State of Oregon
Department of
Environmental
Quality

National Pollutant Discharge Elimination System
Permit Renewal Fact Sheet
City of Myrtle Point

Final: June 14, 2024

Permittee	City of Myrtle Point 220 River Road Myrtle Point, OR 97458
Existing Permit Information	File Number: 59742 Permit Number: 101192 EPA Reference Number: OR0020435 Category: Domestic Class: Minor Expiration Date: June 30, 2015
Permittee Contact	Scott Nay City Manager 541-572-2626 424 Fifth Street Myrtle Point, OR 97458
Receiving Water Information	Water Body Name: South Fork Coquille River River Mile: 0.8 Assessment Unit ID: OR_SR_1710030502_02_104970 Sub Basin Name: Coquille Basin Name: Southern Oregon Coast
Proposed Action	Permit Renewal Application Number: 959345 Date Application Received: Dec. 23, 2014
Permit Writer	Phillip Sprague 541.686.7998 Date Prepared: June 12, 2024

NPDES Permit Renewal Fact Sheet
City of Myrtle Point

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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.
Schedule F – General conditions.

The following list summarizes the major changes to the permit:

- Schedule A:
  - Added seasonal CBOD5 limits, based on the Final Draft 2022 Coquille Sub-basin TMDL.
  - Removed chlorine limits (the facility uses UV for disinfection).
  - Added ammonia as nitrogen limits, based on the Final Draft 2022 Coquille Sub-basin TMDL waste load allocations.
  - Added Total Nitrogen limits, based on the Final Draft 2022 Coquille Sub-basin TMDL waste load allocations.
  - Added Total Phosphorous limits, based on the Final Draft 2022 Coquille Sub-basin TMDL waste load allocations.
  - Added numeric and flow-based Excess Thermal Load limits, based on the Final Draft 2022 Temperature TMDL.
  - Added a regulatory mixing zone condition.
  - Added a chlorine usage condition.
- Schedule B:
  - Removed chlorine sampling and reporting requirements.
  - Added hauled waste control plan requirements.
  - Added an industrial user survey requirement.
  - Added an outfall inspection report requirement.
  - Updated monitoring and reporting protocols.
  - Added UV monitoring and reporting requirements.
  - Added alkalinity, dissolved oxygen and total dissolved solids monitoring and reporting requirements.

- Added stream monitoring and reporting requirements.

- Schedule D:
  - Added a mixing zone study requirement.
  - Added an Emergency Response and Public Notification Plan.
  - Added an Exempt Wastewater Reuse at the Treatment System condition.
  - Added a hauled waste control plan condition.
  - Added an industrial user survey condition.
  - Added an outfall inspection condition.

2. Facility Description

2.1 Wastewater Facility

In 1954 the city constructed a wastewater treatment system for primary wastewater treatment. Since then, the city has constructed significant upgrades. A large upgrade project was completed on September 27, 2016, resulting in the current configuration of the treatment plant. The treatment plant is an extended aeration lagoon system with a design average dry-weather flow of 0.37 MGD primarily from domestic sources. Wastewater enters the plant through a trench style self-cleaning influent pump station with 5 submersible pumps. The headworks includes a fine mechanical screen and grit chamber. The headworks also includes a manual bypass to a bar screen for instances of high flow. Secondary treatment occurs in two extended aeration basins, each with a capacity of 490,000 gallons. The facility employs UV disinfection on the treated wastewater prior to routing it through a Parshall Flume and discharging to the Coquille River. Solids are removed from the aeration basins by air lift pumps and routed either back to the front of the aeration basin or to the on-site biosolids facility.

Figure 2-1 is an aerial view showing the facility and outfall locations. Figure 2-2 is a process flow diagram for the facility.

