



State of Oregon
 Department of
 Environmental
 Quality

National Pollutant Discharge Elimination System Permit Renewal Fact Sheet City of Coquille

Final: August 6, 2024

Permittee	City of Coquille Coquille STP 300 West Main Street Coquille, OR 97423
Existing Permit Information	File Number: 20015 Permit Number: 3885 EPA Reference Number: OR0026247 Category: Domestic Class: Minor Expiration Date: 12/31/2008
Permittee Contact	Raymond Doan Plant Operator 541-396-4286 300 West Main Coquille, OR 97423
Receiving Water Information	Water Body Name: Coquille River River Mile: 23.9 Assessment Unit ID: OR_SR_1710030505_02_104992 Sub Basin Name: Coquille Basin Name: South Coast
Proposed Action	Permit Renewal Application Number: 972528 Date Application Received: 8/22/2008
Permit Writer	Phil Sprague 541-686-7998 Date Prepared: 6/17/2024

NPDES Permit Renewal Fact Sheet City of Coquille

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NPDES Permit Renewal Fact Sheet

City of Coquille

1. Introduction

As Oregon Administrative Rule 340-045-0035 requires, this fact sheet describes the basis and methodology DEQ used to develop the permit. The permit is divided into the following sections:

- Schedule A – Waste discharge limitations
- Schedule B – Minimum monitoring and report requirements
- Schedule C – Compliance conditions and schedules
- Schedule D – Special conditions
- Schedule E – Pretreatment conditions (Not applicable)
- Schedule F – General conditions

A summary of the major changes to the permit are listed below:

- Schedule A:
 - Changed limits for Carbonaceous Biochemical Oxygen Demand, Total Suspended Solids, Ammonia as Nitrogen, Total Nitrogen, Total Phosphorous, and Excess Thermal Load, based on the 2022 Total Maximum Daily Load.
- Schedule B:
 - Removed chlorine reporting requirements and added UV disinfection system reporting requirements.
 - Added Total Dissolved Solids, alkalinity, and total nitrogen reporting requirements.
 - Removed Whole Effluent Toxicity testing requirements.
 - Added stream monitoring requirements.
 - Removed Biosolids Management requirements.
- Schedule C:
 - Removed Schedule C requirements.
- Schedule D:
 - Removed Whole Effluent Toxicity testing requirements.
 - Replaced an Inflow and Infiltration condition with an Inflow Removal Program condition.
 - Added a Mixing Zone study condition.
 - Added an Emergency Response and Public Notification Plan condition.
 - Added an Exempt Wastewater Reuse at the Treatment System condition.
 - Added a Wastewater Solids Annual Report condition.
 - Added a Wastewater Solids Transfers condition.
 - Added a Hauled Waste Control Plan condition.
 - Added a Hauled Waste Annual Report condition.
 - Added an Industrial User Survey condition.
 - Added an Outfall Inspection condition.

2. Facility Description

2.1 Wastewater Facility

The City of Coquille originally constructed the STP and collection system in 1953. The wastewater treatment processes included large debris and grit removal, activated sludge digestion, secondary clarification, and chlorine disinfection. The sludge treatment processes included aerobic sludge digestion and sludge separation and stabilization. The city upgraded the original plant in 1971. The city replaced the original plant in 2012 with a new treatment facility. The city upgraded the original influent pump station and incorporated it into the new facility, along with some of the existing tanks.

The new treatment facility is an extended aeration activated sludge Sequencing Batch Reactor (SBR), with a Trojan UV-3000 disinfection system. The new facilities include an influent pump station, headworks, SBR tanks, equalization basin, UV disinfection system, aerobic sludge digester, and sludge storage tanks. Facility personnel put the SBR into service on Dec. 13, 2012. The facility has an average dry weather design flow (ADWDF) of 0.53 million gallons per day (MGD).

In 2023, the permittee produced approximately 885,000 gallons of aerobically digested wastewater solids for disposal. The city uses three tanks for sludge storage including Sludge Storage Tank No. 1 (213,000 gallons), Sludge Storage Tank No. 2 (108,000 gallons), and Sludge Storage Tank No. 3 (72,000 gallons). The permittee disposes wastewater solids at Heard Farms in Wilbur, Oregon and the Beaver Hill Transfer Station. A requirement to maintain a biosolids management plan was included in the previous permit renewal, but due to the above described disposal methods a plan is no longer required. Reporting of wastewater solids now falls under the Wastewater Solids Annual Report, as described in section 7.5.

Besides gravity, the city's collection system uses two pump stations to collect and convey raw sewage to the treatment facility. The city has expanded and improved different sections of the system throughout the years.

Figure 2-1 below is an aerial view showing the plant and outfall locations. Figure 2-2 below is a process flow diagram for the facility. Figure 2-3 below is the facility's hydraulic profile.

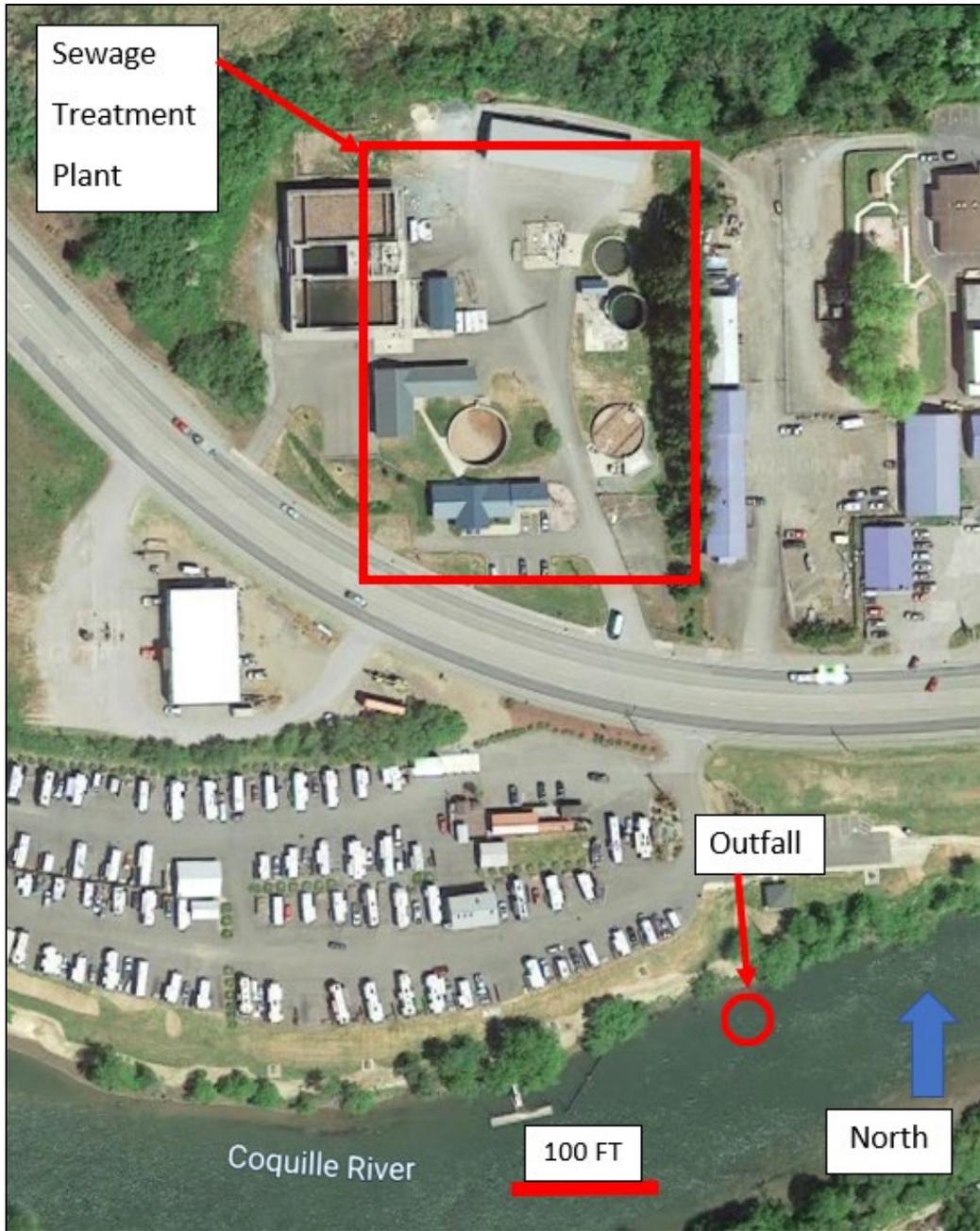


Figure 2-1: Aerial view of facility and outfall location.

