Oregon
Tina Kotek, Governor

Department of Environmental Quality
Western Region Salem Office
4026 Fairview Industrial Dr SE
Salem, OR 97302
(503) 378-8240
FAX (503) 373-7944
TTY 711

July 26, 2024

Steve James
City of Bandon
P.O. Box 67
Bandon, OR 97411

Re: NPDES Permit Public Notice Period
Comments Due: August 30, 2024, 5 p.m.
File no. 5664
Permit no. 101546
EPA no. OR0020206
Facility: Bandon WWTP, 80 Fillmore Ave. SE, Bandon
Coos County

Enclosed please find the Public Notice drafts for your proposed National Pollutant Discharge Elimination System Permit including a copy of the public notice, permit, fact sheet, and biosolids management plan. Please be aware that the city may provide additional comment on the permit during this time and submit to:

Trinh Hansen, Water Quality Permit Coordinator
DEQ Western Region
4026 Fairview Industrial Way Dr. SE
Salem, OR 97302
trinh.hansen@deq.oregon.gov

Your comments **must be received by 5 p.m. on August 30, 2024**. DEQ will hold a public hearing if DEQ receives written requests for a hearing during the public comment period from at least 10 people, or from an organization representing 10 or more people. DEQ gives equal weight to written and oral comments. When the public participation period has ended, DEQ will take final action on your application.

Please contact me at 503-378-5055 with any questions about permitting processing.

Sincerely,

Trinh Hansen

Trinh Hansen
Water Quality Permit Coordinator
Western Region, Salem Office

ec: WQ NPDES Permit Source File, Portland Office, DEQ
Andy Ullrich, Medford, DEQ
Bob Dillard, City Consultant
ORMS

PUBLIC NOTICE

Date posted: 7/26/24

DEQ Requests Comments on Proposed City of Bandon Water Quality Permit Renewal

HOW TO PROVIDE PUBLIC COMMENT

Facility name: City of Bandon Wastewater Treatment Plant

Permit type: National Pollutant Discharge Elimination System permit

Comments due by: Friday, Aug. 30, 2024 at 5 p.m.

Send written comments to: Trinh Hansen, DEQ Water Quality Permit Coordinator

By mail: 4026 Fairview Industrial Drive SE
Salem, OR 97302

By email: trinh.hansen@deq.oregon.gov

The Oregon Department of Environmental Quality invites the public to provide written comments on the conditions of City of Bandon's proposed water quality permit, known officially as a National Pollutant Discharge Elimination System permit.

Summary

Subject to public review and comment, DEQ intends to renew the proposed water quality permit, which allows City of Bandon to discharge wastewater to the Coquille River estuary.

About the facility

The City of Bandon has applied for a water quality permit renewal for the Bandon Wastewater Treatment Plant located at 80 Fillmore Ave. SE in Bandon. DEQ last renewed this permit on Nov. 6, 2019. The facility treats domestic wastewater from Bandon.

The facility discharges to the Coquille River estuary near the Bandon marina. The Coquille River estuary is listed as impaired (category 4 or 5) for two pollutants according to the most recent U.S. Environmental Protection Agency-approved integrated report for Oregon. The proposed permit reflects effluent limits established through reasonable potential analysis, best available technology, and the Coquille River Total Maximum Daily Load, or TMDL, for biochemical oxygen demand, total suspended solids, pH, enterococcus, and fecal coliform.

The most recent DEQ inspection of the Bandon Wastewater Treatment Plant was on April 19, 2024. DEQ did not identify violations during this inspection. The facility has had no water quality violations in the past permit term.

The facility holds no other permits from DEQ.

Translation or other formats

Español | 한국어 | 繁體中文 | Русский | Tiếng Việt | العربية
800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov

State of Oregon
DEQ Department of Environmental Quality

What types of pollutants does the permit regulate?

This permit sets conditions for how the facility deals with the following pollutants: biochemical oxygen demand, total suspended solids, pH, enterococcus, and fecal coliform.

DEQ also requires the permittee to maintain a biosolids management/land application plan. As part of this permit renewal, this plan has been updated and is on public notice. The facility treats wastewater solids to produce biosolids for beneficial reuse on agricultural lands located in Coos County. The biosolids program including the beneficial use sites are described in the biosolids management/land application plan.

Would the draft permit change the amount of pollution the facility is allowed to release?

No.

How did DEQ determine permit requirements?

DEQ evaluates types and amounts of pollutants and the water quality of the surface water or groundwater where the pollutants are proposed to be discharged and determines permit requirements to ensure the proposed discharges will meet applicable statutes, rules, regulations and effluent guidelines of Oregon and the Clean Water Act.

For this proposed permit action, DEQ reviewed the renewal application, all previous permits and fact sheets and associated administrative records, regional water quality data and research, discharge monitoring reports and attachments submitted by the permittee, all available mixing zone studies and memos, the current biosolids management plan, all available compliance and enforcement documents in the administrative record, records of communications with the permittee, and other documents contained within the administrative record. DEQ relied solely on these documents and made no other discretionary decisions for the permit action.

How does DEQ monitor compliance with the permit requirements?

This permit will require the facility to monitor pollutants discharged using approved monitoring practices and standards. DEQ reviews the facility's discharge monitoring reports to check for compliance with permit limits.

What happens next?

Submit comments by sending an email or using mail service addressed to the permit coordinator listed in the "how to provide public comment" box above.

DEQ will hold a public hearing if it receives written requests for a hearing during the public comment period from at least 10 people or from an organization representing at least 10 people.

DEQ will consider and respond to all comments received and may modify the proposed permit based on comments.

For more information

Find more information by reviewing draft permit documents attached to this notice, or contact Trinh Hansen at 503-378-5055, 800-349-7677 or trinh.hansen@deq.oregon.gov with questions or to view documents in person at a DEQ office.

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities. Visit DEQ's Civil Rights and Environmental Justice page.

State of Oregon Department of Environmental Quality

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT

Oregon Department of Environmental Quality
Western Region – Salem Office
4026 Fairview Industrial Dr. SE
Salem, OR 97302
Telephone: 503-378-8240

Issued pursuant to ORS 468B.050 and the federal Clean Water Act.

ISSUED TO:
City Of Bandon
P.O. Box 67
Bandon, OR 97411

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Treated Wastewater	001	43.122446, -124.40466 (WGS84)
Biosolids	N/A	Specified in Biosolids Management/Land Application Plan

FACILITY LOCATION:

Bandon Wastewater Treatment Plant
80 Fillmore Ave SE
Bandon, OR 97411
County: Coos
EPA Permit Type: Minor

RECEIVING STREAM INFORMATION:

Receiving stream/NHD name: Coquille River
USGS 12-Digit HUC: 171003050506, Ferry Creek-Coquille River
OWRD Administrative Basin: South Coast
NHD Reach Code & % along reach: 17100305000010, 7.67%
ODEQ LLID & RM: 1244273431235-0.8
Integrated Report AU ID: OR_EB_1710030505_01_100284

Issued in response to Application No. 948188 received November 29, 2023. This permit is issued based on the land use findings in the permit record.

DRAFT	DRAFT	DRAFT
Ranei Nomura, Water Quality Manager Western Region	Issuance Date	Effective Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to: 1) operate a wastewater collection, treatment, control and disposal system; and 2) discharge treated wastewater to waters of the state only from the authorized discharge point or points in Schedule A in conformance with the requirements, limits, and conditions set forth in this permit.

Unless specifically authorized by this permit, by another NPDES or Water Pollution Control Facility permit, or by Oregon statute or administrative rule, any other direct or indirect discharge of pollutants to waters of the state is prohibited.

TABLE OF CONTENTS

Note: Schedule C (Compliance) and E (Pretreatment Activities) are not part of this permit.

LIST OF TABLES

SCHEDULE A: WASTE DISCHARGE LIMITS

1. Outfall 001 – Permit Limits

During the term of this permit, the permittee must comply with the limits in the following table.

Table A1: Permit Limits

Parameter	Units	Average Monthly	Average Weekly	Daily Maximum (See note a.)
BOD_5 (May 1 – October 31)	mg/L	20	30	-
	lb/day	75	110	150
	% removal	85	-	-
TSS (May 1 – October 31)	mg/L	20	30	-
	lb/day	75	110	150
	% removal	85	-	-
BOD_5 (November 1 – April 30)	mg/L	30	45	-
	lb/day	210	310	410
	% removal	85	-	-
TSS (November 1 – April 30)	mg/L	30	45	-
	lb/day	210	310	410
	% removal	85	-	-
pH	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0		
Fecal Coliform Bacteria	#/100 mL	Must not exceed a monthly median of 14, not more than 10% of the samples may exceed 43		
Enterococcus Bacteria	#/100 mL	Must not exceed a monthly geometric mean of 35, not more than 10% of the samples may exceed 130		

Note:

a. The daily mass load limit is suspended on any day in which the flow to the treatment facility exceeds 0.9 MGD (twice the design average dry weather flow).

2. Regulatory Mixing Zone

Pursuant to OAR 340-041-0053, the permittee is granted a regulatory mixing zone as described below:

The Regulatory Mixing Zone (RMZ) is defined as that portion of the Coquille River Estuary within a 100-foot radius from the point of discharge. The Zone of Immediate Dilution (ZID) is defined at that portion of the Coquille River Estuary within a 10-foot radius from the point of discharge.

3. Biosolids

The permittee may land apply biosolids or provide biosolids for sale or distribution, subject to the following conditions:

a. Biosolids Management Plan - The permittee must manage biosolids in accordance with its DEQ-approved Biosolids Management Plan and Land Application Plan (see Schedule D).

b. Agronomic Rates for Nutrient Loading - The permittee must apply biosolids at or below the agronomic rates approved by DEQ to minimize potential groundwater degradation. At the time of sale or distribution of the exceptional quality biosolids, the origin must be identified and biosolids analyses must be available to appliers or users of the biosolids.

c. Land Application Site Authorization - The permittee must obtain written site authorization from DEQ for each land application site prior to land application (see Schedule D) and follow the site-specific management conditions in the DEQ-issued site authorization letter. This requirement does not apply for exceptional quality biosolids, which may be land applied as any other fertilizer or soil amendment.

d. Pathogen and Vector Attraction Reduction - Prior to land application, the permittee must ensure that biosolids meet one of the pathogen reduction standards under 40 CFR 503.32 and one of the vector attraction reduction standards under 40 CFR 503.33. For exceptional quality biosolids, the biosolids must meet one of the Class A pathogen reduction requirements in 40 CFR 503.32(a) and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(8) prior to land application.

e. Pollutants - The permittee must not apply biosolids containing pollutants in excess of the ceiling concentrations shown in Table A3. The permittee may apply biosolids containing pollutants in excess of the pollutant concentrations. However, the total quantity of these pollutant(s) cannot exceed the cumulative pollutant loading rates in Table A3. For biosolids to be managed as exceptional quality biosolids, the biosolids cannot exceed any of the ceiling concentration limits or the pollutant concentration limits in Table A3.

f. Approval to Apply Cumulative Pollutant Loading Rates - If the permittee's biosolids are subject to the cumulative pollutant loading rates as described in section e. above, the permittee must obtain specific approval from DEQ to land apply these biosolids in accordance with their approved Biosolids Management and Land Application Site Authorization (see Schedule D).

Table A2: Biosolids Limits

Pollutant (See note a.)	**Ceiling concentrations (mg/kg)**	**Pollutant concentrations (mg/kg)**	**Cumulative pollutant loading rates (kg/ha)**
Arsenic	75	41	41
Cadmium	85	39	39
Copper	4300	1500	1500
Lead	840	300	300
Mercury	57	17	17
Molybdenum	75	–	–
Nickel	420	420	420

Pollutant (See note a.)	**Ceiling concentrations (mg/kg)**	**Pollutant concentrations (mg/kg)**	**Cumulative pollutant loading rates (kg/ha)**
Selenium	100	100	100
Zinc	7500	2800	2800

Note:

a. Biosolids pollutant limits are described in 40 CFR 503.13, which uses the terms *ceiling concentrations*, *pollutant concentrations*, and *cumulative pollutant loading rates*.

4. Chlorine Usage

The permittee is prohibited from using chlorine or chlorine compounds for effluent disinfection purposes. Chlorine residual in effluent resulting from chlorine or chlorine-containing chemicals used for maintenance or other purposes is also prohibited.

SCHEDULE B: MINIMUM MONITORING AND REPORTING REQUIREMENTS

1. Reporting Requirements

The permittee must submit to DEQ monitoring results and reports as listed below.

Table B1: Reporting Requirements and Due Dates

Reporting Requirement	Frequency	Due Date (See note a.)	Report Form (See note b.)	Submit To:
Tables B2, B3, and B4 Influent Monitoring, Effluent Monitoring, and Receiving Stream Monitoring	Monthly	By the 15th of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Inflow and Infiltration Report (see Schedule D)	Annually	February 15	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Biosolids Annual Report (see Schedule D)	Annually	By February 19 of the following year	Electronic copy in a DEQ-approved form	Attached via electronic reporting as directed by DEQ DEQ Biosolids Program Coordinator
Hauled Waste Annual Report (see Schedule D) - Only required if facility has a Hauled Waste Control Plan, or otherwise accepts hauled waste.	Annually	January 15	Electronic copy in a DEQ-approved form	Attached via electronic reporting as directed by DEQ
Industrial User Survey (see Schedule D)	Once per permit cycle	Submit by no later than 24 months after permit effective date	Electronic copy in a DEQ-approved form	Attached via electronic reporting as directed by DEQ
Outfall Inspection Report (see Schedule D)	Once per permit cycle	Submit by 02/15/2027	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ

Notes:

a. For submittals that are provided to DEQ by mail, the postmarked date must not be later than the due date.

b. All reporting requirements are to be submitted in a DEQ-approved format, unless otherwise specified in writing.

2. Monitoring and Reporting Protocols

a. Electronic Submissions

The permittee must submit to DEQ the results of monitoring indicated in Schedule B in an electronic format as specified below.

i. The permittee must submit monitoring results required by this permit via DEQ-approved web-based Discharge Monitoring Report (DMR) forms to DEQ via electronic reporting. Any data used to calculate summary statistics must be submitted as a separate attachment approved by DEQ via electronic reporting.

ii. The reporting period is the calendar month.

iii. The permittee must submit monitoring data and other information required by this permit for all compliance points by the 15th day of the month following the reporting period unless specified otherwise in this permit or as specified in writing by DEQ.

b. Test Methods

The permittee must conduct monitoring according to test procedures in 40 CFR 136 and 40 CFR 503 for biosolids or other approved procedures as per Schedule F.

c. Detection and Quantitation Limits

i. Detection Level (DL) – The DL is defined as the minimum measured concentration of a substance that can be distinguished from method blank results with 99% confidence. The DL is derived using the procedure in 40 CFR 136 Appendix B and evaluated for reasonableness relative to method blank concentrations to ensure results reported above the DL are not a result of routine background contamination. The DL is also known as the Method Detection Limit (MDL) or Limit of Detection (LOD).

ii. Quantitation Limits (QLs) – The QL is the minimum level, concentration or quantity of a target analyte that can be reported with a specified degree of confidence. It is the lowest level at which the entire analytical system gives a recognizable signal and acceptable calibration for the analyte. It is normally equivalent to the concentration of the lowest calibration standard adjusted for sample weights, volumes, preparation, and cleanup procedures employed. The QL as reported by a laboratory is also sometimes referred to as the Method Reporting Limit (MRL) or Limit of Quantitation (LOQ).

d. Sufficient Sensitivity of Quantitation Limits

i. The Laboratory QLs (adjusted for any dilutions) for analyses performed to demonstrate compliance with permit limits or as part of effluent characterization, must meet at least one of the requirements below:

(A) The QL is at or below the level of the water quality criterion for the measured parameter.

(B) The QL is above the water quality criterion but the amount of the pollutant in a facility's discharge is high enough that the method detects and quantifies the level of the parameter in the discharge.

(C) The QL has the lowest sensitivity of the analytical methods procedure specified in 40 CFR 136.

(D) The QL is at or below those defined in Oregon DEQ list of quantitation limits posted online at DEQ permitting website.

e. Quality Assurance and Quality Control

i. Quality Assurance Plan – The permittee must develop and implement a written Quality Assurance Plan that details the facility sampling procedures, equipment calibration and maintenance, analytical methods, quality control activities and laboratory data handling and reporting. The QA/QC program must conform to the requirements of 40 CFR 136.7.

ii. If QA/QC requirements are not met for any analysis, the permittee must re-analyze the sample. If the sample cannot be re-analyzed, the permittee must re-sample and analyze at the earliest opportunity. If the permittee is unable to collect a sample that meets QA/QC requirements, then the permittee must include the result in the discharge monitoring report (DMR) along with a notation (data qualifier). In addition, the permittee must explain how the sample does not meet QA/QC requirements. With the exception of BOD_5/$CBOD_5$, the permittee may not use the result that failed the QA/QC requirements in any calculation required by the permit unless authorized in writing by DEQ. For BOD_5/$CBOD_5$, the permittee may not use the result that failed the QA/QC requirement in any calculation except as follows:

(A) When the glucose-glutamic acid, dilution water, and/or seed control check are not met, the values are reported with the "e" (estimate) data qualifier. The estimated values are not used in the calculations.

