State of Oregon Department of Environmental Quality

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WATERSHED-BASED WASTE DISCHARGE PERMIT

Oregon Department of Environmental Quality
Northwest Region – Portland Office
700 NE Multnomah St., Suite 600
Portland, OR 97232
Telephone: 503-229-5263

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

ISSUED TO:

Clean Water Services
2550 SW Hillsboro Highway
Hillsboro, OR 97123

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Treated Wastewater	Various	See Table below
Recycled Water Reuse	N/A	Specified in Recycled Water Use Plan
Biosolids	N/A	Specified in Biosolids Management/Land Application Plan
Stormwater	Various	Various (See note 1.)

FACILITY LOCATION:

Durham Water Resource Recovery Facility
16580 SW 85th Avenue Tigard, Oregon 97224
EPA REFERENCE NO: OR0028118
File No.: 90735 **Permit No.:** 101141
Treatment System Class: Level IV
Collection System Class: Level IV

Rock Creek Water Resource Recovery Facility
3235 SE River Road Hillsboro, Oregon 97123
EPA REFERENCE NO: OR0029777
File Number: 90770 **Permit No.:** 101144
Treatment System Class: Level IV
Collection System Class: Level IV

Hillsboro Water Resource Recovery Facility
770 South First Ave Hillsboro, Oregon 97123
EPA REFERENCE NO: OR0023345
File Number: 90752 **Permit No.:** 101143
Treatment System Class: Level III
Collection System Class: Level IV

RECEIVING STREAM INFORMATION:

WRD Basin: Lower Willamette
USGS Sub-Basin: Tualatin
Receiving Stream Name: Tualatin (See notes 2 and 3)
NHD Reach Codes:
17090010000038 - 0.61% (Durham WRRF)
17090010018350 - 34.2% (Rock Creek WRRF)
17090010018350 - 53.4% (Hillsboro WRRF)
17090010018350 - 94.9% (Forest Grove WRRF)

LLID: 1226500453377 (All facilities)
Treated Wastewater Tualatin River Outfalls:

Outfall	River Mile	Geo-location
Durham D001	9.2	45.3932°N -122.7644°W
Durham D003	9.2	45.3931°N -122.7642°W
Rock Creek R001	37.7	45.4908°N -122.9454°W
Rock Creek R003	37.7	45.4908°N -122.9453°W
Hillsboro H001A	43.3	45.4991°N -122.9859°W
Hillsboro H001B	42.9	45.4989°N -122.9893°W
Forest Grove F001	53.8	45.5018°N -123.0890°W
Forest Grove F003	53.8	45.5080°N -123.0875°W
Forest Grove F004	N/A	Internal Outfall

Forest Grove Water Resources Recovery Facility w/ Natural Treatment System
1345 SW Fern Hill Road Forest Grove, OR 97116
EPA REFERENCE NO: OR0020168
File Number: 90745 **Permit No.:** 101142
Treatment System Class: Level III
Collection System Class: Level IV

Municipal Separate Storm Sewer System
File Number: 108014 Permit No.: 101309
EPA REFERENCE NO: ORS108014

County: Washington
EPA Permit Type: Major

Notes:

1. Stormwater Sources Covered by this Permit: All existing and new discharges of stormwater from the Municipal Separate Storm Sewer System (MS4) within the stormwater service area of Clean Water Services within the urban growth boundary of Washington County. The list of jurisdictions within the stormwater service area include Clean Water Services, Washington County, and the Cities of Banks, Beaverton, Cornelius, Durham, Forest Grove, Hillsboro, King City, North Plains, Sherwood, Tigard, and Tualatin.

2. Receiving streams within the CWS service area: Ash Creek; Ball Creek; Beaverton Creek; Bronson Creek; Butternut Creek; Cedar Creek; Cedar Mill Creek; Chicken Creek; Council Creek; Dairy Creek; Dawson Creek; Fanno Creek; Gales Creek; Hall Creek; Hedges Creek; North and South Johnson Creek; Koll Wetland; McKay Creek; Nyberg Creek; Red Rock Creek; North and South Rock Creek; Summer Creek; Tualatin River; Willow Creek; and Waible Gulch.

3. Total Maximum Daily Loads (TMDLs), wasteload allocations and load allocations have been established for all water bodies in the sub-basin. The TMDLs for the Tualatin sub-basin establish wasteload allocations for urban storm water and wastewater treatment facilities. See Tualatin sub-basin TMDL approved by EPA on August 7, 2001 (as amended in 2012) and Willamette Basin Mercury TMDL issued by EPA on February 4, 2021. These allocations are addressed in Schedules A and D of the permit.

This permit is issued in response to Application Nos. 950670 (Hillsboro WRRF), 950671 (Forest Grove WRRF), 950672 (Durham WRRF), 950673 (Rock Creek WRRF) and 991575 (MS4) received December 1, 2020 along with supplemental information provided on June 17, 2021, June 23, 2021, June 25, 2021, July 9, 2021, September 27, 2021, November 19, 2021, November 22 and 23, 2021, December 16, 2021, March 4, 2022, April 1, 2022 and June 17, 2022. This permit is issued based on the land use findings in the permit record.

Tiffany Yelton-Bram Water Quality Manager Northwest Region	December 8, 2022 Issuance Date	January 1, 2023 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.

Additionally, the permittee is authorized to discharge municipal stormwater to waters of the state in conformance with the requirements and conditions set forth in the attached schedules. The municipal stormwater sources covered under this permit include all existing and new discharges of stormwater from the MS4 within the stormwater service area of Clean Water Services and within the urban growth boundary of Washington County.

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.

This permit and its related plans serve as this permittee's implementation plan addressing the wasteload allocation requirements of the Tualatin Sub-basin Total Maximum Daily Load (TMDL) issued in August 2001 and amended in August 2012.

The term "permittee" refers to Clean Water Services within this document.

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Note: Schedule C: Compliance Schedule is not a part of this permit.

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SCHEDULE A: WASTE DISCHARGE LIMITS

The permittee's regulated activities under this permit include the operation of four POTWs or Water Resource Recovery Facilities (WRRFs), and a municipal separate storm sewer system. The permittee operates the Durham (WRRF), the Rock Creek WRRF, the Hillsboro WRRF, and the Forest Grove WRRF, which includes the Forest Grove Natural Treatment System (NTS).

This permit authorizes discharges from multiple outfalls associated with each of the four treatment facilities including: Durham 001 and 003 (D001 and D003), Rock Creek 001 and 003 (R001 and R003), Hillsboro 001A and 001B (H001A and H001B) and Forest Grove 001 and 003 (F001 and F003). The D003, R003 and F003 outfalls are used during high river flows and effluent limits from these outfalls are only included during wet season flow conditions. Effluent limits for each outfall are established in the following tables:

1. $CBOD_5$ and TSS Permit Limits

a. Low River Flow

The low river flow period begins the earlier of: 1) the first day after April 30 when the seven-consecutive-day median of daily mean river flow at the Farmington gauge is less than 250 cubic feet per second (cfs) or; 2) July 1. During this time period, the permittee must comply with the limits in the following table (Table A1). In addition to the TSS concentration and load limits presented in Table A1, the permittee must also meet the bubbled TSS mass load limitations in Table A3.

Table A1: Low River Flow $CBOD_5$ and TSS Limits

Outfall Number	Parameter	Units	Average Monthly (Unless otherwise noted. See note a.)	Average Weekly (Unless otherwise noted. See note b.)	Daily Maximum (See note c.)
D001	$CBOD_5$	mg/L	5	8	-
		lb/day	950	1400	1900
		% removal	85	-	-
	TSS (See note d.)	mg/L	5	8	-
		lb/day	6400	9,600	N/A
		% removal	85	-	-
R001 (Includes effluent from Hillsboro and Forest Grove WRRFs) (See note e.)	$CBOD_5$	mg/L	8	11	-
		lb/day	1750	2600	3500
		% removal	85	-	-
	TSS (See note d.)	mg/L	8	11	-
		lb/day	13,000	20,000	N/A
		% removal	85	-	-

Outfall Number	Parameter	Units	Average Monthly (Unless otherwise noted. See note a.)	Average Weekly (Unless otherwise noted. See note b.)	Daily Maximum (See note c.)
R001 (Rock Creek WRRF effluent only) (See note f.)	$CBOD_5$	mg/L	8	11	-
		lb/day	1550	2300	3100
		% removal	85	-	-
	TSS (See note d.)	mg/L	8	11	-
		lb/day	12,000	18,000	N/A
		% removal	85	-	-
F001 (See note g.)	$CBOD_5$ (See notes h, i and j.)	mg/L	10	15	-
		lb/day	500	750	1000
		% removal	85	-	-
	TSS (See notes d, h, i and j.)	mg/L	10	20	-
		lb/day	1600	2400	N/A
		% removal	85	-	-

Notes:

a. The average monthly limitations apply the first full month after the beginning of the low river flow period.

b. The average weekly limitations apply the first full week after the beginning of the low river flow period.

c. The daily maximum limitations apply the first day after the beginning of the low river flow period.

d. TSS average monthly and average weekly mass limits based upon federal secondary treatment standards.

e. Mass load limits apply only when Rock Creek WRRF discharges and receives effluent flows from Hillsboro and/or Forest Grove WRRFs.

f. Mass load limits apply only when Rock Creek WRRF discharges with no effluent flows received from Hillsboro or Forest Grove WRRFs.

g. Discharges through Outfall F001 is effluent from the Forest Grove WRRF routed through the Natural Treatment System (NTS). Effluent from the Hillsboro WRRF is sent to Forest Grove WRRF and then routed through the NTS. During the low river flow period, the compliance point for the Forest Grove WRRF is at the NTS outlet structure prior to discharge to Outfall F001. The Natural Treatment System must be operated in accordance with the current Operations Plan (See Schedule D).

h. Monthly and weekly concentration limits for $CBOD_5$ and TSS are expressed as median values.

i. The operation of the NTS can be impacted by extreme unpredictable natural and physical events that are determined by DEQ to impact the ability for the NTS to properly meet limits (e.g., declared droughts, smoke from forest fires, flash flooding, etc.). Such events are expected to be rare, infrequent and of limited duration, and can affect the ability of the NTS to meet the $CBOD_5$ and TSS monthly and weekly median concentration limits. During such an event, the permittee must ensure that the following requirements are met:

   i. The permittee must notify DEQ of the event as soon as practicable, but no later than three business days, after receiving any single F001 discharge sample result exceeding the weekly median values for $CBOD_5$ or TSS. The notice must include a description of the abnormal event suspected of causing the elevated $CBOD_5$ or TSS discharge concentration; the estimated duration of the abnormal event if it is

Outfall Number	Parameter	Units	Average Monthly (Unless otherwise noted. See note a.)	Average Weekly (Unless otherwise noted. See note b.)	Daily Maximum (See note c.)

ongoing; and any steps that the permittee is taking to reduce $CBOD_5$ or TSS discharge concentrations in response to the abnormal event.

ii. Monitoring of the Forest Grove WRRF effluent at internal monitoring location (Outfall F004) meets the $CBOD_5$ and TSS concentration targets in Table A1-1 below:

Table A1-1 Target Concentrations for $CBOD_5$ and TSS at Forest Grove WRRF Effluent

Parameter	Monthly Average	Weekly Average
$CBOD_5$	15 mg/L	25 mg/L
TSS	20 mg/L	30 mg/L

iii. Monitoring of the effluent from the Forest Grove NTS outlet structure F001 meets the following effluent limits in Table A1-2 below:

Table A1-2 Effluent Limits for $CBOD_5$ and TSS at NTS Outlet Structure

Parameter	Monthly Average	Weekly Average
$CBOD_5$	25 mg/L	40 mg/L
TSS	30 mg/L	45 mg/L

iv. Report exceedance of monthly or weekly median concentration limit for $CBOD_5$ and TSS in discharge monitoring reports as required by Schedule B for the duration of exceedance. For each discharge monitoring report, the permittee shall include a statement describing any abnormal event that the permittee believes caused the exceedances, the estimated duration of the abnormal event if it is ongoing, the reasons the permittee believes that the exceedances were caused by the abnormal event, the measures that the permittee undertook to implement the NTS Operations Plan in response to the abnormal event, any steps that the permittee is taking to reduce $CBOD_5$ or TSS discharge concentrations in response to the abnormal event and any adaptive management actions that the permittee will take in anticipation of similar future events.

v. Provided that the permittee was operating the NTS per the NTS Operations Plan required by Condition D.12 of this permit at the time of the event, complied with the target concentrations in Table A1-1 and prepared the required documentation and reporting of the event, the limits in Table A1-2 will apply for the duration of the event.

j. For all NTS start-up periods, the following limits apply to any calendar week for seven days after start-up, provided the permittee has implemented the NTS Operations Plan required by Schedule D.12 of this permit and complies with the internal Outfall F004 $CBOD_5$ and TSS concentration targets in Table A1-1:

Table A1-3 Weekly Effluent Limits for $CBOD_5$ and TSS for NTS Start-Ups

Parameter	Weekly Average
$CBOD_5$	40 mg/L
TSS	45 mg/L

b. **High River Flow**

The high river flow period begins the earlier of: 1) the first day after September 30 when the seven-consecutive-day median of daily mean river flow at the Farmington gauge is at least 350 cfs or; 2) November 15. During this time period, the permittee must comply with the limits in the following table (Table A2). In addition to the TSS concentration and load limits presented in Table A2, the permittee must also meet the bubbled TSS mass load limitations in Table A4.

Table A2: High River Flow Combined $CBOD_5$ and TSS Limits

Outfall Number	**Parameter** (See note a.)	**Units**	**Average Monthly** (See note b)	**Average Weekly** (See note c.)	**Daily Maximum** (See note d.)
D001 & D003	$CBOD_5$	mg/L	10	15	-
		lb/day	3500	5300	7000
		% removal	85	-	-
	TSS (See note e.)	mg/L	10	15	-
		lb/day	11,000	17,000	N/A
		% removal	85	-	-
R001 & R003	$CBOD_5$	mg/L	15	25	-
		lb/day	8600	13,000	17,000
		% removal	85	-	-
	TSS (See note e.)	mg/L	20	30	-
		lb/day	17,000	26,000	N/A
		% removal	85	-	-
H001A & H001B	$CBOD_5$	mg/L	15	25	-
		lb/day	1000	1500	2000
		% removal	85	-	-
	TSS (See note e.)	mg/L	20	30	-
		lb/day	2000	3,000	N/A
		% removal	85	-	-
F001 & F003 (See note f.)	$CBOD_5$	mg/L	15	25	
		lb/day	1000	1500	2000
		% removal	85	-	-
	TSS (See note e.)	mg/L	20	30	-
		lb/day	2000	3,000	N/A
		% removal	85	-	-

Outfall Number	**Parameter** (See note a.)	**Units**	**Average Monthly** (See note b)	**Average Weekly** (See note c.)	**Daily Maximum** (See note d.)

Notes:

a. On any day when discharges occur through both outfalls at each facility, the $CBOD_5$ and TSS mass load will be calculated on a flow-weighted basis for the combined discharge from both outfalls.

b. The average monthly limitations apply the first full month after the beginning of the high river flow period.

c. The average weekly limitations apply the first full week after the beginning of the high river flow period.

d. The daily maximum limitations apply the first day after the beginning of the high river flow period.

e. TSS average monthly and average weekly mass limits based upon federal secondary treatment standards.

f. During the high river flow period, the compliance point is at the Forest Grove WRRF prior to discharge to Outfall F001.

c. **Bubbled TSS Mass Limitations**

Total suspended solids bubbled mass loadings for the Durham WRRF, Rock Creek WRRF, Hillsboro WRRF, and Forest Grove WRRF during low and high river flow conditions are presented in Tables A3 and A4 below:

Table A3: Combined Bubbled TSS Mass Limitations During Low River Flow Period

Outfall Numbers	**Parameter** (See note a.)	**Units**	**Average Monthly** (See note b.)	**Average Weekly** (See note c.)	**Daily Maximum** (See note d.)
D001 & R001 (See note e.)	TSS	lb/day	2700	4000	5400
D001, R001 and F001 (See note f.)	TSS	lb/day	3000	4500	6000

Notes:

a. The low river flow period begins the earlier of: 1) the first day after April 30 when the seven-consecutive-day median of daily mean river flow at the Farmington gauge is less than 250 cubic feet per second (cfs) or; 2) July 1. Typical low river flow period months are July through October.

b. The average monthly limitations apply the first full month after the beginning of the low river flow period.

c. The average weekly limitations apply the first full week after the beginning of the low river flow period.

d. The daily maximum limitations apply the first day after the beginning of the low river flow period.

e. Limits are combined for discharges from both facilities and apply when only the Durham and Rock Creek WRRFs are discharging. No discharges from the Hillsboro or Forest Grove WRRFs are included in this combined limit.

f. Limits are combined for all discharges and apply when Durham and Rock Creek WRRFs discharge, and Forest Grove WRRF is discharging through the NTS; the compliance point for the Forest Grove WRRF is at the Forest Grove NTS outlet structure prior to discharge to Outfall F001.

Table A4: Combined Bubbled TSS Mass Limitations During High River Flow Period

Outfall Numbers	Parameter (See note a.)	Units	Average Monthly (See note b.)	Average Weekly (See note c.)	Daily Maximum (See note d.)
D001 & D003, R001 & R003, H001A & H001B, F001 & F003 (See note e.)	TSS	lb/day	17,000	26,000	34,000

Notes:

a. The high river flow period begins the earlier of: 1) the first day after September 30 when the seven-consecutive-day median of daily mean river flow at the Farmington gauge is at least 350 cfs or; 2) November 15. Typical high river flow period months are November through April.

b. The average monthly limitations apply the first full month after the beginning of the high river flow period.

c. The average weekly limitations apply the first full week after the beginning of the high river flow period.

d. The daily maximum limitations apply the first day after the beginning of the high river flow period.

e. Limits are combined limits for discharges from all four facilities; the compliance point for the Forest Grove WRRF is at the Forest Grove WRRF prior to discharge to Outfall F001.

2. Temperature Limits

The permittee must implement the DEQ-approved Thermal Load Management Plan and the elements included in Schedule D, Condition 14 to generate thermal credits that meet or exceed the aggregate Thermal Load to Offset (TLO) discharged from the Durham, Rock Creek and Forest Grove treatment facilities. The thermal loads presented in the table below are used to determine the TLO for each water resource recovery facility that discharges during the low flow period. Compliance with the thermal load limits must be demonstrated by generating thermal credits that meet or exceed the aggregate TLO discharged from the Durham, Rock Creek and Forest Grove water resource recovery facilities. (Schedule B of this permit requires the permittee to report [in July and August] the credits generated through implementation of its Thermal Load Management Plan.) The thermal loads associated with thermal shock (Notes b. and c. of the table below) are not part of the Thermal Load Management Plan and must be met at the point of discharge.

For each water resource recovery facility, TLO (kcal/day) = Current Excess Thermal Load (kcal/day) – Allowable Thermal Load (kcal/day), where:

Current Excess Thermal Load (Above System Potential) = QPS x ΔT x (1000/35.3) x 86400 x 5/9) kcal/day

ΔT = TPS - TSP, degrees F.

QPS = Treatment plant effluent flow, cfs

TPS = Treatment plant maximum daily effluent temperature, degrees F.

TSP = System Potential temperature, degrees F. (D001= 64.6°F; R001 = 58.5°F; F001A= 53.1°F)

Other factors: 1000 kg/m3; 35.3 ft^3/m^3; 86400 sec/day; 5/9 degrees C/degrees F

Table A5: Temperature and Thermal Load Limits

Outfall Number	Parameter	Units	Applicable Time Period	Average Monthly	Average Weekly	Daily Maximum
D001	Temperature	°C	May 1-October 31	-	-	25 (See notes a. and b.)
	Allowable Thermal Load (See note d.)	million kcal/day	May 1-October 31	-	-	20
R001	Temperature	°C	May 1-October 31	-	-	25 (See notes a. and b.)
	Allowable Thermal Load (See note d.)	million kcal/day	May 1-October 31	-	-	24
F001 (See note e.)	Temperature	°C	May 1-October 31			25 (See notes a. and c.)
	Allowable Thermal Load (See note d.)	million kcal/day	May 1-October 31	-	-	7.0

Notes:

a. The measurement of maximum effluent temperature must be the maximum 1-hour average temperature.

b. The permittee may demonstrate compliance with this limitation by either complying with this thermal shock temperature limitation (Option A) or complying with one of the following allowable thermal shock load limits (relative to 25°C, the thermal shock criterion):

Option B: Outfall D001 - 36 million kcal/day
Outfall R001 - 66 million kcal/day

Option C: Thermal Shock Load Limit = $0.3 \times (Q_e + Q_r \times 0.05) \times 2.448$ million kcal/day

Where:

Q_r = Stream flow, cfs

Q_e = Treatment plant effluent flow, cfs

c. The permittee may demonstrate compliance with the thermal shock temperature limitations by either complying with a temperature limit (Option A) or complying with the following allowable thermal shock load limits (relative to 25°C, the thermal shock criterion):

Option B: Outfall F001 - 85 million kcal/day (Applicable during May)
68 million kcal/day (Applicable during June)
93 million kcal/day (Applicable during July)
76 million kcal/day (Applicable during August)
60 million kcal/day (Applicable during September)
69 million kcal/day (Applicable during October)

Outfall Number	Parameter	Units	Applicable Time Period	Average Monthly	Average Weekly	Daily Maximum
d. The thermal load limits for the Durham, Rock Creek and Forest Grove facilities are based on the 2001 Tualatin sub-basin TMDL. The TMDL focused on the July/August time period as the critical time period for deriving wasteload allocations. The permittee must demonstrate compliance with the thermal load limits by using the thermal credits calculated for this time period. The permittee may use actual effluent flows and temperatures, and actual stream flows to calculate the thermal loads for the Durham, Rock Creek and Forest Grove treatment facilities. DEQ may reopen and modify or reissue the permit to include revised temperature and thermal load limits based on new information or on new or revised laws, regulations, or policies related to temperature, including revised TMDL provisions for the Tualatin River Basin. e. The compliance point is at the NTS outlet structure prior to discharge to Outfall F001. During this period (May 1 – October 31), when stream flows are high (≥350 cfs at the Farmington gauge) and preclude the use of the Forest Grove NTS, the compliance point is at the Forest Grove WRRF.						

3. Bacteria, Total Residual Chlorine, pH, and Dissolved Oxygen Limits

Table A6: Bacteria, Total Residual Chlorine, pH and Dissolved Oxygen Permit Limits

Outfall Number	Parameter (See note a.)	Units	Average Monthly	Average Weekly	Daily Maximum
D001 & D003 R001 & R003 H001A & H001B F001, F003 & F004	*E. coli* (See notes b and c.)	#/100 mL	Must not exceed a monthly geometric mean of 126, no single sample may exceed 406		
D001 & D003	Chlorine, Total Residual (See notes b and d.)	mg/L	0.019	-	0.026
R001 & R003	Chlorine, Total Residual (See note d.)	mg/L	0.009	-	0.025
D001 & D003	pH (See notes b and e.)	SU	Instantaneous limit between a daily minimum of 6.2 and a daily maximum of 9.0		
R001 & R003	pH (See note e.)	SU	Instantaneous limit between a daily minimum of 6.3 and a daily maximum of 9.0		
H001A & H001B	pH	SU	Instantaneous limit between a daily minimum of 6.3 and a daily maximum of 9.0		
F001 & F003	pH (See note a.)	SU	Instantaneous limit between a daily minimum of 6.3 and a daily maximum of 9.0		
D001	Dissolved Oxygen (See note f.)	mg/L	Must not be less than 5.2 mg/L as a daily average following the chlorine contact chamber		
R001	Dissolved Oxygen (See note f.)	mg/L	Must not be less than 3.0 mg/L as a daily average following the chlorine contact chamber		
F001	Dissolved Oxygen (See note f.)	mg/L	Must not be less than 6.0 mg/L as a daily average leaving the Natural Treatment System		

Notes:

a. All limits within this table apply year-round unless otherwise noted and apply individually to the Durham WRRF, Rock Creek WRRF, Hillsboro WRRF and Forest Grove WRRF. The compliance point for *E. coli* bacteria is at the Forest Grove WRRF on a year-round basis. When discharging through the NTS during the low flow period, the compliance point for dissolved oxygen and pH is at the NTS outlet structure prior to discharge to Outfall F001. From May 1 – October 31, when stream flows are high (≥350 cfs at Farmington gauge) and preclude the use of the Forest Grove NTS, the compliance point for dissolved oxygen and pH is at the Forest Grove WRRF.

b. On any day when discharge occurs through both Outfalls D001 and D003, the limits for bacteria, total residual chlorine and pH apply separately to each outfall.

c. If a single sample exceeds 406 organisms/100 mL, the permittee may take at least 5 consecutive re-samples at 4-hour intervals beginning within 28 hours after the original sample was taken. A geometric mean of the 5 re-samples that is less than or equal to 126 *E. coli* organisms/100 mL demonstrates compliance with the limit.

d. DEQ has established a minimum Quantitation Limit of 0.05 mg/L for Total Residual Chlorine. Any analysis done for Total Residual Chlorine must have a quantitation limit that is either equal to or less than 0.05 mg/L. In cases where the average monthly or maximum daily limit for Total Residual Chlorine is lower than the Quantitation Limit, DEQ will use the reported Quantitation Limit as the compliance evaluation level.

e. Monitoring for pH will be conducted via continuous monitoring for Outfalls D001 and R001. At these outfalls, pH may not be outside the limit ranges indicated above for more than a total of 7 hours and 26 minutes in any calendar month, and no individual excursion from this range may exceed 60 minutes. In the event continuous monitoring equipment for pH is inoperable, the permittee may obtain compliance with daily manual grab samples collected once per day. Use of manual grab samples to be halted once continuous pH monitoring system is operational.

f. Limits apply only during low river flow periods.

4. Phosphorus Permit Limits

The permittee must comply with the limits for phosphorus in the following table:

Table A7: Phosphorus Limitations

Outfall Number	Parameter	Units	Applicable Time Period	Monthly Median Limit (See note a.)	Seasonal Median Limit (See note b.)
D001	Total Phosphorus	mg/L	May 1 – October 15 (See note c.)	0.11	N/A
R001	Total Phosphorus	mg/L	May 1 – September 30 (See note c.)	0.10	N/A
F001 (See note d.)	Total Phosphorus	lb/day	May 1 – September 30 (See note c.)	81.6 (calculated monthly median total phosphorus mass load from R001 in lb/day) (See note e.)	66.1 (calculated monthly median total phosphorus mass load from R001 in lb/day) (See note e.)

Notes:

a. The monthly median for September is calculated from September 1 through the day the Lake Oswego Corporation stops diverting water from the river, or through the applicable time period as noted above, whichever is earlier.

b. The seasonal median must be reported in the September DMR and is calculated from May 1 through the day the Lake Oswego Corporation stops diverting water from the river, or the applicable time period note above, whichever is earlier.

c. Phosphorus limitations do not apply after September 15 provided diversions to Lake Oswego have ceased and the 7-day average flow at the Farmington Gauges is ≥ 130 cfs.

d. The compliance point for the Forest Grove facility is at the NTS outlet structure prior to discharge to Outfall F001. During this period (May 1 – September 30), when stream flows are high (≥ 350 cfs at the Farmington Gauge) and preclude the use of the Forest Grove Natural Treatment System, the compliance point is at the Forest Grove WRRF.

e. Phosphorus limitations for F001 based upon Table 2-13 in Chapter 2 of 2012 Tualatin TMDL. The monthly median limit at F001 will be calculated as follows: [Monthly median load (81.6 pounds per day) - ((Monthly median Rock Creek discharge concentration of total P mg/L) × (Actual monthly median Rock Creek effluent volume MGD) × (8.34 conversion factor))]. The seasonal median limit at F001 will be calculated as follows: [Seasonal median load (66.1 pounds per day) - ((Seasonal median Rock Creek discharge concentration of total P mg/L) × (Actual seasonal median Rock Creek effluent volume MGD) × (8.34 conversion factor))].

5. Ammonia Toxicity Limits

The permittee must comply with the limits for ammonia toxicity in the following table:

Table A8: Effluent Limits for Ammonia Toxicity

Outfall Number	Parameter	Units	Applicable Time Period	Stream Flow (cfs) (See note a.)	Daily Maximum (mg/L)	Monthly Average (mg/L)
D001	Ammonia	mg/L	June 1 – October 31	N/A	15.0	5.4
		mg/L	May 1 – May 31	≤500 cfs	18.4	7.7
		mg/L	May 1 – May 31	>500 cfs	39.5	16.6
		mg/L	November 1 – April 30	≤500 cfs	20.3	8.5
		mg/L	November 1 – April 30	>500 to 1000 cfs	34.2	14.3
		mg/L	November 1 – April 30	>1000 cfs	55.5	23.3
R001	Ammonia	mg/L	June 1 – October 31	N/A	7.5	3.1
		mg/L	May 1 – May 31	≤500 cfs	10.6	3.9
		mg/L	May 1 – May 31	>500 cfs	29.6	12.1
		mg/L	November 1 – April 30	≤500 cfs	11.5	4.4
		mg/L	November 1 – April 30	>500 to 1000 cfs	23.2	11.0
		mg/L	November 1 – April 30	>1000 cfs	35.2	16.2
F004 (See note b.)	Ammonia	mg/L	June 1 – October 31	N/A	31.6	12.4
F004 (See note b.)	Ammonia	mg/L	May 1 – May 31	≤500 cfs	32.9	13.8
H001A & H001B	Ammonia	mg/L	When Discharging (typically Nov 1 – April 30)	≤1000 cfs	50.4	17.4

Notes:

a. Flow as measured at the Farmington Gauge in cubic feet per second (cfs). Daily average flows at the Farmington Gauge to be used to determine applicable max daily limits; monthly average flows at the Farmington Gauge to be used to determine applicable monthly average limits.

b. The compliance point for ammonia is at the Forest Grove WRRF at internal Outfall F004. Ammonia toxicity limits do not apply when discharging through the NTS.