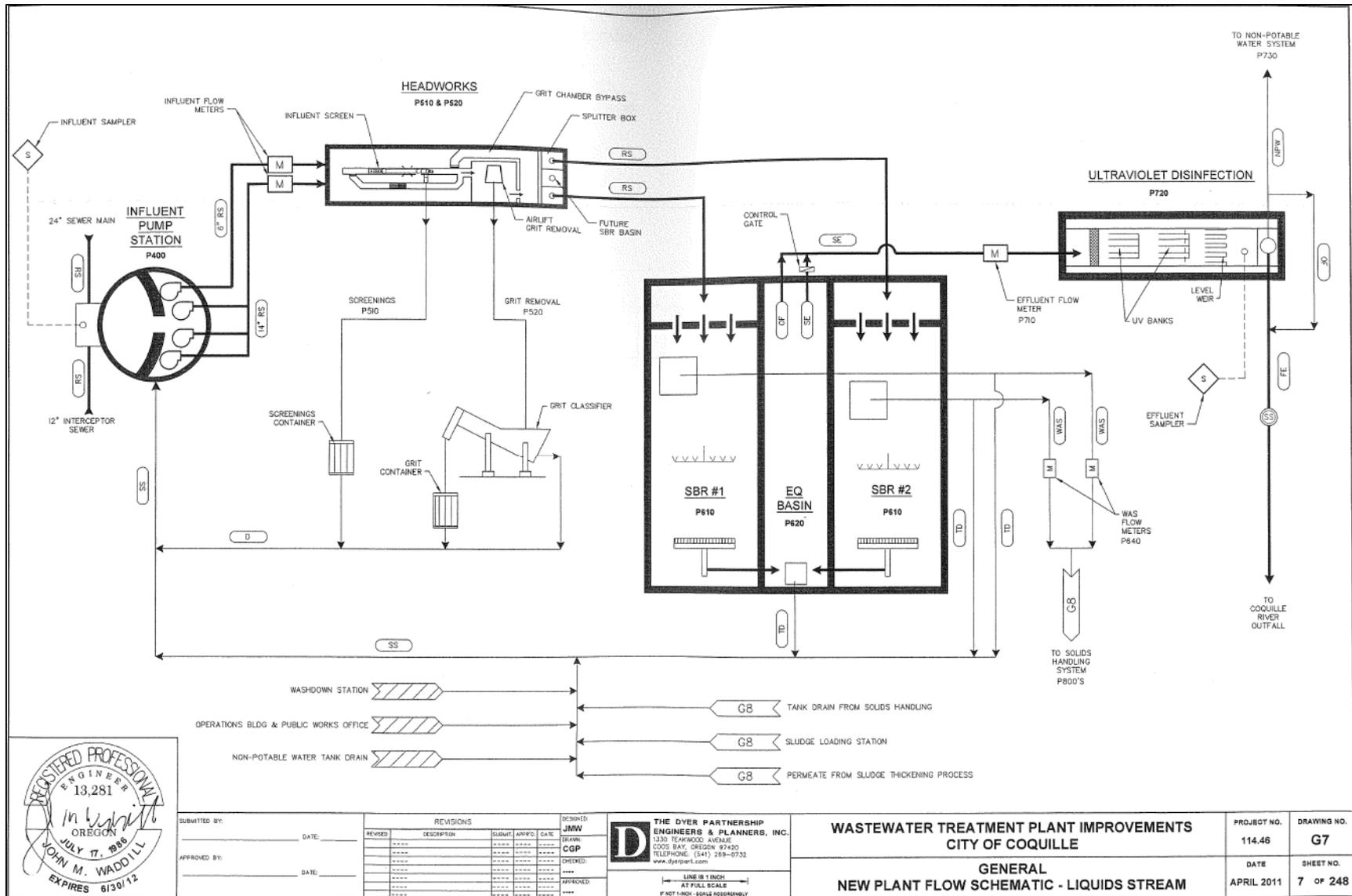


Figure 2-2: Process Flow Diagram

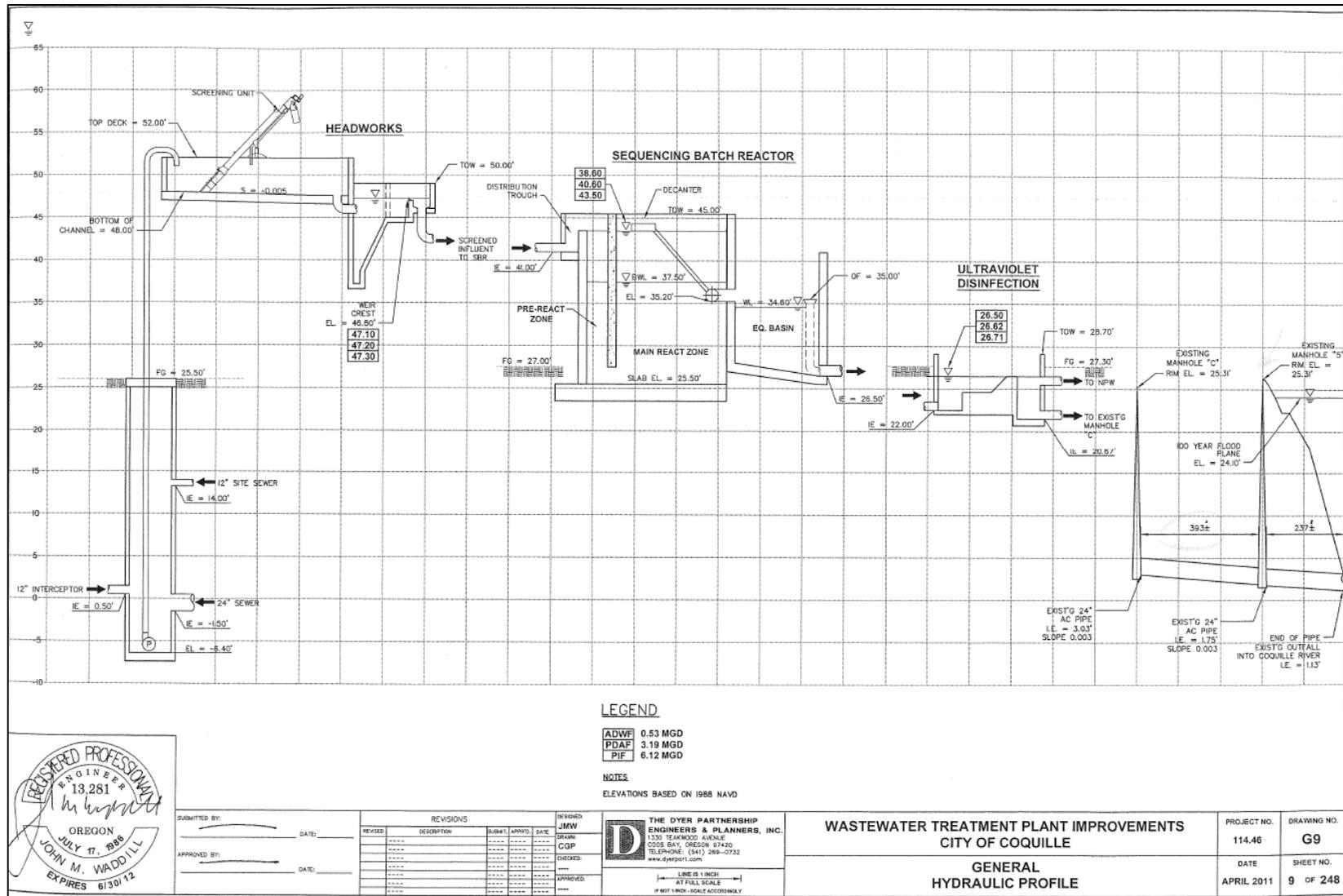


Figure 2-3: Hydraulic Profile

Table 2-1: List of Outfalls

Outfall Number	Type of Waste	Lat/Long	Design Flow ¹ (mgd)	Existing Flow ² (mgd)
001	Domestic	43.173721 / -124.193031	0.53	1.287
1. Design Flow = average dry weather design flow. 2. Existing Flow = existing average monthly wet weather flow (Nov. – Apr., period of record: Jan. 2019 – Apr. 2021).				