(B) When the minimum DO depletion or the minimum residual DO is not met, the values are reported with the "<" or ">" data qualifiers as appropriate. The data must be used in the calculations. It is not acceptable to report "non-detect" on the discharge monitoring report. The data qualifiers carry to the summary statistic. For example, when calculating the loading, the data qualifiers are added to the value.

iii. Flow measurement, field measurement, and continuous monitoring devices - The permittee must:

(A) Establish verification and calibration frequency for each device or instrument in the quality assurance plan that conforms to the frequencies recommended by the manufacturer.

(B) Verify at least once per year that flow-monitoring devices are functioning properly according to manufacturer's recommendation. Calibrate as needed according to manufacturer's recommendations.

(C) Verify at least weekly that the continuous monitoring instruments are functioning properly according to manufacturer's recommendation unless the permittee demonstrates a longer period is sufficient and such longer period is approved by DEQ in writing.

iv. The permittee must develop a receiving water sampling and analysis plan that incorporates QA/QC prior to sampling. This plan must be kept at the facility and made available to DEQ upon request.

f. Reporting Sample Results

i. The permittee must report the laboratory DL and QL as defined above for each analyte, with the following exceptions: pH, temperature, BOD, CBOD, TSS, Oil & Grease, hardness, alkalinity, bacteria, and nitrate-nitrite. For temperature and pH, neither the QL nor the DL need to be reported. For the other parameters listed above, the permittee is only required to report the QL and only when the result is ND.

ii. The permittee must report the same number of significant digits as the permit limit for a given parameter.

iii. (For Discharge Monitoring Reports) If a sample result is above the DL but below the QL, the permittee must report the result as the DL preceded by DEQ's data code "E". For example, if the DL is 1.0 µg/l, the QL is 3.0 µg/L and the result is estimated to be between the DL and QL, the permittee must report "E1.0 µg/L" on the DMR. This requirement does not apply in the case of parameters for which the DL does not have to be reported.

iv. (For Discharge Monitoring Reports) If the sample result is below the DL, the permittee must report the result as less than the specified DL. For example, if the DL is 1.0 µg/L and the result is ND, report "<1.0" on the discharge monitoring report (DMR). This requirement does not apply in the case of parameters for which the DL does not have to be reported.

g. Calculating and Reporting Mass Loads

The permittee must calculate mass loads on each day the parameter is monitored using the following equation:

Example calculation: Flow (in MGD) X Concentration (in mg/L) X 8.34 = Pounds per day

i. Mass load limits all have two significant figures unless otherwise noted.

ii. When concentration data are below the DL: To calculate the mass load from this result, use the DL. Report the mass load as less than the calculated mass load. For example, if flow is 2 MGD and the reported sample result is <1.0 µg/L, report "<0.017 lb/day" for mass load on the DMR (1.0 µg/L x 2 MGD x conversion factor = 0.017 lb/day).

iii. When concentration data are above the DL, but below the QL: To calculate the mass load from this result, use the DL. Report the mass load as the calculated mass load preceded by "E". For example, if flow is 2 MGD, the DL is 1.0 µg/L, the QL is 5 µg/L and the reported sample result is E3.5 µg/L, report "E0.017 lb/day" for mass load on the DMR (1.0 µg/L x 2 MGD x conversion factor = 0.017 lb/day).

3. Monitoring and Reporting Requirements

a. The permittee must monitor influent composite samples after grit removal and before the bar screen, monitor influent grab samples after the screen, and report results in accordance with Table B1 the table below.

Table B2: Influent Monitoring Requirements

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type / Required Action (See note a.)	Report Statistic (See note b.)
Flow (50050)	MGD	Year-round	Daily	Metered	1. Monthly Average 2. Daily Maximum
BOD_5 (00310)	mg/L	May 1 – October 31	2/month	24-hour composite	Monthly Average
BOD_5 (00310)	mg/L	November 1 – April 30	1/month	24-hour composite	Monthly Average
TSS (00530)	mg/L	May 1 – October 31	2/month	24-hour composite	Monthly Average
TSS (00530)	mg/L	November 1 – April 30	1/month	24-hour composite	Monthly Average
pH (00400)	SU	Year-round	3/week	Grab	1. Daily Maximum 2. Daily Minimum

Notes:

a. In the event of equipment failure or loss, the permittee must notify DEQ and deploy new equipment to minimize interruption of data collection. If new equipment cannot be immediately deployed, the permittee must perform grab measurements.

b. When submitting DMRs electronically, the permittee must submit all data used to determine summary statistics in a DEQ-approved format as a spreadsheet via electronic reporting unless otherwise directed by DEQ.

b. The permittee must monitor effluent at Outfall 001 after disinfection and before the flow meter and report results in accordance with Table B1 and the table below.

Table B3: Effluent Monitoring Requirements

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
Flow (50050)	MGD	Year-round	Daily	Metered	1. Monthly Average 2. Daily Maximum
BOD_5 (00310)	mg/L	May 1 – October 31	2/month	24-hour composite	1. Monthly Average 2. Maximum Weekly Average
BOD_5 (00310)	mg/L	November 1 – April 30	1/month	24-hour composite	1. Monthly Average
BOD_5 (00310)	lb/day	May 1 – October 31	2/month	Calculation	1. Daily Maximum 2. Monthly Average 3. Maximum Weekly Average
BOD_5 (00310)	lb/day	November 1 – April 30	1/month	Calculation	1. Daily Maximum 2. Monthly Average
BOD_5 percent removal (81010) (See note c.)	%	Year-round	Monthly	Calculation based on monthly average BOD_5 concentration values	Monthly Average
TSS (00530)	mg/L	May 1 – October 31	2/month	24-hour composite	1. Monthly Average 2. Maximum Weekly Average
TSS (00530)	mg/L	November 1 – April 30	1/month	24-hour composite	1. Monthly Average
TSS (00530)	lb/day	May 1 – October 31	2/month	Calculation	1. Daily Maximum 2. Monthly Average 3. Maximum Weekly Average
TSS (00530)	lb/day	November 1 – April 30	1/month	Calculation	1. Daily Maximum 2. Monthly Average
TSS percent removal (81011) (See note c.)	%	Year-round	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
pH (00400)	SU	Year-round	3/week	Grab	1. Daily Maximum 2. Daily Minimum
Temperature (00010)	ºC	Year-round	3/week	Grab (See note d.)	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
Fecal coliform (74055)	#/100 mL	Year-round	2/week	Grab	1. Daily Maximum 2. Monthly Median
Fecal coliform (30500)	%	Year-round	Monthly	Calculation	Monthly percent over 43
Enterococci (61211)	#/100 mL	Year-round	1/month	Grab	1. Daily Maximum 2. Monthly Geometric Mean
Enterococci % samples exceeding limit (51937)	%	Year-round	Monthly	Calculation	Monthly percent over 130
Total ammonia (as N) (00610)	mg/L	Year-round	1/month	24-hour composite	Monthly Maximum
Alkalinity as $CaCO_3$ (00410)	mg/L	Year-round	1/quarter	Grab	Quarterly Maximum
UV intensity	mW/cm^2	Year-round	Daily	Continuous	Maintain records on-site
UV dose	mJ/cm^2	Year-round	Daily	Calculation OR from manufacturer's table	Maintain records on-site
UV transmittance	%	Year-round	Daily	Continuous	Maintain records on-site
Salinity (480PS)	psu	Third year of permit cycle 2027	Quarterly	Grab	Quarterly Maximum
Dissolved Oxygen (00300)	mg/L	Third year of permit cycle 2027	Quarterly	24-hour composite (See note e.)	Quarterly Minimum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	Third year of permit cycle 2027	Quarterly	24-hour composite	Quarterly Maximum
Nitrate (NO_3) Plus Nitrite (NO_2) Nitrogen (00630)	mg/L	Third year of permit cycle 2027	Quarterly	24-hour composite	Quarterly Maximum
Oil and Grease (00556)	mg/L	Third year of permit cycle 2027	Quarterly	Grab	Quarterly Maximum
Total Phosphorus (00665)	mg/L	Third year of permit cycle 2027	Quarterly	24-hour composite	Quarterly Maximum
Total Dissolved Solids (70295)	mg/L	Third year of permit cycle 2027	Quarterly	24-hour composite	Quarterly Maximum

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)

Notes:

a. In the event of equipment failure or loss, the permittee must notify DEQ and deploy new equipment to minimize interruption of data collection. If new equipment cannot be immediately deployed, the permittee must perform grab measurements.

b. When submitting DMRs electronically, all data used to determine summary statistics must be submitted in a DEQ-approved format as a spreadsheet via electronic reporting unless otherwise directed by DEQ.

c. Percent Removal must be calculated on a monthly basis using the following formula:

$$Percent\ Removal = \frac{[Influent\ Concentration] - [Effluent\ Concentration]}{[Influent\ Concentration]} \times 100$$

Where:

Influent Concentration = Corresponding Monthly average influent concentration based on the analytical results of the reporting period.

Effluent Concentration = Corresponding Monthly average effluent concentration based on the analytical results of the reporting period.

d. The permittee must perform temperature grab measurements daily between 12 PM and 5 PM.

e. For Dissolved Oxygen, the permittee must collect and analyze at least four discrete grab samples over the operating day with samples collected no less than one hour apart. The analytical results for all samples in a day must be averaged for reporting purposes.

c. The permittee must monitor the Coquille River Estuary and report the results in accordance with Table B1 and the table below. The permittee must collect samples such that the effluent does not impact the samples (e.g., upstream for riverine discharges).

Table B4: Receiving Stream Monitoring (Coquille River Estuary)

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type / Required Action	Report Statistic (See note a.)
Temperature (00010)	ºC	Year-round	1/month	Grab	Monthly Maximum
pH (00400)	SU	Year-round	1/month	Grab	Monthly Maximum
Total ammonia (as N) (00610)	mg/L	Year-round	1/month	Grab	Monthly Maximum
Alkalinity as $CaCO_3$ (00410)	mg/L	Year-round	1/quarter	Grab	Quarterly Maximum
Salinity (480PS)	mg/L	Year-round	1/quarter	Grab	Quarterly Maximum

Note:

a. When submitting DMRs electronically, all data used to determine summary statistics must be submitted in a DEQ-approved format as a spreadsheet via electronic reporting unless otherwise directed by DEQ.

4. Biosolids Monitoring Requirements

The permittee must monitor biosolids land applied or produced for sale or distribution as listed below. The samples must be representative of the quality and quantity of biosolids generated and undergo the same treatment process used to prepare the biosolids. Results must be reported as required in the biosolids management plan described in Schedule D.

Table B5: Biosolids Monitoring

Item or Parameter	Minimum Frequency	Sample Type
Nutrient and conventional parameters (% dry weight unless otherwise specified): Total Kjeldahl Nitrogen (TKN) Nitrate-Nitrogen (NO_3-N) Total Ammoniacal Nitrogen (NH_3-N) Total Phosphorus (P) Potassium (K) pH (S.U.) Total Solids Volatile Solids	As described in DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B6.	As described in DEQ-approved Biosolids Management Plan
Pollutants: As, Cd, Cu, Hg, Pb, Mo, Ni, Se, Zn, mg/kg dry weight	As described in DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B6.	As described in DEQ-approved Biosolids Management Plan
Pathogen reduction	As described in DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B6.	As described in DEQ-approved Biosolids Management Plan
Vector attraction reduction	As described in DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B6.	As described in DEQ-approved Biosolids Management Plan
Record of biosolids land application: date, quantity, location.	Each event	Record the date, quantity, and location of biosolids land applied on site location map or equivalent electronic system, such as GIS.

Table B6: Biosolids Minimum Monitoring Frequency

Quantity of biosolids land applied or produced for sale or distribution per calendar year		Minimum Sampling Frequency
(dry metric tons)	(dry U.S. tons)	
Less than 290	Less than 320	Once per year
290 to 1,500	320 to 1,653	Once per quarter (4x/year)
1,500 to 15,000	1,653 to 16,535	Once per 60 days (6x/year)
15,000 or more	16,535 or more	Once per month (12x/year)

SCHEDULE C: COMPLIANCE SCHEDULE

A compliance schedule is not part of this permit.

SCHEDULE D: SPECIAL CONDITIONS

1. Inflow and Infiltration

The permittee must submit to DEQ an annual inflow and infiltration report on a DEQ-approved form as directed in Table B1. The report must include the following:

a. An assessment of the facility's I/I issues based on a comparison of summer and winter flows to the plant.

b. Details of activities performed in the previous year to identify and reduce inflow and infiltration.

c. Details of activities planned for the following year to identify and reduce inflow and infiltration.

d. A summary of sanitary sewer overflows that occurred during the previous year. This should include the following: date of the SSO, location, estimated volume, cause, follow-up actions and if performed, the results of receiving stream monitoring.

2. Emergency Response and Public Notification Plan

The permittee must develop an Emergency Response and Public Notification Plan ("plan"), or ensure the facility's existing plan is current and accurate, per Schedule F, Section B, and Condition 8 within 6 months of permit effective date. The permittee must update the plan annually to ensure all information contained in the plan, including telephone and email contact information for applicable public agencies, is current and accurate. An updated copy of the plan must be kept on file at the facility for DEQ review. The latest plan revision date must be listed on the plan cover along with the reviewer's initials or signature.

3. Exempt Wastewater Reuse at the Treatment System

Recycled water used for landscape irrigation within the property boundary or in-plant processes at the wastewater treatment system is exempt from the requirements of OAR 340-055 if all of the following conditions are met:

a. The recycled water is an oxidized and disinfected wastewater.

b. The recycled water is used at the wastewater treatment system site where it is generated or at an auxiliary wastewater or sludge treatment facility that is subject to the same NPDES or WPCF permit as the wastewater treatment system.

c. Spray and/or drift from the use does not migrate off the site.

d. Public access to the site is restricted.

4. Biosolids Management Plan

The permittee must update and maintain a Biosolids Management Plan and Land Application Plan meeting the requirements in OAR 340-050-0031. The permittee must submit these plans and any significant modification of these plans to DEQ for review and approval with sufficient time to clear DEQ review and a public notice period prior to implementing any significant changes to the biosolids program. The permittee must keep the plans updated. All plan revisions require written authorization from DEQ and are effective upon permittee's receipt of DEQ written approval. No significant modifications can be made to a plan for an administratively extended permit (after the permit expiration date). Conditions in the plans are enforceable requirements under this permit.

a. Annual Report

The permittee must submit a Biosolids Annual Report by February 19 each year documenting biosolids management activities of the previous calendar year as described in OAR 340-050-0035(6). The permittee must use DEQ approved Biosolids Annual report form. This report must include the monitoring data and analytical laboratory reports for the previous year's monitoring specified under Schedule B.

b. Site Authorization

The permittee must obtain written authorization from DEQ for each land application site prior to its use. Conditions in site authorizations are enforceable requirements under this permit. The permittee is prohibited from land applying biosolids to a DEQ-approved site except in accordance with the site authorization, while this permit is effective and with the written approval of the property owner. DEQ may modify or revoke a site authorization following the procedures for a permit modification described in OAR 340-045-0055.

c. Public Participation

i. DEQ will provide an opportunity for public review and comment on any significant plan modifications prior to approving or denying. Public review is not required for minor modifications or changes to utilization dates.

ii. No DEQ-initiated public notice is required for continued use of sites identified in DEQ-approved biosolids management plan.

iii. For new sites that fail to meet the site selection criteria in the biosolids management plan or that are deemed by DEQ to be sensitive with respect to residential housing, runoff potential, or threat to groundwater, DEQ will provide an opportunity for public comment as directed by OAR 340-050-0030(2).

iv. For all other new sites, the permittee must provide for public participation following procedures in its DEQ-approved land application plan.

5. Wastewater Solids Transfers

a. *Within state.* The permittee may transfer wastewater solids including Class A and Class B biosolids, to another facility permitted to process or dispose of wastewater solids, including but not limited to: another wastewater treatment facility, landfill, or incinerator. The permittee must satisfy the requirements of the receiving facility. The permittee must report the name of the receiving facility and the quantity of material transferred in the wastewater solids or biosolids annual report identified in Schedule B.

b. *Out of state.* If wastewater solids, including Class A and Class B biosolids, are transferred out of state for use or disposal, the permittee must obtain written authorization from DEQ, meet Oregon requirements for the use or disposal of wastewater solids, notify in writing the receiving state of the proposed use or disposal of wastewater solids, and satisfy the requirements of the receiving state.

