

ATTACHMENT G - CITY OF CRESCENT CITY INDIVIDUAL REQUIREMENTS

1. FACILITY INFORMATION.

1.1. The City of Crescent City (hereinafter Permittee) is the owner and operator of the Crescent City Wastewater Treatment Facility (hereinafter Facility), a Publicly-Owned Treatment Works (POTW). The following table summarizes administrative information related to the facility.

Table G 1. Facility Information

WDID	1A84006ODN
Permittee	City of Crescent City
Name of Facility	Wastewater Treatment Facility
Facility Address	210 Battery Street Crescent City, CA 95531 Del Norte County
Facility Contact, Title and Phone	Eric Wier, City Manager, (707) 464-7483
Authorized Person to Sign and Submit Reports	Eric Wier, City Manager, (707) 464-7483
Mailing Address	377 J Street Crescent City, CA 95531
Billing Address	Same
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycled Water Production Authorized	Yes
Land Discharge Authorized	No
Facility Permitted Flow	1.86 mgd (average dry weather flow) 6.12 mgd (average wet weather flow)
Facility Design Flow	1.86 mgd (average dry weather treatment capacity) 6.12 mgd (average wet weather treatment capacity)
Permitted Initial Dilution Factor (Dm)	29:1
Instream Waste Concentration	3.45%

Watershed	Smith River Hydrologic Unit
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean Waters

2. FACILITY DESCRIPTION

The Permittee owns and operates a municipal wastewater treatment facility (WWTF) and associated wastewater disposal facility that serve a population of approximately 15,372 within Crescent City and the surrounding County Service Area (CSA). The CSA has two sub-areas: the Northwest area to the north of the City and the Bertsch Ocean View area to the east of the City.

2.1. Description of Wastewater and Biosolids Treatment and Controls

The Facility treats domestic, commercial, and industrial wastewater and has an average dry weather design treatment capacity of 1.86 mgd and a peak wet weather flow capacity of 6.12 mgd. The Permittee has three significant industrial users, including a cheese factory and two breweries that are covered under local pretreatment permits to discharge to the Facility.

The Permittee and CSA each maintain a separate sanitary sewer collection system within the service area. Flows generated within the CSA are collected and conveyed in the CSA's satellite collection system to the limits of the Permittee's system. The Permittee's system then conveys combined City and County-generated flows to the Facility, which is owned and maintained by the Permittee.

The headworks includes a mechanically cleaned screen, a flow-measuring Parshall flume, and a wet well in which five pumps are available to lift the flow to the primary clarifiers. Primary treatment consists of two grit removal tanks followed by two rectangular primary clarifiers. Secondary treatment is provided by operating the rotating biological contactors (RBC) and membrane bioreactor (MBR) in parallel. The RBC system consists of three trains of four-stage, RBCs with a combined surface area of 1.2 million square feet. Flow from the RBCs reach three rectangular secondary clarifiers. Flows from the clarifiers and any flow from the MBR unit that is not used for recycled water use are commingled and disinfected using sodium hypochlorite and dechlorinated using sodium bisulfite prior to discharge to the Pacific Ocean at Discharge Point 001.

The Permittee has the capability of producing tertiary-2.2 recycled water utilizing flow from the MBR and an ultraviolet (UV) light disinfection system that was installed in 2010. The Permittee does not currently have any recycled water use sites, but may produce recycled water in the future if recycled water use sites are identified. The capacity of the recycled water system is 1.2 mgd; however, the MBR can treat up to 1.6 mgd.

Solids handling consists of gravity thickening primary sludge, rotary drum thickening of secondary sludge, and anaerobic digestion of thickened solids. Both digesters are heated and mixed. Digested solids are dewatered using a belt filter press and hauled to a landfill.

2.2. Discharge Points and Receiving Waters

Treated wastewater is discharged at Discharge Point 001 at 41° 44' 38" N latitude and 124° 12' 10" W longitude to the Pacific Ocean. The outfall consists of a 24-inch ductile iron pipe that has an effluent conveyance capacity of 11 mgd to 13 mgd, depending on tide conditions. The outfall structure is sloped downward and discharges into a rocky slot in the surf zone adjacent to Battery Point Lighthouse.