2.2 Compliance History

During the current permit cycle DEQ has issued the following enforcement actions against the city:

Date	Violation	Description
11/19/2012	Civil penalty assessment	Raw sewage discharged into river.
7/6/2018	Pre-enforcement notice	Discharge limits violation.
11/26/2019	Pre-enforcement notice	Discharge limits violation.
6/23/2021	Pre-enforcement notice	Discharge limits violation.

2.3 Stormwater

This permit does not address stormwater. General NPDES permits for stormwater are not required for facilities with a design flow of less than 1 MGD.

2.4 Industrial Pretreatment

The permittee does not have a DEQ-approved industrial pretreatment program. Based on current information, the city does not need an industrial pretreatment program. Schedule D of the proposed permit requires the permittee to perform an industrial user survey.

2.5 Wastewater Classification

OAR 340-049 requires all permitted municipal wastewater collection and treatment facilities receive a classification based on the size and complexity of the systems. DEQ evaluated the classifications for the treatment and collection system, which are publicly available at: <https://www.deq.state.or.us/wq/opcert/Docs/OpcertReport.pdf>.

3. Schedule A: Effluent Limit Development

Effluent limits serve as the primary mechanism in NPDES permits for controlling discharges of pollutants to receiving waters. Effluent limitations can be based on either the technology available to control the pollutants or limits that are protecting the water quality standards for the receiving water. DEQ refers to these two types of permit limits as technology-based effluent limitations (TBELs), and water quality-based effluent limits (WQBELs) respectively. When a

TBEL is not restrictive enough to protect the receiving stream, DEQ must include a WQBEL in the permit.

3.1 Existing Effluent Limits

The tables below show existing permit limits.

a. CBOD₅ and TSS

- i. May 1 – October 31: During this time period the permittee must comply with the limits in the following table:

Parameter	Average Effluent Concentrations, mg/L		Monthly Average lbs/day	Weekly Average lbs/day	Daily Maximum lbs
	Monthly	Weekly			
CBOD ₅	10	15	55	83	110
TSS	10	15	55	83	110

The summer mass load limits for the facility are based on the Total Maximum Daily Load (TMDL) waste load allocation for design conditions to assure future growth and development of the facility. The TMDL used a projected design flow for the facility of 0.66 MGD.

- ii. November 1 – April 30: During this time period the permittee must comply with the limits in the following table:

Parameter	Average Effluent Concentrations, mg/L		Monthly Average lbs/day	Weekly Average lbs/day	Daily Maximum lbs
	Monthly	Weekly			
CBOD ₅	25	40	210	310	420
TSS	30	45	250	380	500

Average dry weather design flow to the facility equals 1.0 MGD. Mass load limits based upon average dry weather design flow to the facility.

Year-round (except as noted)	Limits
CBOD ₅ and TSS Removal Efficiency	Shall not be less than 85% monthly average for CBOD ₅ and TSS.
<i>E. coli</i> Bacteria (See note a.)	Monthly geometric mean may not exceed 126 organisms per 100 ml. No single sample may exceed 406 organisms per 100 mL.
pH	May not be outside the range of 6.0 to 9.0 S.U.

Year-round (except as noted)	Limits
Total Residual Chlorine	Shall not exceed 0.02 mg/L daily maximum and 0.01 mg/L monthly average.
Ammonia – N (June 1 – Oct. 31)	Daily maximum concentration shall not exceed 7 mg/L.
Excess Thermal Load (May 1 – Oct. 31)	35 Million kcals/day weekly average.
Note: a. No single <i>E. coli</i> sample may exceed 406 organisms per 100 mL; however, DEQ will not cite a violation of this limit if the permittee takes at least 5 consecutive re-samples at 4-hour intervals beginning within 28 hours after the original sample was taken and the geometric mean of the 5 re-samples is less than or equal to 126 <i>E. coli</i> organisms/100 mL.	

3.2 Technology-Based Effluent Limit Development

40 CFR 122.44(a)(1) requires publicly owned treatment works (POTW) to meet technology-based effluent limits, for five-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH (i.e., federal secondary treatment standards). Federal and state rules allow substituting 5-day carbonaceous oxygen demand (CBOD₅) for BOD₅. 40 CFR 133.102 contains the numeric standards for these pollutants. In addition, DEQ has developed minimum design criteria for BOD₅ and TSS that apply to specific watershed basins in Oregon. These are listed in the basin-specific criteria sections under OAR 340-041-0101 to 0350. During the summer low flow months as OAR defines, these design criteria are more stringent than the federal secondary treatment standards. The basin-specific criteria are not effluent limits, but are implemented as design criteria for new or expanded wastewater treatment plants. The table below shows a comparison of the federal secondary treatment standards and the basin-specific design criteria for the South Coast Basin.

Table 3-1: Comparison of TBELs for Federal Secondary Treatment Standards and Oregon Basin-Specific Design Criteria

Parameter	Federal Secondary Treatment Standards		South Coast Basin-Specific Design Criteria (OAR 340-041-0305)
	30-Day Average	7-Day Average	Monthly Average
CBOD ₅ (mg/L)	25	40	During defined periods of low stream flow: 20 mg/L BOD ₅ and TSS. During defined periods of high stream flow: Minimum of secondary treatment
TSS (mg/L)	30	45	

Parameter	Federal Secondary Treatment Standards		South Coast Basin-Specific Design Criteria (OAR 340-041-0305)
	30-Day Average	7-Day Average	Monthly Average
pH (S.U.)	6.0 – 9.0. (instantaneous)		6.5 – 8.5 (instantaneous) Note: basin standards for pH do not have to be met at the outfall and can instead be met at the edge of the mixing zone.
BOD ₅ or CBOD ₅ and TSS % Removal	85%	Not applicable	Not applicable

As noted above, federal and state rules allow substituting 5-day carbonaceous oxygen demand (CBOD₅) for BOD₅. The allowable amount under federal rules is provided in the table above. The amount of CBOD₅ allowed under state policy for design criteria is equal to 0.8 times the BOD₅ concentration, which gives 16 mg/L as a monthly average for this facility during the period of low stream flow (when the state criteria apply). The 7-day average CBOD₅ limit under the policy is calculated by multiplying the BOD₅ concentration (20 mg/L) by 1.5 then multiplying the result by a conversion factor of 0.9. This results in a 7-day average CBOD₅ limit of 27 mg/L during the period of low stream flow.

The limits for CBOD₅ and TSS shown in Table 3-1 and discussed above are concentration-based limits. OAR 340-041-0061(9) also requires mass-based limits. Mass-based limits are required in addition to the concentration-based limits per OAR 340-041-0061(9). For any new facility or any facility that has expanded its dry weather treatment capacity after June 30, 1992, OAR 340-041-0061(9)(b) requires that the mass load limits be calculated based on the proposed treatment facility capabilities and the highest and best practicable treatment to minimize the discharge of pollutants. The CBOD₅ and TSS monthly average concentrations used in these calculations are noted in the table below. DEQ uses the design flows to calculate the mass load limits as shown below for the dry and wet weather seasons.

$$\text{Monthly Avg Mass Load} = \text{Design Flow}^* \times \text{Monthly Concentration Limit} \times \text{Unit Conversion factor}$$

$$\text{Weekly Average Mass Load} = 1.5 \times \text{Monthly Average Mass Load Limit}$$

$$\text{Daily Maximum Mass Load} = 2 \times \text{Monthly Average Mass Load Limit}$$

* Design flow is the design average dry weather flow or design average wet weather flow

The following table lists the effluent flows and concentration limits used for the calculations.

Table 3-2: Design Flows and Concentrations Limits

Season	Design Flow (mgd)	Monthly TSS Concentration Limit (mg/L)	Monthly CBOD ₅ Concentration Limit (mg/L)
Dry Weather	0.53	20	16
Wet Weather	2.04	30	25
Design flow comments: Dry Weather Flow– DADWF, Wet Weather Flow -DAWWF			

Example: Summer CBOD₅ Mass Load Calculations:

- Monthly Average: $0.53 \text{ mgd} \times 16 \text{ mg/L} \times 8.34 = 71 \text{ lbs/day}$ (Rounded to two significant figures).
- Weekly Average: $71 \text{ lbs/day} \times 1.5 = 110 \text{ lbs/day}$ (Two significant figures).
- Daily Maximum: $71 \text{ lbs/day} \times 2 = 140 \text{ lbs/day}$ (Two significant figures).