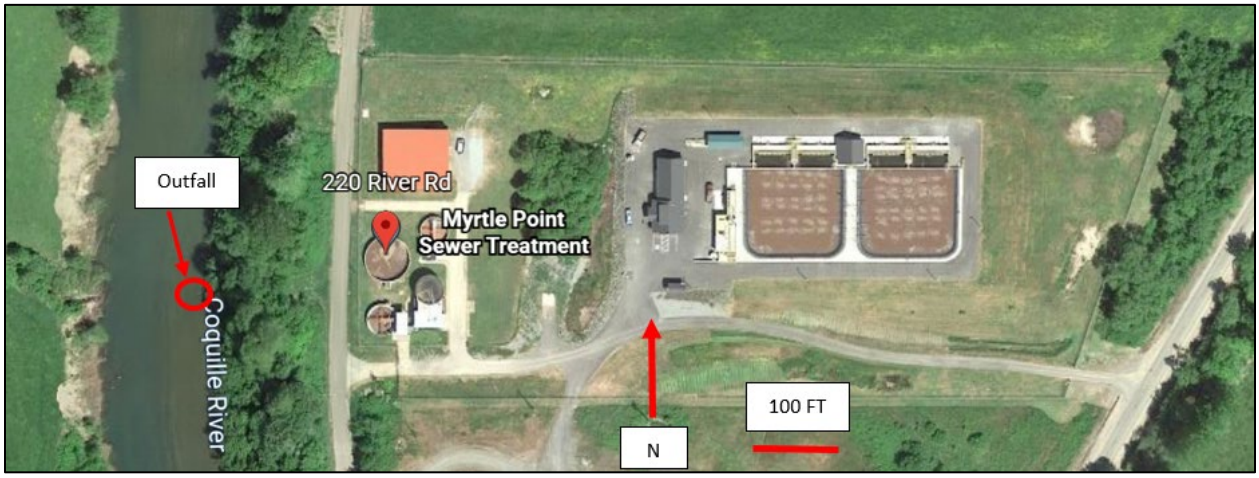

Figure 2-1: Aerial view showing location of facility and outfall.

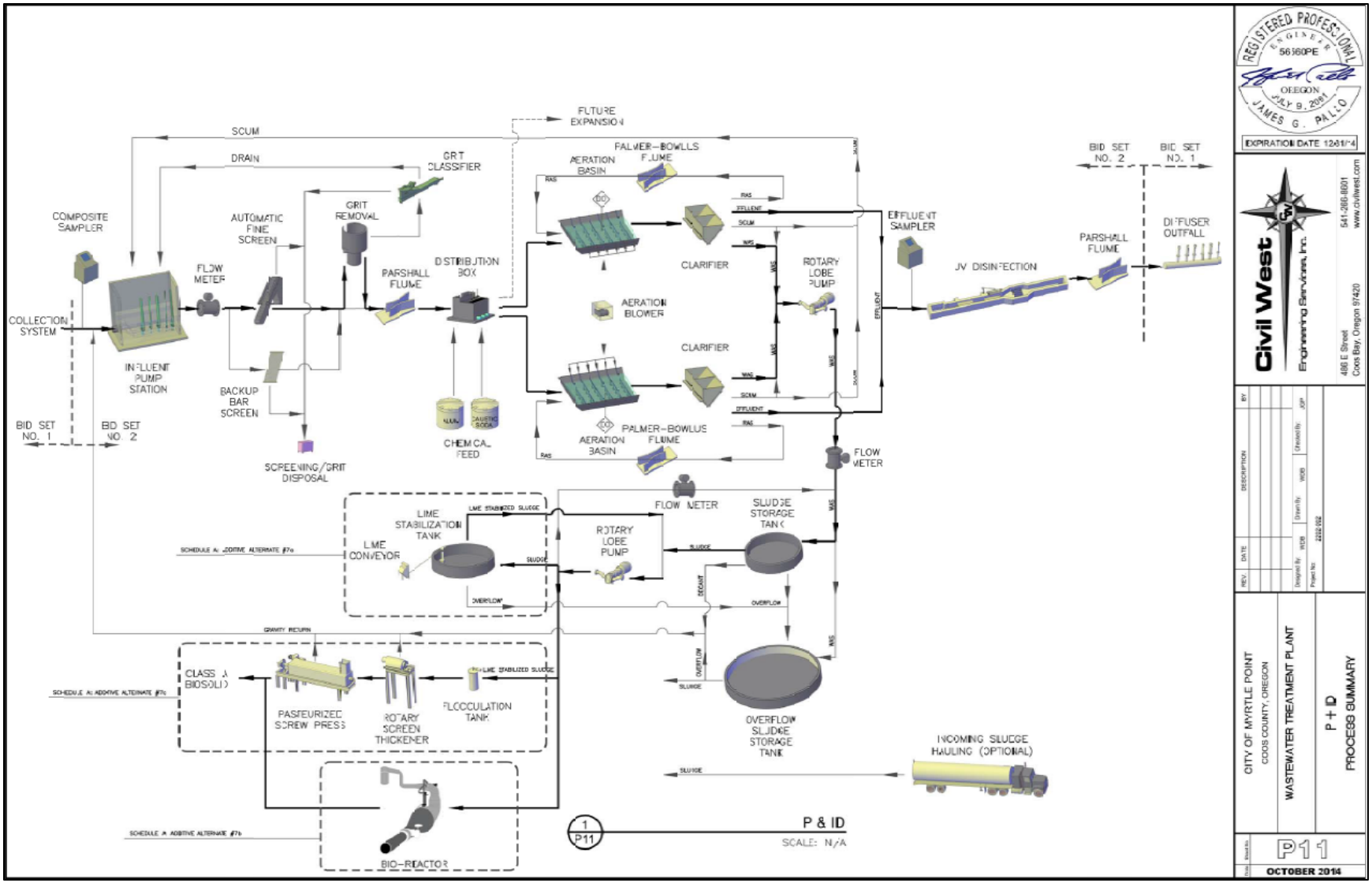

Figure 2-2: Process flow diagram for the facility

Table 2-1: List of Outfalls

Outfall Number	Type of Waste	Lat/Long	Design Flow[1] (mgd)	Existing Flow[2] (mgd)
001	Domestic	43.069389 / -124.148009	0.38	0.717

1. Design Flow = average dry weather design flow.
2. Existing Flow = existing average monthly wet weather flow (period of record: Sep. 2019 – Dec. 2021).