6. Ammonia For Dissolved Oxygen

The permittee must comply with the following limits for ammonia to address dissolved oxygen within the Tualatin River:

a. For ammonia limits to address dissolved oxygen, ammonia reduction period is May 1 through November 15, except as noted below.

b. Between September 1 and November 15, when the seven-consecutive-day median of daily mean flow at the Farmington gauge is at least 350 cfs, ammonia reduction does not apply.

c. The ammonia loadings as ammonia-nitrogen must not exceed the Weekly Median Ammonia Load limitation, calculated using the formula and variables given below and in Table A9.

d. The Tier 1 concentration variable (Table A9) is in effect for any week when ammonia reduction is required unless the following conditions occur, in which case the Tier 2 concentration variable is in effect:

- For Durham WRRF: The weekly mean of the daily mean DO concentrations at RM 3.4 (Oswego Dam), with no credit for super saturation, for the ***previous*** week is less than 6.7 mg/L.
- For Rock Creek WRRF and Forest Grove WRRF: Either the weekly mean of the daily mean DO concentrations, with no credit for supersaturation, at RM 24.5 (Scholls), for the ***previous*** week is less than 6.7 mg/L or the weekly mean of the daily mean DO concentrations, with no credit for super saturation, at RM 3.4 (Oswego Dam), for the ***previous*** week is less than 6.7 mg/L. (See note below.)

Note: In-stream monitoring of dissolved oxygen is currently conducted following the USGS QA/QC procedures described in *Guidelines and Standard Procedures for Continuous Water-Quality Monitors: Site Selection, Field Operation, Calibration, Record Computation, and Reporting, 2000: U.S. Geological Survey Water Resources Investigations Report 00-4252, 53 p.* http://water.usgs.gov/pubs/wri/wri004252/

Table A9: Ammonia Dissolved Oxygen Limit Determination

<table>
<tr><th>Outfall Number</th><th>Parameter</th><th colspan="3">Weekly Median Load Limit (lb/day)</th></tr>
<tr><td>D001 & (R001 + F001)
(See notes a and b.)</td><td>Ammonia – N
(NH3-N)</td><td colspan="3">Weekly Median Ammonia Load Limit = (Farmington Flow) × (Concentration Variable) × (5.39) lb/day, where:

Farmington Flow is the previous calendar weekly consecutive-day median of the daily mean flow at the Farmington gauge in cfs, and

Concentration Variable is NH_3-N in mg/L during the applicable period as follows:</td></tr>
<tr><th colspan="2" rowspan="2">Concentration Variable (NH_3-N, mg/L)
(The applicable tier is based on the in-stream dissolved oxygen concentration described below)</th><th colspan="2" rowspan="2">Applicable Time Period</th></tr>
<tr></tr>
<tr><th>Tier 1</th><th>Tier 2</th><th colspan="2"></th></tr>
<tr><td>1.4</td><td>1.4</td><td colspan="2">May and June</td></tr>
<tr><td>1.4</td><td>0.8</td><td colspan="2">July</td></tr>
<tr><td>1.4</td><td>0.3</td><td colspan="2">August</td></tr>
<tr><td>0.8</td><td>0.21</td><td colspan="2">September through November 15</td></tr>
<tr><td colspan="5">Notes:
a. Outfalls R001 and F001 represents the bubbled ammonia load limit for the Rock Creek and Forest Grove WRRFs.
b. The compliance point for the Forest Grove facility is at the NTS outlet structure prior to discharge to Outfall F001. During the period (May 1 – November 15), when stream flows are high (≥ 350 cfs at the Farmington Gauge) and precludes the use of the Forest Grove Natural Treatment System, the compliance point is at the Forest Grove WRRF.</td></tr>
</table>

7. Regulatory Mixing Zone

Pursuant to OAR 340-041-0053, the permittee is granted regulatory mixing zones for each outfall as described below:

Table A10: Designated Regulatory Mixing Zone Boundaries

Outfall Number	Regulatory Mixing Zone Size (Distance downstream from each outfall)	Zone of Immediate Dilution (ZID) Size (Distance downstream from each outfall)
D001	100 feet from diffuser	10 feet from diffuser
D003	65 feet	10 feet
R001	100 feet from diffuser	10 feet from diffuser
R003	50 feet	10 feet
H001A & B	100 feet	10 feet
F001	100 feet	10 feet
F003	100 feet	10 feet

8. Use of Recycled Water

The permittee is authorized pursuant to OAR 340-055-0012(7) to distribute recycled water from Outfalls D002, F002, H002 and R002 if it is:

a. Treated and used according to the criteria listed in Table A11.

b. Managed in accordance with its DEQ-approved Recycled Water Use Plan unless exempt as provided in Schedule D.

c. Used in a manner and applied at a rate that does not adversely affect groundwater quality.

d. Applied at a rate and in accordance with site management practices that ensure continued agricultural, horticultural, or silvicultural production and does not reduce the productivity of the site.

e. Irrigated using sound irrigation practices to prevent:

   i. Offsite surface runoff or subsurface drainage through drainage tile;

   ii. Creation of odors, fly and mosquito breeding, or other nuisance conditions;

   iii. Overloading of land with nutrients, organics, or other pollutants; and

   iv. Public access and exposure.

Table A11: Recycled Water Limits

Class	Level of Treatment (after disinfection unless otherwise specified) (See note a.)	Beneficial Uses
A	Class A recycled water must be oxidized, filtered and disinfected. Before disinfection, unless otherwise approved in writing by DEQ, turbidity may not exceed (See note b.): • An average of 2 NTUs within a 24-hour period. • 5 NTUs more than five percent of the time within a 24-hour period. • 10 NTUs at any time. After disinfection, total coliform may not exceed: • A median of 2.2 organisms per 100 mL based on daily sampling over the last 7 days that analyses have been completed. • 23 organisms per 100 mL in any single sample.	Class A recycled water may be used for: • Class B, Class C, Class D, and non-disinfected uses. • Irrigation for any agricultural or horticultural use. • Landscape irrigation of parks, playgrounds, school yards, residential landscapes, or other landscapes accessible to the public. • Commercial car washing or fountains when the water is not intended for human consumption. • Water supply source for non-restricted recreational impoundments.
B	Class B recycled water must be oxidized and disinfected. Total coliform may not exceed: • A median of 2.2 organisms per 100 mL, based on the last 7 days that analyses have been completed. • 23 total coliform organisms per 100 mL in any single sample.	Class B recycled water may be used for: • Class C, Class D, and non-disinfected uses. • Stand-alone fire suppression systems in commercial and residential building, non-residential toilet or urinal flushing, or floor drain trap priming. • Water supply source for restricted recreational impoundments.

Class	Level of Treatment (after disinfection unless otherwise specified) (See note a.)	Beneficial Uses
C	Class C recycled water must be oxidized and disinfected. Total coliform may not exceed: • A median of 23 total coliform organisms per 100 mL, based on results of the last 7 days that analyses have been completed. • 240 total coliform organisms per 100 mL in any two consecutive samples.	Class C recycled water may be used for: • Class D and non-disinfected uses. • Irrigation of processed food crops; irrigation of orchards or vineyards if an irrigation method is used to apply recycled water directly to the soil. • Landscape irrigation of golf courses, cemeteries, highway medians, or industrial or business campuses. • Industrial, commercial, or construction uses limited to: industrial cooling, rock crushing, aggregate washing, mixing concrete, dust control, nonstructural firefighting using aircraft, street sweeping, or sanitary sewer flushing.
D	Class D recycled water must be oxidized and disinfected. *E. coli* may not exceed: • A 30-day geometric mean of 126 organisms per 100 mL. • 406 organisms per 100 mL in any single sample.	Class D recycled water may be used for: • Non-disinfected uses. • Irrigation of firewood, ornamental nursery stock, Christmas trees, sod, or pasture for animals.
Non-disinfected	Non-disinfected recycled water must be oxidized.	Non-disinfected water may be used for: • Irrigation for growing commercial timber, fodder, fiber or seed crops not intended for human ingestion.

Notes:

a. Alternative treatment process: The DEQ may approve in writing an alternative wastewater treatment process if it is demonstrated that treatment is equivalent to and can achieve the recycled water criteria required for a specific beneficial purpose. The permittee must update its Recycled Water Use Plan to incorporate DEQ's approval of an alternative wastewater treatment process along with any terms and conditions associated with the approval. The Recycled Water Use Plan will be subject to public notice and comment.

b. The "unless otherwise approved" clause applies only to the Durham WRRF.

9. Use of Recycled Water to Produce Highly Purified Water at Outfall HP001

The permittee must comply with all of the recycled water quality limits established by Table A11 and detailed in its DEQ-approved Recycled Water Use Plan for Individual Batch Process Production of Highly *Purified Water for Beneficial Reuse.* The permittee is authorized to produce recycled water as highly purified water if:

a. Treated, monitored, and used in the manner described in its DEQ-approved *Recycled Water Use Plan for Individual Batch Process Production of Highly Purified Water for Beneficial Reuse.* The plan is updated and approved by DEQ for use of highly purified water. Updates to the plan do not constitute a permit modification provided anticipated future uses of high purity water are consistent with the uses described in the plan and approved by EQC and Oregon Health Authority.

b. Disposal of unused purified water is conducted in a similar manner as Class A recycled water. No direct discharge of highly purified water to waters of the state is permitted.

10. Biosolids

The permittee may land apply biosolids or provide biosolids for sale or distribution, subject to OAR 340-050, 40 CFR, Part 503 and the following conditions:

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

b. The permittee must apply biosolids at or below the agronomic rates approved by DEQ in order to minimize potential groundwater degradation.

c. 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.

d. Prior to 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.

e. The permittee must not apply biosolids containing pollutants in excess of the ceiling concentrations shown in the table below. The permittee may apply biosolids containing pollutants in excess of the pollutant concentrations, but below the ceiling concentrations, however, the total quantity of biosolids applied cannot exceed the cumulative pollutant loading rates in the table below.

Table A12: 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
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*.

11. Chlorine Usage

At the Forest Grove and Hillsboro WRRFs, the permittee is prohibited from using chlorine or chlorine compounds for disinfection of effluent discharged to the river. Chlorine residual in effluent resulting from chlorine or chlorine-containing chemicals used for maintenance or other purposes is also prohibited. Chlorine or chlorine compounds may be used for disinfection of recycled water only.

12. Mercury Minimization Plan

a. The permittee must implement the DEQ-approved Mercury Minimization Plan (MMP). The MMP must include the following elements:

i. Facility name and permit number
ii. Plan submittal date
iii. Identification and evaluation of current and potential mercury sources, including industrial, commercial, and residential sources
iv. An implementation plan that includes specific methods for reducing mercury
v. Changes (if any) that may affect mercury, such as changes to operations, treatment, and chemicals used
vi. Mercury sample results for samples collected during the past five years
vii. Annual average effluent mercury concentrations and mass loads
viii. Annual average biosolids concentrations and mass loads
ix. Summary of mercury reduction activities implemented during the past five years

b. If DEQ determines that the MMP is not effective at reducing mercury concentrations, DEQ may require further changes to the MMP and may reopen the permit to modify the permit conditions.

c. The permittee must evaluate the effectiveness of the MMP, and update the MMP based on that evaluation. The updated MMP must be submitted in accordance with the schedule specified in Table B1.

d. Permittee must also refer to Schedule D Condition 15.c.iii regarding requirements related to development of a mercury minimization assessment in the MS4 permit.

13. Use of Wet Weather Outfalls

For the Durham (D003) and Forest Grove (F003) secondary outfalls, the permittee must not discharge for a period greater than 14 consecutive days without approval from DEQ.

For the Rock Creek secondary Outfall (R003), the permittee may only discharge when the capacity of the primary Outfall (R001) is exceeded.

14. Controls and Limitations for Stormwater Discharges from MS4

As listed on the cover page, the TMDLs that include wasteload allocations (WLAs) for MS4 discharges applicable to this permit include the Tualatin Sub-basin TMDL (2001/2012) with WLAs for Total Phosphorous, *E. coli* Bacteria, and Settleable Volatile Solids (TSS as surrogate), and the Willamette Basin TMDL WLA for Total Mercury (2019/2021). TMDL requirements for the permittee's MS4 system are discussed further in Schedule D.14.c.

a. **Authorized Discharges**

Subject to the terms and conditions of this permit, the permittee is authorized to discharge municipal stormwater to surface waters of the state from its MS4, within the defined permit coverage area.

This permit also conditionally authorizes discharges from the permittee's MS4, which are categorized as allowable non-stormwater discharges in Schedule A.14.a.iv.

i. Requirement to Reduce the Discharge of Pollutants

The permittee must continue to implement, adaptively manage, and enforce the Stormwater Management Program (SWMP) designed to reduce pollutants from the MS4 to the Maximum Extent Practicable (MEP), to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act. Compliance with this permit and implementation of the DEQ-approved SWMP Document in accordance with Schedule A.14.b, establishes the MEP requirement, unless DEQ modifies the permit as provided in Oregon Administrative Rule (OAR) 340-045-0055 to require additional controls.

The permittee is responsible for compliance within its jurisdiction as identified in this permit, and is not responsible for compliance outside of its jurisdiction.

ii. Water Quality Standards

Compliance with all permit requirements constitutes compliance with applicable water quality standards as established in OAR 340-041.

If the permittee or DEQ determines that a pollutant in the permittee's MS4 discharge is causing or contributing to an exceedance of an applicable water quality standard based on site-specific credible evidence, the permittee must take the following corrective actions:

(A) Within 48 hours of becoming aware of or being notified of the exceedance, the permittee must begin to investigate the cause of the exceedance;

(B) Within 30 days of becoming aware of the exceedance, the permittee must notify DEQ in writing of the exceedance (for on-going or continuing exceedances, a single written notification will fulfill this requirement); and

(C) Within 60 days of becoming aware of or being notified of the exceedance, the permittee must submit a report to DEQ that documents the following:

1) The results of the investigation, including the date the exceedance was discovered or the date that the permittee was notified by DEQ;

2) A description of the conditions that are known or suspected to have caused or contributed to the exceedance; and

3) Corrective actions taken or planned, if any, including the date corrective action was completed or is expected to be completed.

DEQ will review the report submitted and either approve it or require modifications. The permittee must implement the corrective action(s) in accordance with the schedule approved by DEQ. DEQ may require a timeline and enforceable milestones for completion of the corrective action plan. The details of all corrective actions implemented associated with Schedule A.14.a.ii(C) must be included in the subsequent annual report.

If the exceedance is due to an illicit discharge and the permittee confirms that the required response per Schedule A.14.c.iii has occurred, the requirements listed in Schedule A.14.a.ii(A), (B), and (C) are not required, though the details of the illicit discharge and response must be included in the subsequent annual report in the illicit discharge section.

If the permittee determines that the exceedance is already being addressed by actions associated with implementation of a DEQ-approved Total Maximum Daily Load (TMDL) Implementation Plan, the permittee must submit a report to DEQ with the next annual report that documents the following:

(D) The results of the investigation, including the date the exceedance was discovered;

(E) A description of the conditions that are known or suspected to have caused or contributed to the exceedance; and

(F) The applicable actions of the permittee's DEQ-approved TMDL Implementation Plan that were or are being implemented.

iii. Limitations of Coverage

The permit does not authorize:

(A) Stormwater discharges associated with industrial activities [as defined in 40 CFR §122.26(b)(14)] or stormwater associated with construction activities [as defined in 40 CFR §122.26(b)(14)(x) and (b)(15)]. Such discharges are regulated through DEQ's NPDES Industrial Stormwater General Permits and DEQ's NPDES Construction Stormwater General Permits; or another appropriate NPDES permit.

(B) Stormwater discharges to underground injection control (UIC) systems

iv. Allowable Non-Stormwater Discharges

The permittee must effectively prohibit non-stormwater discharges into the MS4s unless such discharges are otherwise permitted under this subsection, another NPDES permit or other applicable state or federal permit, or are otherwise exempted or authorized by DEQ. The permit does not authorize the discharge of non-stormwater from the MS4, except where such discharges satisfy one of the following conditions:

(A) The non-stormwater discharge is regulated under a separate NPDES permit.

(B) The non-stormwater discharge is categorized as an authorized or allowable non-stormwater discharge listed below:

1) Uncontaminated water line flushing.
2) Landscape irrigation. For permittee owned or operated areas landscape irrigation will be considered allowable only if pesticides and fertilizers are applied in accordance with manufacturer's instructions.
3) Diverted stream flows.
4) Uncontaminated groundwater infiltration (as defined at 40 CFR § 35.2005(20)) to separate storm sewers.
5) Rising groundwaters.
6) Uncontaminated pumped ground water.
7) Potable water sources (including potable groundwater monitoring wells and draining and flushing of municipal potable water storage reservoirs).
8) Startup flushing of groundwater wells.
9) Foundation, footing and crawlspace drains (where flows are not contaminated).
10) Uncontaminated air conditioning or compressor condensate.
11) Irrigation water.
12) Springs.
13) Lawn watering.
14) Individual residential car washing.
15) Charity car washing (provided that steam and heated water are not used, and that washing is restricted to the outside of the vehicle with no rinsing or washing of engines, transmissions or undercarriages). Permittee should consider requiring that only phosphate-free soaps/detergents are used and

provide educational materials on the harmful effects that other chemicals, soaps, detergents, and heated water or steam can cause.

16) Flows from riparian habitats and wetlands.
17) Dechlorinated swimming pool discharges including hot tubs (heated water must be cooled for at least 12 hours prior to discharge). Swimming pool and hot tub discharges with other pollutants that may impair beneficial uses or exceed water quality criteria, such as chlorine, bromine, and copper, may not be discharged to the MS4.
18) Fire hydrant flushing and emergency firefighting activities.
19) Street and pavement washwaters, including for bridges or pedestrian bridges (provided that chemicals, soaps, detergents, steam or heated water are not used). Permittee and co-implementers should also consider requiring that areas to be washed first be swept prior to washing, and sweepings collected for proper disposal outside the MS4 system.
20) Routine external building wash-down (provided that chemicals, soaps, detergents, steam or heated water are not used).
21) Water associated with dye testing activity.
22) Discharges of treated water from investigation, removal and remedial actions selected or approved by DEQ pursuant to Oregon Revised Statute (ORS) Chapter 465.
23) Any other discharge deemed as *de minimis* by DEQ.

If any of these allowable non-stormwater discharges are or becomes a significant source of pollutants, the permittee must prohibit that discharge or require implementation of appropriate best management practices (BMPs) to reduce the discharge of pollutants associated with the source before discharge to the MS4.

b. **Permittee's Responsibilities**

The permittee is responsible for permit compliance related to its permit coverage area, or where this permit requires the specific permittee to take an action.

i. Coordination Among Other Public Entities and Joint Agreements

(A) The permittee has elected to work with or delegate implementation of one or more stormwater management program control measures to co-implementers as designated in this permit, and may elect to work with or delegate to other regulated MS4s, contractors, or public or private entities as appropriate. The permittee remains responsible for compliance with any permit conditions that another entity fails to implement.

(B) If a permittee elects to work with or delegate implementation of one or more SWMP control measures to a co-implementer or another entity, there must be a written agreement between the permittee and the other entity memorializing the delegation, and all existing such agreements must be updated to reflect current permit requirements by November 1, 2026. These agreements must be referenced or included in the SWMP Document (see Schedule A.14.b.iii) and made accessible, and must identify roles and responsibilities for managing stormwater contributions to streams and other surface waters, as well as address relationship and partnering opportunities for capital improvement projects, long-term maintenance and monitoring, and other elements of Schedule A.14.c, as appropriate.

ii. Maintain Adequate Legal Authority

The permittee must maintain adequate legal authority through ordinance(s), code(s), interagency agreement(s), contract(s), and/or other mechanisms to control pollutant discharges into and discharges from its MS4 and to implement and enforce the conditions of this permit, to the extent allowable pursuant to the respective authority granted under state law.

iii. SWMP Document

The permittee must develop and maintain a written Stormwater Management Program Document (referred to as a SWMP Document), which describes in detail how the permittee implements the required control measures in this permit and reduce the discharge of pollutants, or requires their implementation through Inter-Governmental Agreements (IGAs) with co-implementers per Schedule A.14.b.i and ii. The SWMP Document must be maintained over the course of the permit term and must describe programs and BMPs or refer to publicly available documents detailing the permittee's schedules for implementation of any control measure components to be developed and/or implemented during the term of this permit. The SWMP Document is subject to approval by DEQ, and is a requirement of this permit.

Documentation of the actions or activities required by this Permit or described in the SWMP Document must be submitted to DEQ upon request. If any requirement of this permit is being fulfilled by an agreement with another entity in accordance with Schedule A.14.b.i, the SWMP Document must describe how the requirement is being fulfilled and refer to or include any written agreements describing each party's role.

The permittee must make the first iteration of the SWMP Document available for public review prior to submission to DEQ, by at a minimum, posting to the publicly accessible website required in Schedule A.14.c.ii(A). The SWMP Document is due to DEQ on April 1, 2024, after which DEQ will review and approve the submission or require modification(s) of it. The final approved version of the SWMP Document must thereafter be made available to the public through the permittee's websites. If DEQ notifies the permittee that changes to the SWMP Document are necessary pursuant to Schedule A.14.b.iii or A.14.b.v, the notification will offer the permittee an opportunity to propose alternative program changes to meet the objectives of the requested modification. The permittee must implement the approved SWMP Document.

The DEQ-approved Stormwater Management Plan currently in effect at the time of this permit renewal should continue to be implemented until the SWMP Document has been approved by DEQ.

iv. SWMP Information and Metrics

The permittee must track activities and document program implementation of the SWMP control measures, including data that may be aggregated from co-implementers as appropriate (e.g., the number of inspections, enforcement actions, and/or types of public education actions, etc.), and cite relevant information and metrics, reflecting the specific reporting period, in each Annual Report. These metrics should be used by the permittee for adaptive management purposes, and where they indicate a trend of reduced effectiveness or performance (e.g., fewer citizens engaged by outreach efforts) the permittee is required to consider whether programmatic improvements can be made to reverse the trend.

v. SWMP Resources

The permittee must provide adequate finances, staff, equipment and other support capabilities to implement the control measures and other requirements outlined in this permit.

vi. SWMP Document Review & Modification

The permittee must continue to follow an adaptive management approach developed under the previous permit iteration in order to assess and modify, as necessary, any or all existing SWMP components and adopt new or revised SWMP components to achieve reductions in stormwater pollutants to the MEP. In addition to elements required on particular schedules by this permit (i.e., Schedules A.14.c.iii(E), A.14.c.iv(E), and A.14.c.v(B)), the permittee may update actions and/or activities described in the approved SWMP Document for adaptive management purposes in accordance with the following procedures:

(A) Modifications that add elements to the approved SWMP Document may be made by the permittee at any time. A description of any modifications must be included in the Annual Report for that year.

(B) Modifications to delete, adjust, or replace elements in the approved SWMP Document with an alternate action or activity may be made by the permittee at any time. Modification must be supported by documentation to be submitted to DEQ with the subsequent annual report, which must include:

1) An analysis of why the new action is an appropriate alternative from the standpoint of effectiveness, feasibility and/or cost; and,

2) Expectations on the effectiveness of the replacement action or activity.

c. **Stormwater Management Program Control Measures**

Until the SWMP Document required per Schedule A.14.b.iii is approved by DEQ, the permittee must continue to implement all existing SWMP control measures appropriate to their jurisdiction, and, after the effective date of the permit, must begin to revise their SWMP control measures, as needed, in order to implement any new control measure components required by this permit.

Table A13 identifies required due dates for new program control measures. DEQ may extend the due date(s) or implementation date(s) for any individual stormwater management plan control measure in the event of any extraordinary circumstances including but not limited to pandemic, wildfire, earthquake, flood or other natural disaster provided that the permittee requests an extension in advance and provides all documentation available regarding the specific impacts as to why the deadline cannot be met. In that circumstance, DEQ will respond to the extension request and will document any revised due date(s) when applicable.

i. Public Education & Outreach

The permittee must continue to implement a documented public education and outreach strategy to inform the public about the impacts of stormwater discharges on receiving waterbodies and the actions that they can take to reduce pollutants in stormwater runoff. The education and outreach strategy must identify pollutants of concern, the priority audience(s), specific education and/or activities, the entity or individual responsible for implementation, and be designed to address pollution from municipal stormwater within the permittee's communities. The strategy may incorporate elements of cooperative efforts undertaken with co-implementers or other regulated MS4s, or efforts by other groups or organizations and must be included in the SWMP Document directly or by reference and be prepared to initiate implementation upon DEQ's approval of the SWMP Document.

(A) Education & Outreach Program

The permittee's public education and outreach programs must include educational materials, activities and/or actions for the community. At a minimum, educational efforts should prioritize and focus on audience groups listed in Schedule A.14.c.i(C), as applicable to the permittee's and co-implementers' community and water quality concerns. The goal of the education and outreach program is to change the behaviors and practices by the public and the business community that cause or contribute to adverse stormwater impacts on receiving waters and to identify and remove barriers to adopting alternative behaviors and practices, if possible. The program should promote information and specific actions to:

1) Increase audience understanding of specific stormwater quality issues in the waterways of the community and which pollutants, products, and behaviors contribute to the problems;
2) Communicate and demonstrate how to reduce pollutant discharges in stormwater runoff;
3) Encourage participation by the public in the protection and enhancement of local waterways and wildlife, as well as responsibility in behaviors to prevent illicit discharge from entering the MS4 or impacting receiving waters; and,
4) Promote, publicize and facilitate reporting of illicit discharges.

To be considered adequate, the public education and outreach program must at a minimum include the activities in Schedule A.14.c.i(B)-(D) below.

(B) Stormwater Education Activities

The permittee must contribute to, distribute, or offer educational messages and/or activities to or for the public at similar levels of effort as those associated with the previous permit.

Educational messages or activities may include printed materials (e.g., brochures or newsletters); electronic materials (e.g., social media, websites or e-newsletters); mass media (e.g., utility bill inserts, transit advertisements or signage in highly trafficked corridors, newspaper articles or public service announcements); workshops, or other educational events or formats.

The permittee may use existing materials if applicable. Giving consideration to the community's overall demographics and the prioritized audiences' demographics, the permittee must consider delivering messages in other languages and using other culturally relevant information and techniques to ensure diversity, equity and inclusion, as applicable.

(C) Priority Audiences and Topics

The permittee must at minimum, conduct, participate in, and/or contribute to education and outreach to the priority audiences identified below, as applicable to the community and water quality concerns. The permittee must focus efforts on conveying relevant messages using the priority topics identified below or stormwater issues of significance in their community.

1) Priority Audiences:

   a. General public (e.g., renters, homeowners, homeowner associations, youth, and other groups);

   b. Local elected officials, land use planners, engineers, developers, and/or employees of the permittee responsible for implementing the SWMP, as appropriate;

   c. Construction site operators (See Schedule A.14.c.i(C)2.j below);

   d. Businesses (which may include industrial and commercial facilities, entities that generate wash waters, mobile businesses and food carts, animal handling facilities, nurseries, etc., as appropriate to the water quality concerns of the permittee and to co-implementer communities); and,

   e. Any other groups/entities as appropriate.

2) Pollution Reduction Topics:

   a. Impacts of illicit discharges on receiving waters and how to report them.

   b. Appropriate practices or techniques to avoid adverse water quality impacts due to impervious surfaces.

   c. BMPs for proper use, application, storage, and disposal of pesticides, herbicides, fertilizers, and other household chemicals.

d. BMPs to avoid or reduce discharge of litter and trash to the MS4 or surface waters.

e. BMPs for recycling programs.

f. BMPs to avoid discharges from power washing, carpet cleaning, and auto repair and maintenance.

g. Low-impact development and green infrastructure approaches.

h. Watershed awareness education, including how storm drains lead to local creeks and rivers, and potential impacts to fish and other wildlife.

i. Operation & Maintenance practices for privately owned stormwater quality management facilities.

j. Construction site control measures and BMPs, including information on where in-depth training on erosion prevention and sediment control can be obtained.

k. Stormwater issues of significance identified by permittee.

(D) Tracking and Assessment

The permittee must describe the program in the SWMP Document and document implementation of the Public Education and Outreach requirements in each Annual Report. In each Annual Report, the permittee must summarize or report on metrics and/or tracking measures related to their implementation of the program (e.g., estimated number of members of each priority audience reached with each educational activity or type of educational activity, measurable goals reached, etc.), and plans for the following year.

ii. Public Involvement & Participation

The permittee must continue to implement a public involvement and participation program that provides opportunities for effective public participation in the maintenance, further development, and/or adaptive management of the permittee's stormwater program. The permittee must comply with their public notice requirements, if any, when implementing a public involvement participation process.

(A) Publicly Accessible Website

The permittee must maintain and promote a publicly accessible website with information on the permittee's SWMP implementation, the SWMP Document, contact information, and educational materials. The website must be maintained with current information, and be reviewed for accuracy at least annually and kept updated. The permittee's website must incorporate the following:

1) Illicit discharge complaint or report requirements (see Schedule A.14.c.iii(D)).
2) Drafts of documents listed in this permit as requiring public comment (i.e., the SWMP Document in Schedule A.14.b.iii, the Industrial/Commercial Facilities Strategy in Schedule A.14.c.vii(B), and the Monitoring Plan in Schedule B.15.b) must be posted and available for public comment for a minimum of 30 days, and comments must be considered prior to final issuance. Final reports, plans and other documents relevant to the MS4 programs must also be posted, as appropriate.
3) Links to ordinances, policies and/or guidance documents related to the construction, post-construction, and commercial/industrial stormwater management control programs, including education, training, licensing, and permitting.
4) Contact information for relevant staff, including phone numbers, mailing addresses and email addresses.

(B) Stewardship Opportunity

The permittee must continue to create or partner in the development and/or implementation of stewardship opportunities to foster public involvement. The permittee must provide at least one of the following stewardship opportunities or develop a more locally relevant equivalent:

1) Community watershed restoration or cleanup activities,
2) Storm drain marking or stenciling,
3) Volunteer monitoring,
4) Riparian plantings/facility enhancement,
5) Neighborhood low-impact development activities,
6) Adopt-A-Road or similar programs aimed at green infrastructure vegetation management,
7) Clean up events associated with waterways,
8) Community advisory committee, or
9) Other locally relevant opportunities.

