NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WATERSHED-BASED WASTE DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region – Portland Office
2020 SW 4th Ave., Suite 400, Portland, OR 97201
Telephone: (503) 229-5263

Issued pursuant to ORS 468B.050 and Section 402 of the Federal Clean Water Act

ISSUED TO:

Clean Water Services
2550 SW Hillsboro Highway
Hillsboro, OR 97123

and

Washington County Dept. of Land Use and Transportation
(MS4 permit only)
1400 SW Walnut St
Hillsboro, OR 97124

Four individual permits for the operation of publicly owned sewage treatment works (POTWs), one municipal separate storm sewage system (MS4) permit and individual storm water permits for the Durham and Rock Creek Advanced Wastewater Treatment Facilities in the Tualatin River watershed have been integrated and consolidated into this document. This represents a change in the traditional approach to regulatory management of the watershed by integrating several program elements of the Clean Water Act into a single document along with water quality trading. This combination allows 1) greater coordination of watershed protection and enhancement programs, 2) greater coordination of watershed assessment and monitoring activities, and 3) greater public involvement.

FACILITY NAMES AND LOCATIONS:

Durham Advanced Wastewater Treatment Facility
16580 SW 85th
Tigard, Oregon 97224
EPA REFERENCE NO: OR-002811-8
File Number: 90735
GeoLoc: 45.4008 -122.7919
Treatment System Class: Level IV
Collection System Class: Level IV

Forest Grove Wastewater Treatment Facility
1345 Fernhill Road
Forest Grove, Oregon 97116
EPA REFERENCE NO: OR-002016-8
File Number: 90745
GeoLoc: 45.5112 -123.0907
Treatment System Class: Level IV
Collection System Class: Level IV

Hillsboro Wastewater Treatment Facility
770 South First Street
Hillsboro, Oregon 97120
File Number: 90752
GeoLoc: 45.5137 -122.9897
EPA REFERENCE NO: OR-002334-5
Treatment System Class: Level IV
Collection System Class: Level IV

Rock Creek Advanced Wastewater Treatment Facility
3235 SW River Road
Hillsboro, Oregon 97123
File Number: 90770
GeoLoc: 45.4952 -122.9452
EPA REFERENCE NO: OR-002977-7
Treatment System Class: Level IV
Collection System Class: Level IV

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

RECEIVING STREAM INFORMATION:

Basin: Willamette
Sub-Basin: Tualatin
Receiving Stream: 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#; Waible Gulch#.
County: Washington
LLID: 1226500453377

* This water body has been designated water quality limited.

Total Maximum Daily Loads (TMDLs), Wasteload Allocations and Load Allocations have been established for these water bodies and 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. These allocations are addressed in Schedules A and D

SOURCES COVERED BY THIS PERMIT:

Facility	Type of Waste	Outfall Number	Outfall Location
Durham Advanced Wastewater Treatment Facility	Treated Wastewater	D001	Tualatin R.M. 9.2
		D002	Reclaimed Water Reuse
	Wet weather outfall	D003	Tualatin R.M. 9.2
	Raw Sewage	D004	Lower Tualatin Interceptor
Pump Station Emergency Overflows:	**Location**		
Beaverton	4150 SW Watson, Beaverton	D005	Beaverton Creek
Ironwood	11275 NW McDaniel, Portland	D006	Cedar Mill Creek
Sherwood	19035 SW Pacific Hwy, Sherwood	D007	Rock Creek South
South Bull Mountain	14400 SW Beef Bend Road, Tigard	D008	Unnamed Creek
Cipole	9400 SW Cipole Road, Tualatin	D009	Rock Creek South
Nyberg	6500 SW Nyberg Lane, Tualatin	D010	Nyberg Creek
Fox Hills	5700 SW Nyberg Lane, Tualatin	D011	Nyberg Creek
Borland	4855 SW Borland Road, Tualatin	D012	Saum Creek
Orchard Hills	4561 SW Natchez, Tualatin	D013	Saum Creek
Saum Creek	20455 SW 65th Avenue, Tualatin	D014	Saum Creek
Pleasant View	15906 SW Dozier Way, Tigard	D015	Unnamed Creek
Scholls Country Estates	16381 SW Gearin Court, Tigard	D016	Unnamed Creek
Victoria Woods	22960 SW Miami Place, Tualatin	D017	Hedges Creek
Sequoia Ridge	5990 SW Port Orford Street, Tualatin	D018	Saum Creek
Meyers Farm	16399 SW Bray Lane, Tigard	D019	Unnamed Creek
Tektronix	3555 SW Hocken Dr, Beaverton	D020	Beaverton Creek
Other Emergency Overflows:			
Manhole # 20910	Cedar Hills Boulevard, Beaverton	D021	Beaverton Creek
Manhole # 20900	SW Watson and Hall Blvd, Beaverton	D022	Beaverton Creek

Facility	Type of Waste	Outfall Number	Outfall Location
Forest Grove Wastewater Treatment Facility	Treated Wastewater	F001	R.M. 53.8
		F002	Reclaimed Water Reuse
Pump Station Emergency Overflows:	**Location**		
Cornelius	802 S Linden Street, Cornelius	F003	Council Creek
Pine Lodge	198 S First Street, Cornelius	F004	Pine Lodge
B Street	1527 B Street, Forest Grove	F005	Gales Creek
Gaston	600 Main Street, Gaston	F006	Tualatin River
Cedar Street	1083 Cedar Street, Forest Grove	F007	Gales Creek