6. Hauled Waste Control Plan

The permittee may accept hauled wastes at discharge points designated by the POTW after receiving written DEQ approval of a Hauled Waste Control Plan. Hauled wastes may include wastewater solids from another wastewater treatment facility, septage, grease trap wastes, portable and chemical toilet wastes, landfill leachate, groundwater remediation wastewaters and commercial/industrial wastewaters. A Hauled Waste Control Plan is not required in the event biological seed must be added to the process at the POTW to facilitate effective wastewater treatment.

7. Hauled Waste Annual Report

If the permittee has a Hauled Waste Control Plan, or otherwise accepts hauled waste, the permittee must submit an annual report of hauled waste received by the POTW. This report, if required, must be submitted as described in Table B1. This report must include the date, time, type, and amount received each time the POTW accepts hauled waste. Hauled waste must be described in the permittee's Hauled Waste Control Plan.

8. Operator Certification

a. Definitions

i. "Supervise" means to have full and active responsibility for the daily on-site technical operation of a wastewater treatment system or wastewater collection system.

ii. "Supervisor" or "designated operator", means the operator delegated authority by the permittee for establishing and executing the specific practice and procedures for operating the wastewater treatment system or wastewater collection system in accordance with the policies of the owner of the system and any permit requirements.

iii. "Shift Supervisor" means the operator delegated authority by the permittee for executing the specific practice and procedures for operating the wastewater treatment system or wastewater collection system when the system is operated on more than one daily shift.

iv. "System" includes both the collection system and the treatment systems.

b. The permittee must comply with OAR Chapter 340, Division 49, "Regulations Pertaining to Certification of Wastewater System Operator Personnel" and designate a supervisor whose certification corresponds with the classification of the collection and/or treatment system as specified in DEQ Supervisory Wastewater Operator Status Report. DEQ may revise the permittee's classification in writing at any time to reflect changes in the collection or treatment system. This reclassification is not considered a permit modification and may be made after the permit expiration date provided the permit has been administratively extended by DEQ. If a facility is re-classified, a certified letter will be mailed to the system owner from DEQ Operator Certification Program. Current system classifications are publicized on DEQ Supervisory Wastewater Operator Status Report found on DEQ Wastewater Operator Certification Homepage.

c. The permittee must have its system supervised full-time by one or more operators who hold a valid certificate for the type of wastewater treatment or wastewater collection system, and at a grade equal to or greater than the wastewater system's classification.

d. The permittee's wastewater system may be without the designated supervisor for up to 30 consecutive days if another person supervises the system, who is certified at no more than one grade lower than the classification of the wastewater system. The permittee must delegate authority to this operator to supervise the operation of the system.

e. If the wastewater system has more than one daily shift, the permittee must have another properly certified operator available to supervise operation of the system. Each shift supervisor must be certified at no more than one grade lower than the system classification.

f. The permittee is not required to have a supervisor on site at all times; however, the supervisor must be available to the permittee and operator at all times.

g. The permittee must notify DEQ in writing of the name of the system supervisor by completing and submitting the Supervisory Wastewater System Operator Designation Form. The most recent version of this form may be found on DEQ Wastewater Operator Certification homepage *NOTE: This form is different from the Delegated Authority form. The permittee may replace or re-designate the system supervisor with another properly certified operator at any time and must notify DEQ in writing within 30 days of replacement or re-designation of the operator in charge. As of this writing, the notice of replacement or re-designation must be sent to Water Quality Division, Operator Certification Program, 700 NE Multnomah St, Suite 600, Portland, OR 97232-4100. This address may be updated in writing by DEQ during the term of this permit.

h. When compliance with item (c) of this section is not possible or practicable because the system supervisor is not available or the position is vacated unexpectedly, and another certified operator is not qualified to assume supervisory responsibility, the Director may grant a time extension for compliance with the requirements in response to a written request from the system owner. The Director will not grant an extension longer than 120 days unless the system owner documents the existence of extraordinary circumstances.

9. Industrial User Survey

a. By the date listed in Table B1, the permittee must conduct an industrial user survey as described in 40CFR 403.8(f)(2)(i-iii) to determine the presence of any industrial users discharging wastewaters subject to pretreatment and submit a report on the findings to DEQ. The purpose of the survey is to identify whether there are any industrial users discharging to the POTW and ensure regulatory oversight of these discharges to state waters.

b. Should DEQ determine that a pretreatment program is required, the permit must be reopened and modified in accordance with 40 CFR 403.8(e)(1) to incorporate a compliance schedule for development of a pretreatment program. The compliance schedule must be developed in accordance with the provisions of 40 CFR 403.12(k) and must not exceed twelve (12) months.

10. Outfall Inspection

The permittee must inspect Outfall 001 including the submerged portion of the outfall line and diffuser to document its integrity and to determine whether it is functioning as designed. The inspection must determine whether diffuser ports are intact, clear, and fully functional. The inspection must verify the latitude and longitude of the diffuser. The permittee must submit a written report to DEQ regarding the results of the outfall inspection by the date in Table B1. The report must include a description of the outfall as originally constructed, the condition of the current outfall and identify any repairs needed to return the outfall to satisfactory condition.

SCHEDULE E: PRETREATMENT ACTIVITIES

A pretreatment program is not part of this permit.

SCHEDULE F: NPDES GENERAL CONDITIONS

SCHEDULE F
NPDES GENERAL CONDITIONS – DOMESTIC FACILITIES
October 1, 2015 Version

SECTION A. STANDARD CONDITIONS

A1. Duty to Comply with Permit

The permittee must comply with all conditions of this permit. Failure to comply with any permit condition is a violation of Oregon Revised Statutes (ORS) 468B.025 and the federal Clean Water Act and is grounds for an enforcement action. Failure to comply is also grounds for DEQ to terminate, modify and reissue, revoke, or deny renewal of a permit.

A2. Penalties for Water Pollution and Permit Condition Violations

The permit is enforceable by DEQ or EPA, and in some circumstances also by third-parties under the citizen suit provisions of 33 USC § 1365. DEQ enforcement is generally based on provisions of state statutes and Environmental Quality Commission (EQC) rules, and EPA enforcement is generally based on provisions of federal statutes and EPA regulations.

ORS 468.140 allows DEQ to impose civil penalties up to $25,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution in the second degree, is a Class A misdemeanor and is punishable by a fine of up to $25,000, imprisonment for not more than one year, or both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, unlawful water pollution in the first degree is a Class B felony and is punishable by a fine of up to $250,000, imprisonment for not more than 10 years, or both.

The Clean Water Act provides that any person who violates permit condition, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation.

The Clean Water Act provides that any person who negligently violates any condition, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both.

In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both.

In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

Any person who knowingly violates section any permit condition, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both.

In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both.

An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

Any person may be assessed an administrative penalty by the Administrator for violating any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act.

Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000.

Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

A3. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit. In addition, upon request of DEQ, the permittee must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

A4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

DEQ may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

A5. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute.
b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts.
c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
d. The permittee is identified as a Designated Management Agency or allocated a wasteload under a total maximum daily load (TMDL).
e. New information or regulations.
f. Modification of compliance schedules.
g. Requirements of permit reopener conditions
h. Correction of technical mistakes made in determining permit conditions.
i. Determination that the permitted activity endangers human health or the environment.
j. Other causes as specified in 40 CFR §§ 122.62, 122.64, and 124.5.
k. For communities with combined sewer overflows (CSOs):
   (1) To comply with any state or federal law regulation for CSOs that is adopted or promulgated subsequent to the effective date of this permit.

(2) If new information that was not available at the time of permit issuance indicates that CSO controls imposed under this permit have failed to ensure attainment of water quality standards, including protection of designated uses.
(3) Resulting from implementation of the permittee's long-term control plan and/or permit conditions related to CSOs.

The filing of a request by the permittee for a permit modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

A6. Toxic Pollutants
The permittee must comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rule (OAR) 340-041-0033 and section 307(a) of the federal Clean Water Act for toxic pollutants, and with standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

A7. Property Rights and Other Legal Requirements
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, or authorize any injury to persons or property or invasion of any other private rights, or any infringement of federal, tribal, state, or local laws or regulations.

A8. Permit References
Except for effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act and OAR 340-041-0033 for toxic pollutants, and standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

A9. Permit Fees
The permittee must pay the fees required by OAR.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

B1. Proper Operation and Maintenance
The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

B2. Need to Halt or Reduce Activity Not a Defense
For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B3. Bypass of Treatment Facilities
a. Definitions
(1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be

exceeded, provided the diversion is to allow essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited and DEQ may take enforcement action against a permittee for bypass unless:

i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventative maintenance; and

iii. The permittee submitted notices and requests as required under General Condition B3.c.

(2) DEQ may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, if DEQ determines that it will meet the three conditions listed above in General Condition B3.b.(1).

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, a written notice must be submitted to DEQ at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required in General Condition D5.

B4. Upset

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of General Condition B4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the causes(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee submitted notice of the upset as required in General Condition D5, hereof (24-hour notice); and

(4) The permittee complied with any remedial measures required under General Condition A3 hereof.

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

B5. Treatment of Single Operational Upset

For purposes of this permit, a single operational upset that leads to simultaneous violations of more than one pollutant parameter will be treated as a single violation. A single operational upset is an exceptional incident that causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one federal Clean Water Act effluent discharge pollutant parameter. A single

operational upset does not include federal Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational upset is a violation.

B6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definition. "Overflow" means any spill, release or diversion of sewage including:
   (1) An overflow that results in a discharge to waters of the United States; and
   (2) An overflow of wastewater, including a wastewater backup into a building (other than a backup caused solely by a blockage or other malfunction in a privately owned sewer or building lateral), even if that overflow does not reach waters of the United States.

b. Reporting required. All overflows must be reported orally to DEQ within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D5.

B7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs that threatens public health, the permittee must take such steps as are necessary to alert the public, health agencies and other affected entities (for example, public water systems) about the extent and nature of the discharge in accordance with the notification procedures developed under General Condition B8. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

B8. Emergency Response and Public Notification Plan

The permittee must develop and implement an emergency response and public notification plan that identifies measures to protect public health from overflows, bypasses, or upsets that may endanger public health. At a minimum the plan must include mechanisms to:

a. Ensure that the permittee is aware (to the greatest extent possible) of such events;
b. Ensure notification of appropriate personnel and ensure that they are immediately dispatched for investigation and response;
c. Ensure immediate notification to the public, health agencies, and other affected public entities (including public water systems). The overflow response plan must identify the public health and other officials who will receive immediate notification;
d. Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained;
e. Provide emergency operations; and
f. Ensure that DEQ is notified of the public notification steps taken.

B9. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering waters of the state, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

C1. Representative Sampling

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit, and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of DEQ. Samples must be collected in accordance with requirements in 40 CFR part 122.21 and 40 CFR part 403 Appendix E.

C2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

C3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 unless other test procedures have been specified in this permit.

For monitoring of recycled water with no discharge to waters of the state, monitoring must be conducted according to test procedures approved under 40 CFR part 136 or as specified in the most recent edition of Standard Methods for the Examination of Water and Wastewater unless other test procedures have been specified in this permit or approved in writing by DEQ.

C4. Penalties for Tampering

The federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit may, upon conviction, be punished by a fine of not more than $10,000 per violation, imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

C5. Reporting of Monitoring Results

Monitoring results must be summarized each month on a discharge monitoring report form approved by DEQ. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

C6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503, or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (for example, total residual chlorine), only the average daily value must be recorded unless otherwise specified in this permit.

C7. Averaging of Measurements

Calculations for all limitations that require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

C8. Retention of Records

Records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities must be retained for a period of at least 5 years (or longer as required by 40 CFR part 503). Records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit must be retained for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of DEQ at any time.

C9. Records Contents

Records of monitoring information must include:

a. The date, exact place, time, and methods of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

C10. Inspection and Entry

The permittee must allow DEQ or EPA upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

C11. Confidentiality of Information

Any information relating to this permit that is submitted to or obtained by DEQ is available to the public unless classified as confidential by the Director of DEQ under ORS 468.095. The permittee may request that information be classified as confidential if it is a trade secret as defined by that statute. The name and address of the permittee, permit applications, permits, effluent data, and information required by NPDES application forms under 40 CFR § 122.21 are not classified as confidential [40 CFR § 122.7(b)].

SECTION D. REPORTING REQUIREMENTS

D1. Planned Changes

The permittee must comply with OAR 340-052, "Review of Plans and Specifications" and 40 CFR § 122.41(l)(1). Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers may be commenced until the plans and specifications are submitted to and approved by DEQ. The permittee must give notice to DEQ as soon as possible of any planned physical alternations or additions to the permitted facility.

D2. Anticipated Noncompliance

The permittee must give advance notice to DEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

D3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and EQC rules. No permit may be transferred to a third party without prior written approval from DEQ. DEQ may require modification, revocation, and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under 40 CFR § 122.61. The permittee must notify DEQ when a transfer of property interest takes place.

D4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each

schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

D5. Twenty-Four Hour Reporting

The permittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally (by telephone) to the DEQ regional office or Oregon Emergency Response System (1-800-452-0311) as specified below within 24 hours from the time the permittee becomes aware of the circumstances.

a. Overflows.
   (1) Oral Reporting within 24 hours.
      i. For overflows other than basement backups, the following information must be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311. For basement backups, this information should be reported directly to the DEQ regional office.
         (a) The location of the overflow;
         (b) The receiving water (if there is one);
         (c) An estimate of the volume of the overflow;
         (d) A description of the sewer system component from which the release occurred (for example, manhole, constructed overflow pipe, crack in pipe); and
         (e) The estimated date and time when the overflow began and stopped or will be stopped.
      ii. The following information must be reported to the DEQ regional office within 24 hours, or during normal business hours, whichever is earlier:
         (a) The OERS incident number (if applicable); and
         (b) A brief description of the event.
   (2) Written reporting postmarked within 5 days.
      i. The following information must be provided in writing to the DEQ regional office within 5 days of the time the permittee becomes aware of the overflow:
         (a) The OERS incident number (if applicable);
         (b) The cause or suspected cause of the overflow;
         (c) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
         (d) Steps taken or planned to mitigate the impact(s) of the overflow and a schedule of major milestones for those steps; and
         (e) For storm-related overflows, the rainfall intensity (inches/hour) and duration of the storm associated with the overflow.

      DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

b. Other instances of noncompliance.
   (1) The following instances of noncompliance must be reported:
      i. Any unanticipated bypass that exceeds any effluent limitation in this permit;
      ii. Any upset that exceeds any effluent limitation in this permit;
      iii. Violation of maximum daily discharge limitation for any of the pollutants listed by DEQ in this permit; and
      iv. Any noncompliance that may endanger human health or the environment.
   (2) During normal business hours, the DEQ regional office must be called. Outside of normal business hours, DEQ must be contacted at 1-800-452-0311 (Oregon Emergency Response System).
   (3) A written submission must be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain:
      i. A description of the noncompliance and its cause;
      ii. The period of noncompliance, including exact dates and times;
      iii. The estimated time noncompliance is expected to continue if it has not been corrected;

iv. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
v. Public notification steps taken, pursuant to General Condition B**7.**

(4) DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

D6. Other Noncompliance

The permittee must report all instances of noncompliance not reported under General Condition D4 or D5 at the time monitoring reports are submitted. The reports must contain:

a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

D7. Duty to Provide Information

The permittee must furnish to DEQ within a reasonable time any information that DEQ may request to determine compliance with the permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee must also furnish to DEQ, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it has failed to submit any relevant facts or has submitted incorrect information in a permit application or any report to DEQ, it must promptly submit such facts or information.

D8. Signatory Requirements

All applications, reports or information submitted to DEQ must be signed and certified in accordance with 40 CFR § 122.22.

D9. Falsification of Information

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $125,000 per violation and up to 5 years in prison per ORS chapter 161. Additionally, according to 40 CFR § 122.41(k)(2), any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or non-compliance will, upon conviction, be punished by a federal civil penalty not to exceed $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

D10. Changes to Indirect Dischargers

The permittee must provide adequate notice to DEQ of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the federal Clean Water Act if it were directly discharging those pollutants and;
b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
c. For the purposes of this paragraph, adequate notice must include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

SECTION E. DEFINITIONS

E1. *BOD* or *BOD_5* means five-day biochemical oxygen demand.