2.2 Compliance History

The city's sewage treatment plant has a long history of violating permit discharge limits and conditions. Most of these are due to excessive volumes of inflow and infiltration that occur during large storm events. The plant also has a long history of other permit violations such as total suspended solids exceedances, biochemical oxygen demand exceedances, bacteria exceedances, failure to monitor, and improper plant supervision. In 2004 DEQ and the city entered into a mutual agreement and order to help the plant address these multiple compliance issues. The following table summarizes the most recent enforcement actions DEQ has taken to address the issues with the city.

Date	Type	Description
03/18/2004	MAO	MAO.
01/24/2014	MAO	Amendment #3.
03/26/2014	Penalty Demand	MAO violation.
01/08/2015	Penalty Demand	MAO violation.
02/19/2015	MAO	Amendment #2.
06/02/2015	WL	Warning Letter for BOD % removal violations.
10/17/2016	PEN	Preliminary Enforcement Notice for Failure to report SSO within 24 hours.
08/08/2017	WLOTC	Warning Letter with Opportunity to Correct for TSS & CBOD violations.
01/29/2018	PEN	Preliminary Enforcement Notice for limits violations, failure to report, improper supervision.
04/25/2018	Penalty	Limits violations, failure to monitor, lacking certified operator.

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, this facility 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 system size and complexity. DEQ evaluated the classifications for the treatment and collection system, which are publicly available at the following website: 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. DEQ can base effluent limitations on either the technology available to control the pollutants, or limits that protect 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 the limits contained in the existing permit.

a. Treated Effluent Outfall 001

(1) November 1 - April 30:

Parameter	Average Effluent Concentrations		Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lbs
	Monthly	Weekly			
$CBOD_5$ (See note 1.)	25 mg/L	40 mg/L	146	219	292
TSS	30 mg/L	45 mg/L	175	263	350

* Winter mass load limits based upon average wet weather design flow to the facility equaling 0.700 MGD. The daily mass load limit is suspended on any day in which the flow to the treatment facility exceeds 0.74 MGD (twice the design average dry weather flow).

(2) May 1 - October 31:

Parameter	Average Effluent Concentrations		Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lbs
	Monthly	Weekly			
$CBOD_5$ (See note 1.)	10 mg/L	15 mg/L	31	47	62
TSS	10 mg/L	15 mg/L	31	47	62

* Average dry weather design flow to the facility equals 0.37 MGD. 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 uses a projected design flow for the facility of 0.37 MGD.

(3) Other Parameters

Year-round (except as noted)	Limitations
E. coli Bacteria	Shall not exceed 126 organisms per 100 mL monthly geometric mean. No single sample shall exceed 406 organisms per 100 mL. (See note 2.)
pH	Shall be within the range of 6.0 to 9.0 Standard Units.
$CBOD_5$ and TSS Removal Efficiency	Shall not be less than 85% monthly average for $CBOD_5$ and 85% monthly for TSS.
Total Residual Chlorine: May 1- October 31	Shall not exceed .06 mg/L daily maximum and an average monthly concentration of .02 mg/L. (See note 3.)
Total Residual Chlorine: Nov. 1- April 30	Shall not exceed .09 mg/L daily maximum and an average monthly concentration of .03mg/L. (See note 3).
Excess Thermal Load: May 1- October 31	12.5 Million kcals/day weekly average. (See note 4.)
Ammonia-N: June 1- October 31	Daily maximum effluent concentration shall not exceed 7 mg/l.

NOTES:

1. The $CBOD_5$ concentration limits are considered equivalent to the minimum design criteria for BOD_5 specified in Oregon Administrative Rules (OAR) 340-41. These limits and $CBOD_5$ mass limits may be adjusted (up or down) by permit action if more accurate information regarding $CBOD_5/BOD_5$ becomes available.

2. If a single sample exceeds 406 organisms per 100 mL, then five consecutive re-samples may be taken at four-hour intervals beginning within 72 hours after the original sample was taken. If the log mean of the five re-samples is less than or equal to 126 organisms per 100 mL, a violation shall not be triggered.

3. When the total residual chlorine limitation is lower than 0.10 mg/L, the Department will use 0.10 mg/L as the compliance evaluation level (i.e. daily maximum concentrations below 0.10 mg/L will be considered in compliance with the limitation).

4. The thermal load limit was calculated using the average dry weather design flow and the estimated maximum weekly effluent temperature. This permit may be re-opened, and the maximum allowable thermal load modified, when more accurate effluent data becomes available. In addition, this permit may be re-opened and new temperature and/or thermal load limits assigned.