Facility	Type of Waste	Outfall Number	Outfall Location
Hillsboro Wastewater Treatment Facility	Treated Wastewater	H001A	R.M. 42.9
		H001B	R.M. 43.3
		H002	Reclaimed water reuse
Pump Station Emergency Overflows:	**Location:**		
North Plains	9035 NW 307th Ave., North Plains	H003	McKay Creek
Banks	1 Cedar Canyon Road, Banks	H004	Dairy Cr W Fork
Oak Village	42230 NW Oak Way, Banks	H005	Unnamed Creek
Water Quality Laboratory	2550 SW Hillsboro Hwy., Hillsboro	H006	Unnamed Creek
West Union	29785 NW West Union Rd, North Plains	H007	McKay Creek
Alderbrook	1601 NW 9th Ave., Hillsboro	H008	McKay Creek
Enschede	529 SE Alder Court, Hillsboro	H009	Tualatin River
Other Emergency Overflows:			
Manhole #17168	SW Hobbs Road @ Council Creek	H010	Council Creek

Facility	Type of Waste	Outfall Number	Outfall Location
Rock Creek Advanced Wastewater Treatment Facility	Treated Wastewater	R001	R.M. 37.7
		R002	Reclaimed Water Reuse
	Wet weather Outfall	R003	R.M. 37.7
Pump Station Emergency Overflows:	**Location:**		
Aloha #3	4850 SW 209th Street, Aloha	R004	Butternut Creek
Broad Oak	6313 SW Broad Street, Aloha	R005	Butternut Creek
Cross Creek	SW 209th and Rosedale, Aloha	R006	Cross & Butternut Creek
Rock Creek Ranch	4960 NW Salishan Drive, Portland	R007	Rock Creek
Rock Creek Ranch #3	20410 NW WestUnion Road, Portland	R008	Rock Creek
Brighton Townhomes	14802 NW Cornell Road, Portland	R009	Willow Creek
Bendemeer #1	5080 NW Five Oaks Drive, Hillsboro	R010	Dawson Creek
Bendemeer #2	5670 NW Five Oaks Drive, Hillsboro	R011	Dawson Creek
Westmark	2050 NW WestUnion Road, Hillsboro	R012	McKay Creek
Country Haven	23585 NW Jacobson Road, Hillsboro	R013	McKay Creek
185th	6465 SW 185th, Aloha	R014	Butternut Creek
Fir Grove	1505 SE Duke Drive, Hillsboro	R015	Ditch to Tualatin River

Facility
Municipal Separate Storm Sewer System (MS4)
All existing and new discharges of storm water from the MS4 within the district boundary of Clean Water Services and within the urban growth boundary of Washington County

Facility
Storm water discharges from the Rock Creek and Durham Advanced Wastewater Treatment Facilities. Permit required according to Code of Federal Regulations (CFR) 40.122.26(b)(14)(ix)

Issued in response to Application Numbers; 991614, 991615, 991616 and 991617 received December 29, 1997 and as revised on December 18, 2001, and MS4 Application Number, 989200 received on June 1, 2000.

These permits are issued based on the land use findings in the permit record.

Neil Mullane

Neil Mullane, Administrator
Water Quality Program
Northwest Region

2/26/04
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate a wastewater collection, treatment, control, and disposal system. The permittee is authorized to discharge to public waters adequately treated wastewaters only from the authorized discharge point or points established in Schedule A. Additionally, the co-permittees are authorized to implement a stormwater management program to reduce the contributions of pollutants in stormwater to the maximum extent practicable and to discharge stormwater to the waters of the State. These discharges must conform with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharge to an underground injection control system.

This permit and its related plans serve as the permittee's implementation plan addressing the wasteload allocation requirements of the Tualatin Sub-basin Total Maximum Daily Load (TMDL). The term "TMDL" refers to the August 2001 Tualatin Sub-basin TMDL and any subsequent modifications or amendments.

The term "permittee" shall refer to Clean Water Services. The terms "co-permittee" and "permittees" shall refer to Clean Water Services and Washington County.

SCHEDULE A

1. **Waste Discharge Limitations for wastewater treatment facilities**

a. **Treated Wastewater Effluent**

(1) **$CBOD_5$, TSS**

(a) Low Flow Period limits apply beginning the earlier of a) the first day after April 30 when the seven-consecutive-day median of daily mean flow measured at the Farmington gauge is less than 250 cfs or b) July 1:

Outfall Number	Parameter (See Note 1)	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lbs
D001	$CBOD_5$	5 mg/L	8 mg/L	830	1300	1900
	TSS	5 mg/L	8 mg/L	830	1300	1900
R001	$CBOD_5$	8 mg/L	11 mg/L	1300	1900	2500
	TSS	8 mg/L	11 mg/L	1300	1900	2500

(b) High Flow Period limits apply beginning the earlier of a) the first day after September 30 when the seven-consecutive-day median of daily mean flow at the Farmington gauge is at least 350 cfs or b) November 15:

Outfall Number	Parameter (See Note 1)	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lbs
D001 & D003	$CBOD_5$	10 mg/L	15 mg/L	3500	5300	7000
	TSS	10 mg/L	15 mg/L	3500	5300	7000
F001	$CBOD_5$	15 mg/L	25 mg/L	980	1500	2000
	TSS	20 mg/L	30 mg/L	1300	2000	2700
H001A & H001B	$CBOD_5$	15 mg/L	25 mg/L	980	1500	2000
	TSS	20 mg/L	30 mg/L	1300	2000	2600
R001 & R003	$CBOD_5$	20 mg/L	30 mg/L	7000	10500	14000
	TSS	20 mg/L	30 mg/L	7000	10500	14000

*Mass loads based on previous permit. On any day when the total flow to a treatment facility exceeds twice the design average dry weather flow, the daily maximum limit is suspended.