(C) Tracking and Assessment

The permittee must describe the programs in the SWMP Document and document implementation in each Annual Report. In each corresponding Annual Report, the permittee must summarize or report on metrics or tracking measures related to implementation of the program.

iii. Illicit Discharge Detection & Elimination

The permittee must continue to implement and enforce a comprehensive program to detect and eliminate illicit discharges into the MS4, to the extent allowable by state laws. In addition, the permittee must continue to implement procedures to prevent, contain, and respond to spills, as well as seepage from sanitary sewer system, which

may discharge into the MS4 in accordance with all applicable federal and state laws, including proper notification to the Oregon Emergency Response System (OERS). Illicit discharges are defined in Schedule D, but the term primarily refers to discharges not composed entirely of stormwater. Conditional exceptions are identified in Schedule A.14.a.iv. Procedures and processes required below must be documented or referenced in the SWMP Document.

(A) MS4 Map

1) MS4 Map and Digital Inventory - The permittee must continue to maintain and update a current map of their MS4. The MS4 map may be in the form of a web-based or digital inventory, and must include the location of outfalls and an outfall inventory, conveyance system and structural stormwater control locations, and chronic illicit discharges as applicable (see Schedule A.14.c.iii(A).2-4, below), as well as annual dry-weather priority screening sites as designated under Schedule A.14.c.iii(E) (Dry Weather Screening Program). The permittee must delineate its MS4 by storm sewer drainage basin or catchment area, as appropriate, and identify the location and characteristics of any ongoing dry weather flows.

2) Outfall Inventory - The permittee must maintain inventories of all the known outfall locations, owned or operated by the permittee. The outfall location must include a unique identifier (e.g., alphanumeric code identifier), any geographic information (e.g., streets, manholes, or milepost markers) necessary to locate these outfalls in the field, and the name(s) of the receiving water(s). To the extent data are available, the permittee should include outfall characteristics such as presence of dry weather flows and details of the collection area for each (e.g., approximate acreage and relative proportions of land uses contributing to the outfall, impervious area contributing stormwater, tree cover, etc.).

3) Conveyance System and Stormwater Control Locations - The permittee must continue to maintain maps of the MS4 collection system and all known structural stormwater controls. Where applicable, features must include a unique identifier (e.g., alphanumeric code identifier) and any geographic information (e.g., streets, manholes, or milepost markers) necessary to locate these features in the field.

4) Chronic Illicit Discharges - The permittee must include the location(s) of any known chronic illicit discharge(s), as necessary for ongoing investigations or repeat/recurring issues in dense areas or commercial districts, for example, as applicable.

5) The permittee must submit or provide access to their updated MS4 map that includes the appropriate descriptions with the initial SWMP Document no later than April 1, 2024, and thereafter must make map(s) and digital inventories available to DEQ upon request.

(B) Ordinance and/or Other Regulatory Mechanisms

The permittee must continue to prohibit non-stormwater discharges into the MS4 (except those conditionally allowed by Schedule A.14.a.iv) through enforcement of an ordinance or other regulatory mechanism, to the extent allowable under state law. The permittee must implement appropriate enforcement procedures and actions to ensure compliance.

(C) Enforcement Procedures

The permittee must continue to implement their enforcement and response procedures as developed under the previous permit. The SWMP Document must describe or reference the enforcement and response procedures. The procedures should describe how repeat violations are addressed; the timelines for compliance; specifically address commercial and industrial facilities or activities as described in Schedule A.14.c.vii of this permit; and consider factors such as the amount and type of pollutant discharged, and whether the discharge was intentional or accidental, if known, and whether the discharge could have been prevented.

(D) Program to Detect and Eliminate Illicit Discharges

At a minimum, the permittee's program to detect and eliminate illicit discharges must include the following activities:

1) Illicit Discharge Complaints or Reports - The permittee must publicize a phone number, webpage, and/or other communication channel that the public can use to report illicit discharges. The complaint/reporting communication channel must be answered or responded to by trained staff during normal business hours and must include a system to record or capture incoming complaints or reports during non-business hours.

2) Response to Complaints or Reports - The permittee must respond to all complaints or reports of illicit discharges that have the potential to impact receiving waters through the MS4s. For discharges, including spills, which constitute a threat to human health, welfare, or the environment, the permittee must respond within 24 hours or as soon as possible after becoming aware of it if notified during weekends or after hours. Spills, or other illicit discharges, that may endanger human health, or the environment must be reported in accordance with all applicable federal and state laws, including notification to the OERS (at 800-452-0311). For all other reports of illicit discharges, the permittee must respond within four working days. The permittee's complaint response and the associated investigation must at a minimum, use the following timelines:

   a. Initial Investigation or Evaluation - Conduct an initial investigation or evaluation within five working days or refer the complaint to the appropriate agency.

   b. Ongoing Illicit Discharges - If the elimination of the illicit discharge will take more than 15 working days due to technical, logistical, or other reasonable issues, the permittee must, within 20 working days of source identification, develop and begin implementation of an action plan to

eliminate the illicit discharge in an expeditious manner. Upon confirmation of an illicit connection, the permittee must use the Enforcement Procedures in a documented effort to eliminate the illicit connection within six months, unless otherwise approved by DEQ, to the extent allowable under state law. All known illicit connections to the MS4 must be eliminated.

c. Ongoing Illicit Discharges involving Capital Improvements - If the elimination of the illicit discharge involves the repair or replacement of the permittee's wastewater or storm sewer conveyance systems or other capital improvements, the permittee must remove the source of the illicit discharge within three years of the date of its identification.

3) Notification of Other Authorities - If the illicit discharge originates from or discharges to outside the permittee's jurisdictional authority, the permittee must notify the proper jurisdictional authority as soon as practicable, and at least within one working day of becoming aware of the illicit discharge.

4) Complaints Tracking - The permittee must continue to maintain a procedure or system to document all complaints or reports of illicit discharges into and from the MS4, and all associated investigation activities. The tracking system must be described in the SWMP Document, and complaint tracking information from each prior year must be summarized in each Annual Report.

(E) Dry Weather Screening Program

At a minimum, the permittee must continue to implement a Dry Weather Screening Program at priority MS4 locations. The permittee must review and update the prioritization criteria for dry weather screening locations as described below by the due date of the Annual Report for the 2023-2024 reporting year (November 1, 2024). If necessary, changes to criteria and procedures must be reported on in an update to the SWMP Document. The annual field screening must include a portion or all of the permittee's identified priority locations and include a process for information sharing with maintenance staff responsible for the programs required under Schedule A.14.c.vi(C) (Pollution Prevention and Good Housekeeping for Municipal Operations: Inspection, Maintenance, and Cleaning of the MS4 System).

The dry-weather field screening activities should occur after an antecedent dry period of at least 72-hours. The dry-weather field screening activities must be documented and include:

1) Annual Field Screening of Priority Locations - Priority locations must, when possible, be located at an accessible location downstream of any source of suspected illegal or illicit activity or location as identified by the permittee. Priority location designations must be based on analyses of risk of potential for illicit discharge(s), accounting for factors such as hydrological conditions, percent of impervious surface area, total drainage area of the location, population density of the location, infrastructure access density, traffic density, development age (age of the infrastructure and

structures or buildings in the area), history of the area, land use types, personnel safety, accessibility, historical complaints or other appropriate factors as identified by the permittee. Priority field screening locations must also be identified on the MS4 mapping and digital inventory when the assessment is complete, and may change based on the above criteria if new information comes to light or if a new analysis is conducted.

2) General Observations – General observations must include visual presence of flow, turbidity, oil sheen, trash, debris or scum, condition of conveyance system or outfall, color, odor and any other relevant observations related to the potential presence of non-storm water or illicit discharges.

3) Field Screening and Analysis – If flow is observed, and the source is unknown, a field investigation must be conducted to determine the cause of the dry-weather flow. The field investigation procedures must consider sampling for pollutant parameters that are likely to be found based upon the suspected source of discharge or by other effective investigatory approaches or means to identify the source or cause of the suspected illicit discharge. Field screening pollutant parameter action levels, identified by the permittee in response to previous permit requirements and updated as necessary, must be considered where appropriate.

4) Pollutant Parameter Action Levels – The permittee must continue to utilize pollutant parameter action levels as part of the field screening. The pollutant parameter action levels and rationale must be documented in an enforcement response plan (or similar document) and included or linked/referred to in the SWMP Document. Indicator constituents used by the permittee's procedures may include but need not be limited to the following: pH, total chlorine, turbidity, temperature, conductivity, easily tested-for indicators of human waste, and sensory indicators (odor, color, sheen, visible suds or other floatables, etc.). The permittee must include the Pollutant Parameter Action levels or associated Monitoring Plan by inclusion or reference in the SWMP Document.

5) Laboratory Analysis – If general observations and field screening indicate an illicit discharge and the presence of a suspected illicit discharge cannot be identified through other investigatory methods, the permittee must collect a water quality sample for laboratory analyses for ongoing discharges. The water quality sample must be analyzed for pollutant parameters or identifiers that will aid in the determination of the source of the illicit discharge. The types of pollutant parameters or identifiers may include, but are not limited to genetic markers, industry-specific toxic pollutants, or other pollutant parameters that may be specifically associated with a source type.

(F) Illicit Discharge Detection and Elimination Training and Education

The permittee must ensure that all persons responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 are appropriately trained to conduct such activities. All staff directly responsible for conducting dry weather screening activities or responding to reports of

illicit discharges and spills into the MS4 must be properly trained to conduct such activities, and training strategies and frequencies for staff must be documented and described or referenced in the SWMP Document.

(G) Tracking and Assessment

The permittee must track implementation of the IDDE program requirements. In each corresponding Annual Report, the permittee must summarize or report on metrics or tracking measures related to implementation of the program. The Annual Report should include updates regarding any capital improvements needed or implemented associated with the IDDE program.

iv. Construction Site Runoff Control

The permittee must continue to implement and enforce a construction site runoff control program to reduce discharges of pollutants from construction sites in its coverage area. The permittee must continue to implement their existing construction site runoff program as the new requirements are developed and implemented.

(A) Ordinance and/or Other Regulatory Mechanism

Through ordinance or other regulatory mechanism, and to the extent allowable under state law, the permittee must continue to require erosion, sediment, and waste materials management controls to be used and maintained at all qualifying construction projects from initial clearing through final stabilization to reduce pollutants in stormwater discharges to the MS4 from construction sites. The permittee must require construction site operators to document site specific erosion and sediment controls for construction project sites that result in land disturbance of equal to or greater than 500 square feet. The permittee must use appropriate enforcement procedures and actions to ensure compliance with Schedule A.14.c.iv(B)-(D), below.

(B) Erosion and Sediment Control Plans (ESCPs)

The permittee must continue to maintain written specifications that address the proper installation and maintenance of erosion and sediment controls during all phases of construction activity occurring in their coverage area. The written specifications must include an ESCP template, worksheet, checklist, or similar document for construction site operators to document how erosion, sediment, and waste material management controls for non-stormwater wastes (e.g., discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste) will be implemented and maintained at the construction project site. At a minimum, through ordinance or other regulatory mechanism the permittee must:

1) Require construction site operator to complete a site-specific Erosion and Sediment Control Plan or other documentation of site-specific controls prior to beginning construction/land disturbance;

2) Require the Erosion and Sediment Control Plan be maintained and updated as site conditions change, or as specified by the permittee;

3) Require Erosion and Sediment Control Plans to be kept on site and made available for review by the permittee, DEQ, or another administrating entity during site inspections or upon request; and,

4) Continue to ensure that ESCPs for construction sites disturbing one acre or greater are consistent with the substantive requirements of the State of Oregon's 1200-C NPDES permit ESCPs.

   Permittee may require or issue a simplified ESCP or a list of expected outcomes with prescribed BMPs for small or low-risk construction sites, provided that the permittee's criteria and specifications are clear and documented or referenced in the SWMP Document, and provided that construction operators are required to meet expectations and keep documentation of how they meet those expectations on site for reference during operations, maintenance activities, and inspections. The permittee must include or refer to a description of all Erosion and Sediment Control Plan requirements in the SWMP Document.

(C) Erosion and Sediment Control Plans Review

At a minimum, the permittee must continue to implement procedures to review Erosion and Sediment Control Plans from construction projects that will result in land disturbance of equal to or greater than 500 square feet using a checklist or similar document to determine compliance with the ordinance or other regulatory mechanism required.

Erosion and Sediment Control Plan review procedures must include consideration of the construction activities' potential water quality impacts, and remain in accordance with applicable state and local public notice requirements.

(D) Construction Site Inspections

The permittee must continue to perform inspections of construction sites to ensure that the approved ESCP or other documented set of controls is properly implemented. The SWMP Document must describe procedures, including:

1) Minimum Triggers for Inspection – At a minimum, the permittee or co-implementers must inspect construction sites if:

   a. Sediment and/or turbidity is visible in reported stormwater discharge or dewatering activities from the construction site;

   b. A complaint or report is received; or

   c. A site meets any other minimum triggers established under the permittee's already established inspection program.

2) Minimum Inspection & Documentation Requirements – Permittee or co-implementer inspections of construction sites must follow standardized procedures for inspection and documentation of inspections. Procedures and requirements for inspection and documentation must be detailed in a manual referenced or linked to in the SWMP Document, and include minimum required outcomes, criteria, and/or BMPs for disturbed areas of the site, as well as locations of material and waste storage areas, stockpile areas, construction site entrances and exits, sensitive areas, and points of

discharge to the MS4 or receiving waters. The permittee must include or reference in the SWMP Document a description of how the permittee's site inspection procedures ensure, accomplish, or generate the following:

a. A review and evaluation of the ESCP or other documented set of site-specific controls and the operator's records of maintenance or operation of BMPs where applicable, to determine if the described control measures were installed, implemented and maintained properly.

b. An assessment of the site's compliance with the permittee's ordinances or requirements.

c. Documentation of visual observations and of any existing or potential nonstormwater discharges, illicit connections, and/or discharge of pollutants from the site, as well as of recommendations to the construction site operator for follow-up.

d. A written or electronic inspection report, with photographs as necessary, including documentation of all necessary follow-up actions (e.g., re-inspection, enforcement) to ensure compliance with their applicable requirements.

e. Follow up to verify proper implementation of corrective measures in cases where a permittee-employed or contracted inspector finds evidence of erosion or of deficiencies in BMP maintenance or in adherence to ordinances or other regulations, as well as documentation of the corrective action.

(E) Enforcement Procedures

The permittee must continue to implement and maintain a written escalating enforcement and response procedure for all qualifying construction sites and summarize or reference in the SWMP Document. The procedure must address repeat violations through progressively stricter response, as needed, to achieve compliance. The escalating enforcement and response procedure must describe how the permittee will use enforcement techniques to ensure compliance. The enforcement procedures must include timelines for compliance and, when formulating response procedures and penalties should consider factors (or multipliers) such as the type and severity of pollutant discharge, and whether the discharge was intentional or accidental. If the escalating enforcement procedure already in place does not meet these requirements, a revision or update must be submitted with the SWMP Document by April 1, 2024, and, if necessary as specified under Schedule A.14.b.vi, added to the SWMP Document at that time.

(F) Construction Runoff Control Training and Education

The permittee must ensure that all staff responsible for ESCP reviews, site inspections, and enforcement of the permittee's requirements are trained or otherwise qualified to conduct such activities, and training strategies and frequencies must be described or referenced in the SWMP Document.

(G) Tracking and Assessment

The permittee must routinely or continuously track all construction sites that result in a total land disturbance of equal to or greater than 500 square feet. The inventory must include relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project including area and/or volume of disturbance, the date the permittee approved the ESCP in accordance with Schedule A.14.c.iv(C) or in accordance with coverage under the 1200-CN permit as applicable, and whether any complaints have been received or inspections made. The permittee must also track implementation of activities required by the Construction Site Runoff program. In each corresponding Annual Report, the permittee must summarize metrics or tracking measures related to implementation of the program, which may include but is not limited to number of regulated construction projects, number of inspections, and number of enforcement actions.

v. Post-Construction Site Runoff for New Development and Redevelopment

The permittee must continue to implement their post-construction stormwater pollutant and runoff control program as they develop, implement, and enforce the requirements of Schedule A.14.c.v to control stormwater runoff from new development and redevelopment project sites in its coverage area and reduce the discharge of pollutants. The permittee may adopt policies and standards that encourage infill development in areas with existing stormwater infrastructure or retrofit opportunities, and stable hydrological function as best management practices. The permittee must describe or refer to full documentation of its programs in the SWMP Document.

(A) Ordinance and/or Other Regulatory Mechanism

Through ordinance or other regulatory mechanism, to the extent allowable under state law and within the constraints of land use and zoning regulations, the permittee must require the following for project sites discharging stormwater to the MS4 that create or replace 1,000 square feet or more of impervious surface area:

1) The use of stormwater controls at all qualifying sites.

2) A site-specific stormwater management approach that targets natural surface or predevelopment hydrological function through the installation and long-term operation and maintenance of stormwater controls, with focus on management of quantity and quality of stormwater discharge.

3) Long-term operation and maintenance of stormwater controls at project sites that are under the ownership of a private entity.

The permittee must use appropriate enforcement procedures and actions to ensure compliance with Schedule A.14.c.v(F). The local ordinance or other regulatory mechanism adopted must meet the requirements of Schedule A.14.c.v(B)-(F).

(B) Prioritization of Low Impact Development & Green Infrastructure

The permittee must continue to prioritize LID/GI in post-construction standards. The permittee must also, by November 1, 2026, review and update

the Design & Construction Standards to meet the requirements of Schedule A.14.c.v(C) through (F).

The Design & Construction Standards updates must be incorporated by reference into the SWMP Document after completion. In development of these updates, the permittee must review ordinance for opportunities to reinforce the use of LID/GI as the preferred and commonly used approach to site development. The permittee may include evapotranspiration and reuse of stormwater in accounting for retention volumes but is not required to exhaust those options prior to allowing treatment or offsite options as described below. Where LID/GI controls that infiltrate or otherwise retain stormwater onsite are infeasible, extended filtration must be required, to require treatment of no less than 80% of the annual average runoff volume.

(C) Post-Construction Stormwater Management Requirements

The permittee must by November 1, 2026 develop and implement enforceable postconstruction stormwater management requirements in ordinance or other regulatory mechanism that, at a minimum, prioritize onsite retention or local/regional retention of stormwater and pollutant removal, and include technical standards according to either of the following options:

1) Numeric Stormwater Retention Requirement Site Performance & Treatment Standards

If this option is selected, the permittee must establish a site performance standard with a Numeric Stormwater Retention Requirement (NSRR) that retains stormwater onsite or through local/regional retention and minimizes the offsite discharge of pollutants in runoff by utilizing stormwater controls that infiltrate and facilitate evapotranspiration. The NSRR volume must be determined using one of the following methods:

a. Volume-based method (e.g., retain volume created from the first inch of rainfall).

b. Storm event percentile-based method (e.g., retain the 95th percentile storm event 95% of the time the data is below this value).

c. Annual average runoff-based method (e.g., retain 80% of annual average runoff).

The NSRR is met when the NSRR runoff volume (as determined by the method chosen above) from new and/or replaced impervious surfaces is managed by one or more structural stormwater controls with sufficient capacity to retain the stormwater runoff onsite without adversely impacting groundwater quality per DEQ’s groundwater protection requirements (OAR 340-40). The permittee may require retention or detention in excess of the NSRR in order to prevent hydromodification or other capacity issues that might result from stormwater runoff discharging from the site.

The first priority of this option is onsite retention, but at sites where the NSRR cannot be met due to technical infeasibility and/or site

constraints (including zoning or land use regulations, landslide susceptibility or other geomorphic constraints), the permittee must require treatment of the runoff volume up to a specified water quality design storm, or at least 80% of average annual runoff, in a structural or extended filtration stormwater control prior to discharge. The evaluation of technical infeasibility or site constraints should be based on justification provided in the site plan (see Schedule A.14.c.v(D) and (E).

The procedures for allowing treatment of a portion of the NSRR (as opposed to 100% retention of the NSRR, in situations where 100% retention of the NSRR is infeasible or impracticable) should include a description of allowable structural stormwater controls that are designed to target the removal of TSS and total phosphorus. The description of allowable structural stormwater controls must include site-specific design requirements, design requirements that do not inhibit maintenance, conditions where each control applies, and the operation and maintenance standards for each type of control. For TSS, the permittee may include an upper and lower bound on the effluent TSS concentration that reflects the practical limitation of an engineered control (e.g., 80% removal of TSS for typical influent concentrations ranging from 20 mg/L to greater than 200 mg/L). For total phosphorus, the permittee should target phosphorus removal as specified in OAR 340-041-0345(4). The permittee must give priority to implementing green infrastructure before considering hardscaped structural stormwater controls (such as concrete vaults and piping, proprietary technologies, or other static non-GI facilities) for stormwater treatment. The permittee may adopt specifications created by another entity that comply with these requirements.

All stormwater discharged offsite from new and/or replaced impervious surfaces, at least up to the NSRR volume, must target natural surface or predevelopment hydrology (in terms of rate, duration, and/or volume) to minimize the potential for hydromodification impacts offsite, except in circumstances where the permittee can demonstrate that the risk of hydromodification impacts is negligible, (e.g., large tidally-influenced waterways or flow-managed waterways). The use of treatment trains of post-construction stormwater controls should be encouraged where appropriate for treating stormwater runoff that is managed offsite before discharging to receiving waters, to improve stormwater runoff quality and reduce discharge quantity.

2) Alternative Site Performance Standards

As an alternative or in addition to Option 1 in Schedule A.14.c.v(C), the permittee may establish design requirements including site performance standards determined to generate water quality benefits comparable to the NSRR approach for new development and redevelopment. The alternative site performance standards must be included in ordinances or other enforceable documents adopted by the permittee. Such local requirements

and thresholds must provide equal or similar protection of receiving waters and equal or similar levels of treatment as the NSRR approach.

The permittee must demonstrate how alternative compliance approaches prioritize infiltration and LID/GI, include pollutant removal performance goals, target natural surface or pre-development site hydrology, and reduce the discharge of pollutants from new and/or replaced impervious surfaces.

The permittee must set requirements for site layout plans and a minimum set of specific onsite or local/regional stormwater controls (collectively "site design measures") based on the GI approach of emphasizing infiltration, evapotranspiration and/or harvesting/reuse of the stormwater. Site design measures must be used to reduce the amount of runoff, comparable to the NSRR, to the extent technically feasible and not prohibited by other constraints such as land use regulations or other state or federal regulations. Any remaining runoff from impervious drainage management areas may be directed to one or more LID/GI facilities, extended filtration facilities, or other area. Site planning procedures must require projects to consider site layout options that optimize retention of stormwater.

At sites where retention is infeasible due to technical and/or site constraints, the permittee must develop a process whereby at least 80% of average annual runoff from new and/or replaced impervious surfaces, must be treated with an extended filtration stormwater control prior to discharge, to target removal of TSS. Stormwater discharged offsite must target natural surface or predevelopment hydrology (as measured by rate, duration, and/or volume of discharge) to minimize the potential for hydromodification impacts, except in circumstances where the permittee can demonstrate that the risk of hydromodification impacts is negligible, (e.g., large tidally influenced waterways or flow-managed waterways).

More specific requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of sub-basin plans or other similar stormwater management planning efforts.

(D) Water Quality Benefit Offset Programs

The permittee may develop water quality benefit offset programs as options for sites that, under Option 1 of Schedule A.14.c.v(C), cannot meet the NSRR and for which full treatment of the NSRR design storm event is impracticable, or for sites under Option 2 that require special consideration for other reasons, or for sites unable to meet other stormwater requirements established by the permittee. Economic considerations alone are insufficient reason for not requiring adherence to the retention or treatment standards above. The options may include, but are not limited to stormwater mitigation options, a payment-in lieu program, groundwater replenishment program, or another option that matches the water quality goals of retaining or treating stormwater at any given site and reducing overall discharge of TMDL pollutants. If the permittee chooses to provide one or more water quality benefit offset programs, the permittee must develop and document how the alternative option works and

what the standards and management systems are to value, estimate, and/or account for the ecological impact of untreated stormwater at qualifying sites. All programs developed should implement mitigation or other projects in the same sub-watershed (as defined in Schedule D.14.d) as the proposed project, to the degree possible. Exceptions should be documented with appropriate rationale.

(E) Post-Construction Site Runoff Plan Review

The permittee must have documented, standardized procedures for the review and approval of structural stormwater control plans for new development and redevelopment projects, and procedures must be detailed or referenced in the SWMP Document. At a minimum, the permittee must review and approve or disapprove plans for structural stormwater controls at new development and redevelopment sites that result from the creation or replacement of 1,000 or more square feet of impervious surface; and sites that use alternative compliance to meet the retention requirement, before construction permits are issued. The permittee must review plans for consistency with the ordinance/regulatory mechanism and specifications required by Schedule A.14.c.v(A).

The permittee must require and subsequently review and approve or disapprove the written technical justification to evaluate any technical infeasibility or site constraints which prevent the onsite management of the runoff amount stipulated in the NSRR or the site's ability to meet the alternative site performance standard. The written technical justification must be in the form of a site-specific hydrologic or technical analysis. The permittee must establish criteria or circumstances under which such analysis must be conducted, and the results of the permittee's review must be documented. Such infeasibility or constraint factors may include, but are not limited to, low infiltration rates, shallow bedrock, high groundwater, groundwater contamination, soil instability as documented by geotechnical analysis, or land use or zoning constraints. The determination that the NSRR or Alternative Site Performance Standard cannot be achieved at a project site must be based on documented infeasibility criteria or constraints considering the impact from one or more multiple technical factors.

(F) Long-Term Operation and Maintenance (O&M)

The permittee must continue to maintain an inventory and implement a strategy to ensure that all public and private stormwater controls that discharge to the MS4 are operated and maintained to the maximum extent practicable. This strategy must, at minimum, include the following:

1) Legal authority allowing the permittee to inspect and require effective operation and maintenance of privately owned and operated stormwater controls that discharge to the MS4.

2) Continued maintenance of the inventory and mapping developed under the previous permit term for all public stormwater facilities, as well as private facilities which discharge to the MS4 and which have been either constructed since April 22, 2018, used to estimate pollutant load reduction

as part of the TMDL benchmark evaluation, or otherwise determined by the permittee to be major stormwater facilities or controls.

3) Maintenance and inspection criteria, rationale, priorities, frequency, and procedures, and an inspection schedule ensuring compliance with the O&M requirements of each type of stormwater control operated by the permittee and by other private entities.

4) Tracking mechanism(s) for documenting inspections, as well as verification that site owners are prepared to meet the O&M requirements for private stormwater controls. The tracking mechanism(s) must document enforcement actions and compliance response. For stormwater controls that include vegetation, the O&M requirements must at minimum include requirements to remove sediment accumulation and manage the vegetation community to ensure the functionality of the control. For stormwater controls that include soils in the treatment process, O&M requirements must at minimum include requirements for practices to maintain soil permeability. For manufactured stormwater technology, O&M requirements must include, as applicable, documentation of the model number, manufacturer or equivalent identifiers where available, information about suppliers and/or vendors, and schedules for replacement at regular intervals, as well as plans or contracts for an appropriate supply of such components to ensure proper treatment function and timely maintenance.

5) Required training or appropriate qualifications to inspect private stormwater facilities.

6) Reporting requirements, where appropriate as determined by the permittee, for privately owned and operated stormwater controls.

7) The location of all public and private stormwater controls installed in compliance with this permit must be included with the MS4 Map and Digital Inventory described in Schedule A.14.c.iii(A).

(G) Training and Education

The permittee must ensure that staff responsible for performing post-construction runoff site plan reviews, administering the post-construction program requirements, and performing O&M practices or evaluating compliance with long-term O&M requirements, are trained or otherwise qualified to conduct such activities, and training strategies and frequencies for staff must be described or referenced in the SWMP Document.

(H) Tracking and Assessment

The permittee must maintain records for activities conducted to meet the requirements of the Post-Construction Site Runoff program, and include a descriptive summary of their activities and report on metrics or tracking measures related to implementation of the program in the corresponding Annual Report.

vi. Pollution Prevention and Good Housekeeping for Municipal Operations

The permittee must properly operate and maintain its facilities, and through IGA or other cooperative agreement format must also ensure all co-implementers properly operate and maintain their facilities, using pollution prevention and good housekeeping to reduce the discharge of pollutants through the MS4 to waters of the state.

(A) Operation and Maintenance Strategy for Existing Controls

For existing structural stormwater controls installed or permitted by the permittee or co-implementers prior to the effective date of this permit, the permittee must develop and implement an operation and maintenance strategy for controls the permittee is responsible for, and controls owned and operated by other non-MS4 and non-NPDES entities discharging to the MS4. The O&M strategy for stormwater controls must include, at minimum, the long-term O&M requirements in Schedule A.14.c.v(F).

(B) Inspection, Maintenance, and Cleaning of the MS4

The permittee must develop and implement a process for the inspection, maintenance, and cleaning of their MS4 and related structures (including, but not limited to, catch basins, storm drain inlets, water quality facilities, pipes, etc.) to maximize debris and pollutant removal, and verify proper operation of all its municipal structural treatment controls designed to reduce pollutants (including floatables) in storm water discharges to or from its MS4s and related drainage structures. Operation and maintenance activities may include, but are not limited to, the following:

1) Inspection, Maintenance, and Cleaning of the MS4
2) Cleaning of the MS4 and related structures as needed; and
3) Proper disposal of materials removed from cleaning of the MS4.

The permittee must maintain records of inspection and cleaning activities to facilitate adaptive management, including but not limited to such metrics as an estimated volume of debris removed during O&M activities as a total or by category or type of activity, if known, number of structures of each category inspected, number of structures of each category cleaned, and linear feet of pipe cleaned.

The inspection, maintenance, and cleaning schedule must ensure inspection of the permittee owned or operated catch basins and inlets within the MS4 at least once every five years unless an alternate schedule is established in the SWMP Document and approved by DEQ, and take all appropriate maintenance or cleaning action based on those inspections to ensure the catch basins and inlets continue to function as designed. The permittee may establish an inspection prioritization system for its catch basins and other structural MS4 elements, and adjust inspection frequency as needed for adaptive management, provided the permittee describes all relevant factors it uses to prioritize its inspections to specific geographic or land use areas of its MS4 in the SWMP Document or another document cited/referenced therein.