Treated wastewater may also be discharged to the recycled water system at Discharge Point 002.

2.3. Compliance Summary

On August 26, 2025, the Regional Water Board issued Administrative Civil Liability Complaint (Invitation to Settle) for 79 violations of effluent limitations for residual chlorine, enterococci, total coliform, ammonia, and settleable solids in Order No. R1-2025-0034. The Invitation to Settle assessed a penalty of \$228,000 for these violations. A Settlement Agreement for this complaint has not yet been finalized.

2.4. Planned Changes

The Permittee may commence discharges of recycled water if any recycled water use sites are identified during the term of this Order. To authorize the use of the Permittee's recycled water at new recycled water use sites, the Permittee is required to enroll the new recycled water use sites under State Water Resources Control Board Order WQ 2016-0068-DDW. In addition, the Permittee must complete testing of its UV disinfection system to demonstrate that it meets recycled water requirements in section 60301.230 of title 22 of the CCR.

No other modifications or operational changes that will cause a material change in the volume or quality of discharges from the Facility have been identified for the term of this Order.

3. REASONABLE POTENTIAL ANALYSIS (RPA)

Procedures for performing an RPA are described in section 5.3.3.1 of the Fact Sheet. A summary of the RPA results is included in Table G-2 below. The RPA for the effluent was conducted using effluent monitoring data generated from Ocean Plan Table 3 parameter monitoring and routine monitoring events conducted between January 2021 through December 2025.