Facility	Design Average Dry Weather Flow (MGD)
Durham Advanced Wastewater Treatment Facility	22.6
Forest Grove Wastewater Treatment Facility	5.0
Hillsboro Wastewater Treatment Facility	3.7
Rock Creek Advanced Wastewater Treatment Facility	39

(2) **Phosphorus**

The phosphorus reduction period begins May 1 and ends October 31.

Outfall Number	Parameter	Monthly Median Effluent Concentration
D001	Total Phosphorus	0.11 mg/L
R001	Total Phosphorus	0.10 mg/L

(3) **Ammonia**

(a) The 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; and

(c) The ammonia loadings as ammonia-nitrogen shall not exceed the Weekly Median Maximum Ammonia Load limitation, calculated using the formula and variables given below.

Outfall Number	Parameter	Weekly Median Maximum Load, lbs/day
D001, R001	Ammonia (NH_3-N)	Weekly Median Maximum Ammonia Load = (Farmington Flow)(Concentration Variable) (5.39) lbs/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:

Concentration Variable (NH_3-N, mg/L) (The applicable tier is based on the instream dissolved oxygen concentration as described below)		Applicable Time Period
Tier 1	Tier 2	
1.4	1.4	May and June
1.4	0.8	July
1.4	0.3	August
0.8	0.21	September through November 15

(d) The Tier 1 concentration variable 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.

(i) For Rock Creek AWTF: Either the weekly mean of the daily mean DO concentrations, with no credit for supersaturation, at RM 24.5 (Neals), 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 supersaturation, at RM 3.4 (Oswego Dam), for the ***previous*** week is less than 6.7 mg/L. (See Note 2)

(ii) For Durham AWTF: The weekly mean of the daily mean DO concentrations at RM 3.4 (Oswego Dam), with no credit for supersaturation, for the ***previous*** week is less than 6.7 mg/L. (See Note 2)

(4) Water Quality Trading Plan for Oxygen Demanding Parameters

Water Quality Trading Credits for oxygen demanding parameters ($CBOD_5$ and ammonia) between the Durham and Rock Creek Advanced Wastewater Treatment Facilities (AWTF) are authorized by Schedule D of this permit provided that the permittee uses the following equations to define the available assimilative capacity. Whenever the combined load as calculated by the equation in Schedule A, 1.a.(4)(b) is less than or equal to the combined load limitation as calculated by the equation in Schedule A, 1.a.(4)(a), (the baseline for purposes of water quality trading) the permittee shall be deemed to be in compliance with the $CBOD_5$ and ammonia-nitrogen effluent limitations of this permit.

(a) Oxygen Demand Load Limitation

Outfall Number	Parameter	Combined Rock Creek and Durham Oxygen Demand Load Limitation at Oswego Dam (lb/day)
D001 , R001	$CBOD_5$ and NBOD	R001 NBOD Limit (lb/day) + R001 $CBOD_5$ Limit (lb/day) + D001 NBOD Limit (lb/day) + D001 $CBOD_5$ Limit (lb/day) Where, R001 NBOD Limit = Weekly R001 NH_3-N Load Limit, lb/day (see Schedule A.1.a.(3)) x 4.33 x Fraction R001 ammonia decayed at dam (see Table 2) R001 $CBOD_5$ Limit = Weekly R001 $CBOD_5$ concentration, mg/L, (see Table 1) x Actual Weekly Median Rock Creek Effluent Flow, MGD x 8.34 x 4.9 x Fraction R001 $CBOD_{ultimate}$ decayed at dam (see Table 2) D001 NBOD Limit = Weekly D001 NH_3-N Load Limit, lb/day (see Schedule A.1.a.(3)) x 4.33 x Fraction D001 ammonia decayed at dam (see Table 2) D001 $CBOD_5$ Limit = Weekly D001 $CBOD_5$ concentration, mg/L, (see Table 1) x Actual Weekly Median Durham Effluent Flow, MGD x 8.34 x 4.9 x Fraction D001 $CBOD_{ultimate}$ decayed at dam (see Table 2)

Note: 4.33 = NBOD:NH_3 ratio
4.9 = $CBOD_{ultimate}$:$CBOD_5$ ratio
8.34 = pound conversion

Water Quality Trading Credit for oxygen demanding substances authorized under the water quality trading program in Schedule A, 1.a.(4) shall not be allowed if the trade results in an exceedance of the $CBOD_5$ mass limitations for outfalls D001 or R001.

(b) Calculation of Combined Rock Creek and Durham Actual Discharged Oxygen Demand Load at Oswego Dam**:** *(applies on a calendar week basis)*

Actual Discharged Oxygen Demand Load at Oswego Dam (lb/day) =
R001 NBOD Discharge (lb/day) + R001 $CBOD_5$ (lb/day) +D001 NBOD Discharge (lb/day) +D001 $CBOD_5$ Discharge (lb/day)

Where:

R001 NBOD Discharge =
Actual Weekly Median R001 NH_3-N Concentration, mg/L x Actual Weekly Median Rock Creek Effluent Flow, MGD x 8.34 x 4.33 x Fraction Rock Creek ammonia decayed at dam (see Table 2)

R001 $CBOD_5$ Discharge =
Actual Weekly Median R001 $CBOD_5$ Concentration, mg/L x Actual Weekly Median Rock Creek Effluent Flow, MGD x 8.34 x 4.9 x Fraction Rock Creek $CBOD_{ultimate}$ decayed at dam (see Table 2)