E2. *CBOD* or *$CBOD_5$* means five-day carbonaceous biochemical oxygen demand.
E3. *TSS* means total suspended solids.
E4. *Bacteria* means but is not limited to fecal coliform bacteria, total coliform bacteria, *Escherichia coli* (*E. coli*) bacteria, and *Enterococcus* bacteria.
E5. *FC* means fecal coliform bacteria.
E6. *Total residual chlorine* means combined chlorine forms plus free residual chlorine
E7. *Technology based permit effluent limitations* means technology-based treatment requirements as defined in 40 CFR § 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
E8. *mg/l* means milligrams per liter.
E9. *µg/l* means microgram per liter.
E10. *kg* means kilograms.
E11. *m^3/d* means cubic meters per day.
E12. *MGD* means million gallons per day.
E13. *Average monthly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
E14. *Average weekly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
E15. *Daily discharge* as defined at 40 CFR § 122.2 means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge must be calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge must be calculated as the average measurement of the pollutant over the day.
E16. *24-hour composite sample* means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
E17. *Grab sample* means an individual discrete sample collected over a period of time not to exceed 15 minutes.
E18. *Quarter* means January through March, April through June, July through September, or October through December.
E19. *Month* means calendar month.
E20. *Week* means a calendar week of Sunday through Saturday.
E21. *POTW* means a publicly-owned treatment works.

State of Oregon
Department of
Environmental
Quality

National Pollutant Discharge Elimination System
Permit Fact Sheet
City of Bandon

Permittee	City of Bandon Bandon Wastewater Treatment Plant (WWTP) P.O. Box 67 Bandon, OR 97411
Existing Permit Information	File Number: 5664 Permit Number: 101546 EPA Reference Number: OR0020206 Category: Domestic Class: Minor Expiration Date: 10/31/2024
Permittee Contact	Steven H. James Supervisor 541-347-9122 80 Fillmore Ave SE Bandon, OR 97411
Receiving Water Information	Receiving stream/NHD name: Coquille River NHD Reach Code & % along reach: 17100305000010, 7.67% USGS 12-digit HUC: 171003050506, Ferry Creek-Coquille River OWRD Administrative Basin: South Coast ODEQ LLID & River Mile: 1244273431235-0.8 Assessment Unit ID: OR_EB_1710030505_01_100284
Proposed Action	Permit Renewal Application Number: 948188 Date Application Received: 11/29/2023
Permit Writer	Olivia Stoken 971-867-1077 Date Prepared: 7/25/2024

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1. Introduction

As required by Oregon Administrative Rule 340-045-0035, this fact sheet describes the basis and methodology used in developing the permit. The permit is divided into several 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

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

Schedule B:

- Influent and effluent monitoring requirements in Tables B2 and B3 have been updated to meet current monitoring matrix requirements, except BOD, TSS, and Enterococci which have been updated based on a monitoring reduction request analysis.
- Receiving stream monitoring in the Coquille River Estuary upstream of Outfall 001 has been added in Table B4.

2. Facility Description

2.1 Wastewater Facility

The City of Bandon (population about 3,321) owns and operates an activated sludge type wastewater treatment plant (WWTP) with a current average dry weather design flow (ADWDF) of 0.50 million gallons per day (MGD) and an average wet weather design flow (AWWDF) of 0.82 MGD. The treatment facility was originally constructed in 1970 and discharges treated wastewater year-round near the mouth of the Coquille River at river mile 0.8. The plant was upgraded in 1993-1994 to correct recurrent effluent violations. Upgrades included a new outfall that was built out into the river to address past problems of effluent backing up into the outfall line during very high tidal conditions.

The WWTP is a conventional activated sludge plant designed for a population of 5,068 persons. The plant includes head works consisting of a mechanical auger screen and grit removal system. In late 2023, both the mechanical auger screen and grit classifier were upgraded. The removed solids are transported to a landfill for disposal.

From the headworks, wastewater flows to one or both of two aeration basins through a distribution channel, depending on the amount of flow the plant is receiving. Basin #1 has a capacity of 157,000 gallons and basin #2 has a capacity of 145,000 gallons. A baffle in the channel detains grease which is manually removed through an access port. The second basin is typically brought online during wet weather flows. Blowers provide air to the basins through fine bubble diffusers.

From the aeration basins, flow goes to the secondary clarifiers for settling. Each secondary clarifier has a capacity of 199,000 gallons. Disinfection takes place following clarification with ultraviolet lights in a two-channel system. Following disinfection, treated effluent is discharged through Outfall 001.

Sludge from the clarifiers is pumped back to the aeration basins or to the aerobic digesters for further digestion of the biomass. Digester #1 has a capacity of 127,000 gallons, while digesters #2 and #3 hold 133,000 gallons each. The biosolids produced from digestion are Class B and are land applied as a beneficial soil amendment at DEQ approved sites in Coos County or landfilled.

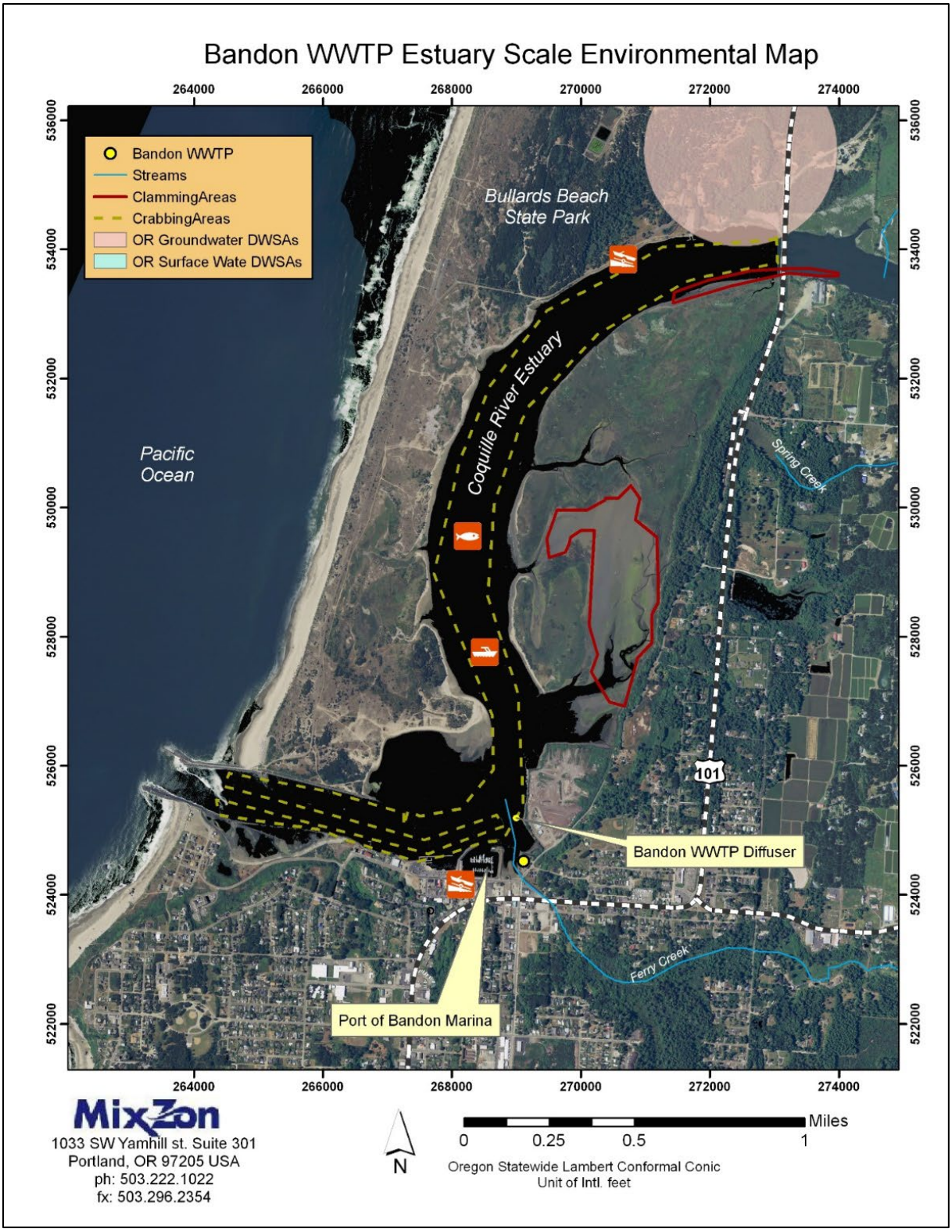


Figure 2-1: Facility Location

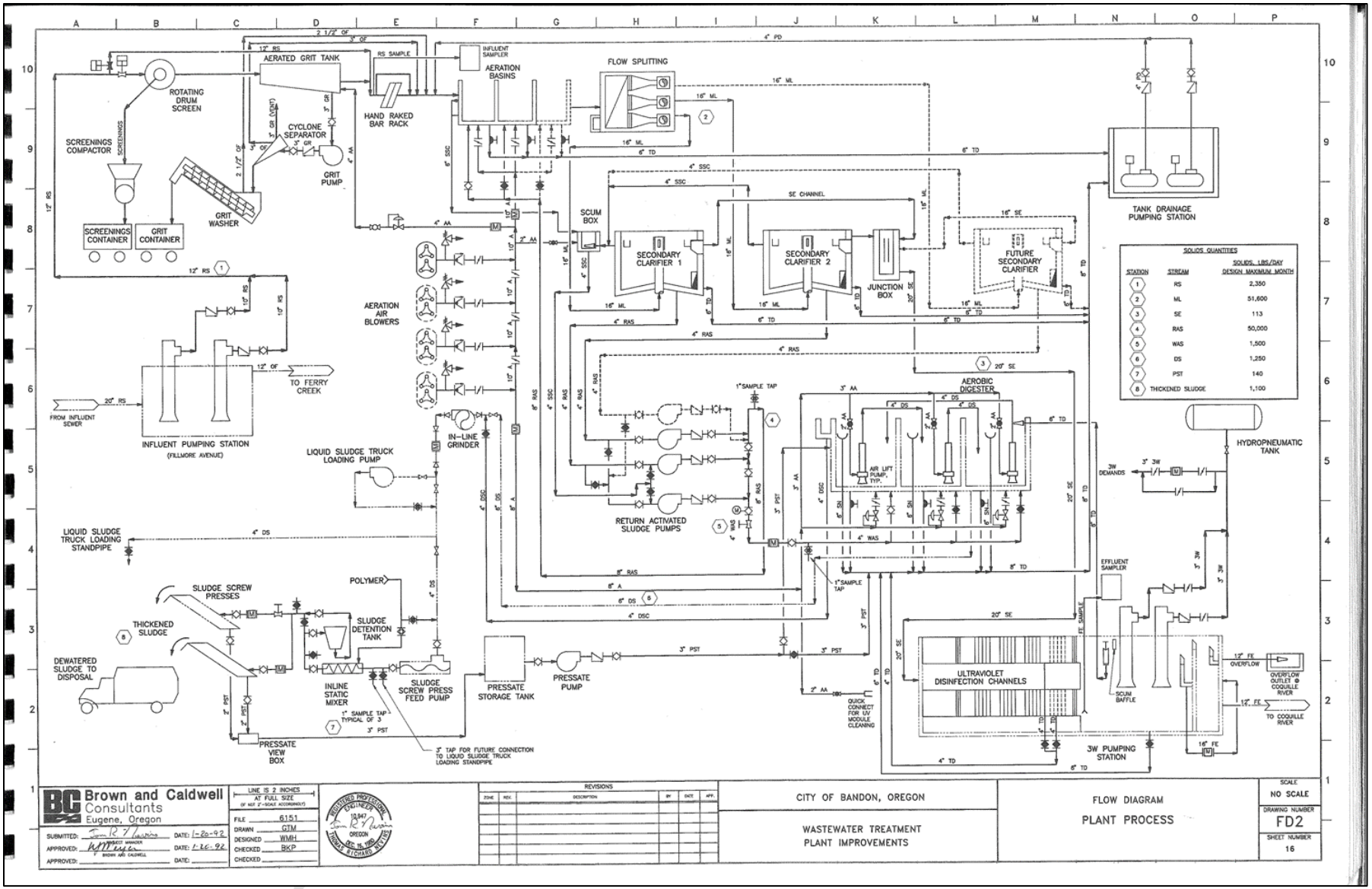


Figure 2-2: Line Drawing of Wastewater Treatment

Table 2-1: List of Outfalls

Outfall Number	Type of Waste	Lat/Long
001	Treated Wastewater	43.122446, -124.40466 (WGS84)

2.2 Compliance History

DEQ conducted a data gap analysis during the last permit cycle and determined receiving water monitoring upstream of the outfall was needed for the proposed permit renewal. A monitoring request letter was sent on 5/16/2022. The permittee did not collect the requested data. As a result, receiving water monitoring upstream of the outfall is included in the proposed permit.

2.3 Stormwater

Stormwater is not addressed in this permit. 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, no industrial pretreatment program is needed. 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 table below shows the limits contained in the existing permit.

Table 3-1: Existing Effluent Limits

Parameter	Units	Average Monthly	Average Weekly	Daily Maximum (See note a.)
BOD_5 (May 1 – October 31)	mg/L	20	30	-
	lb/day	75	110	150
	% removal	85	-	-
TSS (May 1 – October 31)	mg/L	20	30	-
	lb/day	75	110	150
	% removal	85	-	-
BOD_5 (November 1 – April 30)	mg/L	30	45	-
	lb/day	210	310	410
	% removal	85	-	-
TSS (November 1 – April 30)	mg/L	30	45	-
	lb/day	210	310	410
	% removal	85	-	-
pH	SU	Instantaneous limit between a daily minimum of 6.0 and a daily maximum of 9.0		
Fecal Coliform Bacteria	#/100 mL	Must not exceed a monthly median of 14, and no more than 10% of the samples may exceed 43		
Enterococcus Bacteria	#/100 mL	Must not exceed a monthly geometric mean of 35, and no more than 10% of samples may exceed 130		

Note:

a. The daily mass load limit is suspended on any day in which the flow to the treatment facility exceeds 0.9 MGD (twice the design average dry weather flow).

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). Substitution of 5-day carbonaceous oxygen demand ($CBOD_5$) for BOD_5 is allowed. The numeric standards for these pollutants are contained in 40 CFR 133.102. In addition, DEQ has developed minimum design criteria for BOD_5 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 defined by OAR, 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 3-2: 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
BOD_5 (mg/L)	30	45	May 1 to Oct 31: 20 mg/L, Nov 1 to Apr 30: secondary treatment (same as federal)
TSS (mg/L)	30	45	May 1 to Oct 31: 20 mg/L, Nov 1 to Apr 30: secondary treatment (same as federal)
pH (S.U.)	6.0 – 9.0. (instantaneous)		Not applicable
BOD_5 and TSS % Removal	85%	Not applicable	Not applicable

The limits for BOD_5 and TSS shown in the table 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 permittee's facility has been engineered to achieve BOD_5 and TSS monthly average concentrations of 20 mg/L during the dry weather season and 30 mg/L during the wet weather season. DEQ uses the average design flow 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 (DADWF) or design average wet weather flow (DAWWF).

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

Table 3-3: Design Flows and Concentrations Limits

Season	Design Flow (mgd)	Monthly TSS Concentration Limit (mg/L)	Monthly BOD_5 Concentration Limit (mg/L)
Dry Weather	0.45	20	20
Wet Weather	0.82	30	30
Design flow comments: Design average dry weather flow (DADWF), Design average wet weather flow (DAWWF)			

The previous permit contains mass load limits calculated using the following rounding convention:

May 1 to October 31
Monthly Average: 0.45 mgd x 20 mg/L x 8.34 = 75.06 lbs/day, rounded to 75 lbs/day (two significant figures)

Weekly Average: 75.06 lbs/day x 1.5 = 112.59 lbs/day, rounded to 110 lbs/day

Daily Maximum: 75.06 lbs/day x 2 = 150.12 lbs/day, rounded to 150 lbs/day

November 1 to April 30
Monthly Average: 0.82 mgd x 30 mg/L x 8.34 = 205.16 lbs/day, rounded to 210 lbs/day

Weekly Average: 205.16 lbs/day x 1.5 = 307.74 lbs/day, rounded to 310 lbs/day

Daily Maximum: 205.16 lbs/day x 2 = 410.32 lbs/day, rounded to 410 lbs/day

Using the current mass load limit rounding convention, the mass load limits are calculated as:

May 1 to October 31
Monthly Average: 0.45 mgd x 20 mg/L x 8.34 = 75.06 lbs/day, rounded to 75 lbs/day (two significant figures)

Weekly Average: 75 lbs/day x 1.5 = 112.5 lbs/day, rounded to 110 lbs/day

Daily Maximum: 75 lbs/day x 2 = 150 lbs/day

November 1 to April 30
Monthly Average: 0.82 mgd x 30 mg/L x 8.34 = 205. 16 lbs/day, rounded to 210 lbs/day (two significant figures)

Weekly Average: 210 lbs/day x 1.5 = 315 lbs/day, rounded to 320 lbs/day

Daily Maximum: 210 lbs/day x 2 = 420 lbs/day

Mass load limits calculated using the current rounding convention are less stringent than the limits included in the previous permit. As a result, the mass load limits from the previous permit are retained in the proposed permit to comply with antibacksliding (CWA sections 402(o), 303(d)(4), and 40 CFR 122.44(l)) and antidegradation (OAR 340-041-0004) rules. The proposed BOD_5 and TSS limits are listed in the following table.