Table G-2. Facility RPA Summary

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint ⁶
Arsenic	µg/L	<	2.0	5	5	8	3	<3.0	3
Cadmium	µg/L	<	5.0	5	5	1	0	<0.1667	3
Chromium VI	µg/L	<	5.0	5	5	2	0	<0.1667	3
Copper	µg/L	=	22	63	2	3	2	2.7	2
Lead	µg/L	<	5.0	5	5	2	0	<0.1667	3
Mercury	µg/L	<	1.0	5	5	0.04	0.0005	<0.0338	3
Nickel	µg/L	=	14	41	5	5	0	0.4667	2
Selenium	µg/L	<	10	5	5	15	0	<0.490	3
Silver	µg/L	<	10	19	19	0.7	0.16	<0.490	2
Zinc	µg/L	=	45	5	0	20	8	9.2	2
Cyanide	µg/L	<	1.2	5	5	1	0	<0.667	3
Total Chlorine Residual	µg/L	=	520	1,777	1,776	2	0	500	1
Ammonia (as N)	µg/L	=	38,200	514	7	600	0	1,110	1
Phenolic Compounds (non-chlorinated)	µg/L	<	9.5	5	5	30	0	<0.3167	3
Chlorinated Phenolics	µg/L	<	24	5	5	1	0	<0.8000	3
Endosulfan	µg/L	=	0.012	5	5	0.009	0	0.0004	3
Endrin	µg/L	<	0.0038	5	5	0.002	0	<0.0001	3
HCH	µg/L	=	0.0088	5	5	0.004	0	0.0003	3
Acrolein	µg/L	<	2.0	5	5	220	0	<0.0667	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint ⁶
Antimony	µg/L	=	21	5	4	1,200	0	0.700	3
Bis(2-chloroethoxy) methane	µg/L	<	9.5	5	5	4.4	0	<0.3167	3
Bis(2-chloroisopropyl) ether	µg/L	<	9.5	5	5	1,200	0	<0.3167	3
Chlorobenzene	µg/L	<	1.0	5	5	570	0	<0.0333	3
Chromium (III)	µg/L	<	10	5	4	190,000	0	<0.3333	3
Di-n-butyl Phthalate	µg/L	<	9.5	5	5	3,500	0	<0.3167	3
Dichlorobenzenes	µg/L	<	9.5	5	5	5,100	0	<0.3167	3
Diethyl Phthalate	µg/L	<	9.5	5	5	33,000	0	<0.3167	3
Dimethyl Phthalate	µg/L	<	9.5	5	5	820,000	0	<0.3167	3
4,6-dinitro-2-methylphenol	µg/L	<	47	5	5	220	0	<1.5667	3
2,4-dinitrophenol	µg/L	<	47	5	5	4	0	<1.5667	3
Ethylbenzene	µg/L	<	1.0	5	5	4,100	0	<0.0333	3
Fluoranthene	µg/L	<	9.5	5	5	15	0	<0.3167	3
Hexachlorocyclopentadiene	µg/L	<	24	5	5	58	0	<0.8000	3
Nitrobenzene	µg/L	<	24	5	5	4.9	0	<0.8000	3
Thallium	µg/L	<	10	5	5	2	0	<0.3333	3
Toluene	µg/L	=	4.54	5	3	85,000	0	0.1513	3
Tributyltin	µg/L	<	3.0	5	5	0.0014	0	<0.1000	3
1,1,1-trichloroethane	µg/L	<	1.0	5	5	540,000	0	<0.0333	3
Acrylonitrile	µg/L	<	2	5	5	0.1	0	<0.0667	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint ⁶
Aldrin	µg/L	<	0.0038	5	5	0.000022	0	<0.00013	3
Benzene	µg/L	<	1.0	5	5	5.9	0	<0.0333	3
Benzidine	µg/L	<	50	5	5	0.000069	0	<1.6667	3
Beryllium	µg/L	<	1.0	5	4	0.033	0	0.0333	3
Bis(2-chloroethyl) Ether	µg/L	<	24	5	5	0.045	0	<0.8000	3
Bis(2-ethylhexyl) Phthalate	µg/L	=	37	5	4	3.5	0	1.233	3
Carbon Tetrachloride	µg/L	<	1.0	5	5	0.9	0	<0.0333	3
Chlordane	µg/L	<	0.047	5	5	0.000023	0	<0.0016	3
Chlorodibromomethane	µg/L	=	0.628	5	4	8.6	0	0.0209	3
Chloroform	µg/L	=	30.4	5	0	130	0	1.01	2
DDT	µg/L	=	0.0049	10	9	0.00017	0	0.00016	3
1,4-Dichlorobenzene	µg/L	<	1.0	5	5	18	0	<0.0333	3
3,3'-Dichlorobenzidine	µg/L	<	24	5	5	0.0081	0	<0.8000	3
1,2-Dichloroethane	µg/L	<	1.0	5	5	28	0	<0.0333	3
1,1-Dichloroethylene	µg/L	<	1.0	5	5	0.9	0	<0.0333	3
Dichlorobromomethane	µg/L	=	5.66	5	3	6.2	0	0.1887	3
Dichloromethane	µg/L	<	2.0	5	5	450	0	<0.0667	3
1,3-Dichloropropene	µg/L	<	1.0	5	5	8.9	0	<0.0333	3
Dieldrin	µg/L	<	0.0038	10	10	0.00004	0	<0.00013	3
2,4-Dinitrotoluene	µg/L	<	9.5	5	5	2.6	0	<0.3167	3
1,2-Diphenylhydrazine	µg/L	<	9.5	5	5	0.16	0	<0.3167	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint ⁶
Halomethanes	µg/L	<	2.0	5	5	130	0	<0.0667	3
Heptachlor	µg/L	=	0.0083	10	9	0.00005	0	0.00028	1
Heptachlor Epoxide	µg/L	<	0.0038	5	5	0.00002	0	<0.00013	3
Hexachlorobenzene	µg/L	<	9.5	5	5	0.00021	0	<0.3167	3
Hexachlorobutadiene	µg/L	<	9.5	5	5	14	0	<0.3167	3
Hexachloroethane	µg/L	<	9.5	5	5	2.5	0	<0.3167	3
Isophorone	µg/L	<	9.5	5	5	730	0	<0.3167	3
N-Nitrosodimethylamine	µg/L	<	9.5	5	5	7.3	0	<0.3167	3
N-Nitrosodi-N-Propylamine	µg/L	<	9.5	5	5	0.38	0	<0.3167	3
N-Nitrosodiphenylamine	µg/L	<	9.5	5	5	2.5	0	<0.3167	3
PAHs	µg/L	<	9.5	5	5	0.0088	0	<0.3168	3
PCBs	µg/L	<	0.28	5	5	0.000019	0	<0.0093	3
TCDD equivalents	µg/L	=	3.63E-09	5	2	3.9E-09	0	1.20E-10	3
1,1,2,2-Tetrachloroethane	µg/L	<	1.0	5	5	2.3	0	<0.0333	3
Tetrachloroethylene	µg/L	<	1.0	5	5	2	0	<0.0333	3
Toxaphene	µg/L	<	0.28	5	5	0.00021	0	<0.0093	3
Trichloroethylene	µg/L	<	1.0	5	5	27	0	<0.0333	3
1,1,2-Trichloroethane	µg/L	<	1.0	5	5	9.4	0	<0.0333	3
2,4,6-Trichlorophenol	µg/L	<	9.5	5	5	0.29	0	<0.3167	3
Vinyl Chloride	µg/L	<	1.0	5	5	36	0	<0.0333	3