D001 NBOD Discharge =
Actual Weekly Median D001 NH_3-N Concentration, mg/L x Actual Weekly Median Durham Effluent Flow, MGD x 8.34 x 4.33 x Fraction Durham ammonia decayed at dam (see Table 2)

D001 $CBOD_5$ Discharge =
Actual Weekly Median D001 $CBOD_5$ Concentration, mg/L x Actual Weekly Median Durham Effluent Flow, MGD x 8.34 x 4.9 x Fraction Durham $CBOD_{ultimate}$ decayed at dam (see Table 2)

Table 1. Weekly $CBOD_5$ Concentrations

Rock Creek AWTF	Durham AWTF
1.4 mg/L	3.9 mg/L

Table 2. Fraction Decayed at Oswego Dam

Farmington flow, cfs	River temperature, °C	Rock Creek AWTF		Durham AWTF	
		Ammonia	CBOD	Ammonia	CBOD
120 – 175	≤10	0.61	0.33	0.22	0.10
	>10 to 15	0.70	0.40	0.27	0.12
	>15 to 20	0.79	0.48	0.33	0.15
	>20 to 25	0.86	0.56	0.40	0.19
>175 – 200	≤10	0.48	0.24	0.15	0.07

	>10 to 15	0.56	0.29	0.19	0.09
	>15 to 20	0.65	0.36	0.24	0.11
	>20 to 25	0.74	0.43	0.29	0.14
	≤10	0.43	0.21	0.14	0.06
	>10 to 15	0.52	0.26	0.17	0.08
	>15 to 20	0.60	0.32	0.21	0.10
>200 – 250	>20 to 25	0.69	0.39	0.26	0.12
	≤10	0.37	0.17	0.11	0.05
	>10 to 15	0.44	0.22	0.14	0.06
	>15 to 20	0.52	0.27	0.17	0.08
>250 – 300	>20 to 25	0.61	0.33	0.22	0.10
	≤10	0.32	0.15	0.09	0.04
	>10 to 15	0.38	0.18	0.12	0.05
	>15 to 20	0.46	0.23	0.15	0.06
>300 – 350	>20 to 25	0.55	0.28	0.18	0.08
Values for each range set at low end of range for flow and high end for temperature					

(5) **Temperature**

The effluent temperature limitations in this Schedule, the temperature monitoring requirements of Schedule B, the Clean Water Services Temperature Management Plan required by Schedule C, and the thermal load to offset and water quality trading provisions of Schedule D, constitute the primary elements of the permittee's Department approved surface water temperature management plan pursuant to OAR 340-041-0026(3)(a)(D)(vi). The permittee and the Department may amend the plan during the course of this permit to include additional elements if necessary. The permittee is deemed to be in compliance with in-stream water quality standards and shall not be deemed to be causing or contributing to a violation of the Tualatin Basin temperature TMDL or water quality standards for temperature if the permittee is in compliance with this approved surface water temperature management plan.

Outfall Number	Parameter	Limitation
D001	Effluent Temperature (See Note 3)	77° F daily maximum
D001	Allowable Thermal Load (See Note 4)	2.0×10^7 kcal/day
R001	Effluent Temperature (See Note 3)	77° F daily maximum
R001	Allowable Thermal Load (See Note 4)	2.4×10^7 kcal/day

(6) **Other Parameters (Year-Round)**

Outfall Number	Parameters (year-round)	Limitations
D001 & D003, R001 & R003, H001A & B, F001	*E. coli* Bacteria	Shall not exceed 126 organisms per 100 mL monthly geometric mean. No single sample shall exceed 406 organisms per 100 mL. (See Note 5)
D001 & D003, R001 & R003, H001A & B, F001	pH	Shall be within the range of 6.0 - 9.0. When continuous monitoring is conducted, pH values shall not be outside the range of 6.0 – 9.0 for more than a total of 8 hours in any calendar month and no individual excursion from this range shall exceed 60 minutes.
D001 & D003, R001 & R003, H001A & B, F001	$CBOD_5$ and TSS Removal Efficiency	Shall not be less than 85% monthly average for $CBOD_5$ and TSS.
D001 & D003, R001 & R003	Total Residual Chlorine	For Outfall D001 & D003, shall not exceed a 24-hr average of 0.026 mg/L and not exceed 0.038 mg/L for more than 60 continuous minutes on any given day. For Outfall R001 & R003, shall not exceed a 24-hr average of 0.032 mg/L and not exceed 0.048 mg/L for more than 60 continuous minutes on any given day. (See Note 6 and 7)
D001, R001 (low flow period only)	Dissolved Oxygen	For Outfall D001, shall not be less than 5.2 mg/L following the chlorine contact chamber. For Outfall R001, shall not be less than 3.0 mg/L following the chlorine contact chamber.

(7) **Mixing Zones**

The allowable mixing zones for the following outfalls are that portion of the Tualatin River within 100 (one hundred) feet of the diffuser. The Zone of Immediate Dilution (ZID) shall be defined as that portion of the allowable mixing zone that is within 10 (ten) feet of the point of discharge.