Table 3-4: BOD_5 and TSS Technology Based Effluent Limits

Parameter	Units	Average Monthly	Average Weekly	Daily Maximum
BOD_5 (May 1 – Oct. 31)	mg/L	20	30	-
	lbs/day	75	110	150
	% removal	85	-	-
TSS (May 1 – Oct. 31)	mg/L	20	30	-
	lbs/day	75	110	150
	% removal	85	-	-
BOD_5 (Nov. 1 – Apr. 30)	mg/L	30	45	-
	lbs/day	210	310	410
	% removal	85	-	-
TSS (Nov. 1 – Apr. 30)	mg/L	30	45	-
	lbs/day	210	310	410
	% removal	85	-	-

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 Coquille River Estuary. These uses are listed in OAR-340-041-0300 for estuarine waters of the South Coast Basin.

- Industrial water supply
- Fish and aquatic life (including salmonid rearing and migration)

- Wildlife and hunting
- Fishing
- Boating
- Water contact recreation
- Aesthetic quality
- Commercial navigation and transportation

3.3.2 303(d) Listed Parameters and Total Maximum Daily Loads

The following table lists the parameters that are on the 2022 303(d) list (Category 5) within the discharge's stream reach. The table also lists any parameters with a TMDL wasteload allocation (WLA) assigned to the facility (Category 4).

Table 3-5: 303(d) and TMDL Parameters

Water Quality Limited Parameters (Category 5)	
AU ID:	OR_EB_1710030505_01_100284
AU Name:	Coquille River
AU Status:	Impaired
Year Listed	2012
Year Last Assessed	2018
303d Parameters (Category 5)	Fecal Coliform, Arsenic - Inorganic
TMDL Parameters (Category 4A)	
None	

DEQ has not developed a TMDL for fecal coliform or arsenic in the Coquille River Estuary. The fecal coliform listing is addressed in section 3.3.9, while the arsenic listing is addressed in section 3.3.10.3.

3.3.3 TMDL Wasteload Allocations

DEQ issued a TMDL for the Coquille River and Estuary in 1996. Primary parameters of concern in the 1996 TMDL were dissolved oxygen and bacteria. No WLAs from this TMDL are applicable to the permittee. Effluent from the Bandon WWTP was not found to significantly affect dissolved oxygen in the water quality limited sections of the Coquille, so a WLA was not developed. Dissolved oxygen is not listed on the 2022 303(d) list as a water quality limited parameter for the Coquille River Estuary.

Table 3-6: Applicable WLAs

Parameter	WLA	Time Period
NA	NA	NA

3.3.4 Ocean Discharge Findings

Federal rules (40 CFR §125.120 – 40 CFR §125.124) require that a discharge into territorial seas that is to be permitted under the NPDES program be evaluated as to whether the discharge will cause unreasonable degradation of the marine environment. Goals 6 and 19 of Oregon's Statewide Planning Goals and Guidelines and Oregon's Territorial Seas Plan require that the State's marine resources be conserved. DEQ believes that the intent of these criteria is to reduce or prevent the discharge of those persistent pollutants that bio-accumulate in the marine food chain. Pollutants found in sewage that are amenable to treatment by typical wastewater treatment facilities include Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), pH, bacteria, nutrients, and potentially toxic substances, such as chlorine, which is used for disinfection of pathogenic organisms. BOD, TSS, and pH are not discrete substances that can accumulate in living organisms. BOD is a measure of the oxygen used by microorganisms when they break down organic matter. TSS is a measure of organic and inorganic solid materials that are suspended in the water column, and pH is a measure of the amount of hydrogen ions in solution.

Residual chlorine in treated wastewater, if any, immediately reacts with bromide naturally present in seawater to produce other oxidants that are toxic to living organisms. These other oxidants are referred to as chlorine produced oxidants. Chlorine, which is still present in the reaction products, is too reactive to be bioavailable from soil, water, or other environmental media and too reactive to bio-accumulate in the food chain. The City of Bandon, however, uses ultraviolet light for disinfection, and chlorine compounds are prohibited in the discharge. Bacteria do not bio-accumulate in other living organisms. Nutrients, (e.g., nitrogen and phosphorus), can have deleterious effects on the marine environment by stimulating algal blooms. These algal blooms have the potential to cause turbidity problems and fluctuations in dissolved oxygen and pH. However, nutrients do not bio-accumulate in the tissues of living organisms and do not bio-magnify in the trophic levels of marine food chains.

DEQ has concluded that the discharge from the City of Bandon wastewater treatment plant will not cause unreasonable degradation of the marine environment.

3.3.5 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, toxic pollutants of concern for domestic facilities are listed in the following table.

Table 3-7: 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
≥ 1.0 mgd	Total Residual Chlorine, Total Ammonia Nitrogen, Metals, Volatile Organic Compounds, Acid Extractable Compounds, Base Neutral Compounds

DEQ identified the following pollutants of concern for this facility listed in the following table.

Table 3-8: Pollutants of Concern

Pollutant	How was pollutant identified?
pH	Effluent Monitoring
Temperature	Effluent Monitoring
Fecal Coliform	Effluent Monitoring
Enterococcus	Effluent Monitoring
Total Ammonia Nitrogen	Application Requirement

The sections below discuss the analyses that were conducted for the pollutants of concern to determine if water quality-based effluent limits are needed to meet water quality standards.

3.3.6 Regulatory Mixing Zone

The proposed permit contains a mixing zone as allowed per OAR 340-041-0053. The regulatory mixing zone (RMZ) from the existing permit is described as:

> The allowable mixing zone is that portion of the Coquille River Estuary within a radius extending out no more than 200 feet from the point of discharge. The Zone of Immediate Dilution (ZID) is defined as that portion of the allowable mixing zone that is within a 20-foot radius from the point of discharge.

Mapping of the current RMZ shows that it is inappropriately sized for the area. The current RMZ not only overlaps dry land, but also overlaps into shallow water areas that are likely exposed at low tide as well as old dock piles likely to attract fish. It is proposed to resize the RMZ to a 100 ft radius and the ZID to a 10-foot radius to avoid these features. Because the outfall is located at a bend in the river and the tidal influence could move the effluent in varying directions, the RMZ will be kept as a radius from the outfall instead the more common description of a distance upstream and downstream. The proposed regulatory mixing zone will be described as:

> The Regulatory Mixing Zone (RMZ) is defined as that portion of the Coquille River Estuary within a 100-foot radius from the point of discharge. The Zone of Immediate Dilution (ZID) is defined at that portion of the Coquille River Estuary within a 10-foot radius from the point of discharge.

Figure 3-1: Bandon Outfall with Current Regulatory Mixing Zone (red circle) and Proposed Regulatory Mixing Zone (yellow circle)

Outfall 001 has two diffusers 5 feet in length shaped in the form of a "T" with 5 ports on each diffuser. The outfall is approximately 130 ft from the bank and discharges into the Coquille River Estuary at 43.122446, -124.40466 (WGS84). A 2022 outfall inspection study showed that the outfall pipe was in very poor condition, with many of the original diffuser ports blocked and the pipe deteriorating with multiple holes ranging from 1 to 12 inches in diameter.

The City of Bandon submitted a 2017 mixing zone study conducted by MixZon. The study provided predicted dilution values for Bandon's existing outfall, but an outfall inspection conducted in 2017 did not show the extent of pipe deterioration existing in 2022. The dilution values were updated by DEQ for this memo, using CORMIX v12.0, to account for current effluent flows and temperature, the poor condition of the pipe, and the new ZID and RMZ size. To account for the poor condition of the pipe the outfall was conservatively modeled as a single port 12 inches in diameter, which removes the increase in dilution normally achieved by a diffuser. The ambient values used in the 2017 mixing zone study were retained.

The dilution factors at the edge of the Regulatory Mixing Zone and Zone of Initial Dilution are shown in Tables 3-9 and 3-10. These dilutions are based on a 2017 mixing zone study reviewed and updated by DEQ. The mixing zone memo documenting this analysis is in a March 7, 2024 Mixing Zone Memo which is part of the administrative record.

Table 3-9: Dry Weather Dilution Values

Dilution Summary – Outfall 001 – May 1 to October 31 (Dry Weather)						
Water Quality Standard	**Tidal Velocity**		**Effluent Flow (mgd)**		**Dilution Factor**	**Location**
	Statistic	**ft/s**	**Statistic**	**Flow**		
Aquatic Life, Acute	10th Percentile	0.59	☐ ADWDF x PF ☒ Max Daily Avg ☐ Other	0.32	6.7	ZID (10 ft)
Aquatic Life, Chronic	50th Percentile	1.31	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.28	115	RMZ (100 ft)
Human Health, Non-Carcinogen	Median	1.31	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.28	115	RMZ (100 ft)
ADWDF = Average dry weather design flow *PF = Peaking factor (1.5)*						
Comments: Tidal measurements from 1963 McAlister Report, used in 2017 MZ Study						

Table 3-10: Wet Weather Dilution Values

Dilution Summary – Outfall 001 – November 1 to April 30 (Wet Weather)						
Water Quality Standard	**Tidal Velocity**		**Effluent Flow (mgd)**		**Dilution Factor**	**Location**
	Statistic	**Flow**	**Statistic**	**Flow**		
Aquatic Life, Acute	10th Percentile	0.69	☐ ADWDF x PF ☒ Max Daily Avg ☐ Other	1.4	1.7	ZID
Aquatic Life, Chronic	50th Percentile	1.43	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.64	56	RMZ
Human Health, Non-Carcinogen	Median	1.43	☐ ADWDF ☒ Max Monthly Avg ☐ Other	0.64	30	RMZ
ADWDF = Average dry weather design flow *PF = Peaking factor (1.5)*						
Comments: Tidal measurements from 1963 McAlister Report, used in 2017 MZ Study						

3.3.7 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. The proposed pH limit is maintained from the previous permit at 6.0 – 9.0 and is a TBEL. The following provides a summary of the data used for the analysis.

Table 3-11: pH Reasonable Potential Analysis

Input	Lower pH Criteria	Upper pH Criteria
1. Discharge area characteristics		
a) Dilution at mixing zone boundary	56	56
b) Depth of discharge (m)	2	2
2. Upstream characteristics		
a) Temperature (deg C)	16.7	8.3
b) pH (S.U.)	7.8	8.0
c) Alkalinity (mg $CaCO_3$/L)	97.4	97.4
d) Salinity (psu)	20	20
3. Effluent characteristics		
a) Temperature (deg C)	21.2	14.5
b) pH (S.U.)	6.0	9.0
c) Alkalinity (mg $CaCO_3$/L)	149.0	149.0
d) Salinity (psu)	2	2
4. Applicable pH criteria	6.5	8.5
pH at mixing zone boundary	**7.4**	**8.0**
Is there reasonable potential?	**No**	**No**
Proposed effluent limits	**6.0**	**9.0**
Effluent data source: ICIS summary statistics - 2/1/2020 to 1/31/2024 for effluent temperature DMR raw data - 2/6/2020 to 2/23/2024 for effluent salinity and alkalinity		
Ambient data source: AWQMS - 1/31/2000 to 10/29/2013 for ambient pH, temperature, and alkalinity at ORDEQ monitoring locations – 11723, 13401, 13402, 13403, 13404, 13525, 13526, 13527, 13528, 13530, 13531, 13672, 13673, 13680, 13682, 25657, and 25669. Ambient salinity is the average salinity from stations and dates above.		

3.3.8 Temperature

3.3.8.1 Temperature Criteria OAR 340-041-0028

The following table summarizes the temperature criteria that apply at the discharge location along with whether the receiving estuary 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 effluent limits were needed to comply with the temperature criteria.

Table 3-12: Temperature Criteria Information

Applicable Temperature Criterion	Oceans & Bays (340-041-0028(7))
Applicable dates: year-round	
Salmon/Steelhead Spawning 13°C? OAR 340-041-0028(4)(a)	☐Yes ☒No
Applicable dates: NA	
WQ-limited?	☐Yes ☒No
TMDL wasteload allocation assigned?	☐Yes ☒No
Applicable dates: NA	
TMDL based on natural conditions criterion?	☐Yes ☐No ☒NA
Cold water summer protection criterion applies?	☐Yes ☒No
Cold water spawning protection applies?	☐Yes ☒No
Comments: NA	

OAR 340-041-0028(7) specifies that effluent discharges may not warm ocean and bay waters by more than 0.3 ℃ above the natural condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. DEQ presumes that the ambient temperature of the estuary upstream and downstream of the outfall is the same as the natural thermal condition or would result in an analysis that is protective of water quality standards. Minimal ambient data was available solely upstream of the outfall, so DEQ included downstream sites in the analysis as well. The permittee will be required to collect temperature data upstream of the outfall during the proposed permit cycle.

DEQ conducted a temperature reasonable potential analysis (RPA) to determine if the effluent discharge has the reasonable potential to warm the Coquille River Estuary at the edge of the mixing zone by more than 0.3 ℃ above the natural condition. The effluent temperature value used in this analysis is 21.5 °C. This value was taken from the facility's DMRs for the period from May 2021 to October 2023 and represents the maximum 7-day average of the daily maximum in the summer period. The ambient temperature used in this analysis is 7.4 °C. This value was taken from monitoring stations close to Bandon's outfall in ORDEQ's Ambient Water Quality Monitoring System for the period from January 2000 to October 2013 and represents the minimum ambient temperature year-round. These temperature values paired with the most restrictive mixing zone dilution represent the most conservative conditions possible for the RPA.

The result of this RPA indicates that there is no potential for the facility's discharge to exceed the temperature standard. Based on these analyses, no temperature limit associated with the applicable temperature criteria is included in the proposed permit (Appendix A). Final effluent limits are listed in the following table.

Table 3-13: Temperature Criterion Effluent Limits

Effluent limit needed? ☐Yes ☒No
TMDL WLA Limit: NA
Applicable time period: Dates ☒NA
Temperature Criterion Limit: NA
Applicable time period: Dates ☒NA
Comments: NA

3.3.8.2 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. The discharge was evaluated 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 ºC or more for salmon and steelhead, and 9 ºC or more for bull trout.

  The Coquille River Estuary is not designated as salmonid spawning habitat; therefore, the spawning area requirement is met.

- 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 ºC or more to less than 2 seconds.

  The maximum daily effluent temperature recorded between May 2021 and October 2023 was 22 °C, below the criterion of 32 °C. Therefore, the discharge is not expected to cause acute impairment to salmonid species.

- 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 ºC or more to less than 5% of the cross-section of 100% of the 7Q10 flow of the water body.

  The maximum daily effluent temperature recorded between May 2021 and October 2023 was 22 °C. Since the maximum effluent temperature is below 25 °C, thermal shock caused by the discharge is prevented or minimized.

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

An analysis related to migration blockage, included in Appendix B, indicates that when the effluent plume reaches 25% of the receiving stream's cross-sectional area, the plume's temperature will not be above 21.0°C, and migration blockage caused by the discharge is therefore prevented or minimized.

Effluent limits needed to comply with the thermal plume requirements are shown in the following table.

Table 3-14: Thermal Plume Effluent Limit

Effluent limit needed? ☐Yes ☒No
Calculated limit: NA
Applicable timeframe: NA
Comments: NA

3.3.9 Bacteria

OAR 340-041-0009(6)(a) requires discharges of bacteria into coastal waters meet a monthly geometric mean of 35 enterococcus organisms per 100 mL, with no more than 10 percent of samples exceeding 130 enterococcus organisms per 100 mL. The following table includes the proposed permit limits and apply year-round.

Table 3-15: Proposed Enterococcus Limits

Enterococcus (#/100 ml)	Geometric Mean	No more than 10% exceed
Existing Limit	35	130
Proposed Limit	35	130

The proposed permit contains limits based on the fecal coliform standard in OAR 340-041-0009(1)(c) for the protection of shellfishing. The proposed limits are a monthly median concentration of 14 organisms per 100 milliliters, with no more than ten percent of the samples exceeding 43 organisms per 100 ml and apply year-round. The following table includes the proposed permit limits and apply year-round.

Table 3-16: Proposed Fecal Coliform Limits

Fecal Coliform (#/100 ml)	Median	No more than 10% exceed
Existing Limit	14	43
Proposed Limit	14	43

3.3.10 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:

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

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

3.3.10.1 Total Ammonia Nitrogen

DEQ's ammonia criteria 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.

An ammonia reasonable potential analysis was performed for summer (May 1 – October 31) and winter (November 1 – April 30). The results of the analyses show that there was no reasonable potential to exceed water quality at the edge of the ZID or the RMZ. As a result, no effluent limits are included in the proposed permit.

The following table provides a summary of the data used for the ammonia analyses and the results of the analyses.