Pollutant	Units	Qualifier	MEC ¹	No. Samples	No. ND ²	Co ³	Cs ⁴	X-obs ⁵	Endpoint ⁶
<u>Table Notes</u>									
1. MEC = Maximum Effluent Concentration									
2. ND = Non-Detected									
3. Co = The concentration (water quality objective) to be met at the completion of initial dilution (from Table 3 of the 2019 Ocean Plan).									
4. Cs = The background seawater concentrations (from Table 5 of the 2019 Ocean Plan).									
5. X-obs = The maximum concentration after complete mixing, calculated according to Step 4 of Appendix VI of the Ocean Plan using the permitted dilution ratio (Dm) of 50 as follows: $X\text{-obs} = (C_e + D_m * C_s)/(D_m + 1)$, unless otherwise noted.									
6. RPA Results:									
Endpoint 1 = An effluent limitation must be developed for the pollutant. Monitoring is required.									
Endpoint 2 = An effluent limitation is not required for the pollutant. Monitoring may be required as appropriate.									
Endpoint 3 = RPA is inconclusive. Less than 3 detects or greater than 80% ND.									

3.1. Water Quality-Based Effluent Limitations

Water quality objectives for pollutants determined to require an effluent limitation are as follows:

Table G 3. Applicable Water Quality Objectives – Ocean Plan

Parameter	Units	6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average
Ammonia	µg/L	600	2400	6000	--
Total Residual Chlorine	µg/L	2	8	60	--
Heptaclor	µg/L	--	--	--	0.00005

Using the equation, $C_e = C_o + D_m (C_o - C_s)$, effluent limitations are calculated as follows. Here, D_m is equal to 29 for each effluent limitation calculation. The effluent limitations established in this Order have been rounded to two significant figures.

Ammonia

$$C_e = (600 + 29 (600-0))/1000 = 18 \text{ mg/L (6-Month Median)}$$

$$C_e = (2400 + 29 (2400-0))/1000 = 72 \text{ mg/L (Daily Maximum)}$$

$$C_e = (6000 + 29 (6000-0))/1000 = 180 \text{ mg/L (Instantaneous Maximum)}$$

Total Residual Chlorine

$$C_e = 2 + 29 (2 - 0) = 60 \text{ } \mu\text{g/L (6-Month Median)}$$

$$C_e = 8 + 29 (8 - 0) = 240 \text{ } \mu\text{g/L (Daily Maximum)}$$

$$C_e = 60 + 29 (60 - 0) = 1,800 \text{ } \mu\text{g/L (Instantaneous Maximum)}$$

Heptachlor

$$C_e = 0.00005 + 29 (0.00005 - 0) = 0.0015 \text{ } \mu\text{g/L (30-day Average)}$$

Facility
Specific Effluent Limitation Summary

Effluent limitations applicable to the City of Crescent City Wastewater Treatment Facility, for discharges from Discharge Points 001 (Monitoring Location EFF-001) are as follows:

Table G-4. Facility Specific Effluent Limitations – Discharge Point EFF-001

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	mg/L	30	45	--	--	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	--	--	--
pH	s.u.	--	--	--	6.0	9.0	--
Oil and Grease	mg/L	25	40	--	--	75	--
Settleable Solids	mL/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
Ammonia Nitrogen, Total (as N)	mg/L	--	--	72	--	180	18
Total Residual Chlorine ¹	µg/L	--	--	240	--	1,800	60
Heptachlor	µg/L	0.0015	--	--	--	--	--
<u>Table Notes</u>							
1. See section 8.13 of this General Order regarding compliance with chlorine residual effluent limitations.							