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 (BOD_5), total suspended solids (TSS) and pH (i.e., federal secondary treatment standards). Federal and state rules allow substituting 5-day carbonaceous oxygen demand ($CBOD_5$) for BOD_5. 40 CFR 133.102 contains the numeric standards for these pollutants. In addition, DEQ has developed minimum design criteria for BOD_5 and TSS that apply to specific Oregon watershed basins. OAR 340-041-0101 to 0350 lists these criteria in the basin-specific sections. 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. Table 3-1 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	
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 ($CBOD_5$) for BOD_5. The allowable amount under federal rules is provided in the table above. The amount of $CBOD_5$ allowed under state policy for design criteria is equal to 0.8 times the BOD_5 concentration (20 mg/L), 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 $CBOD_5$ limit under the policy is calculated by multiplying the BOD_5 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 $CBOD_5$ limit of 27 mg/L during the period of low stream flow.

The limits for $CBOD_5$ and TSS shown in Table 3-1 above are concentration-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 $CBOD_5$ 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.

Monthly Avg Mass Load = Design Flow* x Monthly Concentration Limit x Unit Conversion factor

Weekly Average Mass Load = 1.5 x Monthly Average Mass Load Limit

Daily Maximum Mass Load = 2 x 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	0.38	20	16
Wet Weather	0.70	30	27
Design flow comments: Dry Weather- Average dry weather design flow, Wet Weather - average wet weather design flow			

Summer $CBOD_5$ Mass Load Calculations:

Monthly Average: 0.38 mgd x 16 mg/L x 8.34 = 51 lbs/day (Rounded to two significant figures)

Weekly Average: 51 lbs/day monthly average x 1.5 = 77 lbs/day (Two significant figures)

Daily Maximum: 51 lbs/day monthly x 2 = 100 lbs/day (Two significant figures)

Winter $CBOD_5$ Mass Load Calculations:

Monthly Average: 0.70 mgd x 25 mg/L x 8.34 = 150 lbs/day (Rounded to two significant figures)

Weekly Average: 150 lbs/day monthly average x 1.5 = 230 lbs/day (Two significant figures)

Daily Maximum: 150 lbs/day monthly x 2 = 300 lbs/day (Two significant figures)

The technology based $CBOD_5$ and TSS limits are listed in Table 3-3. 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	51	77	100
	% removal	85	NA	NA
TSS (May 1 – October 31)	mg/L	20	30	NA
	lbs/day	63	95	130
	% removal	85	NA	NA
$CBOD_5$ (November 1 – April 1)	mg/L	25	40	NA
	lbs/day	150	230	300
	% removal	85	NA	NA
TSS (November 1 – April 1)	mg/L	30	45	NA
	lbs/day	180	270	360
	% removal	85	NA	NA

The TBELs listed in the table above differ from the existing permit limits (see Section 3.1 above). 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.)

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. The permittee has requested that the proposed 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 represent a deminis 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 an exceedance of 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

NPDES permits issued by DEQ must protect the following designated beneficial uses of the South Fork Coquille River. These uses are listed in OAR-340-041-0300 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

3.3.2 Water Quality-Limited Parameters and Total Maximum Daily Loads

The following table 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
AU ID: OR_SR_1710030502_02_104970. **AU Name:** South Fork Coquille River. **AU Description:** Middle Fork Coquille River to confluence with Coquille River (Confluence at North Fork Coquille River). **Year Last Assessed:** 2022. **AU Status: Impaired.** **Impaired Uses:** Fish and Aquatic Life. **Year Listed:** 2004. **Category 5:** Temperature- Year Round.
TMDL Parameters
Chlorophyll a, Dissolved Oxygen, *E. coli*, Fecal coliform, Temperature.

3.3.3 TMDL Wasteload Allocations

In January and February 2022 DEQ completed the Final Draft TMDLs for the Coquille River Subbasin. The TMDLs addressed temperature, $CBOD_5$, 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.

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:

$$Pollutant\ Load = C \times Q \times CF$$

Where: $Pollutant\ Load = mass\ load, kg day$ / $C = Concentration, mgL$ / $Q = Flow\ rate, cfs$ ($cubic\ ft\ per\ second$) *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:

- 18.0ºC as a seven-day-average maximum temperature for a stream identified as having salmon and trout rearing and migration use;
- 16.0ºC as a seven-day-average maximum temperature for a stream identified as having core cold water habitat use;
- 13.0ºC 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 3-5: 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 3-6: Pollutants of Concern

Pollutant	How was pollutant identified?
pH	Effluent Monitoring
Temperature	TMDL
E. coli	Effluent Monitoring
$CBOD_5$	TMDL
Ammonia as N	TMDL
Total Nitrogen	TMDL
Total Phosphorous	TMDL

The sections below discuss the analyses that DEQ conducted for the pollutants of concern to determine if the permit needs water quality based effluent limits to meet water quality standards.