The technology-based CBOD₅ and TSS limits are listed in Table 3-3. Note: DEQ bases the winter time calculations on a design flow of 2.04 mgd. In Section 3.4, DEQ compares these limits to the existing limits and the water quality-based limits derived in the following section to determine the final effluent limits in the proposed permit.

Table 3-3: Technology Based Effluent Limits

Parameter	Units	Average Monthly	Average Weekly	Daily Maximum
CBOD ₅ (May 1 – October 31)	mg/L	16	27	NA
	lbs/day	71	110	140
	% removal	85	NA	NA
TSS (May 1 – October 31)	mg/L	20	30	NA
	lbs/day	88	130	180
	% removal	85	NA	NA
CBOD ₅ (November 1 – April 30)	mg/L	25	40	NA
	lbs/day	430	650	860
	% removal	85	NA	NA
TSS (November 1 – April 30)	mg/L	30	45	NA
	lbs/day	510	770	1020
	% removal	85	NA	NA

The TBELs listed in the table above differ from the existing permit limits (see Section 3.1 above). Because the winter design flow for the facility increased due to a plant upgrade, the November – April mass loads in the table above are higher than the existing limits. Also, the existing CBOD and TSS limits for the May – October period are more stringent than those in the table above. These differences and the limits in the proposed permit are detailed below. (Additional and/or more stringent water quality-based effluent limits are discussed in the following section.)

November – April (Winter) Mass Load Limits (TBELs)

The permittee has requested that the proposed permit include winter mass load limits that reflect the increased winter design flow of 2.04 MGD. As noted above, these less stringent limits are allowed under the regulations and policies related to TBELs. However, DEQ must determine if anti-backsliding and anti-degradation requirements prohibit the less stringent limits.

In accordance with 40 CFR 122.44(1)(2)(i)(2), backsliding is allowed if it is determined that “material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation.”. DEQ has determined that the construction of the new wastewater treatment facility in 2012 which resulted in the increased design flow constitutes a substantial alteration or addition to the facility and therefore meets this backsliding exception.

In addition, DEQ must ensure antidegradation requirements are also met and ensure compliance with associated water quality standards. DEQ performed a dissolved oxygen (DO) analysis to confirm that the proposed increase would not cause a lowering of water quality. For CBOD discharges, DEQ determines if a lowering of water quality occurs based on the impact to DO in the receiving stream. If the proposed CBOD increase results in less than a 0.10 mg/L decrease in the receiving water’s DO, this is not considered a reduction in water quality under Oregon’s antidegradation rule. The existing winter monthly limit is 210 lb/day and would be allowed to increase to 430 lb/day during the November 1 – April 1 period. DEQ’s DO analysis determined that the 220 lb/day CBOD increase would not result in a maximum DO reduction of greater than 0.1 mg/L. This analysis was based on November being the critical month with the lowest winter time DO in the Coquille River. Since impact to the receiving water is below the 0.1 mg/L threshold, the adjusted mass limit for CBOD is consistent with antidegradation requirements. DEQ’s longstanding policy is that because CBOD and TSS are associated parameters with respect to domestic wastewater, then the TSS antidegradation finding parallels the CBOD finding for a minor facility. Therefore, DEQ considers the adoption of the new TSS limits to be consistent with antidegradation requirements.

May - October (Summer) TSS Limits

The summer TSS concentration and TSS mass limits included in the proposed permit are based on the South Coast Basin-Specific Design Criteria (OAR 340-041-0305) of 20 mg/L monthly TSS concentration. The prior permit included a TSS monthly concentration limit of 10 mg/L, along with mass load limits based on this concentration. DEQ is proposing that the permit include TSS limits based on the design criteria and applicable design flow.

In order to allow an increase in the summer TSS limits, DEQ must determine if anti-backsliding requirements prohibit the less stringent limits. In accordance with 40 CFR 122.44(l)(2)(i)(B), backsliding is allowed if it is determined that “technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).” DEQ has determined that the inclusion of the 10 mg/L monthly TSS limit and associated load limits was the result of a mistaken interpretation of state rules and therefore meets the antibacksliding exception.

Additionally, to satisfy antidegradation requirements, an antidegradation analysis was performed which shows that the inclusion of the new summer TSS mass load limits represents a de minimis lowering of water quality in the assessment unit. Therefore, DEQ considers the adoption of the corrected summer TSS limits to be consistent with antidegradation.

May - October (Summer) CBOD Limits

The summer CBOD limits included in the existing permit are water quality based effluent limits. The permittee has not requested an increase in these limits and no analyses related to anti-backsliding or antidegradation have been performed. Therefore, the existing summer CBOD limits are retained in the proposed permit except where they are superseded by the new WQBELs developed in the following section.

3.3 Water Quality-Based Effluent Limit Development

40 CFR 122.44(d) requires that permits include limitations more stringent than technology-based requirements where necessary to meet water quality standards. Water quality-based effluent limits may be in the form of a wasteload allocation required as part of a Total Maximum Daily Load (TMDL). They may also be required if a site specific analysis indicates the discharge has the reasonable potential to cause or contribute to exceeding a water quality criterion. DEQ establishes effluent limits for pollutants that have a reasonable potential to exceed a criterion. The analyses are discussed below.

3.3.1 Designated Beneficial Uses

DEQ-issued NPDES permits must protect the following designated beneficial uses of the Coquille River. These uses are listed in OAR-340-041-0305 for the South Coast Basin.

- Public and private domestic water supply
- Industrial water supply
- Irrigation and livestock watering
- Fish and aquatic life (including salmonid rearing, migration, and spawning)
- Wildlife and hunting
- Fishing
- Boating
- Water contact recreation
- Aesthetic quality
- Hydro power
- Commercial navigation and transportation

3.3.2 Water Quality-Limited Parameters and Total Maximum Daily Loads

Table 3-2 below lists the parameters in the 2022 303(d) list for which the receiving stream is water quality-limited (Category 5) within the discharge’s stream reach. The table also lists any parameters covered by a TMDL.

Table 3-4: WQ-Limited and TMDL Parameters

Water Quality Limited Parameters
<p>AU ID: OR_SR_1710030505_02_104992.</p> <p>AU Name: Coquille River.</p> <p>AU Description: Confluence of South Fork Coquille River and North Fork Coquille River to tidewater (China Creek).</p> <p>Year Last Assessed: 2022.</p> <p>AU Status:</p> <p>Impaired Uses: Water Contact Recreation; Fish and Aquatic Life; Fishing; Private Domestic Water Supply; Public Domestic Water Supply.</p> <p>Year Listed: 2002.</p> <p>Category 5: Fecal Coliform, Dissolved Oxygen- spawn, Temperature- year-round, Methylmercury- Human Health Toxics</p>
TMDL Parameters
Chlorophyll a, Dissolved Oxygen, pH, Temperature (final draft 2022 TMDL).

3.3.3 TMDL Wasteload Allocations

In January and February 2022 DEQ completed the Final Draft TMDL for the Coquille River Subbasin. The TMDLs addressed temperature, CBOD₅, ammonia, nitrogen, and phosphorus, and included WLAs for each of these. These WLAs are listed and discussed below (section 3.3.10). The Final Draft TMDLs and associated analysis are part of the administrative record for this renewal.

The Final Draft TMDL for Dissolved Oxygen, pH, and Chlorophyll a for the Coquille River Subbasin targets a dissolved oxygen concentration of 8.0 milligrams per liter (mg/l) where active salmonid rearing and migration occur, and a dissolved oxygen concentration of 11.0 mg/l during active anadromous fish spawning or resident trout spawning.

The WLAs included in the TMDL are for materials likely to influence dissolved oxygen as well as pH and chlorophyll concentrations in the Coquille River Subbasin. It should be noted that the TMDL does not include specific limits for pH or dissolved oxygen but addresses these parameters through the nutrient WLAs. DEQ conducted a separate pH analysis to determine if this facility has reasonable potential to exceed the basin standard of 6.5-8.5. That analysis can be found in section 3.3.6 below.