(C) Pollution Prevention in Facilities and Operations

The permittee must continue to conduct its municipal O&M activities in a manner that reduces the discharge of pollutants through the MS4 to protect water quality, and through an Inter-Governmental Agreement (IGA) or other cooperative agreement format must also ensure that co-implementers similarly control municipal O&M activities that may contribute pollutants to the MS4. The permittee must review and update existing procedures and schedules for inspection and maintenance of the MS4, and describe or reference in the SWMP Document pollution prevention and good housekeeping related to:

1) Operation and maintenance of public streets, roads, and highways, and associated stormwater controls, ditches, and pipes over which the permittee has authority;

2) Operation, repair, and maintenance of bridges or other over-water infrastructure over which the permittee has authority;

3) Control and minimization of the use and application of pesticides, herbicides, and fertilizers on permittee-owned properties and facilities;

4) Control or minimization of stormwater runoff from municipal facilities that treat, store or transport municipal waste, such as yard waste or other municipal waste and are not already covered under an NPDES permit, a DEQ solid waste, or other permit designed to reduce the discharge of pollutants;

5) Control measures to limit or eliminate infiltration of seepage from the municipal sanitary sewer system to the MS4; and,

6) Management practices that prevent or control the release of materials related to fire-fighting training activities.

(D) Permittee-owned NPDES Industrial Stormwater Permit Facilities

Permittee-owned or operated facilities with industrial activity as defined in 40 CFR §122.26(b)(14) discharging stormwater to the waters of the state must continue to maintain coverage under DEQ's NPDES Industrial Stormwater General Permit. The permittee may use the actions required in the NPDES Industrial Stormwater Permit to address the applicable facility requirements in Schedule A.14.c.vi(H).

(E) Winter Operations and Maintenance Program

The permittee must document and include with or reference in the SWMP Document the Winter Maintenance and Operations Program for public roads, or cooperative agreements with others, that will limit impacts to water quality to the degree practicable from O&M activities.

1) Winter Management Materials – The permittee must ensure that all winter materials utilized by the permittee and co-implementers on roads for anti-icing and de-icing purposes (e.g., abrasives, sand, deicers including but not limited to MgCl2, solid salt, etc.) are utilized and stored properly, according to most updated and accepted practices.

2) Winter Maintenance Strategy – The permittee must provide or reference a Winter Maintenance Strategy with the SWMP Document. This document must describe how the permittee manages rights-of-way owned or operated by the permittee during inclement weather and what Best Management Practices are implemented.

3) Winter Maintenance Tracking and Reporting – Winter Maintenance activities for streets and roads must be included as an element of the MS4 Annual Report required by this permit beginning in the Annual Report due November 1, 2023, or no later than upon DEQ's approval of the SWMP Document. The information for each year must include but need not be limited to: a list of materials used, number of winter weather events where winter maintenance materials are used, quantities and general location of each material used in relation to distance (e.g., pounds per mile), and any other actions taken to protect waters of the state for areas where that data is available or becomes available during the permit term.

(F) Requirements for Pesticide and Fertilizer Applications

The permittee must develop or continue to implement practices based on integrated pest management principles to the extent practicable in order to reduce the discharge of pollutants to the MS4 associated with the application and storage of pesticides and fertilizers. At a minimum, such areas include the permittee's public rights-of-way, parks, recreational facilities, golf courses, and any other publicly owned landscaped areas owned or managed by the permittee. All employees or contractors of the permittee applying pesticides must follow all label requirements, including those regarding application methods, rates, number of applications allowed, and disposal of the pesticide, fertilizer and rinsate.

(G) Litter Control

The permittee must continue to implement methods to reduce litter within its jurisdiction. The permittee must work cooperatively with co-implementers, other departments, organizations, and/or other entities to control litter on a regular basis and after major public events, in order to reduce the discharge of pollutants and litter to the MS4.

(H) Materials Disposal

All collected material or pollutants removed in the course of maintenance, treatment, control of stormwater, or other wastewaters must be managed and disposed of in a manner that prevents such pollutants from entering the waters of the state in accordance with state regulations.

(I) Flood Control, Transportation, and Other Infrastructure

The permittee must continue to assess flood control, transportation, and other infrastructure projects during planning stages in order to identify and mitigate potential negative impacts on or to enhance benefits for the water quality of receiving water bodies. This permit does not require the permittee to take action with respect to flood control itself and does not seek to impose flood control responsibility on the permittee.

(J) Operations & Maintenance Staff Training

The permittee must continue to ensure that staff responsible for evaluating O&M practices, evaluating compliance with long-term O&M requirements or ensuring pollution prevention at permittee- or co-implementer-owned facilities and during operations are trained or otherwise qualified to conduct such activities. Training strategies and frequencies for staff must be described in the SWMP Document.

(K) Tracking and Assessment

The permittee must maintain records for activities undertaken to meet the requirements of the Pollution Prevention for Municipal Operations program requirements and through IGA or other cooperative agreement format must also ensure co-implementers maintain records where appropriate. The permittee must also include a descriptive summary of their activities in the corresponding Annual Report, as well as relevant metrics or tracking measures.

vii. Industrial and Commercial Facilities

The permittee must continue to implement a program to reduce pollutants in stormwater discharges to the MS4 from industrial and commercial facilities including, at a minimum: sites the permittee has identified as being subject to the DEQ-issued 1200-Z industrial stormwater NPDES general permit; hazardous waste treatment, disposal and recovery facilities; industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986; facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023; sites flagged by a pretreatment program or Industrial User Survey as potentially contributing, or housing activities that may contribute, pollutants to the MS4; and facilities or activities that have been identified by the permittee as potentially contributing a significant pollutant load to the MS4. Screening for industrial and commercial sites and activities may be conducted in conjunction with industrial pretreatment program activities or a business licensure program as long as stormwater and MS4 considerations are added to the Industrial User Survey or other questionnaire, or may be conducted separately under a program developed solely for MS4 purposes.

(A) Screening for Industrial Stormwater Permitting

The permittee must continue to screen existing and new industrial facilities to assess whether they may be subject to the DEQ-issued 1200-Z industrial stormwater NPDES general permit or have the potential to contribute a significant pollutant load to the MS4.

The screening must be done on a routine basis, and in no case may screening for new facilities take place less often than once a year. Within 30 days after determining a facility may be subject to a DEQ-issued industrial stormwater permit, the permittee must notify the industrial facility and DEQ.

(B) Strategy to Reduce Pollutants from Industrial and Commercial Facilities

The permittee must by November 1, 2024, at minimum, review and update as appropriate the Industrial/Commercial Facilities Strategy developed under the previous permit term include it in the SWMP Document directly or by reference. The Strategy must be posted on the permittee's website for public comment for a minimum of 30 days prior to submission to DEQ for approval and incorporation into the SWMP Document. If the Strategy Document is completed early, wholly incorporated into the SWMP Document, and submitted to public review with the initial SWMP Document, this suffices for the public review requirement. The Strategy document must include, at a minimum:

1) The facility types or activities, rationale, and priorities for entities that the permittee has determined may have high potential to discharge pollutants of concern to the MS4,

2) Inspection procedures, documentation standards, and frequency of inspections; and

3) Description of the assessment and tracking of compliance with municipal ordinances related to discharges to the MS4 at industrial and commercial facilities that are potential sources of pollutants in stormwater runoff.

(C) Commercial & Industrial Facility Inspection Staff Training

The permittee must ensure that staff responsible for inspecting and evaluating Commercial and Industrial facilities, evaluating compliance with municipal ordinances related to discharges to the MS4, or ensuring pollution prevention at facilities through inspections and/or provision of educational materials on stormwater management, are trained or otherwise qualified to conduct such activities, and training strategies, and frequencies for staff must be described in the SWMP Document.

(D) Tracking and Assessment

The permittee must maintain records of activities conducted to meet the requirements of the Commercial & Industrial Facilities program requirements and include a descriptive summary of their activities in the corresponding Annual Report, as well as relevant metrics or tracking measures. Each annual report should include a list of entities referred to DEQ based on permittee screening activities, a list of categories of facilities inspected, and an overview of the results of inspections.

viii. Infrastructure Retrofit and Hydromodification Assessment Update

The permittee must continue to consider the impacts of policy, capital improvements, and retrofit projects on MS4 discharges to receiving waters, considering the goals and proposed actions described in the Hydromodification Assessment and Stormwater Retrofit Strategy reports submitted per the requirements of the previous iteration of this permit.

(A) Documentation

The permittee is required to include in the Annual Report due November 1, 2025, an assessment of any outcomes related to the Hydromodification Assessment and Stormwater Retrofit Strategy reports, including the status of the Subbasin Strategies proposed in the June 2019 Hydromodification Assessment Report. This update may be an appendix or a subsection of the report, and must include, at a minimum:

1) An assessment of how the Hydromodification Assessment and Stormwater Retrofit Strategy have been used, considered, or implemented since the time the reports were completed;

2) Progress toward or completion of projects identified in the Retrofit Strategy priority list, and a qualitative assessment of the benefits of those projects;

3) Description of any further actions taken as a result of the Hydromodification Assessment, and a rationale for those actions since the writing of the reports; the description must include any additional project using an integrated approach to stormwater management which include improvements in stormwater controls in historical development/infrastructure (i.e. developed areas), and stream and riparian enhancement activities to address hydromodification impacts.

4) Narrative describing progress toward addressing gaps in hydromodification information or data related to waterbodies within the co-permittees' jurisdiction as identified in the Hydromodification Assessment; and,

5) New goals, tools, priorities, and planned or potential projects for addressing ongoing hydromodification and/or water quality impacts resulting from historical development/infrastructure, and for improving retrofit planning, considering information gathered in the time since the completion of the reports. The Hydromodification Assessment and Stormwater Retrofit Strategy update must also include any planned or potential projects for addressing hydromodification impacts from historic development that

utilizes an integrated approach to stormwater management which include improvements in stormwater controls in the developed areas, and stream and riparian enhancement activities.

ix. Summary of SWMP Document Requirements and Deadlines

The following Table A13 summarizes the elements required to be included in, or documented elsewhere and referenced in, the SWMP Document, and may serve as an outline for the SWMP document. Table A13 also includes deadlines for completion of each element, unless a later date is approved in writing by DEQ as outlined in Schedule A.14.c.

Table A13: MS4 Implementation Schedule

PERMIT CONDITION	SUMMARY OF ACTIVITIES	DUE DATE
A.14.b.iii – SWMP Document	Submit SWMP Document	April 1, 2024
A14.c.i – Education & Outreach	Continue to implement and develop as required by Schedule A.3.a, and fully describe or reference in the SWMP Document, an Education & Outreach Program, including: • Program description for education & outreach activities • Priority Audiences & Topics • Tracking & Assessment	Complete description of proposed program no later than April 1, 2024
A.14.c.ii – Public Involvement & Participation	Continue to implement and develop as required by Schedule A.14.c.ii, and fully describe or reference in the SWMP Document, a Public Involvement & Participation Program, including: • Publicly Accessible Website o IDDE Reporting o Draft Documents posted for public comment o Links to ordinances, policies, and guidance documents o Contact info for relevant staff • Stewardship Opportunity • Tracking & Assessment procedures/goals/metrics	Complete description of proposed program no later than April 1, 2024

PERMIT CONDITION	SUMMARY OF ACTIVITIES	DUE DATE
A.14.c.iii – Illicit Discharge Detection & Elimination	Continue to implement and develop as required by Schedule A.14.c.iii, and fully describe or reference in the SWMP Document, an Illicit Discharge Detection & Elimination Program, including: • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • MS4 Map with: o Outfall Inventory o Conveyance system and stormwater control facility locations o Any known chronic illicit discharges o Dry-Weather Priority Screening Sites mapped per Schedule A.14.c.iii(E) • Established, documented enforcement procedures • Program to detect and eliminate Illicit Discharges, including procedures for tracking and investigation of complaints and reports and reporting to other authorities • Dry Weather Screening Program including: o Designation of field screening priority locations o Criteria for general observations o Field screening & analysis guidelines o Pollutant parameter action levels o Laboratory analysis procedures • Training program strategy for all staff involved in IDDE, as appropriate • Tracking & Assessment procedures/goals/metrics	Complete description of proposed program no later than April 1, 2024
Schedule A.14.c.iv – Construction Site Runoff Control	Continue to implement and develop as required by Schedule A.14.c.iv, and describe or reference in the SWMP Document, a program to prevent & control construction site runoff, including: • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • ESCP guidelines and requirements for construction site operators • ESCP plan review procedures	Complete description of proposed program no later than April 1, 2024

PERMIT CONDITION	SUMMARY OF ACTIVITIES	DUE DATE
	• Construction site inspection triggers, guidelines, documentation requirements, and follow-up procedures • Enforcement procedures • Training program strategy for all staff involved in construction site runoff control, as appropriate	
Schedule A.14.c.v – Post-Construction Site Runoff Control	Continue to implement and develop as required by Schedule A.14.c.v, and fully describe or reference in the SWMP Document, a program to control post-construction site runoff, including: • Ordinance or other regulatory mechanism updated as necessary and referred to or included in SWMP Document • LID/GI Prioritization Strategy • Development of technical Post-Construction Stormwater Management Requirements (Site Performance Standards, Treatment Standards, and alternative compliance options) • Plan Review procedures update • Long Term O&M requirements • Training program strategy for all staff involved in post-construction runoff control, as appropriate • Tracking & Assessment procedures/goals/metrics	Complete description of program no later than April 1, 2024; Ordinance as needed to support program no later than November 1, 2026, with update to SWMP Document at that time
Schedule A.14.c.vi – Pollution Prevention and Good Housekeeping for Municipal Operations	Continue to implement and develop as required by Schedule A.14.c.vi, and fully describe or reference in the SWMP Document, a program to control pollution from municipal operations, including: • O&M strategy for existing publicly owned stormwater controls • Inspection, Maintenance, and Cleaning program for MS4 systems and structures • Pollution prevention program for facilities & operations • Winter Operations & Maintenance Program • Controls for pesticide & fertilizer application on public land • Litter controls • Materials disposal • Stormwater quality related adjustments as relevant to flood control facilities, transportation, & other infrastructure projects	Complete description of proposed program no later than April 1, 2024; Winter maintenance tracking measures to be reported on in annual report due November 1, 2023

PERMIT CONDITION	SUMMARY OF ACTIVITIES	DUE DATE
	• Training program schedule for all staff involved in pollution prevention for municipal operations, as appropriate • Tracking & Assessment procedures/goals/metrics	
Schedule A.14.c.vii – Industrial & Commercial Facilities	Continue to implement and develop as required by Schedule A.14.c.vii, and fully describe or reference in the SWMP Document, a program to control pollution in stormwater from industrial & commercial facilities, including: • Designation, inventory, and inspection of businesses with potentially significant stormwater pollutant sources not already permitted and inspected by DEQ, and enforcement actions per IDDE procedures where necessary • Provision of education for operators of commercial and industrial facilities • Screening & notification for industrial sites that may require an industrial NPDES permit • Training program schedule for all staff involved in the above program areas, as appropriate • Tracking & Assessment procedures/goals/metrics	Description of proposed program no later than April 1, 2024, updated Strategy document by November 1, 2024
Schedule A.14.c.viii – Infrastructure Retrofit and Hydromodification Assessment Update	Report on progress related to the Hydromodification Assessment and Retrofit Strategy reports submitted during the previous permit term	Submission in or attached to Annual Report, November 1, 2025

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: (See note c.)
Mercury Minimization Plan (See Schedule A)	One time	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Tables B2 – B7: Influent Monitoring, and Effluent Monitoring	Monthly	By the 15th of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Table B8: Forest Grove Natural Treatment System (F001) Monitoring	Monthly (See note d.)	By the 15th of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Table B9: Aggregate Thermal Load to Offset and Aggregate Thermal Credits Generated	Monthly (See note e.)	By the 15th of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Table B10: Wet Weather Outfall Monitoring (D003, R003, and F003)	Each Occurrence (See note f.)	By the 15th of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Table B13: Copper Biotic Ligand Model Sampling Requirements **(Outfalls D001, R001, H001A & H001B)**	Quarterly starting at the first full quarter after permit's effective date (minimum of 12 samples)	By the 15th of the second month following each quarter	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B13: Copper Biotic Ligand Model Sampling Requirements **(Outfall F001)**	Quarterly starting at the first full quarter after permit's effective date (for 24 samples)	By the 15th of the second month following each quarter	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ

Reporting Requirement	Frequency	Due Date (See note a.)	Report Form (See note b.)	Submit To: (See note c.)
Table B14: Aluminum Sampling Requirements **(Outfalls D001, R001, H001A & H001B and F001)**	Quarterly starting at the first full quarter after permit's effective date (for 24 samples)	By the 15th of the second month following each quarter	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Tables B15 – B18: Effluent Toxics Characterization	Quarterly for the first 3 years after permit's effective date (See note g.)	By the 15th of the second month following each quarter	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B19: WET Test Monitoring	Minimum of 4 times per every 5 years (See note g.)	Submit report with the first DMR following 30 days after receipt of the test results	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B23: Hillsboro and Forest Grove WRRFs Flow Transfers	Monthly (See note h.)	By the 15th of the following month	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B24: Tualatin River and Watershed Monitoring (Stream flow and dissolved oxygen only) (See Schedule B, Condition 14.a)	Monthly	By the 15th of the following month	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B24: Tualatin River and Watershed Monitoring (Discrete water quality monitoring data) (See Schedule B, Condition 14.a)	Annually	November 1 with the MS4 Annual Report	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Table B25: Instream Biological and Physical Monitoring	One Time	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Inflow and Infiltration Annual Report (See Schedule D, Condition 1)	Annually	By March 31of the following year	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ

Reporting Requirement	**Frequency**	**Due Date** (See note a.)	**Report Form** (See note b.)	**Submit To:** (See note c.)
Mixing Zone Study Report (See Schedule D, Condition 3)	One Time	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Recycled Water Annual Report (See Schedule D, Condition 4)	Annually	By January 15 of the following year	Electronic copy in the DEQ-approved format	Attached via electronic reporting as directed by DEQ 1 Electronic copy to DEQ Water Reuse Program Coordinator
Biosolids Annual Report (See Schedule D, Condition 6)	Annually	By February 19 of the following year	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ 1 Electronic Copy to DEQ Biosolids Program Coordinator
Hauled Waste Annual Report (See Schedule D, Condition 8)	Annually	By March 31 of the following year	Electronic copy in the DEQ-approved format	Attached via electronic reporting as directed by DEQ Submit with Annual Pretreatment Report
Outfall Inspection Report (See Schedule D, Condition 11)	Once per permit cycle	Submit by 12/15/2024	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Natural Treatment System Operations Plan Updates (See Schedule D, Condition 12)	Annually	By March 31 of the following year	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ

Reporting Requirement	**Frequency**	**Due Date** (See note a.)	**Report Form** (See note b.)	**Submit To:** (See note c.)
Annual Pretreatment Report (See Table B11, Schedule E Conditions 8 and 13)	Annually	By March 31 of the following year	Electronic copy and hard copy in a DEQ-approved format	1 Hard copy to DEQ Pretreatment Coordinator 1 Electronic copy to DEQ Compliance Officer and DEQ Pretreatment Coordinator
MS4 Annual Report (See Schedule B16)	Annually	November 1 (See note i.)	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ Electronic copy posted to CWS website
Water Quality Trading Annual Report (See Schedule D.13.g)	Annually	March 31 of the following year	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
303(d) Pollutant Assessment (See Schedule D.14.b.iii)	Once during permit cycle	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Willamette Basin Mercury TMDL: Mercury Minimization Assessment (See Schedule D.14.c.iii.A)	Once during permit cycle	Submit with MS4 Annual Report due November 1, 2024	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Willamette Basin Mercury TMDL: Mercury Effectiveness Evaluation (See Schedule D.14.c.iii.C)	Once during permit cycle	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
TMDL Pollutant Load Reduction Evaluation and Benchmarks (See Schedule D.14.iv)	Once during permit cycle	Submit with permit renewal application	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ

Reporting Requirement	Frequency	Due Date (See note a.)	Report Form (See note b.)	Submit To: (See note c.)

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.

c. As electronic file sizes allow with DEQ's existing electronic reporting system, permittee must submit written annual reports, studies, and plan updates as an attachment to the Durham WRRF DMR or with the permit renewal application, as required. All other effluent and toxics data collected for a specific facility to be submitted as attachment to the DMR for that facility. Should the attachment size exceed DEQ's existing electronic reporting system size limit, the permittee must submit annual reports, studies, and plan updates to DEQ's compliance officer via CD or DVD with a signed cover letter. The permittee must indicate in the DMRs that a report, study or plan update was submitted separately to DEQ.

d. Report for those months when natural treatment system discharges – typically May through October.

e. Report for those months when offsets and credits are generated – typically July and August.

f. Report for those months when any wet weather outfall (e.g., D003, R003 and F003) discharges.

g. Quarters are defined as: Q1: Jan – Mar, Q2: Apr – Jun, Q3: Jul – Sept, Q4: Oct – Dec. Quarterly sampling to begin during the next quarter after permit's effective date. If no discharge occurs during the quarter, continue sampling quarterly until 12 sets of samples have been collected for toxics and 4 samples have been collected for WET tests for each facility. During the low river flow period (dry season), both the Hillsboro and Forest Grove WRRFs may discharge through the Forest Grove Natural Treatment System (NTS) to the river. No direct discharge to the river occurs at the Hillsboro WRRF during this time. During the low river flow period, WET tests conducted of discharges at the Forest Grove NTS outlet structure can be used to meet the minimum required 4 samples for both the Forest Grove and Hillsboro WRRFs. If Hillsboro WRRF is treated and discharged at the Rock Creek WRRF rather than the Forest Grove NTS during low flow periods, then the WET tests conducted of discharges at the Rock Creek WRRF outfall can be used to meet the minimum required 4 samples for the Hillsboro and Rock Creek WRRFs. WET tests and toxics characterization testing must be collected on the same day.

h. Report for those months when wastewater flows are transferred among the Hillsboro, Forest Grove and/or Rock Creek WRRFs.

i. Reporting period is July 1 of previous year through June 30 of current year.

2. Monitoring and Reporting Protocols for NPDES Permit Nos 101141-44

Monitoring and reporting requirements are applicable to NPDES permits Nos. 101141, 101142, 101143 and 101144. For the MS4 Permit, refer to reporting requirements for MS4 Permit in Schedule B.16.

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 part 136 and 40 CFR part 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 part 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 the DEQ permitting website.

ii. Matrix effects are present that prevent the attainment of QLs and these matrix effects are demonstrated according to procedures described in EPA's "*Solutions to Analytical Chemistry Problems with Clean Water Act Methods*", March 2007. If using alternative methods and taking appropriate steps to eliminate matrix effects does not eliminate the matrix problems, DEQ may authorize in writing re-sampling or allow a higher QL to be reported.

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. 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. If these method criteria are not met for BOD_5, the permittee must: 1) report the daily BOD_5 values with data qualifiers; 2) include these BOD_5 values in the summary statistic calculations (e.g., weekly averages, monthly averages, % removal); and 3) report the BOD_5 summary statistics with data qualifiers.

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.

(D) 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, bacteriological analytes 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. Chemical Abstracts Service (CAS) Numbers. CAS numbers (where available) must be reported along with monitoring results.

iv. (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.

v. (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:

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 "<0.02 lb/day" for mass load on the DMR (1.0 µg/L x 2 MGD x conversion factor = 0.017 lb/day, round off to 0.02 lb/day).

iii. When concentration data are above the DL, but below the QL: To calculate the mass load from this result, use the detection level. Report the mass load as the calculated mass load preceded by "e". For example, if flow is 2 MGD and the reported sample result is e1.0 µg/L, report "e0.02 lb/day" for mass load on the DMR (1.0 µg/L x 2 MGD x conversion factor = 0.017 lb/day, round off to 0.02 lb/day).

3. Influent Monitoring and Reporting Requirements

a. **Durham and Rock Creek WRRFs**

The permittee must monitor influent at Durham and Rock Creek WRRFs in accordance with Table B1 and the table below. Influent quality at the Durham WRRF will be monitored at the headworks and influent quality at the Rock Creek WRRF will be monitored at the locations indicated in the table below.

Table B2: Durham and Rock Creek WRRFs Influent Monitoring Requirements

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type / Required Action (See note a.)	Report Statistic (See note b.)
Flow (**Durham WRRF**) (50050)	MGD	Year-round	Daily	Metered	1. Maximum Daily Average 2. Monthly Average
Flow (**Rock Creek WRRF**) (50050) (See note c.)	MGD	Year-round	Daily	Calculated	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ **(Durham WRRF)** (80082)	mg/L	Year-round	3/week	24-hour composite	Monthly Average
$CBOD_5$ **(Rock Creek WRRF)** (80082)	mg/L	Year-round	1/week	24-hour composite	Monthly Average
TSS (00530)	mg/L	Year-round	1/week	24-hour composite	Monthly Average
pH (00400)	SU	Year-round	Daily	Continuous Recorder (See note d.)	1. Monthly Maximum 2. Monthly Minimum
Total Ammonia (as N) (00610)	mg/L	Year-round	1/Week	24-hour composite	Monthly Maximum
Total Phosphorus (as P) (00665)	mg/L	Year-round	1/week	24-hour composite	Monthly 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 once per day. The permittee must include a note in the DMR comments when grab sampling is being performed.

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.

c. Influent flow at the Rock Creek WRRF includes flows from the influent pump station, remote pump stations, and transfer flows from the Hillsboro and Forest Grove WRRFs.

d. The permittee must keep on file either an instrument manual showing that less than daily calibration is required along with calibration logs that comply with manufacturer instructions or daily calibration logs, and any Proficiency (PT) or Water Pollution (WP) tests must be done using the continuous pH monitor.

b. **Hillsboro and Forest Grove WRRFs**

The permittee must monitor influent for the Hillsboro and Forest Grove WRRFs at the headworks of each facility and report results in accordance with Table B1 and the table below:

Table B3: Hillsboro and Forest Grove WRRFs Influent Monitoring Requirements

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type / Required Action (See note a.)	Report Statistic (See note b.)
Flow **(Hillsboro WRRF)** (50050) (See note c.)	MGD	Year-round	Daily	Calculated	1. Maximum Daily Average 2. Monthly Average
Flow **(Forest Grove WRRF)** (50050) (See note d.)	MGD	Year-round	Daily	Calculated	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ (80082)	mg/L	Year-round	1/week (Nov 1 – Apr 30) 3/week (when discharging May 1 – Oct 31)	24-hour composite	Monthly Average
TSS (00530)	mg/L	Year-round	1/week (Nov 1 – Apr 30) 3/week (when discharging May 1 – Oct 31)	24-hour composite	Monthly Average
pH (00400)	SU	Year-round	Daily	Grab	1. Monthly Maximum 2. Monthly Minimum
Total Ammonia (as N) (00610)	mg/L	Year-round	1/Week	24-hour composite	Monthly Maximum
Total Phosphorus (as P) (00665) **(Forest Grove WRRF)**	mg/L	Year-round	1/week	24-hour composite	Monthly 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 once per day. The permittee must include a note in the DMR comments when grab sampling is being performed.

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.

c. The Hillsboro WRRF influent flow is the effluent flow plus transfer flows.

d. The Forest Grove WRRF influent flow is the sum of the influent flows minus return flows and transfer flows as measured at the aeration basins.

4. Effluent Monitoring and Reporting Requirements

a. **Durham WRRF**

The permittee must monitor effluent at the Durham WRRF and report results in accordance with Table B1 and the table below. The permittee must monitor effluent from the Durham WRRF after dechlorination and prior to discharge to the Tualatin River.

Table B4: Durham (D001) 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	Calculated (See note c.)	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ (80082)	mg/L	Year-round	3/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
$CBOD_5$ (80082)	lb/day	Year-round	3/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency**	**Sample Type/ Required Action** (See note a.)	**Report Statistic** (See note b.)
$CBOD_5$ Percent Removal (See note d.) (81383)	%	Year-round	Monthly	Calculation based on monthly average $CBOD_5$ concentration values	Monthly Average
TSS (00530)	mg/L	Year-round	1/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
TSS (00530)	lb/day	Year-round	1/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
TSS Percent Removal (81011) (See Note d.)	%	Year-round	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
pH (00400)	SU	Year-round	Daily	Continuous (at minimum hourly) (See note e.)	1. Daily Maximum 2. Daily Minimum
pH range excursions, >60 min (82581)	Occurrences/month	Year-round	Monthly	Calculation	Total
pH range excursions, monthly total accumulation (82582)	minutes	Year-round	Monthly	Calculation	Total

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency**	**Sample Type/ Required Action** (See note a.)	**Report Statistic** (See note b.)
Chlorine, Total Residual (50060)	mg/L	Year-round	Daily	Grab	1. Daily Maximum 2. Monthly Average
Temperature (00010)	ºC	May 1 – Oct 31	Daily	Continuous	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
Excess Thermal Load (51405)	Million kcal/day	May 1 – Oct 31	Daily	Calculation (See note f.)	1. Daily Maximum 2. Maximum 7-day Rolling Average
Thermal Shock Load Compliance Option	NA	May 1 – Oct 31	Daily	Narrative	Compliance Option A, B or C
Thermal Shock Load Limit (Option C calculation see Table A5, note b.) (See note g.)	Million kcal/day	May 1 – Oct 31	Daily (See note g.)	Calculation	(See note g.)
Thermal Shock Load (See note h.)	Million kcal/day	May 1 – Oct. 31	Daily (See note h.)	Calculation	(See note h.)
E. coli (51040)	#/100 mL	Year-round	3/week	Grab	1. Daily Maximum 2. Monthly Geometric Mean

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency**	**Sample Type/ Required Action** (See note a.)	**Report Statistic** (See note b.)
Total Ammonia (as N) (00610)	mg/L	Year-round	3/week	24-hour composite	1. Daily Maximum 2. Monthly Average
Total Ammonia (as N) (00610)	lb/day	Year-round	3/week	Calculation	Maximum Weekly Median
Total Phosphorus (00665) (See note i.)	mg/L	Year-round	3/week (May 1–Oct 15) 1/week (Oct 16 – Apr 30)	24-hour composite	1. Daily Maximum 2. Monthly Median
Dissolved Oxygen (00300)	mg/L	May 1 – Oct. 31	Daily	Continuous	Monthly Minimum of Daily Averages
Nitrate (NO3) Plus Nitrite (NO2) Nitrogen (00630)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Mercury, Total Recoverable (MMP) (See notes j and k.)	µg/L	Year-round	Quarterly	24-hour composite	Daily Value (Report in Pretreatment Annual Report)
Oil and Grease (00556)	mg/L	Third year of permit cycle [2025]	Quarterly	Grab	Quarterly Maximum

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency**	**Sample Type/ Required Action** (See note a.)	**Report Statistic** (See note b.)
Total Dissolved Solids (70295)	mg/L	Third year of permit cycle [2025]	Quarterly	24-hour composite	Quarterly Maximum

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. If the failure or loss is for continuous temperature monitoring equipment, the permittee must perform grab measurements daily between 2 PM and 4 PM until continuous monitoring equipment is redeployed. The permittee must include a note in the DMR comments when grab sampling is being performed.