3.1.1. **Percent Removal:** The average monthly percent removal of BOD5 and total suspended solids shall not be less than 85 percent. Percent removal shall be determined from the monthly average value of influent wastewater concentration in comparison to the monthly average value of effluent concentration for the same constituent over the same time period as measured at Monitoring Locations INF-001 and EFF-001, respectively.

3.1.2. **Disinfection.** Disinfected effluent discharged from the Facility through Discharge Point 001 to the Pacific Ocean shall not contain bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001:

3.1.2.1. **Enterococci**

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

3.1.2.1.2. Not more than 10 percent of the samples collected in a calendar month exceed an MPN of 110 per 100 mL.

3.1.2.2. **Total Coliform Bacteria**

3.1.2.2.1. The median value of total coliform bacteria shall not exceed an MPN of 70 per 100 mL in a calendar month; and

3.1.2.2.2. Not more than 10 percent of the samples collected in a calendar month exceed an MPN of 230 per 100 mL.

3.1.2.3. **Fecal Coliform**

The 30-day geometric mean of fecal coliform density not to exceed 200 per 100 mL;

No sample shall exceed an MPN of 400 per 100 mL.

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

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. The in-stream waste concentration for chronic toxicity for the City of Crescent City is 3.45 percent effluent. The adjusted chronic toxicity value unit for the City of Crescent City is 30.

Compliance with the accelerated monitoring and TRE provisions shall constitute compliance with the chronic aquatic toxicity requirements, as specified in the MRP (Attachment E, sections 5.1 and 5.2).

4. RECYCLED WATER PRODUCTION

4.1. **Recycling Specifications.** The City of Crescent City is authorized to produce tertiary treated recycled water under section 5.3 of this General Order. The City currently has no identified recycled water use sites. Prior to initiating recycled water use at recycled water use sites identified in the future, the Permittee must enroll under State Water Board Order DWQ 2016-0068-DDW (or any subsequent revision), submit a revised title 22 Recycled Water Engineering Report to DDW, and receive approval for the application of recycled water from DDW.

4.1.1. Disinfection Process Requirements

When discharging to the recycled water system, the Permittee shall operate their ultraviolet light (UV) disinfection system in accordance with the operating protocol and technical and administrative requirements set out by DDW in order to ensure compliance with disinfection water recycling specifications in section 5.4.2 of this Order. Site specific requirements include:

- 4.1.1.1. Operate the UV disinfection system to provide a minimum UV dose of 80 millijoules per square centimeter (mJ/cm²) at all times at Monitoring Location INT-002B, unless otherwise approved by DDW.
- 4.1.1.2. Ensure that the UV transmittance (at least 254 nanometers) in the wastewater does not fall below 65 percent of maximum at any time, unless otherwise approved by DDW.
- 4.1.1.3. Replace the UV lamps every 7,000 hours of operation, or sooner, if there are indications that the lamps are failing to provide adequate disinfection.
- 4.1.1.4. Until adequate redundancy and reliability is provided and demonstrated, ensure that flow through the UV disinfection system does not exceed 0.6 mgd as a daily maximum. Upon demonstration of adequate redundancy and reliability, ensure that flow through the UV disinfection system does not exceed 1.2 mgd as a daily maximum, unless otherwise approved by DDW.

4.1.2. Filtration Process Requirements

- 4.1.2.1. **Filtration Rate.** When discharging to the recycled water system, the rate of filtration through the tertiary filters, as measured at Monitoring Location INT-001A, shall not exceed 5 gallons per minute per square foot of surface area or other filtration rates authorized in writing by the Regional Water Board Executive Officer and under conditions recommended by DDW.
- 4.1.2.2. **Turbidity.** When discharging to the recycled water system, the effluent from the filtration system shall at all times be filtered such that the filtered effluent does not exceed any of the following specifications at Monitoring Location INT-001B prior to discharge to the disinfection unit:

- 4.1.2.2.1. 0.2 NTU more than 5 percent of the time during any 24-hour period; and
- 4.1.2.2.2. 0.5 NTU at any time.

5. LAND DISCHARGE SPECIFICATIONS

The City of Crescent City is not authorized to discharge to land under this General Order.