In order to develop a TMDL to address DO listings in the Coquille River Subbasin, water quality models were developed for the Coquille River and Estuary (CE-QUAL-W2), the South Fork Coquille River (Heat Source and QUAL2Kw), and the Middle Fork Coquille River which is a major tributary to the South Fork (Heat Source). These models evaluate the impacts of thermal loads and other pollutant loads on temperature and dissolved oxygen (CE-QUAL-W2 and

QUAL2Kw) in the rivers. In addition, multiple regression statistical models that correlate DO with explanatory variables including flow, temperature, nutrients, and organic matter were developed for the South Fork, North Fork, and Middle Fork. The primary purpose of the models is to develop TMDLs to address Integrated Report Category 5 listings for water temperature, dissolved oxygen, pH, total organic carbon and chlorophyll a (nutrients). Waterbodies that exceed protective water quality standards are identified as impaired, (which is also referred to as the “303(d) List”).

Loading capacities for pollutants such as phosphorus are provided in terms of pollutant mass load per day (kg/day or lb/day). Pollutant loads in kg/day for given concentrations and flow rates may be calculated using the following equation:

$$\text{Pollutant Load} = C \times Q \times CF$$

Where: Pollutant Load=mass load,kgday/ C=Concentration,mg/L/ Q=Flow rate,cfs (cubic ft per second) or cms (cubic meter per second) CF=Conversion factor, 2.45 if Q in cfs or 86.4 if Q in cms

The Final Draft TMDL for Temperature targets the applicable biologically-based numeric criterion, which are as follows:

- 18.0°C as a seven-day-average maximum temperature for a stream identified as having salmon and trout rearing and migration use;
- 16.0°C as a seven-day-average maximum temperature for a stream identified as having core cold water habitat use;
- 13.0°C as a seven-day-average maximum temperature where and when a stream is identified as having salmon and steelhead spawning use.

In order to establish a TMDL to address 303(d) listings for temperature, DEQ quantifies the amount of heat energy in the stream in excess of the applicable temperature criteria plus the human use allowance (excess thermal load or ETL) and identifies known anthropogenic sources of stream heating. The TMDL specifies a thermal loading capacity that is equal to the maximum thermal loading that a stream can receive without exceeding the biologically based numeric criteria, plus the allotted human use allowance (HUA). The TMDL distributes the loading capacity among sources of stream heating including background, unidentified sources of heat, known anthropogenic sources of heat, a margin of safety, and reserve capacity.

Thermal load allocations assigned to human activities (LA_{HUA}) cannot exceed the loading capacity available for human activities (LC_{HUA}). It includes thermal wasteload allocations for point sources (WLA), thermal load allocations for nonpoint sources (LA_{NPS}), appropriate margins of safety (MOS), and reserve capacity for future discharges (RC), as follows:

$$LA_{HUA} = LA_{NPS} + WLA + MOS + RC$$

3.3.4 Pollutants of Concern

To ensure that a permit is protecting water quality, DEQ must identify pollutants of concern. These are pollutants that are expected to be present in the effluent at concentrations that could adversely impact water quality. DEQ uses the following information to identify pollutants of concern:

- Effluent monitoring data.
- Knowledge about the permittee’s processes.
- Knowledge about the receiving stream water quality.
- Pollutants identified by applicable federal effluent limitation guidelines.

Based on EPA’s NPDES permit application requirements, Table 3-5 below lists toxic pollutants of concern for domestic facilities.

Table 3-4: Domestic Toxic Pollutants of Concern

Flow Rate	Pollutants
< 0.1 mgd	Total Residual Chlorine
> 0.1 mgd and < 1.0 mgd	Total Residual Chlorine, Total Ammonia Nitrogen

Table 3-6 below lists the pollutants of concern for this facility that DEQ identified.

Table 3-5: Pollutants of Concern

Pollutant	How was pollutant identified?
pH	Effluent Monitoring
Temperature	TMDL
<i>E. coli</i>	Effluent Monitoring
CBOD ₅	TMDL
Ammonia as N	TMDL
Total Nitrogen	TMDL
Total Phosphorous	TMDL

3.3.5 Regulatory Mixing Zone

Permits issued by DEQ typically specify mixing zones. Mixing zones are allowed under both state and federal regulation. They are areas in the vicinity of outfalls in which all or some of Oregon’s water quality standards can be suspended. DEQ allows mixing zones when the overall impact, evaluated with respect to Oregon’s Mixing Zone Rule (OAR 340-041-0053) appears to be negligible.

Two mixing zones can be developed for each discharge: 1) The acute mixing zone, also known as the “zone of initial dilution” (ZID), and 2) the chronic mixing zone, usually referred to as “the mixing zone.” The ZID is a small area where acute criteria can be exceeded as long as it does not cause acute toxicity to organisms drifting through it. The mixing zone is an area where acute criteria must be met but chronic criteria can be exceeded. It must be designed to protect the integrity of the entire water body.

The existing mixing zone is described as follows:

The allowable mixing zone is that portion of the Coquille River contained within a band extending out 25 percent of the overall stream width and extending 175 feet upstream and 175 feet downstream from the outfall.

DEQ is proposing to change the mixing zone description by removing the 25 percent width description and adding a zone of initial dilution. Dilutions are based on the downstream distance and not on the lateral boundaries, so the 25 percent width isn’t needed. Virtually all permits that have a mixing zone also contain a zone of initial dilution so adding a ZID will make it consistent with all other permits. DEQ proposes the following mixing zone description:

The regulatory mixing zone is that portion of the Coquille River extending 175 feet upstream and downstream of the outfall. The zone of initial dilution is that portion of the Coquille River within 18 feet of the outfall.

The dilutions at the edge of the zone of initial dilution and mixing zone are shown in the table below. The mixing zone analysis is summarized in an April 2022 mixing zone memo that is part of the administrative record. The proposed permit requires the City to submit an updated mixing zone study during the next permit cycle.

Dilution Summary - Dry Weather						
Water Quality Standard	Velocity		Effluent Flow (mgd)		Dilution	Location
	Statistic	ft/s	Statistic	Flow		
Aquatic Life, Acute	10 th %	0.59	<input type="checkbox"/> ADWDF x PF <input checked="" type="checkbox"/> Max Daily Avg <input type="checkbox"/> Other	1.02	5.3	ZID
Aquatic Life, Chronic	50 th %	1.7	<input checked="" type="checkbox"/> ADWDF <input checked="" type="checkbox"/> Max Monthly Avg <input type="checkbox"/> Other	0.53	270	MZ
Human Health, Non-Carcinogen	50 th %	1.7	<input checked="" type="checkbox"/> ADWDF <input checked="" type="checkbox"/> Max Monthly Avg <input type="checkbox"/> Other	0.53	270	MZ

ADWDF = Average dry weather design flow
PF = Peaking factor

Comments: The average dry weather design flow is 0.53 mgd. The maximum monthly average flow over the past three years was also 0.53 mgd. The maximum daily average over the past three years was 1.02 mgd. Velocity values were taken from DEQ’s QUAL2E model for the Coquille River. The output is contained in an excel file (2007 QUAL2E output data.xlsx)

3.3.6 pH

The pH criterion for this basin is 6.5 – 8.5 per OAR 340-041-0305. DEQ determined there is no reasonable potential for the discharge to exceed the pH criterion at the edge of the mixing zone. As a result, the existing pH limit of 6.0 – 9.0 is being retained as a TBEL in the proposed permit. Table 3-7 below summarizes the data DEQ used for the analysis.

Table 3-5: pH Reasonable Potential Analysis

INPUT	Lower pH Criteria	Upper pH Criteria
1. DILUTION AT MZ BOUNDARY	270	270
2. UPSTREAM CHARACTERISTICS		
a. Temperature (deg C):	22.3	7.9
b. pH:	7.1	7.6
c. Alkalinity (mg CaCO3/L):	22.6	22.6
3. EFFLUENT CHARACTERISTICS		
a. Temperature (deg C):	20.8	10.0
b. pH (S.U.) - Enter existing lower and upper limit	6.0	9.0
c. Alkalinity (mg CaCO3/L):	134.6	134.6
4. APPLICABLE PH CRITERIA		
pH at Mixing Zone Boundary:	7.0	7.6
Is there Reasonable Potential?	No	No
Proposed Effluent Limits	6.0	9.0
Effluent Data Source: ICIS summary stats Nov 2018-Feb 2021. Temp 10th percentile = minimum of weekly average. Temp 90th percentile = maximum of weekly average. Alkalinity defaults used.		
Ambient Data Source: AWQMS 2016-2021 Stations 10596-ORDEQ and 10393-ORDEQ.		

3.3.7 Temperature

3.3.7.1 Temperature Criteria OAR 340-041-0028

Table 3-8 below summarizes the temperature criteria that apply at the discharge location, along with whether the receiving stream is water quality-limited for temperature and whether a TMDL wasteload allocation has been assigned. Using this information, DEQ performed several analyses to determine if the permit needs effluent limits to comply with the temperature criteria.