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. The permittee must use influent flows to calculate effluent flows per guidance from DEQ.

d. 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.

e. The permittee must keep on file either an instrument manual showing that less than daily calibration is required along with calibration logs that comply with manufacturer instructions or daily calibration logs, and any Proficiency (PT) or Water Pollution (WP) tests must be done using the continuous pH monitor.

f. The daily maximum excess thermal load (ETL) discharged must be calculated using the daily effluent temperature and the total discharge flow for the day. Excess thermal loads must be calculated using the formula below. If the calculation results in a thermal load value less than zero, the results must be recorded as zero.

Excess Thermal Load = Q_{PS} x ΔT x ((1000/35.3) x 86400 x 5/9) kcal/day

$\Delta T = T_{PS} - T_{SP,}$ degrees F.

Q_{PS} = Daily average effluent flow, cfs

T_{PS} = Daily effluent temperature, degrees F.

T_{SP} = System Potential temperature, degrees F. (At Outfall D001= 64.6°F; R001 = 58.5°F)

Other factors: 1000 kg/m^3; 35.3 ft^3/m^3; 86400 sec/day; 5/9 degrees C/degrees F

g. If the permittee selects Thermal Shock Load Limit Option C from Table A5 Note b, the permittee must calculate the limit (million kcal/day) each day this option is selected. The permittee must use the equation and procedure noted in Table A5. If the permittee does not select Option C, then the limit does not need to be calculated and reported.

h. If the permittee selects Thermal Shock Load Limit Option B or C from Table A5 Note b, the permittee must calculate the Thermal Shock Load discharged (million kcal/day) each day the permittee uses this option. The permittee must use the following equation:

Thermal Shock Load = 3.785 * Qe *ΔT

Where:

Q_e = Daily Average Effluent flow (MGD)

ΔT = Daily Maximum Effluent temperature (°C) minus ambient criterion (25°C)

If the permittee does not select Option B or C, then the Thermal Shock Load discharged does not need to be calculated and reported.

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
i. Higher monitoring frequency for total phosphorus applies from May 1 – October 15 for Durham WRRF consistent with applicable time period listed in Table A7. These dates can be adjusted as noted in Schedule A, Table A7. The reduced monitoring frequency would only apply when total phosphorus limits are not applicable. j. Effluent mercury monitoring conducted under the pretreatment program (Table B11) can be used to meet the mercury monitoring requirement for the MMP. The monitoring results can be submitted in the Pretreatment Annual Report. k. The quantitation limit for mercury must be 0.001 µg/L or less.					

b. **Rock Creek WRRF**

The permittee must monitor effluent at the Rock Creek WRRF in accordance with the table below. The permittee must monitor effluent from the Rock Creek WRRF after dechlorination and prior to discharge to the Tualatin River.

Table B5: Rock Creek (R001 and R003) 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 (See note c.)	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ (80082)	mg/L	Year-round	1/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
$CBOD_5$ (80082)	lb/day	Year-round	1/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
$CBOD_5$ Percent Removal (81383) (See note d.)	%	Year-round	Monthly	Calculation based on monthly average $CBOD_5$ concentration values	Monthly Average
TSS (00530)	mg/L	Year-round	1/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
TSS (00530)	lb/day	Year-round	1/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
TSS Percent Removal (81011) (See note d.)	%	Year-round	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
pH (00400)	SU	Year-round	Daily	Continuous (at minimum hourly) (See note e.)	1. Daily Maximum 2. Daily Minimum
pH range excursions, >60 min (82581)	Occurrences /month	Year-round	Monthly	Calculation	Total
pH range excursions, monthly total accumulation (82582)	minutes	Year-round	Monthly	Calculation	Total
Chlorine, Total Residual (50060)	mg/L	Year-round	Daily	Grab	1. Daily Maximum 2. Monthly Average
Temperature (00010)	ºC	May 1 – Oct 31	Daily	Continuous	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
Excess Thermal Load (51405)	Million kcal/day	May 1 – Oct 31	Daily	Calculation (See note f.)	1. Daily Maximum 2. Maximum 7-day Rolling Average
Thermal Shock Load Compliance Option	NA	May 1 – Oct 31	Daily	Narrative	Compliance Option A, B or C

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
Thermal Shock Load Limit (Option C calculation see Table A5, note b.) (See note g.)	Million kcal/day	May 1 – Oct 31	Daily (See note g.)	Calculation	(See note g.)
Thermal Shock Load (See note h.)	Million kcal/day	May 1 – Oct 31	Daily (See note h.)	Calculation	(See note h.)
E. coli (51040)	#/100 mL	Year-round	3/week	Grab	1. Daily Maximum 2. Monthly Geometric Mean
Total Ammonia (as N) (00610)	mg/L	Year-round	3/week	24-hour composite	1. Daily Maximum 2. Monthly Average
Total Ammonia (as N) (00610)	lb/day	Year-round	3/week	Calculation	Maximum Weekly Median
Total Phosphorus (00665) (See note i.)	mg/L	Year-round	3/week (May 1–Sept 30) 1/week (Oct 1–Apr 30)	24-hour composite	1. Daily Maximum 2. Monthly Median
Total Phosphorus (00665)	lb/day	May 1 – Sept 30	Monthly	Calculate	1. Monthly Median 2. Seasonal Median
Dissolved Oxygen (00300)	mg/L	May 1 – Oct 31	Daily	Continuous	Monthly Minimum of Daily Average
Nitrate (NO3) Plus Nitrite (NO2) Nitrogen (00630)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency**	**Sample Type/ Required Action** (See note a.)	**Report Statistic** (See note b.)
Mercury, Total Recoverable (MMP) (See notes j and k.)	µg/L	Year-round	Quarterly	24-hour composite	Daily Value (Report in Pretreatment Annual Report)
Oil and Grease (00556)	mg/L	Third year of permit cycle [2025]	Quarterly	Grab	Quarterly Maximum
Total Dissolved Solids (70295)	mg/L	Third year of permit cycle [2025]	Quarterly	24-hour composite	Quarterly Maximum

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. If the failure or loss is for continuous temperature monitoring equipment, the permittee must perform grab measurements daily between 2 PM and 4 PM until continuous monitoring equipment is redeployed. The permittee must include a note in the DMR comments when grab sampling is being performed.

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. During high river flow conditions when effluent flow cannot be accurately measured because of backflow from the Tualatin River, effluent flow at the Rock Creek WRRF will be based on influent flows.

d. 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.

e. The permittee must keep on file either an instrument manual showing that less than daily calibration is required along with calibration logs that comply with manufacturer instructions or daily calibration logs, and any Proficiency (PT) or Water Pollution (WP) tests must be done using the continuous pH monitor.

f. The daily maximum excess thermal load (ETL) discharged must be calculated using the daily effluent temperature and the total discharge flow for the day. Excess thermal loads must be calculated using the formula below. If the calculation results in a thermal load value less than zero, the results must be recorded as zero.

Excess Thermal Load = Q_{PS} x ΔT x ((1000/35.3) x 86400 x 5/9) kcal/day

$\Delta T = T_{PS} - T_{SP,}$ degrees F.

Q_{PS} = Daily average effluent flow, cfs

T_{PS} = Daily effluent temperature, degrees F.

T_{SP} = System Potential temperature, degrees F. (At Outfall D001= 64.6°F; R001 = 58.5°F)

Other factors: 1000 kg/m^3; 35.3 ft^3/m^3; 86400 sec/day; 5/9 degrees C/degrees F

g. If the permittee selects Thermal Shock Load Limit Option C from Table A5 Note b, the permittee must calculate the limit (million kcal/day) each day this option is selected. The permittee must use the equation and procedure noted in Table A5. If the permittee does not select Option C, then the limit does not need to be calculated and reported.

h. If the permittee selects Thermal Shock Load Limit Option B or C from Table A5 Note b, the permittee must calculate the Thermal Shock Load discharged (million kcal/day) each day the permittee uses this option. The permittee must use the following equation:

Thermal Shock Load = 3.785 * Qe *ΔT

Where:

Q_e = Daily Average Effluent flow (MGD)

ΔT = Daily Maximum Effluent temperature (°C) minus ambient criterion (25°C)

If the permittee does not select Option B or C, then the Thermal Shock Load discharged does not need to be calculated and reported.

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
i. Higher monitoring frequency for total phosphorus applies from May 1 – September 30 for Rock Creek WRRF consistent with applicable time period listed in Table A7. These dates can be adjusted as noted in Schedule A, Table A7. The reduced monitoring frequency would only apply when total phosphorus limits are not applicable. j. Effluent mercury monitoring conducted under the pretreatment program (Table B11) can be used to meet the mercury monitoring requirement for the MMP. The monitoring results can be submitted in the Pretreatment Annual Report. k. The quantitation limit for mercury must be 0.001 µg/L or less.					

c. **Hillsboro WRRF Effluent Monitoring**

The permittee must monitor effluent at the Hillsboro WRRF and report results in accordance with Table B1 and the table below. The permittee must monitor effluent from the Hillsboro WRRF after disinfection and prior to discharge to the river at Outfalls H001A and H001B.

Table B6: Hillsboro (H001A & H001B) WRRF Effluent Monitoring Requirements

Item or Parameter	Units	Time Period (See note a.)	Minimum Frequency	Sample Type/ Required Action (See note b.)	Report Statistic (See note c.)
Flow (50050)	MGD	Year-round	Daily	Calculated (See note d.)	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ (80082)	mg/L	Year-round	1/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
$CBOD_5$ (80082)	lb/day	Year-round	1/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average

Item or Parameter	**Units**	**Time Period** (See note a.)	**Minimum Frequency**	**Sample Type/ Required Action** (See note b.)	**Report Statistic** (See note c.)
$CBOD_5$ Percent Removal (81383) (See note e.)	%	Year-round	Monthly	Calculation based on monthly average $CBOD_5$ concentration values	Monthly Average
TSS (00530)	mg/L	Year-round	1/week	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
TSS (00530)	lb/day	Year-round	1/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
TSS Percent Removal (81011) (See note e.)	%	Year-round	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
pH (00400)	SU	Year-round	Daily	Grab	1. Daily Maximum 2. Daily Minimum
Temperature (00010)	ºC	May 1 – Oct 31 (when discharging)	Daily	Continuous (at minimum hourly)	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
E. coli (51040)	#/100 mL	Year-round	3/week	Grab	1. Daily Maximum 2. Monthly Geometric Mean

Item or Parameter	**Units**	**Time Period** (See note a.)	**Minimum Frequency**	**Sample Type/ Required Action** (See note b.)	**Report Statistic** (See note c.)
UV dosage (61938)	mJ/cm^2	Year-round	Daily	Calculation	1. Daily Minimum 2. Monthly average
Total Ammonia (as N) (00610)	mg/L	Year-round	2/week	24-hour composite	1. Daily Maximum 2. Monthly Average
Total Phosphorus (00665)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Nitrate (NO3) Plus Nitrite (NO2) Nitrogen (00630)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Oil and Grease (00556)	mg/L	Third year of permit cycle [2025]	Quarterly	Grab	Quarterly Maximum
Total Dissolved Solids (70295)	mg/L	Third year of permit cycle [2025]	Quarterly	24-hour composite	Quarterly Maximum
Mercury, Total Recoverable (MMP) (See notes f and g.)	µg/L	Year-round	Semi-annually (2/year)	24-hour composite	Daily Value (Report in Pretreatment Annual Report)

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

Notes:

a. The Hillsboro WRRF operates seasonally in accordance with the provisions in Schedule A of the permit. The monitoring requirements apply when discharging into the Tualatin River.

b. 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. If the failure or loss is for continuous temperature monitoring equipment, the permittee must perform grab measurements daily between 2 PM and 4 PM until continuous monitoring equipment is redeployed. The permittee must include a note in the DMR when grab sampling is being performed.

c. 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.

d. Effluent flow is calculated using the effluent flow meter at ultraviolet (UV) disinfection minus transfer flows.

e. 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.

f. Effluent mercury monitoring conducted under the pretreatment program (Table B11) can be used to meet the mercury monitoring requirement for the MMP. The monitoring results can be submitted in the Pretreatment Annual Report.

g. The quantitation limit for mercury must be 0.001 µg/L or less.

d. **Forest Grove WRRF Effluent Monitoring**

The permittee must monitor effluent at the Forest Grove WRRF in accordance with Table B1 and the table below. During high river flow conditions in the wet season, the compliance point for all parameters will be at the Forest Grove WRRF after disinfection and prior to direct river discharge at Outfall F001. During infrequent early summer periods when stream flows are high (≥ 350 cfs at the Farmington gauge), which precludes the use of the Forest Grove Natural Treatment System, the compliance point is at the Forest Grove WRRF after disinfection and prior to effluent discharge at Outfall F001. During such discharges that preclude the use of the NTS, the internal monitoring location F004 may be used as the compliance point for ammonia. During low river flow conditions in the dry season, effluent flow from the Forest Grove WRRF is directed to the Natural Treatment System (NTS) prior to discharge to the Tualatin River at Outfall F001. During such discharges through the NTS, the compliance point for all parameters, except *E. coli*, will be at the NTS outlet structure prior to discharge to Outfall F001 (refer to Table B8 for monitoring requirements at the NTS outlet structure). The compliance point for *E. coli* will be at the Forest Grove WRRF after disinfection at an internal monitoring location (labeled F004) prior to effluent discharge to the NTS. The internal monitoring location F004 may also be used for characterization monitoring of treated effluent discharged from the Forest Grove WRRF into the NTS.

Table B7: Forest Grove (F001, F003 & F004) WRRF Effluent Monitoring Requirements

Item or Parameter (See note a.)	**Units**	**Time Period** (See note b.)	**Minimum Frequency** (See note c.)	**Sample Type/ Required Action** (See note d.)	**Report Statistic** (See note e.)
Flow (50050)	MGD	Year-round	Daily	Calculated (See note f.)	1. Maximum Daily Average 2. Monthly Average
$CBOD_5$ (80082)	mg/L	Year-round	1/week (Nov 1 – Apr 30) 3/week (May 1 – Oct 31)	24-hour composite	1. Maximum Weekly Average 2. Monthly Average
$CBOD_5$ (80082)	lb/day	Year-round	1/week (Nov 1 – Apr 30) 3/week (May 1 – Oct 31)	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
$CBOD_5$ Percent Removal (See note g.) (81383)	%	Year-round (Typically, Nov 1 – Apr 30)	Monthly	Calculation based on monthly average $CBOD_5$ concentration values	Monthly Average
TSS (00530)	mg/L	Year-round	1/week (Nov 1 – Apr 30) 3/week (May 1 – Oct 31)	24-hour composite	1. Maximum Weekly Average 2. Monthly Average

Item or Parameter (See note a.)	**Units**	**Time Period** (See note b.)	**Minimum Frequency** (See note c.)	**Sample Type/ Required Action** (See note d.)	**Report Statistic** (See note e.)
TSS (00530)	lb/day	Year-round	1/week (Nov 1 – Apr 30) 3/week (May 1 – Oct 31)	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
TSS Percent Removal (81011) (See note g.)	%	Year-round (Typically, Nov 1 – Apr 30)	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
pH (00400)	SU	Year-round	Daily	Grab	1. Daily Maximum 2. Daily Minimum
Temperature (00010)	ºF	May 1 – Oct 31 (when discharging directly to the Tualatin River)	Daily	Continuous (at minimum hourly) (See note f.)	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
E. coli (51040)	#/100 mL	Year-round	3/week	Grab	1. Daily Maximum 2. Monthly Geometric Mean
UV dosage (61938)	mJ/cm^2	Year-round	Daily	Calculation	1. Daily Minimum 2. Monthly average
Dissolved Oxygen (00300)	mg/L	May 1 – Oct 31 (when discharging directly to the Tualatin River)	Daily	Continuous (at a minimum hourly)	Monthly Minimum of Daily Averages
Total Ammonia (as N) (00610)	mg/L	Year-round	3/week (May 1 – Nov 15) 1/week (Nov 16 – Apr 30)	24-hour composite	1. Daily Maximum 2. Monthly Average

Item or Parameter (See note a.)	**Units**	**Time Period** (See note b.)	**Minimum Frequency** (See note c.)	**Sample Type/ Required Action** (See note d.)	**Report Statistic** (See note e.)
Total Ammonia (as N) (00610)	lb/day	Year-round	3/week (May 1 – Nov 15) 1/week (Nov 16 – Apr 30)	Calculation	Maximum Weekly Median
Total Phosphorus (00665) (See note h.)	mg/L	Year-round	3/week (May 1 – Sep 30) 1/week (Oct 1 – Apr 30)	24-hour composite	1. Daily Maximum 2. Monthly Median
Total Phosphorus (00665)	lb/day	May 1 – Sept. 30	Monthly	Calculation	1. Monthly Median 2. Seasonal Median
Nitrate (NO3) Plus Nitrite (NO2) Nitrogen (00630)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	Year-round	1/week	24-hour composite	Daily Maximum
Oil and Grease (00556)	mg/L	Third and fourth year of permit cycle [2025-2026]	Semi-annually	Grab	Semi-annual Maximum
Total Dissolved Solids (70295)	mg/L	Third and fourth year of permit cycle [2025-2026]	Semi-annually (2/year)	24-hour composite	Semi-annual Maximum
Mercury, Total Recoverable (MMP) (See notes i and j.)	µg/L	Year-round	Semi-annually (2/year)	24-hour composite	Daily Value (Report in Pretreatment Annual Report)

Notes:

a. During wet season high river flow discharge conditions (typically November 1 – April 30), monitoring at the Forest Grove WRRF serves to define the effluent quality discharged directly to the Tualatin River through Outfall F001. During dry season low river flow discharge conditions (typically May 1 – October 31), monitoring at the Forest Grove WRRF serves as an internal monitoring point (F004) to characterize the initial quality of the effluent being released to the NTS.

b. The monitoring time period applies whenever discharges occur directly to the Tualatin River through Outfall F001 with no discharges through the NTS (typically Nov 1 – April 30 with some seasonal variability based upon river flow conditions).

c. Monitoring frequencies apply when facility discharges directly to the Tualatin River through Outfall F001 with no discharges through the NTS. Refer to Table B8 for monitoring frequencies at NTS outlet structure for discharges through the NTS to Outfall F001.

d. 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. If the failure or loss is for continuous temperature monitoring equipment, the permittee must perform grab measurements daily between 2 PM and 4 PM until continuous monitoring equipment is redeployed. The permittee must include a note in the DMR when grab sampling is being performed.

e. 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.

f. Effluent flow is calculated using the influent flow minus transfer flows.

g. Percent removal for $CBOD_5$ and TSS must be calculated at the Forest Grove WRRF when $CBOD_5$ and TSS effluent limits apply at the Forest Grove WRRF (typically high flow conditions from Nov 1 – April 30). Percent removal must be calculated at the Forest Grove NTS outlet structure when the $CBOD_5$ and TSS limits apply at the NTS (see Table B8). 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.

h. Higher monitoring frequency for total phosphorus applies from May 1 – September 30 for Forest Grove WRRF consistent with applicable time period listed in Table A7. These dates can be adjusted as noted in Schedule A, Table A7. The reduced monitoring frequency would only apply when total phosphorus limits are not applicable.

i. Effluent mercury monitoring conducted under the pretreatment program (Table B11) can be used to meet the mercury monitoring requirement for the MMP. The monitoring results can be submitted in the Pretreatment Annual Report.

j. The quantitation limit for mercury must be 0.001 µg/L or less.

e. **Forest Grove Natural Treatment System (NTS) Monitoring**

When the Forest Grove WRRF discharges through the NTS, the permittee must monitor the surface discharge from the NTS at the outlet structure prior to entry into the discharge pipe for Outfall F001 in accordance with Table B1 and the table below. During such monitoring, the NTS outlet structure will be the point of permit compliance for $CBOD_5$, TSS, temperature, pH, dissolved oxygen, and total phosphorus during the time period indicated below.

Table B8: Forest Grove Natural Treatment System (F001) Monitoring

Item or Parameter	Units	Time Period (See note a.)	Minimum Frequency	Sample Type/ Required Action (See note b.)	Report Statistic (See note c.)
Flow (MGD) (50050) (See note d.)	MGD	May 1 – Oct 31	Daily	Measured	1. Daily Maximum 2. Monthly Average
Temperature (00010)	ºC	May 1 – Oct 31	Daily	Continuous (hourly)	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
Dissolved Oxygen (00300)	mg/L	May 1 – Oct 31	Daily	Continuous (hourly)	Monthly Minimum of Daily Average
$CBOD_5$ (80082)	mg/L	May 1- Oct 31	3/week	24-hour composite (See note e.)	1. Maximum Weekly Median 2. Monthly Median
$CBOD_5$ (80082)	lb/day	May 1 – Oct 31	3/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
TSS (00530)	mg/L	May 1 – Oct 31	3/week	24-hour composite (See note e.)	1. Maximum Weekly Median 2. Monthly Median
TSS (00530)	lb/day	May 1 – Oct 31	3/week	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
$CBOD_5$ Percent Removal (81383) (See note f.)	%	May 1 – Oct 31	Monthly	Calculation based on monthly average $CBOD_5$ concentration values	Monthly Average

Item or Parameter	**Units**	**Time Period** (See note a.)	**Minimum Frequency**	**Sample Type/ Required Action** (See note b.)	**Report Statistic** (See note c.)
TSS Percent Removal (81011) (See note f.)	%	May 1 – Oct 31	Monthly	Calculation based on monthly average TSS concentration values	Monthly Average
Excess Thermal Load (51405)	Million kcal/day	May 1 – Oct 31	Daily	Calculation (See note g.)	Maximum 7-day Rolling Average
Thermal Shock Compliance Option	NA	May 1 – Oct 31	Daily	Narrative	Compliance Option A or B
Thermal Shock Load (See note h.)	Million kcal/day	May 1 – Oct 31	Daily (See note h.)	Calculation	(See note h.)
Total Ammonia (as N) (00610)	mg/L	May 1- Oct 31	2/week	24-hour composite (See note e.)	1. Daily Maximum 2. Monthly Average
Total Ammonia (as N) (00610)	lb/day	May 1 – Oct 31	2/week	Calculation	Maximum Weekly Median Load
pH (00400)	SU	May 1 – Oct 31	2/week	Grab	1. Daily Maximum 2. Daily Minimum
Total Kjeldahl Nitrogen (TKN) (00625)	mg/L	May 1 – Oct 31	1/week	24-hour composite (See note e.)	Daily Maximum
Nitrate (NO3) Plus Nitrite (NO2) Nitrogen (00630)	mg/L	May 1 – Oct 31	1/week	24-hour composite (See note e.)	Daily Maximum
Total Phosphorus (00665)	mg/L	May 1 – Oct 31	2/week	24-hour composite (See note e.)	Daily Maximum
Total Phosphorus (00665)	lb/day	May 1 – Sept. 30	Monthly	Calculation	1. Monthly Median 2. Seasonal Median

Item or Parameter	**Units**	**Time Period** (See note a.)	**Minimum Frequency**	**Sample Type/ Required Action** (See note b.)	**Report Statistic** (See note c.)
Total Arsenic, Cadmium, Copper, Chromium, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver and Zinc (See note i.)	mg/L	May 1 – Oct 31 (when discharging)	Semi-annually (2/year)	24-hour composite (See note e.)	Daily Value (Report in Pretreatment Annual Report)

Notes:

a. When the Forest Grove WRRF discharges through the NTS, the permittee must monitor effluent from the NTS at the outlet structure (generally from May 1 to October 31). The NTS will likely experience periodic flooding during the wet season and the permittee will not be required to monitor effluent from the NTS during the wet season (typically November 1 – April 30).

b. 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. If the failure or loss is for continuous temperature and dissolved oxygen monitoring equipment, the permittee must perform grab measurements daily between 2 PM and 4 PM until continuous monitoring equipment is redeployed. The permittee must include a note the DMR comments when grab sampling is being performed.

c. 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.

d. Effluent from the NTS includes flows from both the Hillsboro and Forest Grove WRRFs. NTS effluent flow may be estimated based upon Forest Grove WRRF effluent flows and losses due to evaporation/transpiration when the flow meter at the NTS outlet structure is inoperable or not in place during high flow conditions.

e. If the composite sampler is inoperable due to clogging, damage from wildlife, vandalism or other issues, the permittee must collect a series of discrete grab samples over a 24-hour period in lieu of the 24-hour composite sample. The permittee must collect a series of discrete grab samples if the NTS is operated on a limited basis that precludes the collection of a 24-hour composite sample. For ammonia, grab sampling must be a composite of discrete grabs collected over a 24-hour period.

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

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

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

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.

g. The daily maximum excess thermal load must be calculated using the daily effluent temperature and the total discharge flow for the day. Excess thermal loads must be calculated using the formula below. If the calculation results in a thermal load value less than zero, the results must be recorded as zero.

The Excess Thermal Load = Q_{PS} x ΔT x ((1000/35.3) x 86400 x 5/9) kcal/day

$\Delta T = T_{PS} - T_{SP,}$ degrees F.

Q_{PS} = Daily Average effluent flow, cfs

T_{PS} = Daily effluent temperature, degrees F.

T_{SP} = System Potential temperature, degrees F. (At Outfall F001= 53.1°F)

Other factors: 1000 kg/m^3; 35.3 ft^3/m^3; 86400 sec/day; 5/9 degrees C/degrees F

h. If the permittee selects Thermal Shock Load Limit Option B from Table A5 Note c, the permittee must calculate the Thermal Shock Load discharged (million kcal/day) each day the permittee uses this option. The permittee must use the following equation:

Thermal Shock Load = 3.785 * Qe *ΔT

Where:

Q_e = Daily Average Effluent flow (MGD)

ΔT = Daily Maximum Effluent temperature (°C) minus ambient criterion (25°C)

If the permittee does not select Option B, then the Thermal Shock Load discharged does not need to be calculated and reported.

i. Parameter Codes: Total Arsenic (01079), Total Cadmium (01113), Total Copper (01119) Total Chromium (01034), Total Lead (01114), Total Mercury (71901), Total Molybdenum (01062), Total Nickel (01074), Total Selenium (00981), Total Silver (01079) and Total Zinc (01094). The monitoring results can be submitted in the Pretreatment Annual Report.

f. **Aggregate Thermal Load to Offset**

The permittee must monitor aggregate thermal load to offset and aggregate thermal credits generated in accordance with Table B1 and the table below

Table B9: Aggregate Thermal Load to Offset and Aggregate Thermal Credits Generated

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type / Required Action	Report Statistic (See note a.)
Aggregate Thermal Load to Offset	Million kcals/day	July 1 – August 31	1/month	Calculation (See note b.)	Monthly Maximum
Aggregate Thermal Load Credit	Million kcals/day	July 1-August 31	1/month	Calculation (See note c.)	Monthly 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.
b. The aggregate thermal load to offset is the combined thermal load to offset from the Durham and Rock Creek WRRFs and the Forest Grove NTS.
c. The aggregate thermal credit is the combined credits from riparian shade plantings and flow enhancement.

g. **Wet Weather Outfall Monitoring – D003, R003 and F003**

On any day when discharge occurs from the wet weather Outfalls D003, R003 and F003, the permittee must monitor the flow and duration of the discharge in accordance with the table below. For discharge through Outfall D003, the permittee must monitor the effluent leaving the Durham WRRF wet weather basins through Outfall D003 for the parameters in the table below:

Table B10: Wet Weather Outfall Monitoring (D003, R003 and F003)

Item or Parameter	Units	Time Period	Minimum Frequency (See note a.)	Sample Type/ Required Action	Report Statistic (See note b.)
Flow (50050)	MGD	Year-round	Daily	Measurement	1. Maximum Daily Average 2. Monthly Average
Duration of Discharge (50037)	Hours	Year-round	Daily	Measurement	Total
$CBOD_5$ (80082) (D003 only)	mg/L	Year-round	Daily	Grab	1. Maximum Weekly Average 2. Monthly Average
$CBOD_5$ (80082) (D003 only)	lb/day	Year-round	Daily	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average

Item or Parameter	**Units**	**Time Period**	**Minimum Frequency** (See note a.)	**Sample Type/ Required Action**	**Report Statistic** (See note b.)
TSS (00530) (D003 only)	mg/L	Year-round	Daily	Grab	1. Maximum Weekly Average 2. Monthly Average
TSS (00530) (D003 only)	lb/day	Year-round	Daily	Calculation	1. Daily Maximum 2. Maximum Weekly Average 3. Monthly Average
E. coli (51040) (D003 only)	#/100 mL	Year-round	Daily	Grab	1. Daily Maximum 2. Monthly Geometric Mean
Total Residual Chlorine (50060) (D003 only)	mg/L	Year-round	Daily	Grab	1. Daily Maximum 2. Monthly Average
pH (00400) (D003 only)	SU	Year-round	Daily	Grab	1. Daily Maximum 2. Daily Minimum

Notes:

a. Monitoring frequency applies to any day or portion of day when discharges occur from any of the wet weather Outfalls D003, R003 or F003. Monitoring will extend for duration of each discharge.

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.

5. Pretreatment Monitoring

The permittee must monitor influent, effluent, and biosolids according to the table below and report the results as specified in Schedule E-8.a and E-13.