Table 3-17: Ammonia Analysis Information - Summer

	Acute	Chronic	
		4-day	30-day
Dilution	6.7	115	115
Ammonia Criteria	8.3	1.1	-
Effluent Data Used			
Ammonia (mg/L)	36.0	36.0	
pH (SU)	7.5	7.5	
Temperature (ºC)	20.8	20.8	
Alkalinity (mg/L $CaCO_3$)	100.0	100.0	
Receiving Water Body Data Used			
Ammonia (mg/L)	0.1	0.1	
pH (SU)	8.0	8.0	
Temperature (ºC)	16.6	16.6	
Alkalinity (mg/L $CaCO_3$)	108.6	108.6	
Ammonia Limit Needed?	**No**		
Calculated Limits	AML	MDL	
Ammonia (mg/L)	NA	NA	
Effluent data source			
DMR raw data - 2/6/2020 to 2/23/2024 for effluent ammonia, alkalinity, pH, salinity, and temperature			
Ambient data source			
AWQMS - 1/31/2000 to 10/29/2013 for ambient ammonia, pH, and temperature at ORDEQ monitoring locations: 11723, 13401, 13402, 13403, 13404, 13525, 13526, 13527, 13528, 13530, 13531, 13672, 13673, 13680, 13682, 25657, and 25669. Ambient salinity is the average salinity from stations and dates above.			

Table 3-18: Ammonia Analysis Information - Winter

	Acute	Chronic	
		4-day	30-day
Dilution	1.7	56	30
Ammonia Criteria	21.1	2.9	-
Effluent Data Used			
Ammonia (mg/L)	28.0	28.0	
pH (SU)	7.4	7.4	
Temperature (ºC)	16.5	16.5	
Alkalinity (mg/L $CaCO_3$)	70.0	70.0	
Receiving Water Body Data Used			
Ammonia (mg/L)	0.0	0.0	
pH (SU)	7.7	7.7	
Temperature (ºC)	12.4	12.4	
Alkalinity (mg/L $CaCO_3$)	116.0	116.0	
Ammonia Limit Needed?	**No**		
Calculated Limits	AML	MDL	
Ammonia (mg/L)	NA	NA	
Effluent data source			
DMR raw data - 2/6/2020 to 2/23/2024 for effluent ammonia, alkalinity, pH, salinity, and temperature			
Ambient data source			
AWQMS - 1/31/2000 to 10/29/2013 for ambient ammonia, pH, and temperature at ORDEQ monitoring locations: 11723, 13401, 13402, 13403, 13404, 13525, 13526, 13527, 13528, 13530, 13531, 13672, 13673, 13680, 13682, 25657, and 25669. Ambient salinity is the average salinity from stations and dates above. Ambient alkalinity ocean default value used.			

3.3.10.2 Priority Pollutant Toxics

The City of Bandon's WWTP discharges less than 1 MGD and no priority pollutant toxics are known to be present in the discharge. Therefore, no additional controls or monitoring will be required.

3.3.10.3 Other Pollutants Associated with Water Quality Impairments

This assessment unit is listed for Arsenic in Category 5 for not meeting human health criterion for arsenic. Monitoring is required for facilities where the pollutant is known to be present. Arsenic is not known or expected to be present in the facility discharge. Therefore, there is no reasonable potential to cause or contribute to this listing and monitoring for arsenic is not being required in the proposed permit.

3.3.10.4 Mercury – Human Health Criterion

DEQ determined that this facility is not a likely source of mercury. Therefore, no additional controls or monitoring will be required.

3.4 Antibacksliding

The proposed permit complies with the antibacksliding provisions of CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l). The proposed limits are the same or more stringent than the existing permit so the antibacksliding provision is satisfied.

3.5 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. Permit renewals with the same or more stringent discharge loadings as the previous permit are not considered to lower water quality from the existing condition. 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.

3.6 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.

3.7 Groundwater

The treatment facility does not have any basins, ponds or lagoons that have the potential to leach into the groundwater. No groundwater monitoring or limits are required.

4. Schedule A: Other Limitations

4.1 Mixing Zone

Schedule A describes the regulatory mixing zone as discussed above in section 3.

4.2 Biosolids

The permit holder currently produces a Class B biosolids for land application by distribution or sale and anticipates continuing to do so. DEQ reviewed the biosolids management plan and land application plan. These are available for public review and comment along with the permit. Once approved after public comment, conditions in the biosolids management plan and land application plan become permit conditions.

Schedule A of the permit requires the facility to apply biosolids according to their biosolids management plan. In addition, Schedule A requires the following:

- Apply at or below agronomic rates
- The permittee must have written site authorization for each location from DEQ before land applying and abide by the restrictions for each site
- Prior to application, the permittee must ensure that biosolids meet one of the pathogen reduction standards under 40 CFR 503.32
- The permittee must not apply biosolids containing pollutants in excess of the ceiling concentrations for the nine metals shown in Schedule A of the permit

4.3 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.

All available ambient or receiving water quality data located in the Coquille River Estuary near Bandon's outfall is older than 10 years. Data 10 years or newer is required to adequately characterize the ambient water quality, therefore receiving water monitoring upstream of the outfall by the permittee is included in the proposed permit.

To monitor the receiving stream (Table B4 of the proposed permit), the permittee must collect the samples outside the influence of the effluent. Because the effluent plume is influenced by the tide, the effluent travels both upstream and downstream of the outfall. The CORMIX mixing zone models conducted as part of a mixing zone memo for this permit renewal were referenced to determine the distance away from the outfall at which the plume would be fully vertically

mixed with the receiving stream. Beyond the point at which the plume is fully mixed, it could be expected that a receiving stream sampling location would be outside the influence of the effluent. The furthest distance at which the plume would be fully mixed is approximately 2000 feet away from the outfall. As a result, the permittee should sample at least 2000 feet upstream or downstream from the outfall within the main channel of the receiving stream and prior to inputs from any major tributaries if possible. A map of the locations that are expected to be outside of the influence of the effluent is shown below. The permittee may propose an alternate sampling location to DEQ, which may be used if approved by DEQ in writing.

Figure 5-1: Proposed Receiving Water Monitoring Area Outside of Effluent Plume

6. Schedule C: Compliance Schedule

The permittee is expected to meet all effluent limits once the permit becomes effective and therefore a compliance schedule is not needed.

7. Schedule D: Special Conditions

The proposed permit contains the following special conditions:

7.1 Inflow and Infiltration

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

7.2 Emergency Response and Public Notification Plan

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

7.3 Exempt Wastewater Reuse at the Treatment System

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

7.4 Biosolids Management Plan

A requirement to manage all biosolids in accordance with 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 land application of biosolids is managed to protect public health and the environment.

7.5 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.

7.6 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.

7.7 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.

7.8 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.

7.9 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.

7.10 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

Appendix A: Temperature Reasonable Potential Analysis

Discharge to Natural Lakes (OAR 340-041-0028(6)) and Ocean/Bays (OAR 340-041-0028(7))

Analysis at Edge of Mixing Zone

Section 5.7 of the Temperature IMD

Note: This spreadsheet is generally only appropriate for analyses of effluent from minor domestic facilities. For other facilities, an analysis using paired seasonal ambient and effluent data is more appropriate.

Facility Name: **Date:**

Enter data into white cells below:

			Data Metric/Source
Mixing Zone Dilution =	56		Aquatic life chronic dilution Nov 1 - Apr 30 in MZ memo
Ambient Temperature =	7.4	°C	Minimum ambient temperature 2000-2013
Effluent Temperature =	21.5	°C	Max 7 day average summer effluent temperature 2021-2023
Allowable Increase =	0.3	°C	Max monthly average effluent flow May 1 to Oct 31 x 1.5
Effluent Flow =	0.42	mgd	

ΔT at MZ edge= 0.25 °C **No Reasonable Potential**

Thermal Load Limit = N/A Million Kcals

Note: If Reasonable Potential is indicated, use a more refined analysis (e.g. paired temperature analysis) to make the final RP determination.

Equation used to calculate ΔT at edge of MZ

$$\Delta T_{mz} = \frac{T_e + (S-1)T_a}{S} - T_a$$

Equation used to calculate thermal load limit

$$TLL = 3.7854 Q_e S \Delta T_{all} C_p \rho$$

Where:

Qe = Effluent Flow in mgd

S = Dilution

ΔT_{all} = Allowable temperature increase at edge of MZ (°C)

Cp = Specific Heat of Water (1 cal/g °C)

ρ = Density of Water (1 g/cm^3)

3785.41 = Flow conversion from mgd to m^3/day

Appendix B: Thermal Plume Reasonable Potential Analyses

Temperature Thermal Plume Limitations within the Mixing Zone Rule (OAR 340-041-0053(2)(d))

Sections 5.6 and 6.5 of Temperature IMD

This rule only applies to receiving streams with salmonid uses. For migration blockage, applies to upstream migration of anadromous salmonits (See associated notes in the "Thermal Plumes Instructions".) This spreadsheet assesses compliance with OAR 340-042-0053(2)(d) subparts C and D. Subparts A and B need to be assessed separately (see Thermal Plumes Instructions).

Facility Name: **Date:**

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

Enter data into white cells below:

		Data Metric/Source
7Q10 =	6288 cfs	May 1 to Oct 31 aquatic life, chronic tidal velocity x 5 ft depth x 800 ft width
Ambient Temperature=	21.1 °C	Max ambient temperature 2000-2013
Effluent Flow =	0.42 mgd	Max monthly average effluent flow May 1 to Oct 31 x 1.5
Max Daily Effluent Temperature =	22 °C	Max daily effluent temperature 2021-2023

5% of 7Q10 = **314.4** cfs
5% dilution = **485** dilution = (Qr*0.05)/Qe + 1

Temperature at 5% cross section = 21.1 °C — **No Reasonable Potential**

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 =	6288 cfs	May 1 to Oct 31 aquatic life, chronic tidal velocity x 5 ft depth x 800 ft width
Ambient Temperature =	21 °C	Ambient criterion
Effluent Flow =	0.42 mgd	Max monthly average effluent flow May 1 to Oct 31 x 1.5
Max 7dAM Effluent Temperature =	21.5 °C	Max 7 day average summer effluent temperature 2021-2023

25% of 7Q10 = **1572.0** cfs
25% dilution = **2420** dilution = (Qr*0.25)/Qe + 1

Temperature at 25% cross section = 21.0 °C
ΔT at 25% Stream Flow= 0.0 °C — **No Reasonable Potential**

Notes:

Equation used to calculate ΔT at edge of MZ

$$\Delta T_{mz} = \frac{T_e + (S-1)T_a}{S} - T_a$$

Equation used to calculate thermal load limit

$$TLL = 3.7854 Q_e S \Delta T_{all} C_p \rho$$

Where:

Qe = Effluent Flow in mgd
S = Dilution
ΔT_{all} = Allowable temperature increase at edge of MZ (°C)
Cp = Specific Heat of Water (1 cal/g °C)
ρ = Density of Water (1 g/cm^3)
3785.41 = Flow conversion from mgd to m^3/day

City of Bandon
Biosolids Management Plan
2024

File Number: 5664
Permit Number: 101546

I Treatment Facility

Introduction:

The City of Bandon (pop. 3,235) owns and operates a municipal sewage collection and treatment system under National Discharge Elimination System (NPDES) permit number 101546. Wastewater processed by the sewage treatment works is principally of domestic origin. The current facility was upgraded in 1994. The facility is an activated sludge plant with aerobic digesters. There is no required local pretreatment permit for this facility. Treated effluent from the treatment plant is discharged to the Coquille River (RM L1), in Coos County, Oregon.

A) Wastewater Processing:

Bandon operates an activated sludge plant with aerobic digesters. Designed average dry weather flow is approximately 0.45 million gallons per day (MOD). Influent passes through the headwork (screening and grit removal, flow monitoring, automatic sampling, flow splitting, and grit separation). The plant is run in plug flow, from the headwork in flow enters two aeration basins. Aeration basin #1 is 157,000 gallons, and #2 is 141,000gallons. Aeration basin effluent is transferred to one of two secondary clarifiers (190,246 gallons each) where solids are allowed to settle out. Portions of the solids are returned to the aeration basin and portions of the solids are wasted to the aerobic digesters. Bandon operates a three-cell aerobic digester. The cells are 128,000 gallons (#1), 133,000 (#2), and 133,000 (#3). The aerobic digester is run in series. Sludge can be removed from the digester directly or pumped to the sludge thickening process where it can thicken before land application,**.** . prior to being land applied on a regional authorized biosolids site(s). Clarifier effluent is directed to ultraviolet channels for disinfection and discharged to the Coquille River.

B) Solids Processing:

There are three potential end routes for generating biosolids from this facility and they are:

1) Liquid Biosolids removed from the aerobic digester
2) Dewatered Biosolids taken from the sludge thickening process (after aerobic digester) and Solids Storage Structure:

C)

From the aerobic digesters sludge can be pumped to a truck for land application or to the sludge thicken building. Thickened biosolid can be pumped into a trailer for land application. All Class B biosolids are land applied on a regional DEQ authorized land application site(s

D) Septage Receiving Facility:

No septage is received at the Bandon wastewater treatment facility.

E) Pretreatment Program:

The city's industrial wastewater pretreatment program protects the environment and the area's wastewater collection, treatment facilities and biosolids quality by regulating potentially contaminated wastewater discharges from commercial and industrial activities.

Bandon's Ordinance No. 1254 maintains biosolids quality; currently the city's biosolids are at or below 50% of the "clean sludge" criteria identified in EP A 40 CFR Part 503.13 and Oregon DEQ's Oregon Administrative Rules Chapter 340 Division 50.

II Solid Treatment Processes

The EPA's 40 CFR Part 503 and DEQ's OAR 340-50 allow permittees to use EP A approved alternatives to satisfy Class A and B biosolids pathogen and vector attraction reduction criteria. The permittee must notify the Department in writing and get approval prior to any process change that would utilize pathogen reduction or vector attraction reduction alternatives other than their primary reduction alternatives contained in this management plan. The permittee must also certify that the alternatives used are EP A approved and that sampling and monitoring conforms to the 40 CFR 503 and OAR 340-050 regulations.

Pathogen Reduction

To meet the Part 503 regulatory requirements, pathogen reduction must be met before vector attraction reduction or at the same time vector attraction reduction is achieved.

A) Monitoring for Fecal Coliform

Monitoring for Fecal Coliform. is required to detect growth of bacterial pathogens

Class B biosolids can be met by using one of three alternatives, the two primary alternatives used by this facility are Alt. 1) Monitor sewage sludge for fecal coliform 503.32(b)(2), and Alt. 2) Use Process to Significantly Reduce Pathogen (PSRP) 503.32(b)(3).

Alt. 1) Monitor sewage sludge for fecal coliform 503.32(b)(2) requires that seven samples of treated sewage sludge (biosolids) be collected and that the geometric mean fecal coliform density of these samples be less than 2 million MPN per dry gram biosolid (dry weight basis).

Alt. 2) Use Process to Significantly Reduce Pathogen (PSRP) 503.32(b)(3)* considers sludge treated in one of the PSRP's listed in Appendix B of the 40 CFR Part 503 to meet Class B biosolid criteria for pathogen reduction. For this facility the following PSRP's are primarily used:

- #1 Aerobic digestion, sludge is treated in air/oxygen for a specified residence time at a specified temperature. Values of the mean cell residence time and temperature shall be between 40 days at 20C (6SF) and 60 days at 15C (59F)

The city uses #1 Aerobic digestion. The Department recommends the permittee still collect and run a geometric mean for fecal coliform density on a representative sample each year to ensure the pathogen reduction is less than 2 million MPN per dry gram biosolid (dry weight basis).

B) Vector Attraction

This facility primarily uses the following vector attraction reduction options:

Opt. 1) The percent of volatile solid reduction calculation to use for aerobic digester that is decanted and that does not have appreciable grit accumulation would be the Van Kleeck or Approximate Mass Balance (AMB) equation depending upon the percent of solids in the decant (Attachment A).

Opt. 2) When the 38% volatile solids reduction cannot be met for aerobically treated solids vector attraction reduction biosolids will be dewatered and hauled to a landfill.

Ill Biosolid Characteristics

Bandon's treatment utilizes an activated sludge process. The treatment facility wastes activated sludge from the secondary clarifiers to the aerobic digester. The sludge under goes a minimum of 60 days of digestion at a minimum temperature of 15C prior to removal and staff performing a volatile solids reduction calculation. For the past five years the average volatile solids reduction criteria has been achieved by Bandon's wastewater treatment facility.

Annually, Bandon has generated approximately 33 dry tons of biosolids. For the year 2020, Bandon land applied 33 tons (29.9 dry metric tons) of Class B biosolid. Under the 40 CFR Part 503, Bandon is required to sample biosolids one time per year. Frequency of monitoring depends on the amount biosolid generated that is marketed to be sold or given away, land application and surface disposal.