Table 3-6: Temperature Criteria Information

Applicable Temperature Criterion	Rearing/Migration 18°C (OAR 340-041-0028(4)(c))
Applicable dates: Year-round	
Salmon/Steelhead Spawning 13°C? OAR 340-041-0028(4)(a)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Applicable dates: N/A	
WQ-limited?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
TMDL wasteload allocation assigned?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Applicable dates: May 1 – Oct. 31	
TMDL based on natural conditions criterion?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Cold water summer protection criterion applies?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Cold water spawning protection applies?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Comments: The WLAs vary, based on stream flow. The TMDL specifies WLAs for each month during the critical period (May through October). Table 65, on page 151 of the temperature TMDL lists these specific WLAs.	

While the Coquille TMDL is not finalized, DEQ considers it as a temperature “cumulative effects analysis” that basically conducts a basin-wide reasonable potential analysis and assigns appropriate limits. Oregon’s temperature standard (OAR 304-041-0028(12)(b)(B)) authorizes implementing applicable temperature criteria based on a cumulative effects analysis. The following table recreates Table 65 of the Final Draft 2022 Temperature TMDL:

Month	7Q10 at SF Coquille at Powers Gage	Flow Ratio	Thermal WLA Equation (kcal/day)	Thermal WLA when $Q_{R,Powers} \leq 7Q10$ (million kcal/day)
May	96.2	3.93	$0.17 \times 3.93 \times Q_{R,Powers} \times C_F$	157.3
June	51.4	5.01	$0.17 \times 5.01 \times Q_{R,Powers} \times C_F$	107.1
July	27.7	4.21	$0.17 \times 4.21 \times Q_{R,Powers} \times C_F$	48.5
Aug.	18.5	3.08	$0.17 \times 3.08 \times Q_{R,Powers} \times C_F$	23.7

Month	7Q10 at SF Coquille at Powers Gage	Flow Ratio	Thermal WLA Equation (kcal/day)	Thermal WLA when $Q_{R,Powers} \leq 7Q10$ (million kcal/day)
Sept.	12.8	3.38	$0.17 \times 3.38 \times Q_{R,Powers} \times C_F$	18.0
Oct.	12.8	3.22	$0.17 \times 3.22 \times Q_{R,Powers} \times C_F$	17.1
Nov. – Apr.	No thermal WLA is required			
Note: $Q_{R,Powers}$ is the South Coquille river flow measured at the Powers Gage in cfs.				

DEQ gives the permittee two options for meeting the ETL limits. One is a numeric limit, shown in the last column in the table above. The other is a flow-based limit, using the equations shown in the table above. The TMDL specifies a conversion factor (C_F) of 2,446,665. Note that this gives the limit in kcal/day. For the usual limit, in million kcal/day, DEQ rounds this number to 2.447 in the calculations. To simplify the flow-based equations in Table A1 of the permit, DEQ has reduced the equations as follows (using the May equation as an example):
 May ETL Limit (million kcal/day) = $0.17 \times 3.93 \times 2.447 \times Q_{R,Powers} = 1.6 \times Q_{R,Powers}$.

Table 3-7: Temperature Criteria Effluent Limits

Effluent limit needed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
TMDL WLA Limit: See discussion above for numeric and flow-based limit options.
Applicable time period: May through October. <input type="checkbox"/> NA
Temperature Criterion Limit: N/A
Applicable time period: Dates. <input checked="" type="checkbox"/> NA
Comments: The TMDL (cumulative effects analysis) does not require a limit from November through April.

3.3.7.2 Thermal Plume OAR 340-041-0053(2)(d)

In addition to compliance with the temperature criteria, OAR 340-041-0053(2)(d) contains thermal plume limitation provisions designed to prevent or minimize adverse effects to salmonids that may result from thermal plumes. DEQ evaluated the discharge for compliance with these provisions as follows:

- OAR 340-041-0053(2)(d)(A): Impairment of an active salmonid spawning area where spawning redds are located or likely to be located. This adverse effect is prevented or minimized by limiting potential fish exposure to temperatures of 13°C or more for salmon and steelhead, and 9°C or more for bull trout.

OAR 340-041-0300, Figure 300B, shows that the receiving stream in the vicinity of the facility’s outfall does not support salmonid spawning. Therefore, the facility’s discharge complies with this rule requirement.

- OAR 340-041-0053(2)(d)(B): Acute impairment or instantaneous lethality is prevented or minimized by limiting potential fish exposure to temperatures of 32°C or more to less than 2 seconds.

DEQ reviewed the facility’s monthly discharge data from 2018 through 2020. The review showed that the facility’s discharge temperature never exceeded 20° C. Therefore, the facility’s discharge complies with this rule requirement.

- OAR 340-041-0053(2)(d)(C): Thermal shock caused by a sudden increase in water temperature is prevented or minimized by limiting potential fish exposure to temperatures of 25°C or more to less than 5% of the cross-section of 100% of the 7Q10 flow of the water body.

DEQ reviewed the facility’s monthly discharge data from 2018 through 2020. The review showed that the facility’s discharge temperature never exceeded 20° C. Therefore, the facility’s discharge complies with this rule requirement.

- OAR 340-041-0053(2)(d)(D): Unless ambient temperature is 21°C or greater, migration blockage is prevented or minimized by limiting potential fish exposure to temperatures of 21°C or more to less than 25% of the cross-section of 100% of the 7Q10 flow of the water body.

DEQ reviewed the facility’s monthly discharge data from 2018 through 2020. The review showed that the facility’s discharge temperature never exceeded 20° C. Therefore, the facility’s discharge complies with this rule requirement.

Table 3-8: Thermal Plume Effluent Limits

Effluent limit needed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Calculated limit: N/A
Applicable timeframe: N/A
Comments: No RP, so no thermal plume limits needed.

3.3.8 Bacteria

OAR 340-041-0009(6)(b) requires discharges of bacteria into freshwaters meet a monthly geometric mean of 126 *E. coli* per 100 mL, with no single sample exceeding 406 *E. coli* per 100 mL. If a single sample exceeds 406 *E. coli* per 100 mL, then the permittee may take five consecutive re-samples. If the log mean of the five re-samples is less than or equal to 126, a violation is not triggered. The permittee must perform re-sampling at four-hour intervals, beginning within 28 hours after the original sample was taken. Table 3-10 below includes the proposed permit limits and apply year-round.

Table 3-9: Proposed *E. coli* Limits

<i>E. coli</i> (#/100 ml)	Geomean	Maximum
Existing Limit	126	406
Proposed Limit	126	406

3.3.9 Toxic Pollutants

DEQ typically performs the reasonable potential analysis for toxics according to EPA guidance provided in the Technical Support Document for Water Quality-Based Toxics Control (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991). The factors incorporated into this analysis include the following:

- Effluent concentrations and variability.
- Water quality criteria for aquatic life and human health.
- Receiving water concentrations.
- Receiving water dilution (if applicable).

DEQ performs these analyses using spreadsheets incorporating EPA's statistical methodology. The following sections describe the analyses for various toxic pollutants.

3.3.9.1 Total Ammonia Nitrogen

(Note: This section addresses ammonia toxicity. The section 3.3.10 addresses ammonia as it relates to impacts on dissolved oxygen.) DEQ's ammonia criteria for ammonia toxicity vary with changes in pH and temperature. DEQ performed a reasonable potential analysis that accounts for changes in the effluent and receiving water pH and temperature to determine the appropriate ammonia criteria. Table 3-10 below summarizes the data used for the ammonia analysis and the results of the analysis. There is no reasonable potential to exceed ammonia criteria at the ZID or edge of the mixing zone, so no ammonia limits are included in the proposed permit to address ammonia toxicity. However, ammonia limits are proposed to address the TMDL wasteload allocations related to the dissolved oxygen criteria (see the discussion in the following section).