Table B11: Pretreatment Monitoring

Pollutant (See note a.)	**CAS** (See note b.)	**Minimum Frequency**	**Sample Type**	**Report**
Arsenic	7440382	Quarterly at Durham and Rock Creek WRRFs; and semi-annually (2/year) for Hillsboro and Forest Grove WRRFs, on 3 consecutive days	24-hour composite for influent and effluent samples (See notes c, d and e.)	Daily values
Cadmium	7440439			
Chromium	7440473			
Copper	7440508			
Lead	7439921			
Mercury	7439976			
Molybdenum	7439987			
Nickel	7440020			
Selenium	7782492			
Silver	7440224			
Zinc	7440666			
Cyanide (Total)	57125			
Hardness				

Notes:

a. The permittee must analyze all metals for total concentration unless otherwise specified by DEQ in writing.

b. Chemical Abstract Service

c. Cyanide (total) must be collected as a grab sample according to 40 CFR 122. Twenty-four-hour composite samples are not required for this analyte.

d. Biosolids sampling and analysis must be performed per 40 CFR part 503.

e. Permittee must sample effluent after dechlorination or ultraviolet disinfection and prior to discharge to receiving waters. Biosolids sampling must occur after dewatering and be representative of the facility's biosolids that are delivered to customers.

6. Copper Biotic Ligand Model Sampling

The permittee must monitor the Tualatin River and sample the effluent from Outfalls D001, R001, H001A and H001B, and F001 for copper biotic ligand model parameters per Table B12 and Table B13 below. With the exception of Forest Grove Outfall F001, samples must be collected on a quarterly basis starting at the first full quarter after the permit effective date until a minimum of 12 samples have been collected. The Forest Grove Outfall F001 must be sampled quarterly starting at the first full quarter after the permit effective date until the permit is renewed or until 24 samples have been collected.

Table B12: Tualatin River Monitoring Sites for Copper Biotic Ligand Model Inputs and Aluminum Sampling Locations

Outfall Locations	River Mile	Monitoring Sites	River Mile
Durham (D001) (See note a.)	9.2	Tualatin River at Boones Ferry Rd	8.7
		Tualatin River at Jurgens Park	10.6
Rock Creek (R001)	37.7	Tualatin River at Rood Bridge Rd	39.1
Hillsboro (H001A & H001B)	43.3	Tualatin River at Hwy 219	45.0
Forest Grove (F001)	53.8	Tualatin River at Fernhill Rd	56.9

Note:
a. At the Durham WRRF, river monitoring must be conducted at both the specified downstream and upstream monitoring sites.

Table B13: Copper Biotic Ligand Model Sampling Requirements

Parameter (See notes a and b.)	**CAS** (See note c.)	**Units**	**Sampling Frequency** (See Note d.)	**Sampling Location** (See note e.)
Copper, Total and Dissolved	7440097	µg/L	Quarterly for Outfalls D001, R001, H001A and H001B starting at permit effective date (minimum of 12 samples) Quarterly for Outfall F001 starting at permit's effective date (minimum of 24 samples)	Upstream and Effluent
Dissolved Organic Carbon	–	mg/L		Upstream and Effluent
pH	–	S.U.		Upstream and Effluent
Temperature	–	°C		Upstream and Effluent
Calcium, dissolved	7440702	mg/L		Upstream and Effluent
Magnesium, dissolved	7439954	mg/L		Upstream and Effluent
Sodium, dissolved	7440235	mg/L		Upstream and Effluent
Potassium, dissolved	7440097	mg/L		Upstream and Effluent
Sulfate, dissolved	14808798	mg/L		Upstream and Effluent
Chloride, dissolved	16887006	mg/L		Upstream and Effluent
Alkalinity, dissolved	–	mg/L		Upstream and Effluent

Notes:

a. All effluent samples must be 24-hour composite samples except grab samples must be collected for pH, alkalinity and temperature. All receiving stream samples must be grab samples.

b. If the composite sampler is inoperable due to clogging, damage from wildlife, vandalism or other issues, the permittee must collect a series of discrete grab samples over a 24-hour period in lieu of the 24-hour composite sample. The permittee must collect a series of discrete grab samples if the NTS is operated on a limited basis that precludes the collection of a 24-hour composite sample.

c. Chemical Abstract Service

d. Sampling must be conducted on a minimum quarterly basis until the permit is renewed or the required number of samples are collected for each facility. The permittee has the option to collect samples on a more frequent basis (at least monthly) until the required number of samples are collected.

e. Paired samples must be collected upstream (outside the influence of the effluent) at the monitoring locations specified in Table B12 and from the effluent of the corresponding facility on the same day. The collective sampling for all four facilities does not have to occur on the same day.

7. Aluminum Sampling

The permittee must sample the Tualatin River at the stations listed in Table B12 and sample the river and effluent from all four WRRFs for the parameters listed in Table B14 below. Samples must be collected once per month, starting at the first full month after the permit effective date until 24 samples are collected. If the effluent is not discharged during the month, paired samples should not be collected.

Table B14: Aluminum Sampling Requirements

Parameter (See notes a and b.)	**CAS** (See note c.)	**Units**	**Sampling Frequency**	**Sampling Location** (See note d.)
Aluminum, Total	7429905	µg/L	1/month	Upstream and Effluent
Hardness (as $CaCO_3$)	N/A	mg/L	1/month	Upstream and Effluent
Dissolved Organic Carbon	N/A	mg/L	1/month	Upstream and Effluent
pH	N/A	S.U.	1/month	Upstream and Effluent

Notes:

a. All effluent samples must be 24-hour composite samples except grab samples must be collected for pH. All receiving stream samples must be grab samples.

b. If the composite sampler is inoperable due to clogging, damage from wildlife, vandalism or other issues, the permittee must collect a series of discrete grab samples over a 24-hour period in lieu of the 24-hour composite sample. The permittee must collect a series of discrete grab samples if the NTS is operated on a limited basis that precludes the collection of a 24-hour composite sample.

c. Chemical Abstract Service.

d. Paired samples must be collected upstream of each facility (outside the influence of the effluent) and downstream (if indicated) at the monitoring locations specified in Table B12 and from the effluent of the corresponding facility on the same day. The collective sampling for all four facilities does not have to occur on the same day.

8. Effluent Toxics Characterization Monitoring (Tier 1 Monitoring)

The permittee must collect and analyze effluent samples from the Durham WRRF, Rock Creek WRRF, Hillsboro WRRF and Forest Grove WRRF for the parameters listed in the tables below. The permittee must collect effluent samples from each facility at the effluent monitoring locations specified in Tables B4 through B8 on the dates indicated in Table B1. Quarters are defined as: Q1: Jan – Mar, Q2: Apr – Jun, Q3: Jul – Sept, Q4: Oct – Dec. Quarterly sampling to begin during the next quarter after permit's effective date. If no discharge occurs during the quarter, continue sampling quarterly until 12 sets of samples have been collected from each WRRF.

During low river flow conditions (dry season), effluent from both the Hillsboro and Forest Grove WRRFs is directed through the Forest Grove Natural Treatment System prior to discharge in the river. During such discharges, effluent toxics characterization monitoring conducted at the Forest Grove NTS outlet structure may be used to meet the required 12 sets of samples for both the Forest Grove and Hillsboro WRRFs.

Samples must be 24-hour composites, except as noted in the tables below for total cyanide, free cyanide and volatile organic compounds.

Table B15: Metals and Hardness
(µg/L unless otherwise specified)

Pollutant (See note a.)	**CAS** (See note b.)	**Pollutant** (See note a.)	**CAS** (See note b.)
Antimony (total)	7440360	Lead (dissolved)	7439921
		Nickel (dissolved)	7440020
Arsenic (Total Inorganic)	7440382	Selenium (dissolved)	7782492
Arsenic (Total Inorganic Dissolved)	7440382	Silver (dissolved)	7440224
Beryllium (total)	7440417	Thallium (total)	7440280
Cadmium (dissolved)	7440439	Zinc (dissolved)	7440666
Chromium (dissolved)	7440473	Hardness (Total as CaCO3)	
Chromium III (total and dissolved) (See note c.)	16065831	Iron (Total)	7439896
Chromium VI (dissolved)	18540299	Cyanide (Free) (See note d and e.)	57125

Notes:

a. The term "total" used in reference to metals is intended to cover all EPA-accepted standard digestion methods and is considered to be equivalent to the term "total recoverable".

b. Chemical Abstract Service

c. There is no analytical method to test for Chromium III, results are obtained by subtracting Chromium VI from Chromium.

d. There are multiple approved methods for testing for free cyanide. For more information, refer to DEQ's analytical memo on the subject of cyanide monitoring at: https://www.oregon.gov/deq/FilterDocs/sToxicscyanide.pdf

e. Cyanide (Free) must be collected as a grab sample according to 40 CFR 122. Twenty-four-hour composite samples are not required for this analyte.

Table B16: Volatile Organic Compounds
(µg/L unless otherwise specified)

Pollutant (See note a.)	CAS	Pollutant (See note a.)	CAS
Acrolein (See note b.)	107028	1,2-trans-dichloroethylene (See note c.)	156605
Acrylonitrile (See note b.)	107131	1,1-dichloroethylene (See note d.)	75354
Benzene	71432	1,2-dichloropropane	78875
Bromoform	75252	1,3-dichloropropylene (See note e.)	542756
Carbon Tetrachloride	56235	Ethylbenzene	100414
Chlorobenzene	108907	Methyl Bromide (See note f.)	74839
Chlorodibromomethane (See note g.)	124481	Methyl Chloride (See note h.)	74873
Chloroethane	75003	Methylene Chloride	75092
2-Chloroethylvinyl Ether (See note b.)	110758	1,1,2,2-tetrachloroethane	79345
Chloroform	67663	Tetrachloroethylene (See note i.)	127184
Dichlorobromomethane (See note j.)	75274	Toluene	108883
1,2-Dichlorobenzene (o)	95501	1,1,1-trichloroethane	71556
1,3-Dichlorobenzene (m)	541731	1,1,2-trichloroethane	79005
1,4-Dichlorobenzene (p)	106467	Trichloroethylene (See note k.)	79016
1,1-dichloroethane	75343	Vinyl Chloride	75014
1,2-dichloroethane	107062		

Notes:

a. VOC's must be collected as a grab sample according to 40 CFR 122. Twenty-four-hour composite samples are not required for this analyte. The quantitation limits remain in effect for composite samples.

b. Acrolein, Acrylonitrile, and 2-Chloroethylvinyl ether must be tested from an unacidified sample.

c. 1,2-Trans-dichloroethylene is identified as Trans-1,2-dichloroethene in 40 CFR 136.3, Table 1C.

d. 1,1-Dichloroethylene is identified as 1,1-Dichloroethene in 40 CFR 136.3, Table 1C.

e. 1,3-Dichloropropylene consists of both cis-1,3-Dichloropropene and Trans-1,3-dichloropropene. Both should be reported individually.

f. Methyl bromide is identified as Bromomethane in 40 CFR 136.3, Table 1C.

g. Chlorodibromomethane is identified as Dibromochloromethane in 40 CFR 136.3, Table 1C.

h. Methyl chloride is identified as Chloromethane in 40 CFR 136.3, Table 1C.

i. Tetrachloroethylene is identified as Tetrachloroethene in 40 CFR 136.3, Table 1C.

j. Dichlorobromomethane is identified as Bromodichloromethane in 40 CFR 136.3, Table 1C.

k. Trichloroethylene is identified as Trichloroethene in 40 CFR 136.3, Table 1C.

Table B17: Acid-Extractable Compounds
(µg/L unless otherwise specified)

Pollutant	CAS	Pollutant	CAS
p-chloro-m-cresol (See note a.)	59507	2-nitrophenol	88755
2-chlorophenol	95578	4-nitrophenol	100027
2,4-dichlorophenol	120832	Pentachlorophenol	87865
2,4-dimethylphenol	105679	Phenol	108952
4,6-dinitro-o-cresol (See note b.)	534521	2,4,5-trichlorophenol (See note c.)	95954
2,4-dinitrophenol	51285	2,4,6-trichlorophenol	88062

Notes:

a. p-chloro-m-cresol is identified as 4-Chloro-3-methylphenol in 40 CFR 136.3, Table 1C.

b. 4,6-dinitro-o-cresol is identified as 2-Methyl-4,6-dinitrophenol in 40 CFR 136.3, Table 1C.

c. To monitor for 2,4,5-trichlorophenol, use EPA Method 625.1.

Table B18: Base-Neutral Compounds
(µg/L unless otherwise specified)

Pollutant	CAS	Pollutant	CAS
Acenaphthene	83329	Dimethyl phthalate	131113
Acenaphthylene	208968	2,4-dinitrotoluene	121142
Anthracene	120127	2,6-dinitrotoluene	606202
Benzidine	92875	1,2-diphenylhydrazine (See note c.)	122667
Benzo(a)anthracene	56553	Fluoranthene	206440
Benzo(a)pyrene	50328	Fluorene	86737
3,4-benzofluoranthene (See note a.)	205992	Hexachlorobenzene	118741
Benzo(ghi)perylene	191242	Hexachlorobutadiene	87683
Benzo(k)fluoranthene	207089	Hexachlorocyclopentadiene	77474
Bis(2-chloroethoxy)methane	111911	Hexachloroethane	67721
Bis(2-chloroethyl)ether	111444	Indeno(1,2,3-cd)pyrene	193395
Bis(2-chloroisopropyl)ether (See note b.)	108601	Isophorone	78591
Bis (2-ethylhexyl)phthalate	117817	Napthalene	91203
4-bromophenyl phenyl ether	101553	Nitrobenzene	98953
Butylbenzyl phthalate	85687	N-nitrosodi-n-propylamine	621647
2-chloronaphthalene	91587	N-nitrosodimethylamine	62759
4-chlorophenyl phenyl ether	7005723	N-nitrosodiphenylamine	86306
Chrysene	218019	Pentachlorobenzene (See note d.)	608935
Di-n-butyl phthalate	84742	Phenanthrene	85018
Di-n-octyl phthalate	117840	Pyrene	129000
Dibenzo(a,h)anthracene	53703	1,2,4-trichlorobenzene	120821

Pollutant	CAS	Pollutant	CAS
3,3-Dichlorobenzidine	91941	Tetrachlorobenzene,1,2,4,5 (See note d.)	95943
Diethyl phthalate	84662		

Notes:

a. 3,4-benzofluoranthene is listed as Benzo(b)fluoranthene in 40 CFR part 136.

b. Bis(2-chloroisopropyl)ether is listed as 2,2'-oxybis(1-chloropropane) in 40 CFR part 136.

c. 1,2-diphenylhydrazine is difficult to analyze given its rapid decomposition rate in water. Azobenzene (a decomposition product of 1,2-diphenylhydrazine), should be analyzed as an estimate of this chemical.

d. To analyze for Pentachlorobenzene and Tetrachlorobenzene 1,2,4,5, use EPA 625.1.

9. Additional Receiving Stream and Effluent Characterization Monitoring (Tier 2 Monitoring)

If additional ambient or effluent monitoring is needed, DEQ will notify the permittee through a request for supplemental information/data. The need for additional monitoring will be determined after DEQ's evaluation of the effluent toxics characterization (Tier 1 monitoring in Schedule B8) results.

10. Whole Effluent Toxicity (WET) Requirements

The permittee must monitor final effluent from the Durham WRRF, the Rock Creek WRRF, the Hillsboro WRRF, and the Forest Grove WRRF for whole effluent toxicity as described in the table below using the testing protocols specified in Schedule D, Whole Effluent Toxicity Testing for Freshwater. The permittee must conduct separate bioassay tests for discharges from the Durham WRRF, Rock Creek WRRF, Hillsboro WRRF and Forest Grove WRRF. The permittee must collect samples at each facility at the effluent monitoring locations specified in Table B19 below.

Table B19: WET Test Monitoring

Parameter	Sample Type/Location	Minimum Frequency	Report
Acute toxicity	For acute toxicity: Composites taken after disinfection and dechlorination, where applicable.	Minimum of 4 times per every 5 years (See notes a and b.)	Report must include test results and backup information such as bench sheets sufficient to demonstrate compliance with permit requirements. Report must include a statement certifying that the results do or do not show toxicity.
Chronic toxicity	For chronic toxicity: 24-hr composite taken after disinfection and dechlorination (if applicable)		

Parameter	Sample Type/Location	Minimum Frequency	Report

Notes:

a. Quarters are defined as: Q1: Jan – Mar, Q2: Apr – Jun, Q3: Jul – Sept, Q4: Oct – Dec. Quarterly sampling to begin during the next quarter after permit's effective date. If no discharge occurs during the quarter, continue sampling quarterly until 4 samples from each WRRF have been collected for WET tests.

b. During low river flow periods (dry season), effluent from both the Hillsboro and Forest Grove WRRFs is directed through the Forest Grove Natural Treatment System prior to discharge in the river. The effluent discharged from the NTS outlet structure is considered to be representative of the final effluent discharged to the Tualatin River from both the Hillsboro and Forest Grove WRRFs. During such discharges, WET tests conducted at the Forest Grove NTS outlet structure may be used to meet the required 4 samples for both the Forest Grove and Hillsboro WRRFs. WET tests and toxics characterization testing must be collected on the same day.

11. Recycled Water Monitoring Requirements: Outfalls D002, F002, H002 and R002

The permittee must monitor recycled water for Outfalls D002, F002, H002 and R002 as listed below. The samples must be representative of the recycled water delivered for beneficial reuse at a location identified in the Recycled Water Use Plan. Monitoring results must be reported in the annual report in accordance with Schedule D.

Table B20: Recycled Water Monitoring

Item or Parameter	Time Period	Minimum Frequency	Sample Type/ Required Action	Report
Total Flow (MGD) and Quantity Irrigated (inches/acre)	When Discharging	Daily	Measurement	Monthly Total
Chlorine, Total Residual (mg/L) (See note a.)	When Discharging	Daily	Grab	Monthly Summary
UV dose (mJ/cm^2) (See note b.)	When Discharging	Daily	Calculation based on UVI grab and average daily flow	Monthly Summary
pH	When Discharging	2/Week	Grab	Monthly Summary
Total Coliform (See notes c and d.)	When Discharging	Daily	Grab	1. Daily Value 2. Weekly Median 3. Monthly Maximum

Item or Parameter	Time Period	Minimum Frequency	Sample Type/ Required Action	Report
Turbidity	When Discharging	Hourly	Measurement	1. Daily Average 2. Daily Maximum
Nitrogen Loading Rate (lbs/acre-year)	When Discharging	Annually	Calculation	Monthly Total
Nutrients (TKN, NO_2+NO_3-N, Total Ammonia (as N), Total Phosphorus)	When Discharging	Quarterly (See note e.)	Grab	Record Values

Notes:

a. Chlorine monitoring applies only to recycled water discharges currently from Outfalls D002 and R002. Should recycled water production occur at the Forest Grove WRRF, the Recycled Water Use Plan must be updated to also require monitoring at Outfall F002.

b. Ultraviolet monitoring applies only to recycled water discharges from Outfalls H002 and F002.

c. Calculations of the median total coliform levels for Class A are based on the results of the last seven days that analyses have been completed.

d. Permittee may use the Colilert method for testing for total coliform in recycled water as described in the permittee's Recycled Water Use Plan.

e. Quarterly monitoring for nutrients applies to any quarter when recycled water is produced for at least one week.

12. 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 B21: 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-N) Total Phosphorus (P) Potassium (K) pH (S.U.) Total Solids Volatile Solids	As described in the DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B22.	As described in the DEQ-approved Biosolids Management Plan
Pollutants: As, Cd, Cu, Hg, Pb, Mo, Ni, Se, Zn, mg/kg dry weight	As described in the DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B22.	As described in the DEQ-approved Biosolids Management Plan
Pathogen reduction	As described in the DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B22.	As described in the DEQ-approved Biosolids Management Plan
Vector attraction reduction	As described in the DEQ-approved Biosolids Management Plan, but not less than the frequency in Table B22.	As described in the 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 B22: 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)

13. Flow Transfers

The permittee must report the volume of wastewater transferred among the Hillsboro, Forest Grove and Rock Creek WRRFs in accordance with the table below:

Table B23: Hillsboro and Forest Grove WRRFs Flow Transfers

Item or Parameter	Time Period	Minimum Frequency	Sample Type/ Required Action	Report
Total Flow (MGD)	Year-round	Daily	Measurement	1. Maximum Daily Average 2. Monthly Average

14. Watershed Monitoring

The permittee conducts a comprehensive watershed-based monitoring program that includes in-stream water quality monitoring; physical conditions monitoring; stream flow, temperature and rainfall monitoring using continuous recording devices; and biological monitoring consisting of macro-invertebrate surveys. The monitoring conducted under this condition is used to characterize the watershed and evaluate the effectiveness of the permittee's actions in the watershed and is not for purposes of evaluating compliance. The monitoring under this condition is not subject to the provisions in Schedule F, Condition C6, "Additional Monitoring by the Permittee".

a. **Tualatin River and Watershed Monitoring**

The permittee must monitor the Tualatin River and its tributaries and report the results in accordance with Table B1and the table below. The permittee must collect samples such that the samples are not in the immediate discharge location of effluent from any of the four WRRFs and represent complete mix conditions.

Table B24: Tualatin River and Watershed Monitoring

Item or Parameter (See note a.)	Units	Time Period	Minimum Frequency (See note b.)	Sample Type / Required Action	Report Statistic (See notes c and d.)
Flow, stream **Tualatin River Only**	cfs	Year-round	Daily	Measured (See notes e and f.)	1. Daily Average 2. Monthly Average
Dissolved Oxygen **Tualatin River Only**	mg/L	July 1–Nov 15 (See note g.)	Daily	Continuous (See note h.)	Weekly Average of the daily average of the previous week
Dissolved Oxygen (Tualatin River and Tributaries)	mg/L	Year-round	6/year	Grab	Daily Value
pH	SU	Year-round	6/year	Grab	Daily Value
Temperature	ºC	Year-round	6/year	Grab	Daily Value
Specific Conductance	Umho/cm	Year-round	6/year	Grab	Daily Value
Turbidity	NTU	Year-round	6/year	Grab	Daily Value

Item or Parameter (See note a.)	**Units**	**Time Period**	**Minimum Frequency** (See note b.)	**Sample Type / Required Action**	**Report Statistic** (See notes c and d.)
E. coli	#/100 mL	Year-round	6/year	Grab	Daily Value
Total Organic Carbon	mg/L	Year-round	6/year	Grab	Daily Value
TSS	mg/L	Year-round	6/year	Grab	Daily Value
Total Phosphorus (as P)	mg/L	Year-round	6/year	Grab	Daily Value
Total Ammonia (as N)	mg/L	Year-round	6/year	Grab	Daily Value
Ortho-phosphorus (as P)	mg/L	Year-round	6/year	Grab	Daily Value
Nitrate (NO_3) Plus Nitrite (NO_2) Nitrogen	mg/L	Year-round	6/year	Grab	Daily Value
Total Hardness (as $CaCO_3$)	mg/L	Year-round	Quarterly	Grab	Daily Value
Copper, Total Recoverable	mg/L	Year-round	Quarterly	Grab	Daily Value
Copper, Dissolved	mg/L	Year-round	Quarterly	Grab	Daily Value
Lead, Total Recoverable	mg/L	Year-round	Quarterly	Grab	Daily Value
Lead, Dissolved	mg/L	Year-round	Quarterly	Grab	Daily Value
Zinc, Total Recoverable	mg/L	Year-round	Quarterly	Grab	Daily Value
Zinc, Dissolved	mg/L	Year-round	Quarterly	Grab	Daily Value
Mercury, Total Recoverable	µg/L	Year-round	2/year	Grab	Daily Value
Mercury, Dissolved	µg/L	Year-round	2/year	Grab	Daily Value

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

Notes:

a. With the exception of monitoring for flow and dissolved oxygen on the Tualatin River, the permittee must conduct monitoring for listed parameters at 15 locations throughout the Tualatin River watershed at locations determined by the permittee. Monitoring locations must include the upper and lower portions of the Tualatin River and tributaries where the permittee believes representative data can be obtained to monitor the overall health and condition of the watershed. Permittee must submit to DEQ a brief report summarizing the monitoring results for the year and a map showing the locations of the monitoring sites with its MS4 Annual Report. Refer to Table B1 for reporting frequencies.

b. For parameters to be sampled six times per year, three sample events must occur from May 1 – Oct 31 and three sample events must occur from November 1 – April 30.

c. Daily monitoring data for flow and dissolved oxygen on Tualatin River must be reported in monthly DMRs submitted for all facilities.

d. 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.

e. The daily mean flow of the Tualatin River must be measured at the Farmington Gauge at RM 33.3.

f. In the event the Farmington stream gauge malfunctions or is rendered inaccurate, daily monitoring requirements do not apply until such time as the gauge is repaired or recalibrated. Repairs and recalibrations must be completed as promptly as is reasonably possible.

g. Permittee must monitor daily dissolved oxygen levels in the Tualatin River on a continuous basis at RMs 3.4 and 24.5 when Tier 2 ammonia Limits in Table A9 could apply from July 1 to November 15.

h. Continuous monitoring for dissolved oxygen is conducted by United States Geological Survey (USGS). The permittee must ensure that the in-stream dissolved oxygen meters are properly functioning, and in the event of equipment failure or loss, deploy new equipment to minimize interruption of data collection. If new equipment cannot be immediately deployed, the permittee must either perform daily grab measurements between 2 PM and 4 PM until continuous monitoring equipment is redeployed or calculate ammonia limits in Table A9 using the more restrictive Tier 2 consecutive variables.

b. **Biological and Physical Characteristic Monitoring**

The permittee must conduct biological and physical monitoring throughout the Tualatin Basin. Permittee must conduct monitoring at 15 sites consisting of macro invertebrate sampling and an assessment of the physical conditions (e.g., channel dimensions, wetted width, bank condition [eroding & undercut], percent canopy cover, and large wood rating).

Table B25: In-Stream Biological and Physical Monitoring

Monitoring Type	Locations	Parameters	Monitoring Frequency
Biological	15 sites (See note a.)	Macro invertebrates (See notes b and d.)	1/permit term (See note c.)
Physical	15 sites	Channel dimensions, substrate conditions, bank condition, habitat types, riparian condition, percent canopy cover, and large wood rating. (See note b.)	1/permit term (See note c.)

Notes:

a. Permittee must conduct biological and physical monitoring at 15 locations throughout the Tualatin River watershed at locations to be determined by permittee. These locations will likely include wadeable stream sections and may not be the same locations as those identified for stream water quality monitoring in Table B24. Monitoring locations will include the upper and lower portions of the Tualatin River watershed and will be selected where the permittee believes representative data can be obtained to monitor the overall health and condition of the watershed. Permittee must submit to DEQ a brief report summarizing the monitoring and a map showing the locations of the monitoring sites within its MS4 Annual Report for that reporting year.

b. Biological monitoring must follow a generally accepted biological monitoring methodology (e.g., DEQ Benthic Macroinvertebrate Protocol for Wadeable Rivers and Streams). Physical monitoring must reflect a generally accepted physical habitat condition assessment methodology (e.g., Rapid Stream Assessment Technique [RSAT] or similar methodology).

c. Permittee may conduct biological and physical monitoring at any time during permit term. Permittee must maintain the results and provide the results to DEQ upon request or with the NPDES permit renewal application at the end of the permit term (whichever comes first).

d. Upon approval by DEQ, the permittee may substitute eDNA monitoring in lieu of macroinvertebrate monitoring.

15. MS4 Stormwater Monitoring

a. Monitoring Program

The permittee must continue to implement a monitoring program to support adaptive stormwater management and the evaluation of stormwater management program effectiveness in reducing the discharge of pollutants from the MS4.

i. The stormwater monitoring program must include the following objectives:

(A) Evaluate the source(s) of and means for reducing the pollutants of concern applicable to the permittee's permit area, including 2018/2020 303(d) listed pollutants, as applicable.

(B) Evaluate the effectiveness of Best Management Practices (BMPs) in order to inform BMP implementation priorities.

(C) Characterize stormwater based on land use type, seasonality, geography, or other catchment characteristics.

(D) Evaluate status and long-term trends in receiving waters associated with MS4 stormwater discharges.

(E) Assess the chemical, biological, and physical effects of MS4 stormwater discharges on receiving waters.

(F) Assess progress towards meeting TMDL pollutant load reduction benchmarks.

ii. The stormwater monitoring program must include environmental monitoring that incorporates the requirements identified in Table B26. The requirements in Table B26 become effective with the permit effective date.

iii. The permittee must monitor stormwater runoff at five land-use based sites. The permittee must submit monitoring results and data electronically with the MS4 Annual Report, and make available to DEQ upon request.

Table B26: MS4 Stormwater Monitoring

Monitoring Type	Locations	Parameters*	Monitoring Frequency/Site
Stormwater monitoring – storm event	5 land use-based sites	**Field Parameters:** Temperature, Specific Conductance, & Turbidity **Conventional:** *E. coli*, Hardness, Total Organic Carbon, & TSS **Nutrients:** Total phosphorus as P, Ortho-phosphorus as P, Ammonia (as N), & Nitrite + Nitrate as N **Metals (total & dissolved)**: Copper, Lead, Zinc, Mercury	3 events/year
Stormwater monitoring - pesticides	Conduct pesticide stormwater characterization monitoring or instream pesticide monitoring project/task. The pesticide pollutant parameters that must be considered for purposes of this requirement include pesticides currently used by the permittee within the jurisdictional areas, and the following: Insecticides: Bifenthrin, Chlorpyrifos, Imidacloprid, Fipronil; Herbicides: Atrazine, Simazine, Sulfometuron methyl, Diuron, 2,4-D, Glyphosate & degradate (AMPA), and 2,6-dichlorobenzamide (dichlobenil degradate). Legacy pesticide monitoring (DDT, Dieldrin) must be conducted for streams where an established TMDL requires it).		

