hexachlorobutadiene	ug/L	<	2.5	<	2.6	0.44	--	--	0.44	50	--	Uo
Hexachlorocyclo-pentadiene	ug/L	<	16	<	17	50	--	--	240	17000	50	No
Hexachloroethane	ug/L	<	2.2	<	2.2	1.9	--	--	1.9	8.9	--	Uo
Indeno (1,2,3-cd) Pyrene	ug/L	<	1.7	<	1.8	0.0044	--	--	0.0044	0.049	--	Uo
Isophorone	ug/L	<	1.8	<	1.8	8.4	--	--	8.4	600	--	No
Naphthalene	ug/L	<	1.9	<	2	No Criteria	--	--	--	--	--	No
Nitrobenzene	ug/L	<	2.8	<	2.8	17	--	--	17	1900	--	No
N-Nitrosodimethylamine	ug/L	<	1.7	<	1.7	0.00069	--	--	0.00069	8.1	--	Uo
N-Nitrosodi-n-Propylamine	ug/L	<	2.3	<	2.4	0.005	--	--	0.005	1.4	--	Uo
N-Nitrosodiphenylamine	ug/L	<	2.3	<	2.3	5	--	--	5	16	--	No
Phenanthrene	ug/L	<	1.9	<	2	No Criteria	--	--	--	--	--	No
Pyrene	ug/L	<	1.7	<	0.8	960	--	--	960	11000	--	No
1,2,4-Trichlorobenzene	ug/L	<	1.9	<	1.9	5	--	--	35	70	5	No
Aldrin	ug/L	<	0.002	<	0.002	0.00013	3	--	0.00013	0.0001	--	Uo
alpha-BHC	ug/L	<	0.002	<	0.002	0.0039	--	--	0.0039	0.013	--	No
beta-BHC	ug/L	<	0.005	<	0.005	0.014	--	--	0.014	0.046	--	No

Constituent Name	Units		MEC[1]		B	C	CMC	CCC	Water & Org.[2]	Org. Only[3]	MCL	RP[4,5]
gamma-BHC	ug/L	<	0.003	<	0.003	0.019	0.95	0.08	0.019	0.063	0.2	No
delta-BHC	ug/L	<	0.003	<	0.003	No Criteria	--	--	--	--	--	No
Chlordane	ug/L	<	0.019	<	0.019	0.00057	2.4	0.0043	0.00057	0.0006	0.1	Uo
4,4-DDT	ug/L		0.023	<	0.005	0.00059	1.1	0.001	0.00059	0.0006	--	Yes
4,4-DDD	ug/L	<	0.002	<	0.002	0.00083	1.1	0.001	0.00083	0.0008	--	Uo
alpha-Endosulfan	ug/L		0.004	<	0.002	0.056	0.22	0.056	110	240	--	No
beta-Endosulfan	ug/L	<	0.002	<	0.00014	0.056	0.22	0.056	110	240	--	No
Endosulfan Sulfate	ug/L	<	0.002	<	0.002	110	--	--	110	240	--	No
Endrin	ug/L	<	0.002	<	0.002	0.036	0.086	0.036	0.76	0.81	2	No
Endrin Aldehyde	ug/L	<	0.015	<	0.015	0.76	--	--	0.76	0.81	--	No
Heptachlor	ug/L	<	0.002	<	0.002	0.00021	0.52	0.0038	0.00021	0.0002	0.01	Uo
Heptachlor Epoxide	ug/L	<	0.001	<	0.001	0.0001	0.52	0.0038	0.0001	0.0001	0.01	Uo
Toxaphene	ug/L	<	0.036	<	0.036	0.0002	0.73	0.0002	0.00073	0.0008	3	Uo
Chromium (VI)	ug/L	<	1.9	<	1.9	11	16	11	--	--	--	No
PCB(1)	ug/L	<	0.11	<	0.11	0.00017	--	0.014	0.00017	0.0002	0.5	Uo
Aluminum	ug/L		140		--	No Criteria	750	87	--	--	50	Ud
Chromium (III)	ug/L	<	10	<	10	160	1300	160	--	--	--	No
Ammonia (as N)	mg/L		0.26		--	0.151790	0.37292	0.151791	--	--	--	Yes
Nitrate (as N)	mg/L		7.2		--	10	--	--	10	--	10	Uo
Nitrite (as N)	mg/L	<	0.14		--	1	--	--	--	--	1	Uo

Table Notes

1. MEC = Maximum Effluent Concentration
2. Water & Org = CTR Water Quality Criteria for Human Health for Consumption of Water & Organisms
3. Org. Only = CTR Water Quality Criteria for Human Health for Organisms Only
4. RP = Reasonable Potential
5. Ud = Undetermined, Insufficient Data
6. Uo = Undetermined, No Water Quality Criteria.