Outfall Number	Mixing Zone Size	ZID Size
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 from diffusers	10 feet from Diffusers
F001	100 feet from diffuser	10 feet from Diffuser

This permit contains either technology or water quality based effluent limits for those parameters discharged by the permittee that the Department has determined require effluent limitations to comply with the water quality standards found in OAR 340-041-0445 outside the above mixing zones. The limits were established on the basis of the information provided by the permittee and following the Department's rules, including OAR 340-041-0026. Other parameters also were identified in the permittee's application for which the Department did not establish effluent limitations. The Department has determined that those parameters do not present a reasonable potential to violate applicable water

quality standards. The permittee is required to notify the department if changes occur in its processes or influent stream which could significantly change the effluent stream for any of those parameters.

b. **Reclaimed Water Outfalls D002, F002, H002 and R002**

The permittee shall comply with all the requirements of the approved Reclaimed Water Use Plan and any subsequently approved modifications thereto on file with the Department, which are consistent with OAR 340-055.

c. **Emergency Overflow Outfalls D004 - D022, F003 - F007, H003 - H010 and R004 - R015**

No wastes shall be discharged from these outfalls unless the cause of the discharge is due to storm events as allowed under OAR 340-041-0120 (13) or (14) and reported per Schedule F, Section B, 6.

d. **Groundwater**

No activities shall be conducted that could cause an adverse impact on existing or potential beneficial uses of groundwater. All wastewater shall be managed and disposed in a manner that will prevent a violation of the Groundwater Quality Protection Rules (OAR 340-040).

2. Controls and Limitations for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4)

a. Each co-permittee must implement all applicable provisions in the Storm Water Management Plan (SWMP). The SWMP is the proposed SWMP submitted with the National Pollutant Discharge Elimination System (NPDES) permit re-application, accepted by the Department June 2, 2000, and any changes to the proposed SWMP made as per the requirements in Schedule D, 8.c.(2), 8.c.(4), and 8.c.(5), and Schedule B, 1.e.(3) and 3.b. The SWMP is hereby incorporated into this permit by reference. Applicable provisions are those relating to requirements, programs, and operations of the municipal separate storm sewer system (MS4) over which the co-permittee has jurisdiction or control.

The SWMP describes a program that includes best management practices (BMPs), monitoring triggers, narrative conditions, and other elements designed to reduce the introduction of pollutants into waters of the State from the MS4 to the maximum extent practicable. The SWMP also includes evaluation and reporting requirements designed to measure the effectiveness of the control measures and other programs.

b. The co-permittee must reduce the discharge of the pollutants from the MS4 to the maximum extent practicable (MEP). Compliance with the permit and implementation of the SWMP is deemed to be compliance with this MEP requirement, unless or until the Department reopens the permit as provided in Oregon Administrative Rule (OAR) 340-045-0040 and 0050 to require additional controls.

c. The co-permittee must effectively prohibit non-storm water discharges into the MS4 unless such discharges are otherwise permitted by an existing NPDES permit. Unless identified by any co-permittee, or the Department, the following non-storm water discharges need not be addressed by the co-permittee's illicit discharge program, provided appropriate control measures, if needed, to minimize the impacts of such sources are developed under the SWMP: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated groundwater infiltration; uncontaminated pumped ground water; discharges from potable water sources; start up flushing of groundwater wells; aquifer storage and recovery (ASR) wells; potable groundwater

monitoring wells; draining and flushing of municipal potable water storage reservoirs; foundation drains; air conditioning condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; street wash waters; discharges of treated water from investigation, removal and remedial actions selected or approved by the Department pursuant to Oregon Revised Statute (ORS) Chapter 465, the state's environmental cleanup law; and discharges or flows from emergency fire fighting activities where discharges or flows from fire fighting are identified as not a significant sources of pollutants to waters of the State.

3. **Controls for Storm Water Discharges from Wastewater Treatment Facilities (Durham and Rock Creek Advanced Wastewater Treatment Facilities)**

a. Water Quality Benchmarks. Benchmarks are guideline concentrations not limitations. They are designed to assist the permittee in determining if the implementation of their wastewater facilities SWPCP is reducing pollutant concentrations to below levels of concern. The following benchmarks apply to each point source discharge of storm water from the Durham and Rock Creek advanced wastewater treatment facilities.

Parameter	Benchmark
Total Copper	0.1 mg/L
Total Lead	0.4 mg/L
Total Zinc	0.6 mg/L
pH	5.5 – 9.0 SU
Total Suspended Solids	130 mg/L
Total Oil & Grease	10 mg/L
E. coli	406 counts/100 mL
Floating Solids (associated with industrial activities)	No Visible Discharge
Oil & Grease Sheen	No Visible Sheen

b. If benchmarks are not achieved, the permittee must investigate the source of the elevated pollutant levels and review and, if necessary, revise the wastewater facilities SWPCP within 60 days of receiving sampling results. The purpose of this review is to determine if the SWPCP is being followed and to identify any additional technically and economically feasible site controls that need to be implemented to further improve the quality of storm water discharges. These site controls include best management practices, spill prevention and response procedures, preventative maintenance, and employee education procedures as described in Schedule D, 9.c.

(1) Any newly identified site controls must be implemented in a timely manner and incorporated into the SWPCP as an update. A new SWPCP is not required. If no additional site controls are identified, the permittee must state as such in an update to the SWPCP.

(2) Results of this review must be submitted to the Department in accordance with Schedule B, 3.c. and made available upon request to government agencies responsible for storm water management in the permittee's area.

(3) If the permittee demonstrates that background or natural conditions not associated with industrial activities at the site cause an exceedance of a benchmark, then no further modifications to the SWPCP are required for that parameter. Upon successful

demonstration of natural or background conditions through monitoring of the same storm event used to evaluate benchmarks the permittee would be eligible for the monitoring reduction as outlined in Schedule B, 1.f. (2).