Special Conditions:

1. The monitoring frequency reflects the required number of sample events per monitoring location.
2. All metals must be analyzed for total concentration unless otherwise specified. The term “total” in this permit is intended to cover all EPA-accepted standard digestion methods and is considered to be equivalent to the term “total recoverable”.
3. Monitoring and analysis for mercury must be conducted in accordance with US EPA method 1631E, with a quantitation limit of 0.5 ng/L. EPA Method 1669 ultra clean sampling protocol is to be used to collect samples, unless another method is approved by DEQ per Schedule B.15.c.iv. Total Mercury sampling is required per the requirements of the Willamette Basin Mercury TMDL, and must be paired with TSS sampling.
4. Field pollutant parameters for stormwater monitoring activities include flow rate or rainfall data.

b. Monitoring Plan

The permittee must implement the DEQ-approved monitoring plan starting at the permit effective date. A violation of the stormwater monitoring plan is a violation of the permit. The monitoring plan includes the following elements:

i. Identifies how each monitoring objective identified in Schedule B.15.a.i is addressed and the sources of information used. The permittee may use SWMP Document's measurable goals, environmental monitoring activities, historical monitoring data, stormwater modeling, national stormwater monitoring data, stormwater research or other applicable information to address the monitoring objectives.

ii. Describes the role and specific uses of the monitoring program efforts in implementing the adaptive management approach, required in Schedule A.14.b.vi, as part of the stormwater management program.

iii. Describes the relationship between environmental monitoring and a long-term monitoring program strategy.

iv. Describes in detail or includes by reference to external documents the following information for each environmental monitoring project/task:

(A) Project/task organization;

(B) Monitoring objectives, including:

1) Monitoring question and background;

2) Data analysis methodology and quality criteria; and,

3) Assumptions and rationale;

(C) Documentation and record-keeping procedures;

(D) Monitoring process/study design, including monitoring location, description of sampling event or storm selection criteria, monitoring frequency and duration, and responsible sampling coordinator;

(E) Sample collection methods and handling/custody procedures;

(F) Analytical methods for each water quality parameter to be analyzed;

(G) Quality control procedures, including quality assurance, the testing, inspection, maintenance, calibration of instrumentation and equipment; and,

(H) Data management, review, validation and verification.

v. The monitoring plan may be modified without prior DEQ approval if the permittee meets either of the following conditions A or B are met. For conditions not covered in this section, the permittee must provide DEQ with the proposed modification to the monitoring plan, and receive written approval from DEQ prior to implementation of the proposed modification. The conditions are as follows:

(A) The modification does not reduce the minimum number of data points, which are a product of monitoring location, frequency, and length of permit term, or eliminate pollutant parameters identified in Table B26 and referenced in Schedule B.15.a.ii.

(B) The modification is the result of including elements of another permit, such as a WPCF UIC permit.

vi. The permittee must document modifications to the monitoring plan in accordance with Schedule B.15.b.v and in the subsequent annual report by describing the rationale for the modification, and how the modification will allow the monitoring program to remain compliant with the permit conditions.

c. Sampling and Analysis

The permittee must exercise due diligence in collecting and analyzing all environmental monitoring samples required by this permit. If the permittee is unable to collect or analyze any sample, pollutant parameter, or information due to circumstances beyond the permittee's reasonable control, DEQ must be notified in writing with the submission of the data. These circumstances may include, but are not limited to, abnormal climatic conditions, unsafe or impracticable sampling conditions, equipment vandalism or equipment failures that occur despite proper operations and maintenance. All monitoring must be conducted in accordance with design and procedures identified in Schedule B.15.b.iv and the following conditions.

i. Stormwater runoff and structural BMP monitoring

(A) The permittee must collect all water quality samples during a storm event that is greater than 0.1 inch of rainfall.

(B) When possible, samples should be collected after an antecedent dry period of a minimum of 12 hours.

(C) Precautions must be taken to avoid the collection of samples lacking stormwater runoff, as when the intra-event dry period of a storm exceeds 6 hours, and exceptions must be documented with a rationale for the deviation (e.g., a 24-hr flow-weighted composite sample collection method was employed to compensate).

(D) Sample Collection Method: The permittee must collect a 24-hour flow-weighted composite sample during stormwater runoff producing events that represent the local or regional rainfall frequency and intensity, including event types that may be expected to yield high pollutant loads/concentrations.

1) A time-composite sampling method or grab sampling method may be used for an environmental monitoring project or task, if the monitoring plan identifies the infeasibility of the flow-weighted composite sampling method or flow-weighted composite sampling is scientifically unwarranted based upon the development of plan requirements identified in Schedule B.15.b.iv. For time composite sampling or grab sampling to be considered valid for the purpose of this permit condition, the rationale for the use of these alternative sampling methods and sampling procedures must be described in the monitoring plan.

2) The flow sampling method requirement is not applicable to the collection of samples for the pollutant parameters requiring the grab sampling method, such as bacteria, oil & grease, pH or volatiles, or for samples collected for purposes of insecticide, herbicide and fungicide monitoring.

3) Grab samples may be collected during any part of a wet-weather event which produces sufficient runoff for sampling. The grab samples must be collected in a manner to minimize any potential bias in the results.

(E) Flow or rainfall data must be collected, estimated or modeled for each stormwater monitoring event. If flow or rainfall is modeled or estimated, the procedure must be described in the monitoring plan.

ii. Samples must be analyzed in accordance with EPA approved methods listed in the most recent publication of 40 CFR 136. The analysis must utilize appropriate Quality Assurance/Quality Control protocols, such as routinely analyzing replicates, blanks, laboratory control samples and spiked samples, and quantitation limits appropriate for the sampling objective. Field analytical kits are acceptable if the kits use a method approved under 40 CFR 136. This requirement does not apply to illicit discharge detection and elimination field screening activities conducted by the permittee as required by Schedule A.14.c.iii(E). Use of alternative test procedures must be done in accordance with 40 CFR 136.

iii. If an approved sampling procedure or analytical method is not identified in 40 CFR 136, or if the permittee wishes to deviate from sampling or analytical methods prescribed in 40 CFR 136 or in this permit for other reasons, the permittee may propose a suitable procedure or analytical method if the method is described in the monitoring plan, and submitted to DEQ with a justification for review and approval prior to use, or an alternative testing procedure is already approved by the EPA under 40 CFR 136.

iv. Analyzed samples must comply with preservation, transportation and holding time recommendations cited in 40 CFR 136, in the most recent edition of Standard Methods for the Examination of Water and Wastewater, a DEQ management directive, or as applicable to the analytical method if no approved analytical method in 40 CFR 136 or the most recent edition of Standard Methods for the Examination of Water and Wastewater exists.

v. Analytical data must be submitted annually to DEQ in the DEQ-provided template, with the corresponding annual report.

d. Coordinated Monitoring

Environmental monitoring conducted to meet permit conditions identified in Schedule B.15.a.ii may be coordinated with other MS4 permittees or designated co-implementers. The permittee is responsible for conducting environmental monitoring in accordance with Schedule B requirements. The permittee may utilize data collected by other MS4 permittees or designated co-implementers to meet a permit condition in Table B26 provided the permittee establishes an agreement prior to conducting coordinated monitoring, and the minimum number of samples required in Table B26 are collected.

16. MS4 Reporting Requirements

The permittee must submit an annual report by November 1st of each year that describes the permittee's MS4 activities for the time period of July 1 of the previous year through June 30 of the same year, to evaluate their compliance with the MS4 related requirements of this permit. The permittee must provide DEQ with one hard copy and one electronic copy of the Annual Report and any supplemental information required by the due date in Table B1above until EDMS/Your DEQ Online is set up for the co-permittees.

DEQ may extend the due date for the annual report in the event of extraordinary circumstances including, but not limited to, pandemic, wildfire, earthquake, flood, or other natural disaster provided the permittee requests an extension in writing and provides all documentation available regarding the specific impacts as to why the due date cannot be met. In that circumstance, DEQ will respond to the extension request in writing and will document any revised annual report due date when applicable.

The Stormwater Management Plan approved by DEQ under the previous iteration of the permit must provide the framework, measurable goals, tracking measures, and reporting metrics for annual reporting until the SWMP Document required by this permit is approved by DEQ.

A signed electronic copy must also be made available on the permittee's website and/or other similar method approved by DEQ. Each MS4 annual report must contain:

1. The status of implementing the stormwater management program and each SWMP program element, including progress in meeting the measurable goals and program tracking and assessment metrics identified in the SWMP Document as well as additional annual reporting requirements identified in each section, or, prior to SWMP Document approval by DEQ, measurable goals and tracking metrics approved under the previous permit's approved Stormwater Management Plan(s).
2. A summary of the adaptive management process implementation and any changes or updates to programs made during the reporting year, including any proposed changes to the stormwater management program (e.g., new BMPs) identified through implementation of the adaptive management process, and review of related new and historical monitoring data. This summary should also include discussion of the implications of, or any findings related to recent years' adaptive management and/or changes made to the SWMP Document, based on data from tracking measures, measurable goals, and/or any monitoring related to the change.
3. Any proposed changes to SWMP program elements that are designed to reduce TMDL pollutants to the MEP.
4. A summary of total stormwater program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year.
5. A summary of monitoring program results relative to the Tualatin River and Watershed Monitoring requirements in Table B24, as well as the MS4 requirements in Table B26, including monitoring data that are accumulated throughout the reporting year submitted in the DEQ-approved Data Submission Template, and any assessments or evaluations of that data completed by the permittee or an authorized third party. Duplicate data submission is not needed for requirements of Table B24, but a summary of findings and how they inform MS4 program management is required.
6. Any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments.
7. A summary describing the number and nature of enforcement actions, inspections, and public education programs, including, but not limited to, the results of ongoing field screening and follow-up activities related to illicit discharges.
8. A list of entities referred to DEQ for possible 1200-Z NPDES general permit coverage based on permittee screening activities, a list of categories of facilities inspected, and an overview of the results of inspections of commercial and industrial facilities.
9. Any proposed modifications to the monitoring plan that are necessary to ensure that adequate data and information are collected to conduct stormwater program assessments.
10. An overview, as related to MS4 discharges, of concept planning, land use changes and new development activities (including the number of new post-construction permits issued) that occurred within the Urban Growth Boundary (UGB) expansion areas during the reporting year, and those forecast for the following year, where such data is available.
11. A summary of the new development/redevelopment projects and related stormwater management activities that occurred within the MS4 jurisdictional area during the reporting year. The number of new post-construction permits issued and an estimate of the total new and replaced impervious

surface area related to development projects that commenced during the reporting year must also be included.

12. Status or results, or both, of any public education program effectiveness evaluation conducted during the reporting year and summary of how the results were or will be used for adaptive management.
13. The details of all corrective actions implemented associated with Schedule A.14.a.ii during the reporting 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. Do NOT include mention of third-party contracts. DEQ does not have the authority to enforce these contracts.

3. Mixing Zone Study

The permittee must update the mixing zone study for each of the four WRRFs to reflect the dilution available at each WRRF. The results of each study are to be submitted with the permit renewal application. The mixing zone study for each facility must meet the requirements of a Level 2 mixing zone study in accordance with DEQ's Mixing Zone Internal Management Directive (IMD). In addition, the mixing zone study must also update the thermal plume analysis for each WRRF against criteria listed at OAR 340-041-0053(d) (A-D).

Each mixing zone study report must summarize the procedures for conducting the analysis at each facility and clearly identify the outfalls, effluent flows, stream flows and dilution values for each discharge scenario anticipated from the respective facility. The permittee may combine all four studies into one submittal to DEQ that clearly identifies the study methodologies and results for each of the four WRRFs.

4. Recycled Water Use Plan

The permittee must maintain a DEQ-approved Recycled Water Use Plan meeting the requirements in OAR 340-055-0025. The permittee must submit any significant modifications to this plan to the DEQ for review and approval with sufficient time to clear DEQ review and a public notice period prior to implementing changes to the recycled water program. The permittee must keep the plan 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 plan are enforceable requirements under this permit. 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, changes to utilization dates or changes in use within the recycled water class.

a. Recycled Water Annual Report – The permittee must submit a recycled water annual report by the date specified in Table B1: Reporting Requirements and Due Dates. The permittee must use the DEQ-approved recycled water annual report form. This report must include the monitoring data and analytical laboratory reports for the previous year's monitoring required under Schedule B.

5. 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.

6. Biosolids Management Plan

The permittee must 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 the 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 the 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.

7. 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.

8. 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.

9. Whole Effluent Toxicity Testing for Freshwater

a. The permittee must conduct whole effluent toxicity (WET) tests as specified here and in Schedule B of this permit.

b. Acute Toxicity Testing - Organisms and Protocols

i. The permittee must conduct 48-hour static renewal tests with *Ceriodaphnia dubia* (water flea) and 96-hour static renewal tests with *Pimephales promelas* (fathead minnow).

ii. All test methods and procedures must be in accordance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002*, or the most recent version of this publication if such edition is available. If the permittee wants to deviate from the bioassay procedures outlined in this method, the permittee must submit a written request to DEQ for review and approval prior to use.

iii. Treatments to the final effluent samples (for example, dechlorination, ammonia removal), except those included as part of the methodology, may not be performed by the laboratory unless approved by DEQ in writing prior to analysis.

iv. WET acute testing at each facility must be conducted on a control (0%) and the following dilution series:

(A) Dilution Series for Acute WET tests at all times, except during high river flow conditions as defined below

Facility	Dilution Series
Durham WRRF	100%, 70%, 39%, 20%, 10%
Rock Creek WRRF	100%, 89%, 77%, 38%, 19%
Hillsboro WRRF (when discharging)	100%, 65%, 29%, 15%, 7%
Forest Grove WRRF	100%, 78%, 56%, 28%, 14%

(B) Dilution Series for Acute WET tests during high river flow conditions[1]

Facility	Dilution Series
Durham WRRF	100%, 57%, 15%, 7%, 4%
Rock Creek WRRF	100%, 56%, 22%, 11%, 5%
Hillsboro WRRF (when discharging)	100%, 66%, 32%, 16%, 8%
Forest Grove WRRF	100%, 63%, 26%, 13%, 6%
1. Tualatin River flow at Farmington gauge >1700 cfs.	

v. At all times, except during high river flow conditions, an acute WET test shows toxicity if there is a statistically significant difference in survival between the control and 39% effluent at the Durham WRRF; between the control and 77% effluent at the Rock Creek WRRF; between the control and 29% effluent at the Hillsboro WRRF; and between the control and 56% effluent at the Forest Grove WRRF. This will be reported as the NOEC ≤ for the aforementioned effluent percentages.

During high river flow conditions, an acute WET test shows toxicity if there is a statistically significant difference in survival between the control and 15% effluent at the Durham WRRF; between the control and 22% effluent at the Rock Creek WRRF; between the control and 32% effluent at the Hillsboro WRRF; and between the control and 26% effluent at the Forest Grove WRRF. This will be reported as the NOEC ≤ for the aforementioned effluent percentages.

c. Chronic Toxicity Testing - Organisms and Protocols

i. The permittee must conduct tests with *Ceriodaphnia dubia* (water flea) for reproduction and survival test endpoint, *Pimephales promelas* (fathead minnow) for growth and survival test endpoint, and *Raphidocelis subcapitata* (green alga formerly known as *Selanastrum capricornutum*) for growth test endpoint.

ii. All test methods and procedures must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002,* or the most recent version of this publication if such edition is available. If the permittee wants to deviate from the bioassay procedures outlined in the applicable method, the permittee must submit a written request to DEQ for review and approval prior to use.

iii. Treatments to the final effluent samples (for example, dechlorination, ammonia removal), except those included as part of the methodology, may not be performed by the laboratory unless approved by DEQ in writing prior to analysis.

iv. WET chronic testing at each facility must be conducted based upon a control (0% effluent) and the following dilution series:

(A) Dilution series for the Chronic WET tests at all times, except during high flow conditions as defined below

Facility	Dilution Series
Durham WRRF	100%, 59%, 18%, 9%, 5%
Rock Creek WRRF	100%, 73%, 46%, 23%, 11%
Hillsboro WRRF (when discharging)	100%, 53%, 6%, 3%, 2%
Forest Grove WRRF (Dry Season)	100%, 60%, 20%, 10%, 5%

(B) Dilution Series for Chronic WET tests during high river flow conditions[1]

Facility	Dilution Series
Durham WRRF	100%, 52%, 5%, 2%, 1%
Rock Creek WRRF	100%, 56%, 12%, 6%, 3%
Hillsboro WRRF (when discharging)	100%, 53%, 6%, 3%, 2%
Forest Grove WRRF	100%, 52%, 3%, 2%, 1%
1. Tualatin River flow at Farmington gauge >1700 cfs.	

v. A chronic WET test shows toxicity if the IC_{25} (25% inhibition concentration) occurs at dilutions equal to or less than the dilution that is known to occur at the edge of the mixing zone, that is:

(A) At all times, except during high flow conditions, $IC_{25} \leq 18\%$ for the Durham WRRF; $IC_{25} \leq 46\%$ for the Rock Creek WRRF; $IC_{25} \leq 6\%$ for the Hillsboro WRRF; and $IC_{25} \leq 20\%$ for the Forest Grove WRRF.

(B) During high flow conditions: $IC_{25} \leq 5\%$ for the Durham WRRF; $IC_{25} \leq 12\%$ for the Rock Creek WRRF; $IC_{25} \leq 6\%$ for the Hillsboro WRRF; and $IC_{25} \leq 3\%$ for the Forest Grove WRRF.

d. Dual End-Point Tests

i. WET tests may be dual end-point tests in which both acute and chronic end-points can be determined from the results of a single chronic test. The acute end-point will be based on 48-hours for the *Ceriodaphnia dubia* (water flea) and 96-hours for the *Pimephales promelas* (fathead minnow).

ii. All test methods and procedures must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002*, or the most recent version of this publication if such edition is available. If the permittee wants to deviate from the bioassay procedures outlined in this method, the permittee must submit a written request to DEQ for review and approval prior to use.

iii. Tests run as dual end-point tests must be conducted on a control (0%) and the following dilution series:

(A) Dilution Series for Dual End-Point Tests at all times, except during high flow conditions as defined below

Facility	Dilution Series
Durham WRRF	100%, 39%, 25%, 18%, 13%
Rock Creek WRRF	100%, 77%, 50%, 46%, 25%
Hillsboro WRRF (when discharging)	100%, 40%, 29%, 6%, 3%
Forest Grove WRRF	100%, 56%, 25%, 20%, 13%

(B) Dilution Series for Dual End-Point WET tests during high river flow conditions[1]

Facility	Dilution Series
Durham WRRF	100%, 15%, 13%, 5%, 3%
Rock Creek WRRF	100%, 22%, 13%, 11%, 6%
Hillsboro WRRF (when discharging)	100%, 32%, 25%, 6%, 3%
Forest Grove WRRF	100%, 26%, 13%, 3%, 1%
1. Tualatin River flow at Farmington gauge >1700 cfs.	

iv. Toxicity determinations for dual end-point tests must correspond to the acute and chronic tests described in conditions 9.b.v and 9.c.v above.

e. Evaluation of Causes and Exceedances

i. If any test exhibits toxicity as described in conditions 9.b.v. and 9.c.v. above, the permittee must conduct another toxicity test using the same species and DEQ-approved methodology within two weeks of receiving the results unless an extension is granted by DEQ in writing.

ii. If two consecutive WET test results indicate acute or chronic toxicity as described in conditions 9.b.v. and 9.c.v. above, the permittee must immediately notify DEQ of the results. DEQ will work with the permittee to determine the appropriate course of action to evaluate and address the toxicity.

f. Quality Assurance and Reporting

i. Quality assurance criteria, statistical analyses, and data reporting for the WET tests must be in accordance with the EPA documents stated in this condition.

ii. For each test, the permittee must provide a bioassay laboratory report according to the EPA method documents referenced in this Schedule. The report must include all QA/QC documentation, statistical analysis for each test performed, standard reference toxicant test (SRT) conducted on each species required for the toxicity tests, and completed Chain of Custody forms for the samples including time of sample collection and receipt. The permittee must submit reports to DEQ within 60 days of test completion.

iii. The report must include all endpoints measured in the test: NOEC (No Observed Effects Concentration), LOEC (Lowest Observed Effects Concentration), and IC_{25} (chronic effect 25% inhibition concentration).

iv. The permittee must make available to DEQ upon request the written standard operating procedures they, or the laboratory performing the WET tests, use for all toxicity tests required by DEQ.

g. Reopener

DEQ may reopen and modify this permit to include new limits, monitoring requirements, and/or conditions as determined by DEQ to be appropriate, and in accordance with procedures outlined in OAR Chapter 340, Division 45 if:

i. WET testing data indicate acute and/or chronic toxicity.

ii. The facility undergoes any process changes.

iii. Discharge monitoring data indicate a change in the reasonable potential to cause or contribute to an exceedance of a water quality standard.

h. Circumstances not addressed in this section, or that require deviation from the requirements of this section, must be approved in writing by DEQ before changes are implemented.

10. 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 the 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 the DEQ Operator Certification Program. Current system classifications are publicized on the DEQ Supervisory Wastewater Operator Status Report found on the 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 the 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 (d) 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.

11. Outfall Inspection

By the date in Table B1, the permittee must inspect Outfalls D001, D003, R001, R003, H001A, H001B, F001 and F003 including the submerged portions of the outfall lines and diffusers (if any) to document their integrity and to determine whether they are 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 diffusers (if any). The permittee must submit a written report to DEQ regarding the results of each outfall inspection by the date in Table B1. The report must include a description of each outfall as originally constructed, the condition of the current outfall and identify any repairs needed to return the outfall to satisfactory condition.

12. Forest Grove Natural Treatment System Operations Plan

The permittee must maintain an Operations Plan for the Forest Grove Natural Treatment System. At a minimum, the plan must describe the general design and capabilities of the NTS in providing wastewater treatment and specify the adaptive management strategies for optimizing the quality of effluent discharged from the NTS. The plan must also describe effluent monitoring locations and procedures, current maintenance and management activities employed to the NTS and planned improvements or revisions to the NTS. The plan must be updated on an annual basis and a copy provided to DEQ by the date indicated in Table B1.

13. Water Quality Trading in the Tualatin Basin

a. **Authorization of Water Quality Trading**

The permittee is authorized to use water quality trading to comply with the thermal load limitations in Schedule A provided its trading activities comply with the requirements of this section and its Thermal Load Management Plan. The permittee's trading activities may not cause a net increase of pollutant load or impair in-stream beneficial uses. The temperature trading activities must be designed to reduce or offset thermal loads.

For the purposes of this permit, the term "trading" principally refers to water quality trading activities to reduce or offset thermal loads.

The permittee must submit any amendment that changes the scope or direction of the trading plan to the DEQ for review, public notice, and DEQ approval. DEQ approval and public review is not required for individual trading agreements provided the agreements are for projects that are consistent with the overall scope of the credit trading plan. Any modifications to the permittee's trading plan must be consistent with OAR 340-039.

b. **Authorized Parameters**

i. Temperature

The permittee is authorized to implement their Thermal Load Management Plan as approved by DEQ to generate thermal credits.

c. **Water Quality Trading Plan Components**

The permittee must implement the DEQ- approved Thermal Load Management Plan (also known as the "trading plan"). The permittee's trading plan includes the following elements as required by OAR 340-039-0025(5):

i. Parameter Authorized for Trading - Temperature.

ii. Trading Baseline – The permittee must verify that project sites comply with the regulatory requirements described in OAR 340-039-0030(1). TMDLs are revised periodically. Development of new or revised TMDLs can change implementation requirements. Any new TMDL requirements must be incorporated into subsequent baseline determinations at project initiation per OAR 340-039-0030.

iii. Trading Area – Trading area is the Tualatin River watershed.

iv. Best Management Practices (BMPs) – BMPs include stream flow enhancement and riparian shade projects.

v. Trading Ratios – The permittee must apply a 2:1 ratio for calculating thermal credits generated from its riparian shade projects; that is, the thermal credit is equal to 50% of the actual environmental benefit (shade) generated from the project.

vi. Credits

1) Quantity and Timing –The permittee must continue to generate the necessary number of thermal credits to offset its actual excess thermal load.

2) Methods – Thermal credits will be expressed in kcals/day.

3) Duration - Thermal credits generated from the BMPs will be able to be used as long as the BMP is being implemented consistent with the BMP quality standards and the BMP is functioning effectively.

vii. Monitoring

1) BMP monitoring – Qualitative monitoring will be conducted annually for all riparian shade projects enrolled for thermal credit. Stream flow enhancement will be monitored using data from stream flow monitoring stations located throughout the Tualatin River watershed.

2) Water quality benefit monitoring – Following a riparian shade project's initial enrollment for thermal credit, the permittee must conduct quantitative monitoring (shade monitoring) to assess the development of the shade producing canopy. Canopy (shade) data at project sites will be updated every five years based on the most recently available remotely sensed or other available data until year 20.

viii. Trading Plan Performance Verification – The permittee must use the results of its qualitative and quantitative monitoring to evaluate whether or not BMPs are functioning as planned.

ix. Tracking and Reporting – Permittee must submit to DEQ annual reports in accordance with OAR 340-039-0017(3) (see Schedule D, Condition 13 g, below). Permittee must make the annual reports available to the public by posting the reports to its website.

d. **General Provisions for Water Quality Trading**

i. Obtaining credits.

1) The permittee may obtain credits through contractual trading agreements through marketplace exchanges, or through collaborative efforts with land or water conservation organizations, government agencies, private parties, or through activities performed by the permittee itself.

ii. Validity of credits.

1) Credits must be generated from activities that are not already required by statute or rule.

2) Credits must be generated prior to or during the period they are applied to the permittee's waste discharge limitations in Schedule A except as provided in Schedule D.13.e.iv.

3) Assurances exist to ensure that credits are generated and will be maintained for the expected duration.

4) Maintenance plans must be in place for the duration of the credits.

5) Monitoring plans must be developed and implemented for the activities generating credits to ensure that these activities are functioning as intended.

6) Credits generated must comply with OAR 340-039-0040.

iii. Events beyond the permittee's reasonable control.

1) Riparian Planting Projects

a. Damage to a project due to an event beyond the permittee's reasonable control (for example, wildfire, flood, vandalism) is not in and of itself considered a violation of this permit.

b. If such an event occurs, the permittee must report to DEQ within 90 days of becoming aware of the damage. The report must include the following:

(A) A description of the event, including an assessment of the damage.

(B) A corrective action plan for addressing the damage or replacing the project with an alternative site or sites. Natural restoration and/or active replanting of the site is allowed if continued maintenance is expected to provide a reasonable potential for the long-term restoration of the shading function in an ecologically appropriate manner.

(C) Schedule for implementation of the permittee's corrective action plan.

c. Credits from projects that are damaged due to events beyond the reasonable control of the permittee remain valid provided the permittee demonstrates to DEQ that the sites will be restored, or alternative solutions implemented, and credits will be generated within a reasonable timeframe.

2) Stream Flow Enhancement: The failure to fully offset thermal loads because of reductions in the availability of stored water or limitations on its use because of events beyond the permittee's reasonable control, including but not limited to periods of extended declared drought, earthquake, or other natural events, must be minimized to extent practicable and documented by the permittee. Under these circumstances, the permittee must:

a. prioritize the use of available stored water to offset thermal loads from the WRRFs to the extent feasible; and

b. Notify DEQ in writing within 30 days of becoming aware of the inability to provide sufficient stream flow enhancements. The notification must include:

(A) A description of the circumstances causing the insufficiency;

(B) The duration of the insufficiency, including when the insufficiency began and ended, or, if the insufficiency is continuing at the time of the notice, an estimate of when the insufficiency is expected to end; and

(C) The efforts that the permittee has made or is making to prioritize the use of available stored water to offset thermal loads from the WRRFs to the extent feasible.

e. **Provisions for Generating Thermal Load Credits**

i. Thermal load credits may be generated from the following activities:

1) Riparian area shading

2) Stream flow enhancement

ii. Credits must be from activities implemented after the 2001 Tualatin TMDL was adopted.

iii. Credits for offsetting thermal load must be generated in the trading area as described above in Schedule D, Condition 13 c.iii.

iv. The permittee may use credits for as long as the credit generation activity is monitored and functioning as described in the approved trading plan, unless otherwise specified by this permit or DEQ in writing.

f. **Monthly Thermal Credit Reports**

The permittee must report to the DEQ by the 15th of each month through Discharge Monitoring Reports the thermal loads discharged by the WRRFs, the thermal credits from riparian shading and stream flow enhancement, and the net thermal load to the Tualatin River. Note that this typically applies to the July and August DMRs as noted in Table A5 of the permit.

g. **Annual Water Quality Trading Report**

The permittee must submit to the DEQ by March 31 an annual report in accordance with OAR 340-039-0017(3). At a minimum, the report must include, for each new riparian shade project that is completed within the calendar year, the project name, project number, stream length planted, thermal load blocked and thermal credits generated.

14. Municipal Separate Storm Sewer System (MS4) Provisions

a. Legal Authority

The permittee must maintain adequate legal authority through ordinance(s), interagency agreement(s) or other means to implement and enforce the provisions of this permit.

b. 303(d) Listed Pollutants

The requirements of this section apply to receiving waters listed as impaired on the 303(d) list without established TMDL waste load allocations to which the permittee's MS4 discharges. The permittee must:

i. Review the applicable pollutants that are on the 2018/2020 Integrated Report's 303(d) list, or the most recent USEPA list if approved within three years of the issuance date of this permit, that are relevant to the permittee's MS4 discharges. Based on a review of the most current 303(d) list at the time, evaluate whether there is a reasonable likelihood for stormwater from the MS4 to cause or contribute to water quality degradation of receiving waters.

ii. Evaluate whether the BMPs in the existing SWMP are effective in reducing the 303(d) pollutants. If the permittee determines that the BMPs in the existing SWMP Document are ineffective in reducing the applicable 303(d) pollutants, the permittee must describe how the SWMP Document will be modified or updated to address and reduce these pollutants to the MEP.

iii. Submit a report to DEQ with the Permit Renewal Application Package summarizing the results of the review and evaluation. The permittee must also identify in the report any proposed modifications or updates to the SWMP Document that are necessary to reduce applicable 303(d) pollutants to the MEP.

c. Total Maximum Daily Loads (TMDLs)

i. Applicability: DEQ incorporated performance measures in Schedule A.14.c to address water quality impairments and EPA-approved or issued TMDL allocations to date. Compliance with the permit's terms and conditions is presumed to be in compliance with TMDL Waste Load Allocations (WLAs) issued before the effective date of this permit, unless specified below.

The requirements of this section apply to the permittee's MS4 discharges to receiving waters with established TMDLs or to receiving waters with new or modified TMDLs approved by EPA within three years of the issuance date of this permit. Established TMDLs are noted on page 2 of this permit.