Sampling

The following are sampling reference publications: "Sludge Sampling and Analysis Guidance Document", (EPA 1993) and ASTM Standard E 300-86, "Standard Practice for Sampling Industrial Chemicals" (ASTM 1992a).

1) Aerobic Digesters
   Sample location: Sample port on discharge line from the digester.

2) Number and type of sample taken per day: Class B Biosolids, composite of seven or more discrete samples collected throughout the pump over sampling period.

Sample storage and transport: Samples are stored at 4C in ice chest or refrigerator. Samples are transported in ice chest to maintain temperature during delivery to laboratory. Pathogen samples are delivered to lab within six hours of sample collection.

Sample analysis method: EPA 9045; EPA 160.3; EPA 160.4; SM 4500-NH3B; EPA 353.2; EPA 365.3; EPA 351.3; SW-846 7060; SW-846 6010; SW-846; SW-846 7481;SW-847 7471;SW-846 7740; SMI8th, 9221E.1;SM 18:92600.1;ASTM D 4994- 89; EPA 600/1-87/014; EPA 8240; EPA 1613; EPA 8270; EPA 1613B; EPA 1668 (many include one or more of the referenced methods).

3) Sludge Thickening Process

Sample location: Aerobic Digester

Sample storage and transport: Composite sample is stored at 4C in ice chest or refrigerator. Samples are transported in ice chest to maintain temperature during delivery to laboratory. Pathogen samples are delivered to lab within 24 hours of sample collection.

Sample analysis method: EPA 9045; EPA 160.3; EPA 160.4; SM4500-NH3B; EPA 353.2; EPA 365.3; EPA 351.3; SW-846 7060; SW-846 6010; SW-846; SW-846 7481; SW-847 7471; SW-846 7740; SM 18th, 922IE. 1; SM 18:92600.1; ASTM D 4994-89; EPA 600/1-87/014; EPA 8240; EPA 1613; EPA 8270; EPA 1613B; EPA 1668 (may include one or more of the referenced methods).

Biosolid Analysis:

Biosolid Chemical Analysis:

From Bandon's 2020 biosolids analysis the following is a representative sampling of the biosolid metal concentration.

Metal	Lb./acre-yr.	Site life years
Arsenic (As)	0.1299	345
Cadmium (Cd)	0.0026	16412
Chromium (Cr)	0.0000	
Copper (Cu)	0.0260	63124
Lead (PB)	0.1299	2524
Mercury (Hg)	0.0010	18102
Molybdenum (Mo)	0.1299	151
Nickel (Ni)	0.0130	35349
Selenium (Se)	0.1299	841
Zinc (Zn)	0.1299	23566

The site life would be limited to 151 years based on the Molybdenum loading Bandon's 2020 biosolid analysis (Attachment B).

Biosolid Nutrient Analysis:

For the year 2020, the biosolids contained about 1001 pounds lbs. total nitrogen (N), Bandon needs approximately 10.01 acres to land apply on to handle their annual biosolid nitrogen production.

IV Biosolids Beneficial Reuse Program

Transportation and Land Application:

Biosolids are off loaded into city owned tanker truck at the plant. The biosolids loading area is impounded in case of accidental spillage of biosolids during the truck loading process. This area has a drain that ties back into the facility. During the summer months Bandon's biosolids are land applied on one site totaling 18 acres. The biosolid land application sites are capable of assimilating Bandon's annual total nitrogen production. The perennial agronomic biosolid land application rate for pastures and grass is 140 lb. available N per acre-yr. The agronomic land application rate for annual rye grass, the predominate crop utilized by Bandon's land application program, is 100 lb. available N per acre-yr.

Land application: Bandon land applies on authorized pastures and farmlands. All DEQ site authorizations for Bandon are part of Bandon's Biosolid Management Plan. Bandon currently has 18 acres that are authorized for land application.

Biosolids Site Management Information:

Site	Use/Acres	Lb. N/Acre	Lb. N/Site
Dew Valley	18	100	482
Total	18	100	482

Long term biosolid application rates and site restrictions are contained in the biosolid site authorization letter. References to the OAR 340-50, the 40 CFR Part 503, site setbacks, site agronomic loading rates, land application restrictions and site restrictions are also detailed out in the site authorization letter.

BIOSOLIDS LAND APPLICATION PLAN

Agronomic Application Rate and Site Crops

Biosolids is required to be land applied to a site at a rate that is equal to or less than the agronomic rate for the site. An agronomic rate is the quantity of biosolids application rate designed to provide the annual total amount of nitrogen needed by a crop and to minimize the amount of nitrogen passing below the root zone of the crop or vegetation to groundwater.

Biosolids application rates for the Bandon sites were developed based on Oregon State University (OSU) Extension Service Fertilizer Guide: Seed Production Agronomy FG63. The annual application rate for hay is 100 available nitrogen (N) per acre, unless the application site demonstrates additional nitrogen is required to match crop uptake rates. *(*Note: If more than one type of crop is used at the same site, then state each type of crop and the application rate.)* The land application sites authorized for use can assimilate the total plant available nitrogen the Biosolids provides on an annual basis. Specific site agronomic loading rates are stated in the Department issued site authorization letters.

Site Inventory of Existing and Potential Sites

The City of Bandon currently land applies biosolids to the Department authorized sites listed in the <table below/Appendix letter>. Surface application of biosolids is performed using a 4000 gallon tanker truck for delivery and a portable 6x6 Pioneer pump and spray cannon can be used. Site maps with the general location and size of existing authorized sites are included as Appendix <state letter> of this Biosolids management plan. The City of Bandon currently has 18 acres that are authorized for land application. This is an adequate land base for current <and future> operations, based on current Biosolids generation rates.

*Biosolids Land Application Site Inventory *Note: Maybe included as an Appendix Please include Site Authorization at the end of the plan*

Site Name/ Identifier	Site location (Lat/Long)	Area (ac)	Type of Crop	Application (lb. N/AC)	Time of year applied (month)	Harvest Cycle
Dew Valley	43 5'N	18	Hay	100	June/	Year
	123 21' W				October	

Site Selection Criteria for a New Site

If necessary, the City of Bandon will locate additional sites for land applying biosolids. Prior to using any site for land application, the City of Bandon is required to receive a written site authorization letter from the Department. The following site conditions will be considered when determining the suitability of a site for land application:

- All sites will be located on <agricultural/forest/reclamation> land in <Coos county.
- A site should be on a stable geologic formation not subject to flooding or excessive run-
- off from adjacent land.
- Minimum depth to permanent groundwater should be four feet <and the minimum depth to temporary groundwater should be one foot at the time when application of liquid Biosolids occurs>.
- Topography should be suitable for normal agricultural operations.
  <Biosolids should not be land applied on bare soils when the slope exceeds 12 percents.
- Soil should have a minimum rooting depth of 24 inches.

Public Notification

For new sites, the City of Bandon will notify the public of the proposed land application activity by phone, mail or direct contact. A current copy of the city's Biosolid Manage Plan will be available for review.

Each year prior to land application of biosolids, the City of Bandon will verify for those sites to be used for the year that the property owners who received prior notification have not changed. If a property owner has changed, notification of the land application activity will be made to the new property owner and documented.

Site Management Practices

Site access restrictions and setbacks will be followed as required in OAR 340-050, and 40CFR503, and outlined in the Department's site authorization letters. The City of Bandon will ensure that access is restricted by appropriate means as necessary, such as fencing or posting of signs at the land application site. Biosolids land application will not occur in those areas designated as buffer strips and will be achieved through accurate measurement of the buffer area prior to commencing land application.

Crop Management Practices

As listed in the Biosolids Land Application Site Inventory table on page 9, biosolids are applied to Hay. Timing of application and the harvest cycle of the crop are also listed. Soil conditions must be favorable for application such that runoff, leaching, or soil compaction does not occur. The timing of land application will take into consideration tilling and irrigation practices that may occur on an authorized site. *"•"Note: If tilling or irrigation occurs, describe those practices.*

The overall management of nutrients at the land application site stakes into account the amount of Biosolids land applied, the amount of commercial fertilizers used and the amount of residual nutrients in the soil. When additional sources of nitrogen (e.g., commercial fertilizer) are applied to a site, then the application of Biosolids should be reduced to compensate for the additional nitrogen loading.

If Biosolids is applied to a site two out of three years at the agronomic rate, prior to the third application, a representative composite soil sample will be collected from grab sample taken across the entire site, and analyzed by an independent commercial laboratory. If existing nitrate-nitrogen levels in the soil profile are elevated, the Biosolids application rate, site management practices, or both will be adjusted. Application rates must be adjusted to account for available nitrogen carried over from previous applications. If crop removal of nitrogen exceeds the calculated agronomic rate, additional nitrogen may be required to sustain crop production.

V Contingency Options

In the event biosolids are spilled between the treatment facility and the land application site, Bandon's sewage treatment workers shall contain the spill. Lime, absorbent (for example sand) and remove spilled sludge solids spills with a front end loader or shovels and dispose of the spillage at a DEQ authorized application or disposal site. All spills into waters of the state or spills on the ground surface that are likely to enter waters of the state shall be reported immediately to Oregon Emergency Response System (OERS) at 1 -800-452-0311 and your regional biosolids coordinator at 541-686-7878. All spills of 25 gallons or more on the ground surface shall be report to the regional biosolids coordinator at 541-686-7878.

VI Reporting

Daily Reporting and Recordkeeping (40 CFR 503.17 & 40 CFR 503.18):

Each year prior to land application of biosolids the source operators shall check to see if contiguous property owners have changed. The operators shall keep a record of contact (date, and/or written log of phone call with name and number, and/or Xerox of postcard with name and address, etc.,) with contiguous property owners, which notify them of the biosolid land application practice. Operator shall provide this documentation in the Annual Biosolid Report.

Annual Reporting

The Annual Biosolid Report is due February 19, of each year for the previous year's land applied biosolids. Part of this report is the submittal of the daily site logs, which have the date, time, and quantity gal-lb. N/acre land applied for each day- tank-batch land applied. Site logs shall have a scaled map showing the site and the land application location that coincides with the daily site loading methods (truck spreader bar, irrigation cannon). Daily records should clearly show the location of daily biosolid loading site log.

Annual Report shall have a signed copy of the certification statements for pathogen reduction, vector attraction reduction and biosolids have been land applied at approved agronomic loading. Person signing statements should be the operator of record at the treatment plant. The operator shall show how the vector attraction reduction was met i.e., volatile solids reduction was achieved by time and temperature, the Van Kleeck equation filled out with digester records (MCRT), bench scale test, sour test or any other EPA approved alternative method appropriated for biosolid generated at your facility. Certification of pathogen reduction is required and is satisfied by submittal of test results in the Annual Biosoilds Report. All the previous year's biosolids sampling and analysis that is required by the permit shall be included in Bandon's Annual Biosolid Report (in the year's annual report appendix).

VII Certification Statement

The City of Bandon's facility is capable of meeting their primary alternatives for achieving Class B biosolid pathogen and vector attraction reduction criteria. As required under 40CFR 503.17 a signed Class B biosolid and vector attraction certification statements shall accompany all biosolids that are land applied (Attachment C). For Class B biosolid annual biosolid analysis must be provided upon request. Certification statements must also show conformance with nutrient and land application loading rates where applicable.

Attachment A

Please also include reference to
https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=546252&Lab=CESER for calculations

Calculation of the % volatile solids reduction for the aerobic digesters is to be based on comparison of a representative grab sample of total and volatile solids entering the digestion process (a weighted blend of the secondary clarifier solids) and a representative composite sample of the solids existing in the sludge holding tanks.

Typically in the past we've used the Van Kleeck equation for digesters. The assumption is that there is no grit accumulation in the digester. This volatile solids equation assumes the fixed solids input equals the fixed solids output. The Van Kleeck equation is appropriate if the digester decantant is low in total solids. The Van Kleeck equation can be used to calculate the volatile solids reduction for a digester that decants provided VSb equal VSd.

FVSR: Fractional Volatile Solids Reduction FVSR = 1 - VSb * (1-VSf) / VSf(l-VSb) VSf Feed Sludge Fractional Volatile Solid, (kg/kg)
VSb Digested Sludge (digester bottom) Fractional Volatile Solids, (kg/kg) VSd Decantant Fractional Volatile Solids

For this equation to be valid VSb must equal VSd.

For digesters with decant withdrawal (decant high in solids) and no grit accumulation, where the volatile and fixed concentrations are known for all streams as well as the volumetric flow rates for the decant and digester sludge then the Approximate Mass Balance equation should be used.

FVSR: Fractional Volatile Solids Reduction

FVSR = Fyb - Byb - Dyd / Fyb

Fyb (F) Feed Sludge Volumetric Flow Rate (mZ/d)
(yb) Feed Sludge Volatile Solids Concentration (kg/m3)

Byb (B) Digester Sludge (bottom) Volumetric Flow Rate (M3/d) (Bb) Digester Sludge (bottom) Volatile Solids Concentration (kg/m3)

Dyd (D) Decantate Volumetric Flow Rate (m3/d)
(yd) Decantate Volumetric Solids Concentration (kg/ m3)

Assumptions: Fixed Solids and Volatile Flows Streams.

40 CFR Part 503 Appendix C Section 6.2

Attachment B

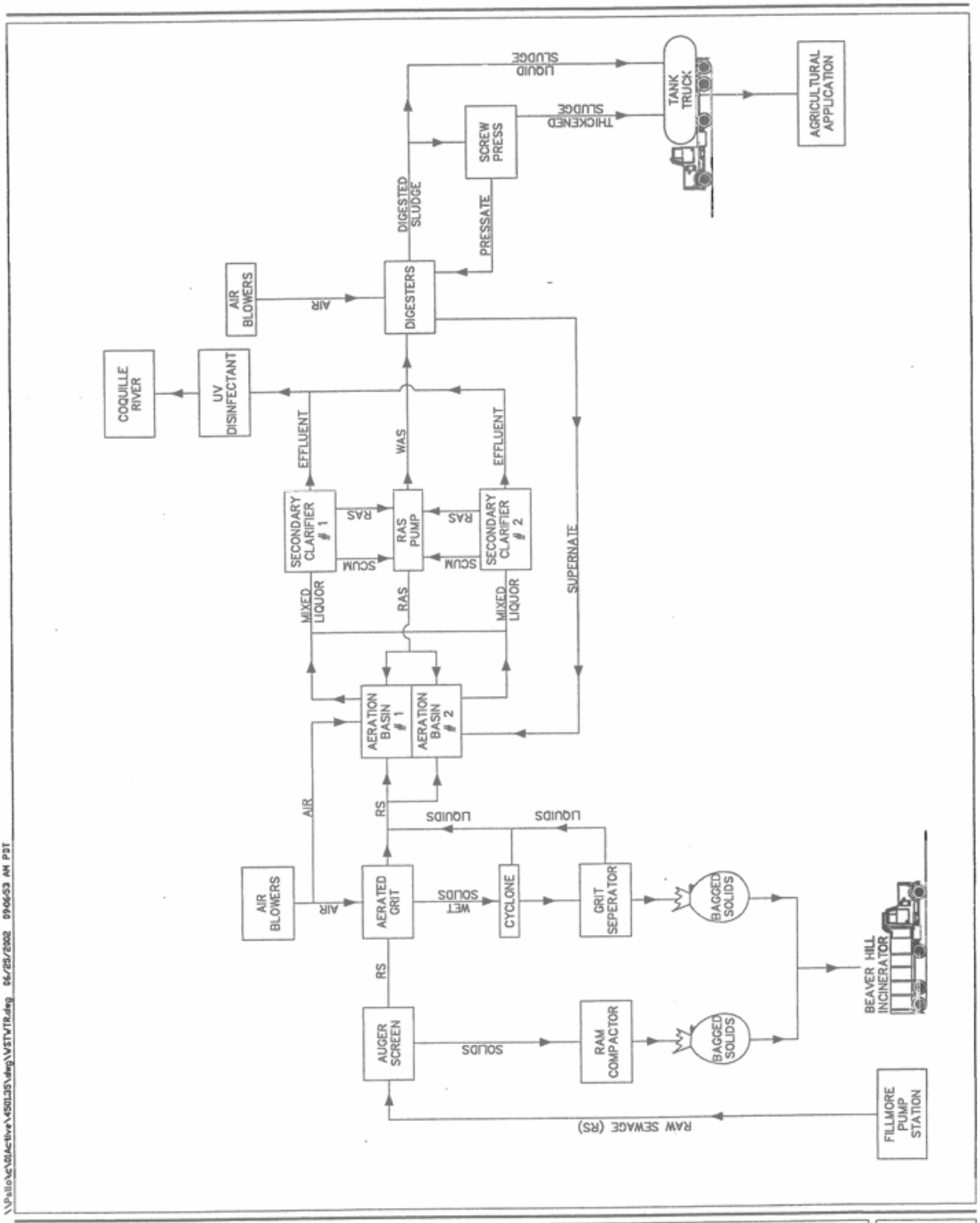
Class B Biosolid Certification Statement