SCHEDULE A NOTES:

1. The $CBOD_5$ concentration limits are considered equivalent to the minimum design criteria for BOD_5 specified in Oregon Administrative Rules (OAR) 340-041. These limits and $CBOD_5$ mass limits may be adjusted (up or down) by permit action if more accurate information regarding $CBOD_5/BOD_5$ becomes available.

2. In-stream monitoring for dissolved oxygen is currently 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/

   The Department is evaluating this procedure and its own sampling protocol to determine the appropriate procedure for this monitoring.

3. The measurement of maximum effluent temperature shall be the 1-hour average temperature.

4. Compliance with the allowable thermal load limit shall be demonstrated when the Permittee achieves the thermal load to offset requirements established in Schedule D, 10. of the permit.

5. If a single sample exceeds 406 organisms per 100 mL, then five consecutive re-samples may be taken at four-hour intervals beginning as soon as practicable (preferably within 28 hours) after the original sample was taken. If the geometric mean of the five re-samples is less than or equal to 126 organisms per 100 mL, a violation shall not be triggered.

6. These limits are based upon continuous monitoring. In the event of continuous monitoring equipment failure, grab samples shall be taken every four (4) hours. For outfalls D001 and D003, the average of any six consecutive samples shall not exceed 0.026 mg/L and no individual grab sample shall exceed 0.038 mg/L. For outfalls R001 and R003, the average of any six consecutive samples shall not exceed 0.032 mg/L and no individual grab sample shall exceed 0.048 mg/L.

7. During the permit period, the permittee may submit a study to the Department assessing the impact of chlorine residual, under varying flow conditions. Based on the results of this study, the Department may modify the total chlorine residual limit, so long as water quality standards continue to be met.

SCHEDULE B

WATERSHED MONITORING PLAN

The following represents an initial watershed monitoring plan, ultimately designed to be a comprehensive and integrated approach to watershed assessment, to address long-term progress towards achieving the goals of the Clean Water Act and, where appropriate, the Endangered Species Act.

1. **Minimum Monitoring Requirements** (unless otherwise approved in writing by the Department).

The permittee shall monitor the parameters as specified below at the locations indicated. The laboratory used by the permittee to analyze samples shall have a quality assurance/quality control (QA/QC) program to verify the accuracy of sample analysis. If QA/QC requirements are not met for any analysis, the results shall be included in the report, but not used in calculations required by this permit. When possible, the permittee shall re-sample in a timely manner for parameters failing the QA/QC requirements, analyze the samples, and report the results.

a. **Durham and Rock Creek Facilities**

(1) **Influent**

The facility influent sampling location is entering the headworks

Item or Parameter	Minimum Frequency	Type of Sample
Total Flow (MGD)	Daily	Measurement
Flow Meter Calibration	Annually	Verification
$CBOD_5$	3/Week	24-hr Composite
TSS	3/Week	24-hr Composite
NH_3-N	3/Week	24-hr Composite
Total Phosphorous-P	3/Week (May - October) 1/week (November - April)	24-hr Composite
pH	Daily	Grab or Continuous

(2) **Treated Effluent Outfall D001, R001**

The facility effluent sampling locations are after dechlorination prior to river discharge

Item or Parameter	Minimum Frequency	Type of Sample
Total Flow (MGD)	Daily	Measurement
Flow Meter Calibration	Annually	Verification
$CBOD_5$	3/Week	24-hr Composite
TSS	3/Week	24-hr Composite
pH	Daily	Grab or Continuous
E. coli	3/Week	Grab (See Note 1)
Dissolved Oxygen	Daily	Grab
Chlorine Residual	Continuous	Continuous (See Notes 2 and 3)
Pounds Discharged ($CBOD_5$ and TSS)	3/Week	Calculation
Average % Removed ($CBOD_5$ and TSS)	Monthly	Calculation

Item or Parameter	Minimum Frequency	Type of Sample
Nutrients: Ammonia (NH_3-N)	Daily (3/week after ammonia reduction period ends)	24-hr Composite
TKN, NO_2+NO_3-N, Total Phosphorus-P	5/Week (May-October) 1/Week (November-April)	24-hr Composite
Bioassay	(See Note 4)	Acute & chronic
Effluent Temperature, Daily Max (See Note 5)	Daily (May – October)	Continuous
Effluent Temperature, Average of Daily Maximums (See Note 5)	Weekly (May – October)	Calculation

NOTE: Requirements for stream temperature monitoring, and temperature monitoring equipment auditing and maintenance in Clean Water Services Temperature Management Plan.

(3) **Biosolids Management**

Item or Parameter	Minimum Frequency	Type of Sample
Biosolids analysis including: Total Solids (% dry wt.) Volatile solids (% dry wt.) **Biosolids nitrogen for:** NH_3-N; NO_3-N; & TKN (% dry wt.) Total Phosphorus (% dry wt.) Potassium (% dry wt.) pH (standard units)	Once per 60 days	Grab (See Note 6)
Biosolids metals content for: As, Cd, Cu, Hg, Mo, Ni, Pb, Se & Zn, measured as total in mg/kg	Once per 60 days	Grab (See Note 6)
Record of locations where biosolids are applied on each DEQ approved site. (Site application logs to be maintained at treatment facility for review upon request by DEQ)	Each Occurrence	Date, volume & locations where biosolids were applied recorded on site application logs.
Record of % volatile solids reduction accomplished through treatment	Monthly	Calculation (See Note 7)
Priority Pollutants (See Note 8)	Annually	Grab
Quantity of biosolids removed from treatment facility	Monthly	Measurement

b. **Forest Grove and Hillsboro Facilities**

(1) **Influent**

The facility influent sampling locations are the following:

Influent grab samples and measurements and composite samples are taken just after the screening and before grit removal. The composite sampler is located at the plant headworks. All samples for toxics are taken in the same location.