Tualatin Sub-basin TMDLs with WLAs for Municipal Stormwater Discharges

Tualatin Sub-basin (2001 and 2012)	Willamette River Basin (2019/2021)
• Total Phosphorus • *E. coli* Bacteria • Settleable Volatile Solids (TSS as a surrogate)	• Total Mercury

ii. Pollutant discharges for those parameters listed in the TMDL with applicable wasteload allocations (WLAs) must be reduced to the maximum extent practicable through the implementation of BMPs. The permittee must apply its adaptive management approach to ensure that reductions in applicable TMDL pollutants to the MEP are achieved.

iii. Willamette Basin Mercury TMDL: The permittee is responsible for the applicable WLAs included in the Total Maximum Daily Load (TMDL) for Mercury in the Willamette Basin and the implementation requirements associated Water Quality Management Plan issued by EPA on December 30, 2019 and reissued with modification on February 4, 2021. These requirements include:

(A) Develop and submit a mercury minimization assessment with the annual report due November 1, 2024, that documents the current actions, such as BMPs implemented, that reduce the amount of solids discharged into and from the permitted MS4 system (similar to the actions currently required in Schedule A.12). If the assessment indicates that mercury and sediment reducing BMPs are fully incorporated into the SWMP Document, a report documenting the results as such is sufficient.

(B) Continued implementation of the BMPs and other actions described in the mercury minimization assessment that are effective for mercury reduction, along with documentation of implementation in each subsequent annual report.

(C) An analysis of the effectiveness of the best management practices and any other actions taken and qualitative pollutant load reductions achieved in the MS4 Permit Renewal Application Package. Due to data limitations, mercury benchmarks are not applicable in the first permit cycle after the TMDL is finalized.

(D) Collection of paired total mercury and total suspended solids samples, as described in Schedule B.15.

(E) Submittal of paired mercury and total suspended solids monitoring data in the appropriate DEQ data submission template. Given the lack of sufficient mercury data, pollutant load reduction evaluations, and benchmarks for mercury will not be required in this permit cycle.

iv. TMDL Pollutant Load Reduction Evaluation: Progress towards reducing TMDL pollutant loads must be evaluated by the permittee through the use of a pollutant load reduction empirical model and water quality status and trend analysis and other appropriate qualitative or quantitative evaluation approaches identified by the permittee. The results of this TMDL pollutant load reduction evaluation must be described in a report and submitted to DEQ with the Permit Renewal Application package. As indicated above in Schedule D.14.c.iii.E, this exercise does not need to include mercury due to insufficient data volume. The report must contain the following:

(A) The rationale and methodology used to evaluate progress towards reducing TMDL pollutant loads.

(B) An estimate of current pollutant loadings without considering BMP implementation, and an estimate of current pollutant loadings considering BMP implementation for each TMDL parameter with an established WLA. The difference between these two estimated loads is the pollutant load reduction.

(C) A comparison of the estimated pollutant loading with and without BMP implementation to the applicable TMDL WLA.

(D) A comparison of the estimated pollutant load reduction to the estimated TMDL pollutant load reduction benchmark established for the permit term, if applicable.

(E) A description of the estimated effectiveness of structural BMPs.

(F) A description of the estimated effectiveness of non-structural BMPs, if applicable, and the rationale for the selected approach.

(G) A water quality trend analysis, as sufficient data are available, and the relationship to stormwater discharges for receiving waterbodies within the permittee's jurisdictional area with an approved TMDL. If sufficient data to conduct a water quality trend analysis is unavailable for a receiving waterbody, the permittee must describe the data limitations. The collection of sufficient data must be prioritized and reflected as part of the monitoring project/task proposal required in Schedule B.15.a.i.D.

(H) A narrative summarizing progress towards the applicable TMDL WLAs and existing TMDL benchmarks, if applicable. If the permittee estimates that an existing TMDL benchmark was not achieved during the permit term, the permittee must apply their adaptive management process to reassess the SWMP and current BMP implementation in order to address TMDL pollutant load reduction over the next permit term. The results of this reassessment must be submitted with the permit renewal application package described in Schedule D.15; and,

(I) If the permittee estimates that TMDL WLAs are achieved with existing BMP implementation, the permittee must provide a statement supporting this conclusion.

v. Establishment of TMDL Pollutant Reduction Benchmarks: A TMDL pollutant reduction benchmark must be developed for each applicable TMDL parameter where existing BMP implementation is not achieving the applicable WLA. DEQ recognizes that not enough data may have been collected in the permit term to allow Benchmark development for mercury in stormwater, because it is a new parameter resulting from a new TMDL, so mercury is exempted from this requirement. The updated TMDL pollutant reduction benchmark must be submitted with the permit renewal application, as follows:

(A) The TMDL pollutant load reduction benchmark must reflect:

1. Additional pollutant load reduction necessary to achieve the benchmark estimated for the current permit term, if not achieved per Schedule D.14.c.iv.D; and,

2. The pollutant load reduction proposed to achieve additional progress towards the TMDL WLA during the next permit term.

(B) The TMDL pollutant load reduction benchmark submittal must include the following:

1. An explanation of the relationship between the TMDL wasteload allocations and the TMDL benchmark for each applicable TMDL parameter;

2. A description of how SWMP implementation contributes to the overall reduction of the TMDL pollutants during the next permit term;

3. Identification of additional or modified BMPs that will result in further reductions in the discharge of the applicable TMDL pollutants, including the rationale for proposing the BMPs; and,

4. An estimate of current pollutant loadings that reflect the implementation of the current BMPs and the BMPs proposed to be implemented during the next permit term.

d. Definitions:

i. Adaptive Management: A structured, iterative process designed to refine and improve stormwater programs over time by evaluating results and adjusting actions on the basis of what has been learned.

ii. Antecedent dry period: The period of dry time between precipitation events greater than 0.1 inch of precipitation.

iii. Best Management Practices (BMPs): The schedules of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs are also treatment requirements operating procedures, and practices to control runoff, spillage, or leads, sludge, or waste disposal, or drainage from raw material storages. See 40 CFR § 122.2 and 122.44(k). For the purposes of this permit, BMPs are synonymous with structural and non-structural stormwater controls and include the schedule of activities, controls, prohibition of practices, maintenance procedures and other management practices designed to prevent or reduce pollution.

iv. Chronic Illicit Discharges are continuous or repeated illicit discharges to an MS4 potentially resulting from sanitary/wastewater connections to an MS4, sanitary/wastewater inflows into an MS4, unpermitted industrial wastewater discharges to the MS4, or other types of illegal dumping or poor housekeeping practices upstream from an outfall where irregular flows, color, smell, or other monitoring parameters indicate an issue that may need repeat investigations over time to ensure cross connections or illegal dumping are remedied. Chronic illicit discharges may not be long-term and ongoing as in the case of illicit connections that can be stopped easily. Chronic illicit discharges may be defined by inconclusive findings of outfall investigations indicating pollutant discharge or repeated reports by members of the public that have not been traced back to a definite source.

v. Construction activity includes, but is not limited to, clearing, grading, excavation, and other site preparation or ground disturbing work related to the construction of residential buildings and non-residential buildings, and heavy construction (e.g., highways, streets, bridges, tunnels, pipelines, transmission lines and industrial non-building structures).

vi. Construction Site Operator: Any party associated with a construction project that meets either of the following two criteria:

(A) The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(B) The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a ESCP for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the ESCP or comply with other permit conditions).

vii. Control Measure, as used in this permit, refers to any action, activity, Best Management Practice or other method used to control the discharge of pollutants in MS4 discharges.

viii. Discharge of a pollutant means any addition of any "pollutant" or combination of pollutants to "waters of the state" from any "point source," or any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the state from surface runoff, which is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person, which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger" [40 CFR §122.2].

ix. Dry-weather pollutant parameter action levels: Pollutant concentrations or concentration ranges used by the permittee during dry-weather periods to identify if an illicit discharge may be present and further investigation is needed.

x. Effective Impervious Area is defined as the subset of the total impervious area often hydrologically connected to stream networks via stormwater infrastructure. Many methods of calculating effective impervious area have been developed, and its importance in runoff modeling and watershed health has been well established in stormwater related academic and scientific literature, making it a governing characteristic of urban watersheds.

xi. Erosion and Sediment Control Plan is a site-specific plan, map, or document that illustrates and/or lists erosion and sediment control measures that are implemented by type and location on a construction site, that for operators and inspectors alike: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater controls to prevent pollutants in stormwater discharges from the construction site; (3) tracks or records updates and corrective actions implemented as site conditions or needs change; and (4) identifies procedures the operator will implement to comply with the terms and conditions of this permit.

xii. Extended Filtration is the technique of using stormwater facilities designed to promote stormwater runoff filtration through natural or engineered media. The runoff is treated through physical, biological, and chemical processes as it filters through the media of the facility. Filtration is promoted by constructing the facility with media of an appropriate infiltration rate and typically includes an underlying aggregate rock reservoir or other engineered flow-through and filtration media with an underdrain to convey to a discharge location.

xiii. Flow-weighted Composite Sample: A sample formed by collection and mixing discrete samples taken periodically and based on flow.

xiv. Grab Sample: An individual discrete sample collected over a period of time not to exceed 15 minutes.

xv. Green Infrastructure (GI): Green Infrastructure is a specific type of stormwater control using vegetation, soils, and natural processes to manage stormwater. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems designed to mimic nature by reducing and/or storing stormwater through infiltration, evaporation, and/or transpiration. At the site level, such measures may include the use of plant or soil systems, permeable pavement or other pervious surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, and/or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters. At the scale of city or county, green infrastructure refers to the patchwork of natural areas that provides flood protection and natural processes that remove pollutants from stormwater.

xvi. Illicit Connections include, but are not limited to, pipes, drains, open channels, or other conveyances that are connected to the MS4 but were constructed for or are currently being used to convey non-stormwater discharges to the public stormwater system or waters of the state and are controlled under the permittee's IDDE program.

xvii. Illicit Discharge: Any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer), discharges resulting from fire fighting activities, authorized under Schedule A.14.a.iv, or otherwise exempted or authorized by DEQ.

xviii. Impaired Water means any waterbody that does not meet applicable water quality standards for one or more parameters as identified on Oregon's 303(d) list.

xix. Impervious Surface: Any surface resulting from development activities that prevents the infiltration of water or results in more runoff than in the undeveloped condition. Common impervious surfaces include: building roofs, traditional concrete or asphalt paving on walkways, driveways, parking lots, gravel roads, and packed earthen materials.

xx. Instream: A location within the defined bed and banks of a waterway that carries perennial or intermittent flows of surface water for all or part of the year, including rivers and creeks.

xxi. Integrated Pest Management is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties.

xxii. Low Impact Development (LID): A stormwater management approach that seeks to mitigate the impacts of increased runoff and stormwater pollution using a set of planning, design and construction approaches and stormwater management practices that promote the use of natural systems, green infrastructure, and other techniques for infiltration, filtration, evapotranspiration, and/or reuse of rainwater, and can occur at a wide range of landscape scales (i.e., regional, community and site). Low impact development is a comprehensive land planning and engineering design approach to stormwater management with a goal of mimicking the pre-development hydrologic regime of urban and developing watersheds.

xxiii. Maximum Extent Practicable (MEP): is the technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by Section 402(p)(3)(B)(iii) of the Clean Water Act [33 U.S.C §1342(p)(3)(B)(iii)].

xxiv. Measurable Goals: BMP objectives or targets used to identify progress of SWMP implementation. Measurable goals are prospective and, wherever possible, quantitative. Measurable goals describe what the permittee intends to do and when they intend to do it.

xxv. Municipal Separate Storm Sewer: A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(A) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State Law) having jurisdiction over disposal of sewage, industrial wastes, stormwater or other wastes, including special districts under State Law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the state;

(B) Designed or used for collecting or conveying stormwater

(C) Which is not a combined sewer; and,

(D) Which is not part of a Publicly-owned Treatment Works as defined at 40 CFR 122.2.

xxvi. Non-structural Stormwater Controls or BMPs are stormwater controls in the form of development standards or other regulatory mechanisms intended to minimize and treat stormwater by minimizing impervious surfaces and by using soil infiltration, evaporation, and transpiration. These controls may also take the form of procedural practices to prevent pollutants from contaminating stormwater. The use of this term in this Permit is consistent with the discussion of non-structural stormwater BMPs in 64 Federal Register 68760 (December 9, 1999) which encompasses preventative actions that involve management and source controls such as: (1) policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive waterbodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; (2) policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; (3) education programs for developers and the public about project designs or stormwater design standards that minimize water quality impacts; and (4) other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and other source control measures such as good housekeeping, street sweeping, preventive maintenance, spill prevention, and public education and outreach.

xxvii. Outfall: A point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

xxviii. Pesticide as used in this Permit carries the same definition as used in the Federal Insecticide, Fungicide, and Rodenticide Act and is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Under FIFRA, pest is any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other micro-organism.

xxix. Pollutant is dredged spoil; solid waste; incinerator residue; sewage; garbage; sewerage sludge; munitions; chemical wastes; biological materials; radioactive materials; heat; wrecked or discarded equipment; rock; sand; cellar dirt; and industrial, municipal, and agricultural waste discharged into water. [40 CFR §122.2]

xxx. Pollutants of Concern are defined in NPDES permitting as 1) pollutants with applicable Technology Based Effluent Limitations (TBELs) defined in an NPDES permit based on national or state standards or on a case by case basis, 2) pollutants for which a wasteload allocation (WLA) has been assigned to a discharge through a TMDL, 3) those pollutants identified in a previous iteration of the discharger's permit as needing Water Quality Based Effluent Limitations (WQBELs), 4) pollutants identified through monitoring as present in the effluent or stormwater discharges, or 5) pollutants not in any of the previous categories but otherwise expected to be present in the discharge. For this permit, use of the term is intended to focus on pollutants known by the permittee to be present in stormwater per categories 4) and 5), and prioritized for reduction via stormwater controls identified in this permit.

xxxi. Post-Construction Site Runoff Plan is a plan developed by a site owner or operator and/or their designer to demonstrate compliance with the post-construction stormwater management and long-term operation and maintenance requirements of this permit.

xxxii. Predevelopment Hydrologic Function is the hydrology of a site reflecting the local rainfall patterns, soil characteristics, land cover, evapotranspiration, and topography. The term predevelopment as used in predevelopment hydrologic function is consistent with the term predevelopment as discussed in Federal Register Volume 64, Number 235 and refers to the runoff conditions that exist onsite immediately before the planned development activities occur. Predevelopment is not intended to be interpreted as the period before any human-induced land disturbance activity has occurred.

xxxiii. Redevelopment: A project on a previously developed site that results in the addition or replacement of impervious surface.

xxxiv. Replace or Replacement: The removal of an impervious surface that exposes soil followed by the placement of an impervious surface. Replacement does not include repair or maintenance activities on structures or facilities taken to prevent decline, lapse or cessation in the use of the existing impervious surface as long as no additional hydrologic impact results from the repair or maintenance activity.

xxxv. Stormwater or Stormwater runoff includes snow melt runoff, and surface runoff and drainage, and is defined in 40 CFR §122.26(b)(13). “Stormwater” means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed stormwater control or infiltration facility.

xxxvi. Stormwater Management Program (SWMP) refers to a comprehensive program that includes legal authority, permitting and stormwater control and facility design standards, capital projects and retrofits, monitoring, policies, procedures, standards, ordinances, criteria, and best management practices and a stormwater management plan that collectively manages the quality of stormwater discharged from the municipal separate storm sewer system to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. For the purposes of this permit, the SWMP consists of the actions and activities conducted by the permittee as required by the permit and described in the permittee’s SWMP Document.

xxxvii. A SWMP Document is the written summary that describes the comprehensive management practices, structural and non-structural controls (or BMPs), techniques, systems, and design and engineering methods employed to reduce the discharge of pollutants from the MS4 to the MEP in accordance with the terms of the permit. A SWMP Document includes or references stormwater plans, manuals, documents or code/ordinances, as applicable, describing the unique and/or cooperative means by which an individual permittee or entity implements the specific stormwater management control measures required by the permit.

xxxviii. Stormwater Mitigation Bank Program is a program for offsite compliance that establishes a market with an entity that tracks the life cycle of an offsite mitigation credit by certifying the credit, issuing a tradable credit to the seller, transferring the ownership of the credit from the seller to the buyer, and use or retirement of the credit to receive a benefit when buyer of the credit is unable to meet a retention requirement on their site.

xxxix. Stormwater Payment-in-Lieu Program is a program for offsite compliance where the permittee or site owner/operator pays a fee in lieu of full compliance with Schedule

A.14.c.v.(C) on the development site with this fee based on volume ratios (e.g., volume of stormwater to be retained onsite to the volume to be retained at the mitigation site) or impervious area unavailable for infiltration, at a rate or rates specified by the permittee. The permittee can aggregate fees and apply them to a public stormwater structural or non-structural control at a later point in time.

xl. Structural Stormwater Controls or BMPs are stormwater controls that are physically designed, installed, and maintained to prevent or reduce the discharge of pollutants in stormwater to minimize the impacts of stormwater on waterbodies. As noted in the 64 Federal Register 68760 (December 9, 1999), examples of structural stormwater controls or BMPs include: (1) storage practices such as wet ponds and extended-detention outlet structures; (2) filtration practices such as grassed swales, sand filters and filter strips; and (3) infiltration practices such as infiltration basins and infiltration trenches.

xli. Subwatershed is a subdivision of a Watershed and is the sixth-level, 12-digit unit of the hydrologic unit hierarchy as defined by the National Watershed Boundary Dataset (USGS et al. 2013).

xlii. Time of Concentration: Travel time for a drop of water to travel from most hydrologically remote location in a defined catchment to the outlet for that catchment where remoteness relates to time of travel rather than distance.

xliii. TMDL Pollutant Load Reduction Benchmark (TMDL benchmark): An estimated total pollutant load reduction target for each parameter or surrogate, where applicable, for waste load allocations established under an EPA-approved TMDL. A benchmark is the anticipated pollutant load reduction goal to be achieved during the permit cycle through the implementation of the stormwater management program and BMPs identified in the SWMP. A benchmark is used to measure the effectiveness of the stormwater management program in making progress toward the waste load allocation, and is a tool for guiding adaptive management. A benchmark is not a numeric effluent limit; rather it is an estimated pollutant reduction target that is subject to the maximum extent practicable standard. Benchmarks may be stated as a pollutant load range based upon the results of a pollutant reduction empirical model.

xliv. Uncontaminated, for the purposes of the MS4 portions of this permit, means that the MS4 discharge does not: result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at any time since November 16, 1987; or result in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or contribute to a violation or exceedance of an applicable Oregon water quality standard.

xlv. Water Quality Trend Analysis: A statistical analysis of in-stream water quality data to identify improvement or deterioration.

xlvi. Waters of the State: Lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

15. MS4 Renewal Application Package

At least 180 days prior to permit expiration, the permittee must submit a permit renewal application package to support their proposed modifications to the stormwater management program for the renewed permit. An electronic copy must also be made available on the co-permittees' websites. The application package must include an evaluation of the adequacy of the co-permittees' programs and stormwater control measures in reducing pollutants in discharges from the MS4 to MEP, and the conclusions of the annual adaptive management process. The application package must contain:

a. The permit renewal documentation must be submitted through DEQ's EDMS/Your DEQ Online system if it has been implemented for MS4 permittees by that time;

b. Any proposed program modifications or new areas of focus for the coming permit term, including the modification, addition or removal of BMPs incorporated into the SWMP Document, and associated measurable goals;

c. The information and analysis necessary to support the DEQ's independent assessment that the permittee's proposed stormwater management program addresses the requirements of the new permit. The permittee must describe how the proposed management practices, control techniques, and other provisions to be implemented as part of the stormwater program were evaluated using a permittee-defined and standardized set of objective criteria relative to the following MEP general evaluation factors:

   i. Effectiveness – program elements effectively address stormwater pollutants.

   ii. Local Applicability – technically feasible considering local soils, geography, etc.

   iii. Program Resources – program elements are being implemented considering availability of resources and the permittee's stormwater management program priorities.

d. If applicable, the established TMDL pollutant load reduction benchmarks, pollutant load reduction evaluation, and 303d pollutant evaluation, as required in Schedule D.14.c.iv, as well as an updated estimate of total annual stormwater pollutant loads for applicable TMDL pollutants or applicable surrogate parameters, and the following pollutant parameters: CBOD, chemical oxygen demand (COD), nitrate, total phosphorus, dissolved phosphorus, cadmium, copper, lead and zinc. The estimates must be accompanied by a description of the procedures for estimating pollutant loads and concentrations, including any modeling, data analysis and calculation methods. Analysis of the effectiveness of the best management practices (for compliance with the Willamette Basin TMDL), and any other actions taken, and qualitative pollutant load reductions achieved.

e. A description of proposed changes to the monitoring plan in the form of a monitoring objectives matrix with accompanying narrative describing the rationales supporting such changes, to be developed based on ongoing discussions with DEQ over the course of the permit term regarding the monitoring needs for the next permit. The monitoring objectives matrix must include the information required in Schedule B.15.b.iv for each proposed monitoring project/task.

f. A description of any service area expansions that are anticipated to occur during the following permit term and a finding as to whether or not the expansion is expected to result in a substantial increase in area, intensity or pollutant loads.

g. A fiscal evaluation summarizing program expenditures for the current permit cycle and projected program allocations for next permit cycle.

h. Updated MS4 maps, including the service boundary of the MS4, projected changes in land use and population densities, anticipated Urban Growth Boundary expansion or areas planned to be incorporated through land annexation, location of permittee-owned operations, facilities or properties with storm sewer systems, and the location of facilities issued an industrial NPDES permit that discharge to the MS4.

SCHEDULE E: PRETREATMENT ACTIVITIES

1. Program Administration

The permittee must conduct and enforce its Pretreatment Program, as approved by DEQ, and comply with the most current General Pretreatment Regulations (40 CFR part 403). The permittee must secure and maintain sufficient resources and qualified personnel to carry out the program implementation procedures described in this permit as required by 40 CFR 403.8(f)(3).

2. Legal Authorities

The permittee must adopt all legal authority necessary to fully implement its approved pretreatment program and to comply with all applicable state and federal pretreatment regulations. The permittee must also establish, where necessary, contracts or agreements with contributing jurisdictions to ensure compliance with pretreatment requirements by industrial users within these jurisdictions. These contracts or agreements must identify the agency responsible for all implementation and enforcement activities to be performed in the contributing jurisdictions. Regardless of jurisdictional situation, the permittee is responsible for ensuring that all aspects of the pretreatment program are fully implemented and enforced.

3. Industrial User Survey

The permittee must update its inventory of industrial users at a frequency and diligence adequate to ensure proper identification of industrial users subject to the POTW pretreatment program, but no less than once per calendar year. The permittee must notify these industrial users of applicable pretreatment standards in accordance with 40 CFR 403.8(f)(2)(iii). Survey update procedures must ensure that Industrial Users potentially subject to pretreatment are identified and issued a control mechanism, if required, on a timely basis but no later than 6 months after receipt of information indicating the IU is subject to pretreatment.

4. National Pretreatment Standards

The permittee must enforce categorical pretreatment standards promulgated pursuant to section 307(b) and (c) of the Federal Clean Water Act, prohibited discharge standards as set forth in 40 CFR 403.5(a) and (b), or local limits developed by the permittee in accordance with 40 CFR 403.5(c), whichever are more stringent, or are applicable to any non-domestic source regulated under section 307(b), (c), or (d) of the Act.

5. Local Limits

The permittee, in consultation with DEQ, must perform a technical evaluation of the need to revise local limits and update these local limits if necessary. The permittee must submit those findings with its permit renewal application unless DEQ authorizes or requires, in writing, an alternate time frame. Locally derived discharge limits must be defined as pretreatment standards under Section 307(d) of the Act and must conform to 40 CFR 403.5(c) and 403.8(f)(4). Technically based local limits must be developed in accordance with the procedures established by DEQ and the EPA’s Local Limits Guidance.

6. Control Mechanisms

The permittee must issue an individual control mechanism to all Significant Industrial Users except where the permittee may, at its discretion, issue a general control mechanism as defined by 40 CFR 403.8(f)(1)(iii); or certification in lieu of a control mechanism for Non-Significant Categorical Industrial Users (NSCIUs) as defined by 40 CFR 403.3(v)(2), and Non-Discharging Categorical Industrial Users (NDCIUs). All individual and general control mechanisms must be enforceable and contain, at a minimum, the requirements identified in 40 CFR 403.8(f)(1)(iii)(B); and, may contain equivalent concentration and mass based effluent limits where appropriate under 40 CFR 403.6(c)(5) and (6). Unless a more stringent definition has been adopted by the permittee, the definition of Significant Industrial User must be as stated in 40 CFR 403.3(v).

7. Hauled Waste Control Plan

The permittee accepts hauled wastes at discharge points designated by the POTW in the 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.

8. Pretreatment Monitoring

a. POTW's Treatment Plant Monitoring

POTW Monitoring requirements (Schedule B - Table B11): The permittee must monitor its influent, effluent, and biosolids for pollutants expected from non-domestic sources. Influent, effluent and sludge samples must be tested for the priority pollutant metals on quarterly basis throughout the term of this permit as specified in Schedule B of the permit.

The permittee must sample POTW influent and effluent on a day when industrial discharges are occurring at normal to maximum levels. All reported test data for metals must represent the total amount of the constituent present. The permittee must include a summary of monitoring results in the Annual Pretreatment Report. The monitoring data collected in this manner must be used for re-evaluation of the POTWs local limits when sufficient data becomes available.

b. Industrial User Sampling and Inspection

The permittee must randomly sample and analyze the effluent from Industrial Users at a frequency commensurate with the character, consistency, and volume of the discharge and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. The permittee must conduct a complete facility inspection; and, sample the effluent from each Significant Industrial User at least once a year at a minimum, unless otherwise specified below:

i. Where the permittee has authorized the Industrial User subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard in accordance with 40 CFR 403.12(e)(2), the permittee must sample for the waived pollutant(s) at least once during the term of the Categorical Industrial User's control mechanism. In the event that the permittee subsequently determines that a waived pollutant is present or is expected to be present in the Industrial User's wastewater based on changes that occur in the User's operations, the permittee must immediately begin at least annual effluent monitoring of the User's Discharge and inspection.

ii. Where the permittee has determined that an Industrial User meets the criteria for classification as a Non-Significant Categorical Industrial User, the permittee must evaluate, at least once per year, whether an Industrial User continues to meet the criteria in 40 CFR 403.3(v)(2).

iii. In the case of Industrial Users subject to reduced reporting requirements under 40 CFR 403.12(e)(3), the permittee must randomly sample and analyze the effluent from Industrial Users and conduct inspections at least once every two years. If the Industrial User no longer meets the conditions for reduced reporting in 40 CFR 403.12(e)(3), the permittee must immediately begin sampling and inspecting the Industrial User at least once a year.

c. Industrial User Self Monitoring and Other Reports

The permittee must receive and analyze self-monitoring and other reports submitted by industrial users as required by 40 CFR 403.8(f)(2)(iv) and 403.12(b),(d),(e),(g) and (h). Significant Industrial User reports must include Best Management Practice (BMP) compliance information per 40 CFR 403.12(b), (e), (h), where appropriate.

d. Industrial User Monitoring In lieu of Self-Monitoring

Where the permittee elects to conduct monitoring of an industrial user in lieu of requiring self-monitoring, the permittee must gather all information which would otherwise have been submitted by the user. The permittee must also perform the sampling and analyses in accordance with the protocols established for the user and must follow the requirements in 40 CFR 403.12(g)(2) if repeat sampling is required as the result of any sampling violation(s).

e. Sample Collection and Analysis

Sample collection and analysis, and the gathering of other compliance data, must be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Unless specified otherwise by the Director in writing, all sampling and analyses must be performed in accordance with 40 CFR part 136 or 40 CFR part 503 for biosolids analytes.

9. Slug Control Plans

The permittee must evaluate whether each Significant Industrial User needs a slug control plan or other action to control slug discharges. Industrial Users identified as significant after October 14, 2005, must be evaluated within 1 year of being designated a Significant Industrial User. A slug discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge that has a reasonable potential to cause interference or pass through or in any other way violate the permittee's regulations, local limits, or conditions of this permit. Per 40 CFR 403.8(f)(2)(vi), the permittee is required to track and document any slug discharge by Significant Industrial Users and make it available to DEQ upon request. The permittee must require Significant Industrial Users to immediately notify the permittee of any changes at its facility affecting potential for a slug discharge. If the permittee determines that a slug control plan is needed, the requirements to control slug discharges must be incorporated into the Significant Industrial User's control mechanism and the slug plan must contain, at a minimum, the following elements:

a. Description of discharge practices, including non-routine batch discharges;

b. Description of stored chemicals;

c. Procedures for immediately notifying the permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b) with procedures for follow-up written notification within five days; and

d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

10. Enforcement

The permittee must identify all violations of the industrial user's permit or local ordinance. The permittee must investigate all such instances of industrial user noncompliance and take all necessary steps to return users to compliance. The permittee's enforcement actions must follow its approved legal authorities (for example, ordinances) and Enforcement Response Plan developed in accordance with 40 CFR 403.8(f)(5). The permittee must periodically review administrative penalties to ensure that the penalties serve as an effective deterrent of noncompliance.

11. Public Notice of Significant Noncompliance

The permittee must publish annual notification in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the permittee of industrial users which, at any time during the previous 12 months, were in significant noncompliance with applicable pretreatment requirements. For the purposes of this requirement, an industrial user is in significant noncompliance if it meets one or more of the criteria listed in 40 CFR 403.8(f)(2)(viii).

12. Data and Information Management

The permittee must develop and maintain a data management system designed to track the status of the industrial user inventory, discharge characteristics, and compliance. In accordance with 40 CFR 403.12(o), the permittee must retain all records relating to pretreatment program activities for a minimum of 3 years and make such records available to DEQ and EPA upon request. The permittee must also provide public access to information considered effluent data under 40 CFR part 2.

13. Annual Pretreatment Program Report

The permittee must submit a complete report to DEQ on or before March 31 that describes the pretreatment program activities during the previous calendar year pursuant to 40 CFR 403.12(i) . For guidance on the content and format of this report, contact DEQ's pretreatment coordinator. Reports submitted to DEQ regarding pretreatment must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for overall operation of the POTW.

14. Pretreatment Program Modifications

The permittee must submit in writing to DEQ a statement of the basis for any proposed modification of its approved program and a description of the proposed modification in accordance with 40 CFR 403.18. No substantial program modifications may be implemented by the delegated program prior to receiving written authorization from DEQ.

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 must 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 must 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, must, 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 must 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, must, 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 includes 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.