"I certify, under penalty of law, that the information used to determine compliance with Class B Pathogen Reduction requirements in40 CFRPart 503.32 Sec.(b)(2) and Vector Attraction Reduction requirements 40 CFR part 503.33 Sec.(b)(l) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluated this information. I certify that all Class B biosolids land applied has met the abovementioned Pathogen and Vector Attraction Reduction requirements. I also certify that all Class B biosolids were land applied at ergonomic rates. L am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Signature/; 

Date / X ~~ *f*

Bandon flow diagram.pdf



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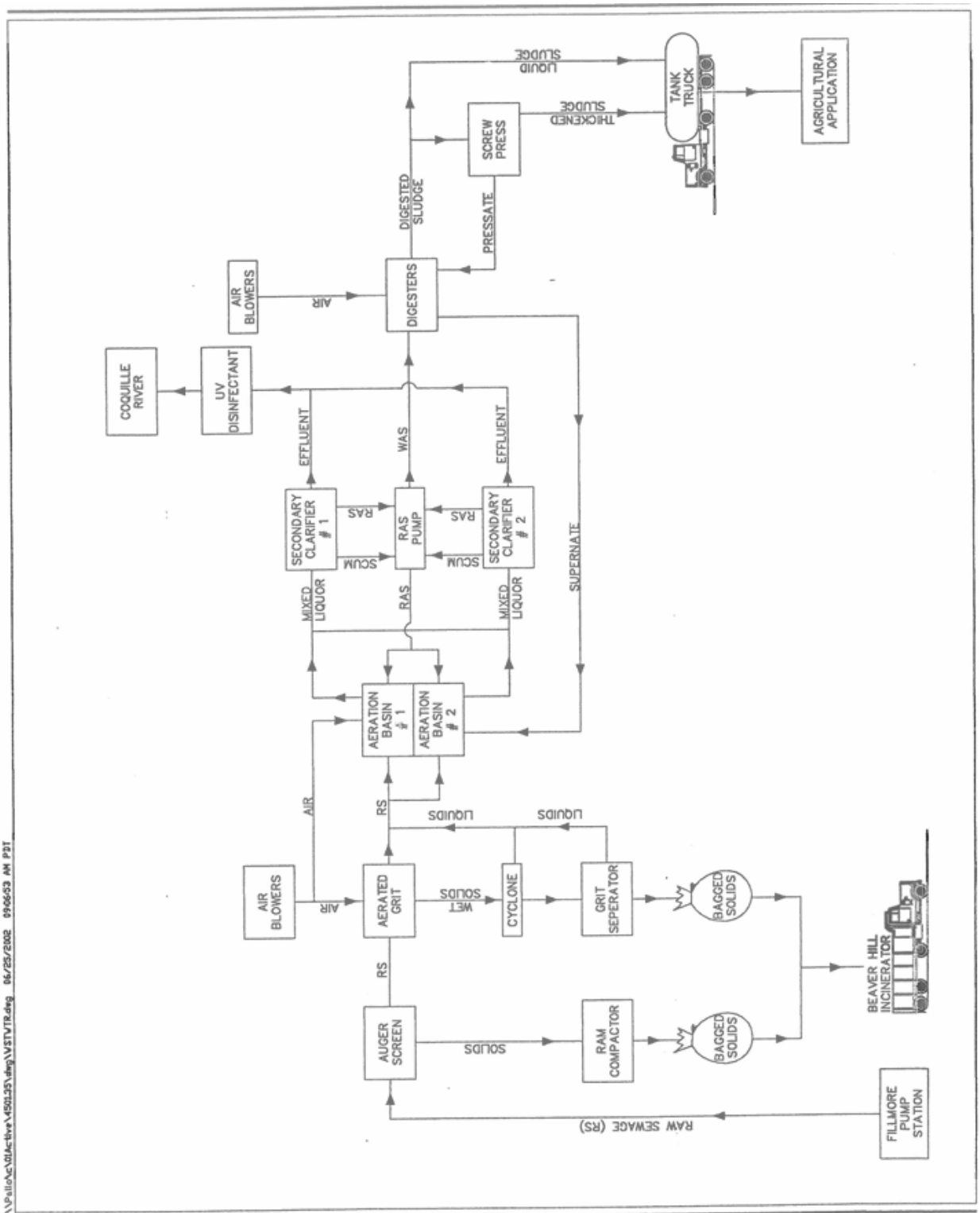
DATE: JUNE, 2002 PROJECT NO.: 4501.35	***WASTEWATER TREATMENT PLANT FLOW DIAGRAM***	



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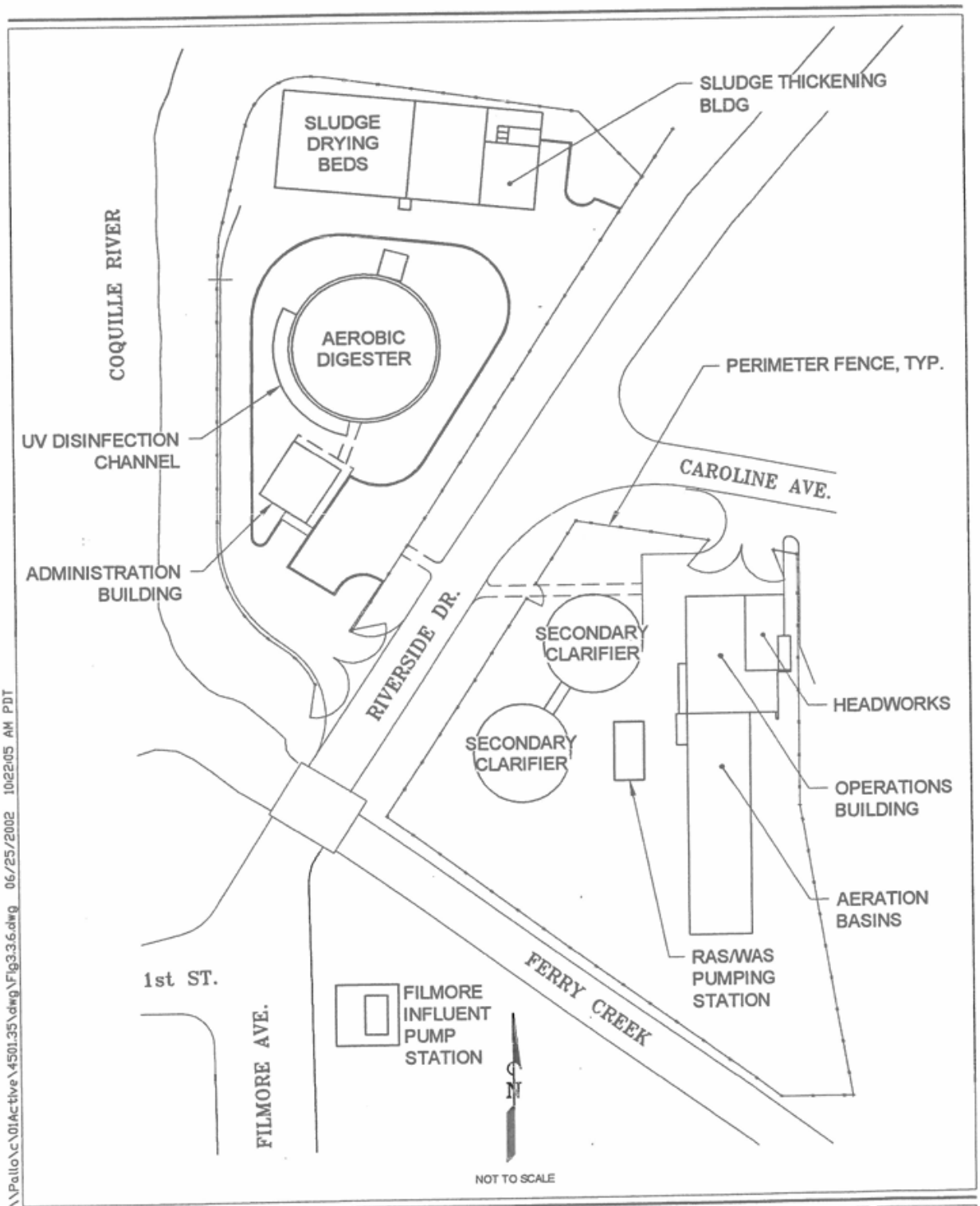
THE DYER PARTNERSHIP ENGINEERS & PLANNERS, INC.	**CITY OF BANDON WASTEWATER MASTER PLAN**	FIGURE NO. 3.3.7
DATE: JUNE, 2002 PROJECT NO.: 4501.35	**WASTEWATER TREATMENT PLANT FLOW DIAGRAM**	



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THE DYER PARTNERSHIP ENGINEERS & PLANNERS, INC.	CITY OF BANDON WASTEWATER MASTER PLAN	FIGURE NO. 3.3.6
DATE: JUNE, 2002	WASTEWATER TREATMENT PLANT	
PROJECT NO.: 4501.35		

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
Western Region Roseburg Office
725 SE Main
Roseburg, OR 97470
(541) 440-3338
FAX (541) 440-3396

October 11, 2000

Bill Nielson
Bandon Wastewater Treatment Plant
PO Box 67
Bandon OR 97411

Re: File number 5664
Authorization to Land Apply Biosolids
David Leff Property
87432 Cranberry Creek Lane
Bandon OR
Twp. 29S S, R. 15W W. Sec. 24 and 25

Bill:

This letter represents approval of your request to apply aerobic biosolids the above referenced property. Approval is subject to criteria detailed in the Oregon Administrative Rules, Chapter 340, Division 50 and the following conditions:

Responsibility:
It is the responsibility of Bandon Wastewater Treatment Facility (BWTF) to insure the proper handling and application of all biosolids generated. Transportation of the biosolids to the application site shall be done in such a manner as to prevent leaking or spilling the biosolids onto the highways, streets, roads, waterways or other land surfaces not approved for biosolids application.

Site Description:
The site has approximately 30 acres of hay pasture and trees, which can be used for biosolid land application. The site is on the West Side of Highway 101 just south of Bandon, Oregon. The land application of biosolids on this ranch is to help to remediate and stabilize the farm's sandy loam-loamy sand soils. This authorization is good for two years at which time another site visit is required to review the farm practices and crop response to land applied biosolids over the previous two years. This authorization can be renewed in two years as an on going remedial land application practice to help reestablish the soil organic horizon on this farm. This biosolids application site is only that portion of this parcel that is shaded on the enclosed map.

Based upon an evaluation of this property the Department is pleased to grant you authorization to land apply stabilized biosolids subject to the conditions under your National Pollutant Discharge Elimination (NPDES) permit and the following stipulations:

1. This site is approved for summer application (June 1 through Oct. 31) of biosolids. During biosolid land application, care should be taken to avoid wet soil conditions, which may have occurred as a result of precipitation, especially in low and concave areas of sites. Application is authorized when the temporary water table is at least 12 inches below the ground surface.

2. Biosolids shall be applied evenly and in a manner to prevent ponding or runoff.

3. Biosolids shall not be applied closer than 50 feet to any drainage ditch, channel, pond or waterway or within 200 feet of any well or domestic water source.

4. Biosolids application rate shall not exceed approximately 32,000 gallons/acre/years. Changes in biosolids characteristics or crops management may necessitate appropriate adjustments in the application rate to maintain proper agronomic nitrogen loading (75 to 100 lb. Total N/acre depending upon digester-solids analysis).

5. If other sources of nitrogen are used, the biosolids application rate must be reduced so that commercial nitrogen in combination with biosolids nitrogen does not exceed agronomic loading rate of this site (100 lb. Total N/acre-year).

Site Use Limitations:

1. Controlled access to the biosolids site must be maintained for a period of 12 months following biosolids application.

2. Grazing animals should not be allowed on pasture within 30 days following biosolids application and 90 days for lactating animals.

Accidental Spillage:

The permittee shall immediately clean up any spillage of biosolids and notify the DEQ Roseburg office at 440-3338 of any such occurrences. Spillage which cannot be completely cleaned up shall be covered with hydrated lime (calcium Hydroxide) or lime (calcium oxide). A 50-lb. bag of liming material shall remain available during transportation of the biosolids.

Monitoring:

1. BWTF shall maintain daily records of accumulated biosolids application. Daily land application shall be kept on a field grid map or other easily readable system. BWTF is responsible for tracking the land application of biosolids on daily basis (number of dry pounds Nitrogen land applied per acre).

2. A copy of this authorization letter and the biosolids certification statements shall be carried with all biosolids s that are to be land applied. The responsible parties who apply biosolids shall review these documents prior to land applying biosolids to this site.

3. BWTF shall provide the DEQ with monthly summaries of biosolids land application activities along with a current BWTF biosolids analysis in BWTF's annual report due February 19 of each year.

4. A copy of this site authorization letter and a signed biosolid pathogen and vector attraction reduction certification statement shall accompany all biosolids land applied at this site.

If you have any questions regarding this approval please call me at 440-3338.

Sincerely,

Paul Kennedy

Paul Kennedy, RS
Environmental Specialist

cc: Biosolids Program, DEQ-Portland

Figure 1. Leff Farm biosolids approval area is approximately 18 of a larger parcel (shade area) when setbacks are in place.

AGREEMENT BETWEEN
CITY OF BANDON
AND
DAVID LEFF

This agreement is entered into by and between David Leff, hereinafter referred to as Landowner, and the City of Bandon, a municipal corporation.

WHEREAS, the City of Bandon operates a municipal wastewater treatment plant which produces an end product of sludge; and

WHEREAS, the City of Bandon needs a location at which this material may be disposed; and

WHEREAS, the Landowner is willing to allow the use of his fields for such disposal considering that the material presents no serious hazard to the Landowner's fields and would act as a fertilizer encouraging the growth of hay and young trees.

NOW, THEREFORE, IT IS HEREBY AGREED that the City of Bandon may apply sludge from their municipal wastewater treatment plant to Landowner's fields subject to the following terms and conditions:

A. Site Designation

1. For purposes of this agreement, each contiguous area to which sludge is applied shall be called a "disposal site".
2. Each sludge spray irrigation gun set up shall be called a "setting".
3. The City of Bandon shall secure prior approval from the Landowner or designee to use a disposal site.
4. Each disposal site and setting shall bear a unique number for purposes of record keeping.
5. The City of Bandon shall measure, stake, number and map each setting in accordance with the City's equipment capabilities.
6. A map will be maintained, jointly by the Landowner and the City of Bandon, showing the location of each disposal site setting

used.

7. The Landowner may, at any time, temporarily or permanently discontinue a disposal site if it is deemed necessary.

B. Posting of Disposal Site Areas

1. The Landowner shall post approaches to disposal sites with no trespassing signs to control access.
2. The Landowner shall further agree to gate, lock and provide key to the City of Bandon, approaches to disposal sites if access is not controlled by no trespassing signs.
3. The City of Bandon shall post approaches to disposal sites to advise of the disposal activities during application of sludge and maintain such posting for a minimum period of 45 days after completion of such application and/or as required by regulatory agencies.
4. Such signs shall include terminology as may be required by regulatory agencies.

C. Method of Disposal

The City of Bandon shall dispose of sludge in the following manner:

1. Application only on sites designated by the DEQ and Landowner.
2. Application shall be rotated among the designated sites and settings.
3. Application shall be under pressure utilizing a spray gun.
4. All equipment shall stay on the roads.
5. There shall be no application within any drainage ditch.
6. No more than 100 pounds/acre of nitrogen shall be applied in any given two year cycle unless more is allowed by DEQ in writing.

rules not inconsistent with the terms of this agreement and the City of Bandon agrees to comply with the same as soon as reasonably possible.

G. Termination

This agreement may be terminated by either party upon thirty (30) days written notice or at any other time by mutual agreement of the parties. In case of breach of this agreement by the City of Bandon, the Landowner may order the immediate suspension of the application of sludge on his property. Notwithstanding the termination or suspension of this agreement, the rights and obligations of each party under Paragraphs D, E, F, and H shall continue in full force and effect.

H. Hold Harmless

It is hereby agreed that the City of Bandon shall indemnify, defend and hold harmless David Leff and his agents and employees from all claims, actions, demands, loss, damage or expense by any person or persons whatsoever arising out of this agreement and/or the application of sludge on Mr. Leff's fields by the City of Bandon. Actions covered by this paragraph include, but are not limited to, actions by governmental officials for the cleanup of hazardous wastes

CITY OF BANDON

City Manager

Wastewater Treatment Plant

7/16/2024

Date

PROPERTY OWNER

David R. Leff

87432 Cranberry Creek Ln,

Bandon, OR 97411

7/16/2024

Date