3.3.5 Regulatory Mixing Zone

The proposed permit contains a mixing zone as allowed per OAR 340-041-0053 as follows:

> *The allowable mixing zone is that portion of the South Fork Coquille River extending from a point 10 feet upstream of the outfall to a point 90 feet downstream from the outfall. The Zone of Immediate Dilution (ZID) shall be defined as that portion of the allowable mixing zone that is within 9 feet of the point of discharge.*

The table below shows dilutions at the edge of the zone of initial dilution and mixing zone. DEQ bases these dilutions on a 2022 mixing zone analysis DEQ conducted. Environmental mapping demonstrated there are no critical habitat or water recreation uses within the mixing zone. DEQ proposes the permittee submits an updated mixing zone study during the next permit cycle that DEQ will use for the next permit renewal.

Dilution Summary - Dry Weather						
Water Quality Standard	Stream Flow (cfs)		Effluent Flow (mgd)		Dilution	Location
	Statistic	Flow	Statistic	Flow		
Aquatic Life, Acute	1Q10	18	☐ ADWDF x PF ☒ Max Daily Avg ☐ Other	0.89	6	ZID
Aquatic Life, Chronic	7Q10	22	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.45	17	MZ
Human Health, Non-Carcinogen	30Q5	33	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.45	26	MZ
ADWDF = Average dry weather design flow *PF = Peaking factor*						
Comments: Click or tap here to enter text.						

Dilution Summary - Wet Weather						
Water Quality Standard	Stream Flow (cfs)		Effluent Flow (mgd)		Dilution	Location
	Statistic	Flow	Statistic	Flow		
Aquatic Life, Acute	1Q10	53	☐ AWWDF x PF ☒ Max Daily Avg ☐ Other	1.58	9	ZID
Aquatic Life, Chronic	7Q10	66	☐ AWWDF ☒ Max Monthly Avg ☐ Other	0.70	32	MZ
Human Health, Non-Carcinogen	30Q5	99	☐ AWWDF ☒ Max Monthly Avg ☐ Other	0.70	49	MZ
AWWDF = Average wet weather design flow *PF = Peaking factor*						
Comments: Click or tap here to enter text.						

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 3-7: pH Reasonable Potential Analysis

INPUT	Lower pH Criteria	Upper pH Criteria
1. Dilution at mixing zone boundary	17	17
2. Upstream characteristics		
a. Temperature (deg C)	8.4	23.9
b. pH	7.6	7.9
c. Alkalinity (mg CaCO3/L)	27.0	63.0
3. Effluent characteristics		
a. Temperature (° C)	13.3	26.3
b. pH (S.U.)	6.0	9.0
c. Alkalinity (mg CaCO3/L)	64.0	134.6
4. Applicable pH criteria	6.0	9.0
pH at mixing zone boundary	**6.9**	**7.9**
Is there reasonable potential?	**No**	**No**
Proposed effluent limits	**6.0**	**9.0**
Effluent data source: ICIS summary stats (Data Sept 2019-May 2020). Alkalinity defaults. Temp 10th %ile= min of weekly average, Temp 90th %ile= max of weekly average.		
Ambient data source: Station 11486 2015-2020.		

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 3-8: Temperature Criteria Information

Applicable Temperature Criterion	Rearing/Migration 18ºC (OAR 340-041-0028(4)(c)
Applicable dates: Year-round	
Salmon/Steelhead Spawning 13°C? OAR 340-041-0028(4)(a)	☐Yes ☒No
Applicable dates: N/A	
WQ-limited?	☒Yes ☐No
TMDL wasteload allocation assigned?	☒Yes ☐No
Applicable dates: May 1 – Oct. 31	
TMDL based on natural conditions criterion?	☐Yes ☒No
Cold water summer protection criterion applies?	☐Yes ☒No
Cold water spawning protection applies?	☐Yes ☒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	2.24	0.18 x 2.24 x $Q_{R,Powers}$ x C_F	94.9
June	51.4	2.97	0.18 x 2.97 x $Q_{R,Powers}$ x C_F	67.2
July	27.7	2.02	0.18 x 2.02 x $Q_{R,Powers}$ x C_F	24.6
Aug.	18.5	1.88	0.18 x 1.88 x $Q_{R,Powers}$ x C_F	15.3
Sept.	12.8	1.85	0.18 x 1.85 x $Q_{R,Powers}$ x C_F	10.4
Oct.	12.8	1.82	0.18 x 1.82 x $Q_{R,Powers}$ x C_F	10.3
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) = 0.18 x 2.24 x 2.447 x $Q_{R,Powers}$ = 0.99 x $Q_{R,Powers}$

Table 3-9: Temperature Criterion Effluent Limits

Effluent limit needed? ☒Yes ☐No
TMDL WLA Limit: See discussion above for numeric and flow-based limit options.
Applicable time period: May through October. ☐NA
Temperature Criterion Limit: N/A
Applicable time period: Dates. ☒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 13ºC or more for salmon and steelhead, and 9ºC 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 32ºC 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 28ºC. 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 25ºC or more to less than 5% of the cross-section of 100% of the 7Q10 flow of the water body.