Item or Parameter	Minimum Frequency	Type of Sample
Total Flow (MGD)	Daily	Measurement
Flow Meter Calibration	Annual	Verification
$CBOD_5$	2/Week	Composite
TSS	2/Week	Composite

(2) **Treated Effluent Outfalls F001, H001A & B**

The facility effluent sampling location is following disinfection:

Item or Parameter	Minimum Frequency	Type of Sample
Total Flow (MGD)	Daily	Calculation
Flow Meter Calibration	Annual	Verification
$CBOD_5$	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab
Bioassay	(See Note 4)	Acute & chronic
Dissolved Oxygen	Daily	Grab
E. coli	2/Week	Grab (See Note 1)
UV % Transmittance	Daily	Grab or on-line meter reading (See Note 9)
Pounds Discharged ($CBOD_5$ and TSS)	2/Week	Calculation
Average Percent Removed ($CBOD_5$ and TSS)	Monthly	Calculation

(3) **Transfer of flow to Rock Creek facility**

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Daily	Measurement

c. **All Wastewater Treatment facilities**

(1) **Pretreatment Program**

Item or Parameter	Location	Minimum Frequency	Type of Sample
Metals (Ag, As, Cd, Cu, Cr, Hg, Mo, Ni, Pb, Se, & Zn) measured as total in ug/L(micrograms per liter).	Influent	Quarterly using 3 consecutive days	24-hour Composite (See Note 10)
	Effluent	Quarterly using 3 consecutive days	24-hour Composite (See Note 10)
Total Cyanide (See Note 11)	Influent	Quarterly using 3 consecutive days	24-hour Composite (See Note 10)
	Effluent	Quarterly using 3 consecutive days	24-hour Composite (See Note 10)
Priority Pollutant Organics (see Note 8)	Influent and Effluent Outfalls	Annual	24-hour Composite (see Note 10)

(2) **Reclaimed Water Outfall D002, R002, F002 & H002**

Item or Parameter	Minimum Frequency	Type of Sample
Quantity Irrigated (MGD)	Daily	Measurement
Flow Meter Calibration	Annually	Verification
Chlorine Residual	Daily	Grab
PH	2/Week	Grab
Total Coliform	1/Week (F002, H002) Daily (D002, R002)	Grab
Turbidity	Hourly (D002, R002)	Measurement
Nutrients (TKN, NO_2+NO_3-N, NH_3-N, Total Phosphorus)	Quarterly	Grab

(3) **Emergency Overflow Outfalls D005 – D022, F003 – F007, H003 – H009, R004 – R015**

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Each occurrence	Estimate duration and volume

d. **Tualatin River**

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Daily (see Note 12)	Farmington stream gauge at R.M. 33.3
Dissolved Oxygen (in-stream at two locations)	Daily when the alternative Tier 2 ammonia limitation is applied (see Note 13)	Continuous at R.M. 24.5
		Continuous at R.M. 3.4

e. **MS4 Monitoring Component Requirements**

(1) The monitoring component will be described in the Storm Water Management Plan (SWMP), which is submitted to, and approved by, the Department. The permittees must conduct the monitoring as described in the monitoring component of the approved SWMP to fulfill the reporting requirements described in Schedule B, 3. Permittees must conduct monitoring necessary to track the long-term progress of the SWMP towards achieving improvements in receiving water quality, including progress towards meeting pollutant load reduction benchmarks associated with Total Maximum Daily Load (TMDL) parameters as specified in Schedule D, 8.c.(4). The monitoring component of the SWMP must explain how the proposed monitoring program fulfills each of the primary program objectives listed in (a) through (f) below. To achieve the objectives listed below, the permittee's monitoring activities must include some level of MS4 discharge monitoring and in-stream monitoring, unless the permittee demonstrates that alternative sources of data can adequately support conclusions associated with these objectives.

(a) Determine the status of implementing the components of the SWMP;
(b) Evaluate the effectiveness of BMPs for specific source controls;
(c) Evaluate the source of specific pollutants;

(d) Assess the chemical, biological, and physical effects of MS4 runoff on receiving waters;
(e) Characterize MS4 runoff discharges; and
(f) Evaluate long-term trends in receiving water quality associated with storm water discharges.

The plan must address ongoing long-term monitoring and may address short-term special studies. The results of the monitoring component must be used to support the adaptive management process and lead to refinements of the SWMP.

(2) The following information must be included in the monitoring component of the SWMP:
  (a) Program monitoring:
    (i) A list of activities to be monitored, and
    (ii) A list of monitored performance indicator metrics (e.g.., number of miles of streets swept, number of cross-connections found, tons of material removed from storm sewers, etc.).
  (b) Environmental monitoring:
    (i) A list of monitoring sites;
    (ii) A list of constituents to be analyzed;
    (iii) The media sampled;
    (iv) Sample collection frequency and any targeted conditions (such as hydrologic or meteorological); and
    (v) Protocols for quality assurance/quality control for sample collection and analysis must be consistent with the quality assurance protocols described in the Department's 303(d) list data requirements.

(3) Each co-permittee must review their monitoring components to ensure that they support the primary MS4 program components listed in Schedule B. Each co-permittee must submit any necessary proposed improvements and/or modifications to their monitoring component(s) consistent with any changes to a revised SWMP proposed in the second annual report. The Department may, upon review of any annual report submittal, require revisions to the monitoring component described therein to ensure the requirements of this section are met.