Table 3-10: Ammonia Analysis Information - Year-Round

	Acute	Chronic	
		4-day	30-day
Dilution	5.3	270	270
Ammonia Criteria	6.9	2.7	1.1
Effluent Data Used			
Ammonia (mg/L)	3.5	3.5	
pH (SU)	7.6	7.6	
Temperature (°C)	20.8	20.8	
Alkalinity (mg/L CaCO3)	64.0	64.0	
Receiving Stream Data Used			
Ammonia (mg/L)	0.0	0.0	
pH (SU)	7.6	7.6	
Temperature (°C)	22.3	22.3	
Alkalinity (mg/L CaCO3)	48.0	48.0	
Ammonia Limit Needed?	No		
Calculated Limits	AML	MDL	
Ammonia (mg/L)	N/A	N/A	
Effluent data source			
Ammonia from 2019-2020 DMRs. Temp, pH from ICIS summary stats 2018-2021. Temp 90th = max of weekly average. pH 90th percentile = 90th percentile of daily max. Alkalinity defaults used.			
Ambient data source			
AWQMS 2016-2021 Stations 10596-ORDEQ and 10393-ORDEQ.			

3.3.10 Non-Temperature TMDL Parameters (Ammonia, Nitrogen, Phosphorus and CBOD₅)

As noted in section 3.3.3, above, in February 2022 DEQ completed the Final Draft TMDL for the Coquille River Subbasin. In addition to temperature (addressed above), the TMDL addressed CBOD₅, ammonia, nitrogen and phosphorus, and included WLAs for each of these. These WLAs are listed in the table below. While the TMDL is not yet finalized, since the analyses presented in the TMDL constitute reasonable potential analyses addressing these parameters and associated criteria, the proposed permit includes limits based on these WLAs. Each of the wasteload allocations are applicable as a monthly average, and are included in the proposed permit as monthly averages.

Table 3-11: Applicable Non-Temperature WLAs

Parameter	WLA	Time Period
CBOD ₅	102 lbs/day	May 1 – June 30
CBOD ₅	44 lbs/day	July 1 – Sept. 30
CBOD ₅	44 lbs/day (See note a.) 102 lbs/day (See note b.)	Oct. 1 – Oct. 31
Ammonia as N	20 lbs/day	May 1 – June 30
Ammonia as N	4.4 lbs/day	July 1 – Sept. 30
Ammonia as N	4.4 lbs/day (See note a.) 20 lbs/day (See note b.)	Oct. 1 – Oct. 31
Total Nitrogen	102 lbs/day	May 1 – June 30
Total Nitrogen	44 lbs/day	May 1 – June 30
Total Nitrogen	44 lbs/day (See note a.) 102 lbs/day (See note b.)	Oct. 1 – Oct. 31
Total Phosphorous	41 lbs/day	May 1 – June 30
Total Phosphorous	3.5 lbs/day	July 1 – Sept. 30
Total Phosphorous	3.5 lbs/day (See note a.) 41 lbs/day (See note b.)	Oct. 1 – Oct. 31
Notes:		
a. Discharge at Powers Gage (14325000) < 100 cfs.		
b. Discharge at Powers Gage (14325000) ≥ 100 cfs.		

3.4 Limits in Proposed Permit

The preceding three sections of this fact sheet present the existing permit’s limits, the technology-based effluent limits (TBELs) and the water quality-based effluent limits (WQBELs). The more stringent of these three sets of limits are generally included in permits. (The exception in the proposed permit is for the winter limits, as noted below. The ammonia concentration limit is also replaced by load limits, also noted below.) The limits in the proposed permit and their rationale for inclusion are as follows:

- pH and bacteria: Limits developed in the WQBEL section above are the same as the current permit’s limits and will therefore be retained in the proposed permit.
- Chlorine: Since the chlorine disinfection system at the facility has been replaced by an ultraviolet (UV) system, the chlorine limit was removed from the proposed permit and replaced by a chlorine use prohibition (see below).
- Temperature (excess thermal load or ETL) limit: The existing permit contains an ETL limit of 12.5 million kcals/day, applicable from May 1 - October 31. The ETL limits presented in Section 3.3.7, above, are at times less stringent than the existing limit, and more stringent at other times. Although antibacksliding provisions generally do not allow relaxation of effluent limits in renewal permits, section 303(d)(4)(A) of the Clean Water Act allows relaxation when the receiving water is not in attainment for the limiting or

related pollutant. The effluent limit is based on a TMDL wasteload allocation, and it can be shown that relaxation is consistent with antidegradation requirements. As noted above, the receiving water is water quality limited and the new limits are based on a TMDL WLA. It also complies with the antidegradation requirement since TMDL wasteload allocation ensures the temperature increase is an insignificant increase according to the Antidegradation Rule, OAR 340-041-0004(3)(c). Therefore, the new excess thermal load limits based on the TMDL wasteload allocations are allowed and are included in the proposed permit.

- Ammonia: The existing maximum daily limit of 7 mg/L is based on the old TMDL and was included in the existing permit to address dissolved oxygen issues in the receiving stream. The old TMDL has been replaced by a new draft TMDL, which includes new wasteload allocations that are being applied as load limits in this permit (see Section 3.3.10). These new load limits are therefore replacing existing limit. Antibacksliding and antidegradation issues related to this change are addressed in Sections 3.5 and 3.6, below.

There are no existing or technology-based ammonia mass load limits, so the TMDL WLAs presented in Table 3-12 apply and are included in the proposed permit.

- CBOD₅: For the May through June period, CBOD₅ loads based on the existing limits are the most stringent. For the July through September period, the monthly CBOD₅ loads based on the WLAs (presented in Table 3-12) and the existing weekly and daily load limits are more stringent and are included in the proposed permit. For October, the monthly CBOD₅ loads for river flows less than 100 cfs based on the WLAs (presented in Table 3-12), the existing monthly loads for river flows equal to or greater than 100 cfs and the existing weekly and daily load limits are more stringent and are included in the proposed permit. For the November-April period, the CBOD mass load limit is based on an effluent flow of 2.04 MGD as discussed in section 3.2.
- TSS: TSS limits are technology based effluent limits with the load limits calculated using a summer effluent flow of 0.53 MGD and a winter effluent flow of 2.04 MGD as discussed in section 3.2.
- Phosphorus and Nitrogen: There are no existing ammonia, phosphorus or nitrogen permit load limits, so the WLAs presented in Table 3-12 for these parameters are included as effluent limits in the proposed permit.
- Table 3-13 below lists the proposed CBOD₅, phosphorus, nitrogen, and ammonia limits, along with the source of each limit (existing, TBEL or WQBEL).

Table 3-12: Proposed CBOD₅, TSS, Phosphorus, Nitrogen, and Ammonia Limits

Season	Parameter		Units	Avg. Monthly	Avg. Weekly	Daily Max.	Source of Limit	
May 1 – Oct. 31	CBOD ₅		mg/L	10	15	-	Existing	
			% removal	85	-	-	TBEL	
	TSS		mg/L	20	30	-	TBEL	
			lb/day	88	130	180	TBEL	
			% removal	85	-	-	TBEL	
May 1 Jun. 30	CBOD ₅		lb/day	55	83	110	Existing	
	Ammonia as N			20	-	-	TMDL	
	Total Nitrogen			100	-	-	TMDL	
	Total Phosphorus			41	-	-	TMDL	
Jul. 1 – Sep. 30	CBOD ₅		lb/day	44	-	-	TMDL	
				-	83	110	TBEL	
	Ammonia as N			4.4	-	-	TMDL	
	Total Nitrogen			44	-	-	TMDL	
	Total Phosphorus			3.5	-	-	TMDL	
Oct. 1 – Oct. 31	River flow at Powers < 100 cfs	CBOD ₅	lb/day	44	-	-	TMDL	
		-		83	110	TBEL		
		Ammonia as N		4.4	-	-	TMDL	
		Total Nitrogen		44	-	-	TMDL	
		Total Phosphorus		3.5	-	-	TMDL	
	River flow at Powers ≥ 100 cfs	CBOD ₅		lb/day	55	83	110	Existing
		Ammonia as N			20	-	-	TMDL
		Total Nitrogen			100	-	-	TMDL
Total Phosphorus		41	-		-	TMDL		
Nov. 1 – Apr. 30	CBOD ₅		mg/L	25	40	-	TBEL	
			lb/day	430	650	860	TBEL	
			% removal	85	-	-	TBEL	
	TSS		mg/L	30	45	-	TBEL	
			lb/day	510	770	1020	TBEL	
			% removal	85	-	-	TBEL	

3.5 Antibacksliding

The proposed permit complies with the antibacksliding provisions of CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l). With the exception of the ammonia, winter CBOD/TSS limits and the summer TSS limits, the proposed limits are the same or more stringent than the existing permit so the antibacksliding provision is satisfied. The new winter CBOD/TSS limits and the summer TSS limits are allowed under the antidegradation regulations as discussed in Section 3.2, above.