  Due to a lack of ambient data, DEQ performed a thermal shock RPA, using a conservative approach. DEQ created a spreadsheet showing the days when effluent temperatures were at or above 25ºC. The period of record was from September 2019 through October 2021. For those days when ambient temperature data was unavailable, DEQ applied the maximum recorded ambient temperature of 23.7ºC as a conservative temperature assumption in the analysis. The RPA results showed the discharge does not have a reasonable potential to adversely affect the receiving stream. Appendix A summarizes the results.

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

  DEQ performed an RPA, using ambient data from station 11486 (Jan. 2015 through Mar. 2020), and DMR data from Sept. 2019 through Dec. 2021. The RPA results showed no reasonable potential for the discharge to adversely affect the receiving stream. Appendix B summarizes the RPA results.

Table 3-100: Thermal Plume Effluent Limits

Effluent limit needed? ☐Yes ☒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 3-111: Proposed *E. coli* Limits

E. coli (#/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 following section 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. Tables 3-12 and 3-13 below summarize the data used for the ammonia analysis and the results of the analysis. While the RPA results show reasonable potential at the end-of-pipe, there is no reasonable potential 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 3-122: Ammonia Toxicity Analysis Information - Winter

	Acute	Chronic	
		4-day	30-day
Dilution	9	32	49
Ammonia Criteria	14.0	4.8	1.9
Effluent Data Used			
Ammonia (mg/L)	1.74	1.74	
pH (SU)	6.8	6.8	
Temperature (ºC)	19.5	19.5	
Alkalinity (mg/L CaCO3)	64	64	
Receiving Stream Data Used			
Ammonia (mg/L)	0	0	
pH (SU)	7.9	7.9	
Temperature (ºC)	10.6	10.6	
Alkalinity (mg/L CaCO3)	40	40	
Ammonia Limit Needed?	**No**		
Calculated Limits	AML	MDL	
Ammonia (mg/L)	N/A	N/A	
Effluent data source			
Summary statistic data from ICIS (September 2019-May 2020). Temp 90th %ile= max of average. pH 90th %ile= 90th %ile of maximum. Alkalinity defaults used. Maximum of maximum ammonia used. Ammonia reported monthly in winter, was able to calculate CV			
Ambient data source			
Station 11486, 2015-2020.			

Table 3-133: Ammonia Toxicity Analysis Information - Summer

	Acute	Chronic	
		4-day	30-day
Dilution	6	17	26
Ammonia Criteria	4.3	1.6	0.7
Effluent Data Used			
Ammonia (mg/L)	3	3	
pH (SU)	7.2	7.2	
Temperature (ºC)	26.3	26.3	
Alkalinity (mg/L CaCO3)	64.0	64.0	
Receiving Stream Data Used			
Ammonia (mg/L)	0	0	
pH (SU)	8.0	8.0	
Temperature (ºC)	25.0	25.0	
Alkalinity (mg/L CaCO3)	69.4	69.4	
Ammonia Limit Needed?	**No**		
Calculated Limits	AML	MDL	
Ammonia (mg/L)	N/A	N/A	
Effluent data source			
Summary statistic data from ICIS (September 2019-May 2020). Temp 90th %ile= max of average. pH 90th %ile= 90th %ile of maximum. Alkalinity defaults used. Maximum of maximum ammonia used. Used 0.99 as default ammonia CV.			
Ambient data source			
Station 11486, 2015-2020.			

3.3.10 Non-Temperature TMDL Parameters (Ammonia, Nitrogen, Phosphorus and $CBOD_5$)

As noted in section 3.3.3 above, in February 2022 DEQ completed the Final Draft TMDL for the Coquille River Subbasin. 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. In addition to temperature (addressed above), the TMDL addressed $CBOD_5$, 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. The information in Table 3-14 (below) is derived from Table 34 of the Final Draft TMDL for the Coquille River Subbasin.

Table 3-144: Applicable WLAs (Non-Temperature)

Parameter	WLA (monthly average)	Time Period
$CBOD_5$	42 lbs/day	May 1 – June 30
$CBOD_5$	18 lbs/day	July 1 – Sept. 30
$CBOD_5$	18 lbs/day (See note a.) 42 lbs/day (See note b.)	Oct. 1 – Oct. 31
Ammonia as N	8.3 lbs/day	May 1 – June 30
Ammonia as N	1.8 lbs/day	July 1 – Sept. 30
Ammonia as N	1.8 lbs/day (See note a.) 8.3 lbs/day (See note b.)	Oct. 1 – Oct. 31
Total Nitrogen	42 lbs/day	May 1 – June 30
Total Nitrogen	18 lbs/day	July 1 – Sept. 30
Total Nitrogen	18 lbs/day (See note a.) 42 lbs/day (See note b.)	Oct. 1 – Oct. 31
Total Phosphorous	17 lbs/day	May 1 – June 30
Total Phosphorous	1.5 lbs/day	July 1 – Sept. 30
Total Phosphorous	1.5 lbs/day (See note a.) 17 lbs/day (See note b.)	Oct. 1 – Oct. 31

Notes:
a. Discharge at Powers Gage < 100 cfs.
b. Discharge at Powers gage ≥ 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 limits in the proposed permit and their rationale for inclusion are as follows:

- pH and bacteria: pH analysis shown in section 3.3.6 above indicated no reasonable potential for the discharge to exceed the pH criterion at the edge of the mixing zone. As such, the existing TBEL for pH is being retained. Bacteria limits are derived from OAR 340-041-0009(6)(b) and are the same as in the current 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 (applicable during the June through October period) was developed under the previous permit to address the old TMDL and the associated dissolved oxygen criteria. As noted above, new wasteload allocations (applicable during the May through October period) have been developed under the new draft TMDL. Limits based on these allocations supersede the existing limits and are included in the proposed permit. A comparison was made between the TMDL WLA mass limits and the 7 mg/L concentration limit at design flow and the TMDL WLAs were found to be more stringent than the existing concentration limit.
- $CBOD_5$: For the May through October period, the $CBOD_5$ loads based on the WLAs (presented in Table 3-14) and calculated TBELs are less stringent than the existing permit limits. As such, the existing $CBOD_5$ limits are included in the proposed permit.
- Phosphorus and Nitrogen: There are no existing phosphorus or nitrogen permit limits, so the ammonia WLAs presented in Table 3-14 are included as effluent limits in the proposed permit.

The following table lists the proposed $CBOD_5$, phosphorus, nitrogen, and ammonia limits, along with the source of each limit (existing, TBEL or WQBEL).

Table 3-155: Proposed CBOD5, Phosphorous, 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	63	95	130	TBEL
		% removal	85	-	-	TBEL
May 1 - Jun. 30	$CBOD_5$	lb/day	31	47	62	Existing
	Ammonia as N		8.3	-	-	TMDL
	Total Nitrogen		42	-	-	TMDL
	Total Phosphorus		17	-	-	TMDL

Season	Parameter		Units	Avg. Monthly	Avg. Weekly	Daily Max.	Source of Limit
Jul. 1 – Sep. 30	$CBOD_5$		lb/day	18	-	-	TMDL
				-	47	62	TBEL
	Ammonia as N			1.8	-	-	TMDL
	Total Nitrogen			18	-	-	TMDL
	Total Phosphorus			1.5	-	-	TMDL
Oct. 1 – Oct. 31	River flow at Powers < 100 cfs	$CBOD_5$	lb/day	18	-	-	TMDL
				-	47	62	TBEL
		Ammonia as N		1.8	-	-	TMDL
		Total Nitrogen		18	-	-	TMDL
		Total Phosphorus		1.5	-	-	TMDL
	River flow at Powers ≥ 100 cfs	$CBOD_5$	lb/day	31	47	62	Existing
		Ammonia as N		8.3	-	-	TMDL
		Total Nitrogen		42	-	-	TMDL
		Total Phosphorus		17	-	-	TMDL
Nov. 1 – Apr. 30	$CBOD_5$		mg/L	25	40	-	TBEL
			lb/day	150	230	300	TBEL
			% removal	85	-	-	TBEL
	TSS		mg/L	30	45	-	TBEL
			lb/day	180	270	360	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 limits and summer TSS limits, the proposed limits are the same or more stringent than the existing permit so the antibacksliding provision is satisfied.

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.

As noted in Section 3.2, above, the summer TSS concentration and TSS mass limits included in the proposed permit are higher than those in the existing permit. 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.

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. With the exception of the summer TSS mass load limits, the proposed permit contains the same or more stringent discharge loadings as the existing permit. DEQ does not consider permit renewals with the same or more stringent discharge loadings as the previous permit to lower water quality from the existing condition. The permit does include a change in the ammonia limits 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.

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 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 Biosolids

The permit holder has the capability and/or intends to develop a new biosolids program to land apply biosolids or produce biosolids for sale and distribution during the term of this permit. The permit holder will develop a comprehensive biosolids management plan and land application plan. DEQ will review the plans and provide an opportunity for public comment on the proposed land application activity. Once approved, conditions in the biosolids management plan and land application plan become permit conditions.