The proposed permit includes ammonia limits that are expressed as loads, as opposed to the concentration limit in the existing permit. This change may be considered a relaxation of the effluent limit in certain circumstances. Although antibacksliding provisions generally do not allow relaxation of effluent limits in renewal permits, section 303(d)(4)(A) of the Clean Water Act allows relaxation when the receiving water is not in attainment for the limiting or related pollutant, the effluent limit is based on a TMDL wasteload allocation, and it can be shown that relaxation is consistent with antidegradation requirements. As noted above, the receiving water is water quality limited for dissolved oxygen and the new ammonia limits are based on a TMDL WLA associated with dissolved oxygen. Therefore, the new ammonia limits based on the TMDL wasteload allocations are allowed and are included in the proposed permit. As explained in the following section, this change is also consistent with antidegradation requirements.

3.6 Antidegradation

DEQ must ensure the permit complies with Oregon's antidegradation policy found in OAR 340-041-0004. This policy is designed to protect water quality by limiting unnecessary degradation from new or increased sources of pollution.

DEQ has performed an antidegradation review for this discharge. The proposed permit contains the same or more stringent discharge loadings as the existing permit with three exceptions. Each of these are discussed below. For the mass load limits that did not change or are more restrictive as the previous permit, these are not considered to lower water quality from the existing condition. The permit does include a change in the ammonia limits related to dissolved oxygen in the proposed permit (from a concentration limit to mass load limits as noted in Section 3.4). This change complies with the antidegradation requirement since the TMDL wasteload allocations ensure that any dissolved oxygen decrease is an insignificant decrease according to the Antidegradation Rule, OAR 340-041-0004(3)(d). The TMDL accounts for seasonal variation and critical conditions in stream flow, sensitive beneficial uses, pollutant loading and water quality parameters so that water quality standards will be attained and maintained during all seasons of the year.

The permit also includes a change in the winter CBOD/TSS mass loadings which was discussed in section 3.2 of this document. This change was shown to comply with the antidegradation requirement since DEQ analysis shows that any dissolved oxygen decrease resulting from the CBOD/TSS limits is an insignificant decrease according to the Antidegradation Rule, OAR 340-041-0004(3)(d). (See section 3.2 of this document for a more detailed discussion.)

For the summer TSS mass load increase and the potential to reduce water quality by a measurable amount, DEQ compares the impact of the discharge on water quality against a *de minimis* threshold. An analysis determined that the increase represents a *de minimis*, or non-measurable, impact on water quality. Since it was found that there will be no measurable reduction in water quality due to the proposed mass load increase, no further anti-degradation analysis is required.

DEQ is not aware of any information that existing limits are not protecting the receiving stream's designated beneficial uses. DEQ is also not aware of any existing uses present within the water body that are not currently protected by standards developed to protect the designated uses. Therefore, DEQ has determined that the proposed discharge complies with DEQ's antidegradation policy. DEQ's antidegradation worksheet for this permit renewal is available upon request.

3.7 Whole Effluent Toxicity

DEQ does not require whole effluent toxicity testing (WET) for minor domestic facilities because concentrations of toxics are typically very low and WET testing is not warranted. The most recent WET testing was conducted at the facility in 2015 and did not show acute or chronic toxicity.

3.8 Groundwater

The treatment facility does not have any basins, ponds or lagoons that have the potential to leach into the groundwater. The treatment facility is not located in a groundwater management area. The renewal permit does not need any groundwater monitoring or limits.

4. Schedule A: Other Limitations

4.1 Mixing Zone

Schedule A describes the regulatory mixing zone as discussed above in section 3.3.5.

4.2 Chlorine Usage

Schedule A of the permit prohibits the permittee from using chlorine or chlorine compounds for effluent disinfection purposes.

5. Schedule B: Monitoring and Reporting Requirements

Schedule B of the permit describes the minimum monitoring and reporting necessary to demonstrate compliance with the proposed effluent limits. In addition, monitoring for other parameters is required to better characterize the effluent quality and the receiving stream. This data will be used during the next permit renewal. Detailed monitoring frequency and reporting requirements are in Schedule B of the proposed permit. The required monitoring, reporting and

frequency for many of the parameters are based on DEQ's monitoring and reporting matrix guidelines, permit writer judgment, and to ensure the needed data is available for the next permit renewal.

6. Schedule C: Compliance Schedule

The proposed permit contains new effluent limits for phosphorous. The facility is unable to meet these limits upon permit issuance. The proposed permit contains a compliance schedule that allows time for the facility to make facility modifications in order to meet the new limits. This compliance schedule will enable the permittee to meet the permit's water quality-based effluent limits (see 40 CFR 122.47 and OAR 340-041-0061(12)).

The proposed phosphorous limits are new WQBELs that have not been included in previous NPDES renewals. It has been determined that the permittee will not be able to meet these limits upon the permit effective date and that additional treatment will be required. DEQ has determined that the proposed compliance schedule requires the permittee to meet the final limits as soon as possible. The proposed compliance schedule requires that testing of the phosphorous treatment system be completed by November 1, 2025. At this time the final limits for Total Phosphorous will become effective.

7. Schedule D: Special Conditions

The proposed permit contains the following special conditions. The conditions include the following:

7.1 Inflow and Infiltration

A requirement to submit an updated inflow and infiltration plan in order to reduce groundwater and stormwater from entering the collection system.

7.2 Mixing Zone Study

A requirement to submit an updated mixing zone study.

7.3 Emergency Response and Public Notification Plan

A requirement to develop and submit an emergency and spill response plan or ensure the existing one is current per General Condition B.8 in Schedule F.

7.4 Exempt Wastewater Reuse at the Treatment System

A condition that exempts the permit holder from the recycled water requirements in OAR 340-055, when facility personnel use recycled water for landscape irrigation at the treatment facility or for in-plant processes, such as in plant maintenance activities.

7.5 Wastewater Solids Annual Report

This condition requires the permittee to submit a Wastewater Solids Annual Report each year documenting removal of wastewater solids from the facility during the previous calendar year.

7.6 Wastewater Solids Transfers

A condition that allows the facility to transfer treated or untreated wastewater solids to other in-state or out-of-state facilities that are permitted to accept the wastewater solids.

7.7 Hauled Waste Control Plan

A condition allowing the facility accept hauled waste according to a DEQ-approved hauled waste plan. The hauled waste plan ensures waste is not accepted that could negatively impact the treatment capabilities of the facility.

7.8 Hauled Waste Annual Report

A condition requiring submittal of an annual hauled waste report that summarizes hauled waste accepted at the facility during the previous year.

7.9 Operator Certification

OAR 340-049-0005 requires the permittee to have a certified operator consistent with the size and type of treatment plant covered by the permit. This special condition describes the requirements relating to operator certification.

7.10 Industrial User Survey

This condition requires the permittee to conduct or update an industrial user survey. The purpose of the survey is to identify whether there are any categorical industrial users discharging to the POTW, and ensure regulatory oversight of these discharges.

7.11 Outfall Inspection

A condition that requires the permittee to inspect the outfall and submit a report regarding its condition.

8. Schedule F: NPDES General Conditions

Schedule F contains the following general conditions that apply to all NPDES permittees. These conditions are reviewed by EPA on a regular basis.

- Section A. Standard Conditions.
- Section B. Operation and Maintenance of Pollution Controls.
- Section C. Monitoring and Records.
- Section D. Reporting Requirements.

- Section E. Definitions.

9. Next Steps

DEQ will make the proposed NPDES permit available for public comment for a minimum of 35 days as OAR 340-045-0027 requires. DEQ will post public notice and links to the proposed permit on DEQ's website and sent to subscribers of DEQ's pertinent public notice e-mail lists. DEQ will schedule a public hearing scheduled if 10 or more people request one, or if an authorized person representing an organization of at least 10 people requests one. DEQ will provide a minimum of 30 days' notice for a hearing if one is scheduled.

DEQ will respond to comments received during the comment period. All those providing comment will receive a copy of DEQ's response. Interested parties may also request a copy of DEQ's response. After DEQ receives and evaluates comments, DEQ will decide whether to issue the permit as proposed, make changes to the permit, or deny the permit. DEQ will notify the permittee of DEQ's decision. If DEQ makes substantive changes to the permit, then an additional public notice period may occur. DEQ may also revise this fact sheet or update the fact sheet through memorandum.