4.3 Chlorine Usage

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

4.4 Peracetic Acid Usage

Schedule A of the permit prohibits the permittee from using peracetic acid 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, the permittee must monitor other parameters to better characterize the effluent quality and the receiving stream. DEQ will use this data during the next permit renewal. Detailed monitoring frequency and reporting requirements are in Schedule B of the proposed permit. DEQ bases the required monitoring, reporting and frequency for many of the parameters on DEQ's monitoring and reporting matrix guidelines, permit writer judgment, and to ensure the needed data is available for the next permit renewal. Parameters in the proposed permit for which the monitoring frequency would increase are the result of updates to the Oregon DEQ monitoring and reporting matrix since the permit was last renewed in 2010.

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 lays out a series of milestones which upon completion, 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 chemical treatment be initiated, and testing completed by December 31, 2025, in order to achieve reductions in phosphorous loading as quickly as possible. If testing shows that chemical treatment alone is sufficient to comply with the final total phosphorous limits, the compliance schedule will terminate and final effluent limits for phosphorous become effective. Should chemical treatment not result in reductions adequate to comply with the limit, the compliance schedule requires that additional improvement project(s) be completed by September 1, 2030, at which point the final effluent limit for total phosphorous becomes 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 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 wastewater solids removal from the facility during the previous calendar year.

7.6 Biosolids Management Plan

A requirement to manage all biosolids according to a DEQ-approved biosolids management plan and land application plan. The biosolids management plan and the land application plan must meet the requirements in OAR 340-050-0031 and describe where and how the permittee manages biosolids land application to protect public health and the environment.

7.7 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.

7.8 Hauled Waste Control Plan

A condition that allows the acceptance of 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.

7.9 Hauled Waste Annual Report

A condition requiring the permittee to submit an annual hauled waste report summarizing hauled waste accepted at the facility during the previous year.

7.10 Operator Certification

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

7.11 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.

7.12 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.

Appendix A: Reasonable Potential Analysis for Thermal Plume

OAR 340-041-0053(2)(d)(C): Thermal Shock
25 deg C at 5% of the stream cross section

Date	Eff Temp (deg. C)	Eff Flow (mgd)	Amb Temp (deg. C)	7Q10 Flow (cfs)	Dilution at 5%	Temp @ 5% X-Section (deg. C)
				22		
10/27/2021	18.8	0.216	12.5		4.3	14.0
9/1/2021	22.5	0.068	20.5		11.5	20.7
8/2/2021	25.1	0.275	23.7		3.6	24.1
8/10/2021	25.6	0.115	23.7		7.2	24.0
7/27/2021	25.1	0.146	23.7		5.9	23.9
7/28/2021	25.2	0.147	23.7		5.8	24.0
7/29/2021	25.1	0.098	23.7		8.3	23.9
7/30/2021	25.2	0.178	23.7		5.0	24.0
6/28/2021	25.4	0.167	23.7		5.3	24.0
6/29/2021	25.2	0.121	23.7		6.9	23.9
6/30/2021	24.5	0.150	23.7		5.7	23.8
9/5/2020	25.3	0.060	23.7		12.9	23.8
9/1/2019	24.6	0.087	18.1		9.2	18.8
9/2/2019	25.0	0.130	23.7		6.5	23.9
9/3/2019	25.2	0.153	23.7		5.6	24.0
9/6/2019	25.3	0.116	23.7		7.1	23.9
9/7/2019	25.5	0.088	23.7		9.1	23.9
9/10/2019	27.2	0.162	23.7		5.4	24.3
9/11/2019	26.9	0.158	23.7		5.5	24.3
9/12/2019	27.5	0.150	23.7		5.7	24.4
9/13/2019	27.8	0.099	23.7		8.2	24.2
9/14/2019	28.1	0.089	23.7		9.0	24.2
9/15/2019	26.1	0.372	23.7		2.9	24.5
9/16/2019	25.8	0.244	23.7		3.9	24.2
9/17/2019	26.1	0.199	23.7		4.6	24.2

Notes:
For days where ambient data is missing, the maximum measured ambient temperature (23.7) was used. These values, along with the resulting temperature at 5% of the river's cross-section, are noted in red font.
Using the ambient 7Q10 flow (22 cfs) and, for days where ambient temperature is missing, the highest measured temperature, results in a conservative analysis.

Appendix B: Reasonable Potential Analysis for Thermal Plume

OAR 340-041-0053(2)(d)(D): Migration Blockage 21 deg C at 25% of the stream cross section				
Enter data into white cells below:				Data Metric/Source
7Q10 =	22	cfs		MZ Memo
Ambient Temperature =	21	ºC		Sta. 11486 (Jan. 2015 - Mar. 2020)
Effluent Flow =	0.57	mgd		ADWDF x 1.5
Max 7dAM Effluent Temperature =	22	ºC		DMRs (Nov. 2019 - Dec. 2021)
25% of 7Q10 =	5.5	cfs		
25% dilution =	7		dilution = (Qr*0.25)/Qe + 1	
Temperature at 25% cross section =	**21.1**	**ºC**		
ΔT at 25% Stream Flow=	**0.1**	**ºC**		**No Reasonable Potential**