(4) In the event the co-permittee is unable to collect or analyze any sample or pollutant parameter due to circumstances beyond the co-permittee's control, a written explanation of the circumstances that prevented the collection or analysis must be submitted to the Department in the annual report. The co-permittee must exercise due diligence in collecting and analyzing all samples as required by Schedule B. Circumstances beyond the control of the co-permittee may include abnormal climatic conditions (e.g., fewer storms in the annual reporting period than typically are representative of climatic conditions, or the lack of sufficient dry weather in between sampling events.); weather conditions that make the collection or analysis of samples unsafe or impracticable (e.g., storms of such intensity that sampling would present an unreasonable safety risk); or unavoidable equipment failures caused by weather conditions or other conditions beyond the reasonable control of the co-permittee (provided that operator error is not a condition beyond the control of the co-permittee).

f. **Minimum Monitoring Requirements for Storm Water Discharges from Wastewater Treatment Facilities (Durham and Rock Creek Advanced Wastewater Treatment Facilities)**

(1) Permittee must monitor storm water associated with wastewater treatment facility activity for the following:

GRAB SAMPLES OF STORM WATER	
Parameter*	**Frequency**
Total Copper	Twice per Year
Total Lead	Twice per Year
Total Zinc	Twice per Year
pH	Twice per Year
Total Suspended Solids	Twice per Year
Total Oil & Grease	Twice per Year
E. coli	Twice per Year

VISUAL MONITORING OF STORM WATER	
Parameter	**Frequency**
Floating Solids (associated with industrial activities)	Once a Month (when discharging)
Oil & Grease Sheen	Once a Month (when discharging)

(a) Grab samples that are representative of the discharge must be taken at least 60 days apart. It is preferred, but not required, that one sample be collected in the fall and one in the spring. Compositing of samples from different drainage areas is not allowed.

(b) The permittee may reduce the number of storm water monitoring points provided the outfalls have substantially identical effluents. Substantially identical effluents are discharges from drainage areas serving similar activities where the discharges are expected to be similar in composition. Outfalls serving areas with no exposure of storm water to industrial activities are not required to be monitored.

(c) All samples must be taken at monitoring points specified in the SWPCP before the storm water joins or is diluted by any other waste stream, body of water or substance unless otherwise approved in writing by the Department.

(2) **Monitoring Reduction**

(a) There is no reduction allowed of the required visual observations.

(b) The permittee is not required to conduct sampling if the benchmarks specified in Schedule A, 3.a. are met, or if the exceedance is due to natural or background conditions for at least four consecutive storm water monitoring events conducted by the permittee over 24 continuous months.

(c) Results from sampling events cannot be averaged to meet the benchmarks.

(d) Monitoring waivers may be allowed for individual parameters.

(e) Parameters in exceedance or not previously sampled must be monitored as required in Schedule B, 1.f.(1) until the monitoring waiver condition above is met.

(f) Monitoring data from the previous permit period may be used to meet the waiver requirement. This data must be evaluated against the benchmarks specified in this permit.

(g) Monitoring data from the same storm event must be used to demonstrate that background or natural conditions not associated with industrial activities at the site are contributing to the exceedance of a benchmark.

(h) The permittee must submit written notification to the Department when exercising the monitoring waiver condition (refer to Schedule B, 2.b.).

(3) **Reinstatement of Monitoring Requirements**

(a) The permittee must conduct monitoring as specified in Schedule B, 1.f.(1) if changes to site conditions are expected to affect storm water discharge characteristics.

(b) The Department may reinstate monitoring requirements as specified in Schedule B, 1.f.(1) if prior monitoring efforts were improper or results were incorrect. The Department will notify the permittee of reinstatement in writing.

(c) Monitoring may also be reinstated if future sampling efforts by the permittee or the Department indicate benchmarks are being exceeded.

(d) If no monitoring was performed during the previous permit period, the permittee must reinitiate monitoring as specified in Schedule B, 1.f.(1) to qualify for the monitoring reduction allowed in Schedule B, 1.f.(2).

2. **Reporting Procedures**

a. Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department's Northwest Region – Portland office by the 15th day of the following month.

b. Reclaimed wastewater monitoring results shall be reported monthly, with the exception of nutrients, which shall be reported in the annual reclaimed water report (See 3.a. below).

c. State monitoring reports shall identify the name, certificate classification and grade level of the supervising operator designated by the permittee, as defined in Schedule D, 5., as responsible for supervising the wastewater collection and treatment systems during the reporting period. Monitoring reports shall also identify each system classification as found on page one of this permit.

d. Monitoring reports shall also include a record of the quantity of all biosolids removed from the treatment facility and a record of all applicable equipment breakdowns and bypassing.

3. **Report Submittals**

a. Annual Reports

Watershed-based Permit – Reporting Requirements **The reports listed below shall be submitted to the Department by the corresponding due date.**	
Report Due Date	**Report Description.**
February 19	An annual report that describes solids handling activities for the previous year and includes, but is not limited to, the required information outlined in OAR 340-050-0035(6)(a)-(e).
March 1	An annual report which details sewer collection maintenance activities that reduce inflow and infiltration into the sewage collection system. The report shall state those activities that have been done in the previous year and those activities planned for the following year. The permittee is required to have in place a program to identify and reduce inflow and infiltration into the sewage collection system. An annual report describing the effectiveness of the reclaimed water system to comply with approved reclaimed water use plan, the rules of Division 55, and the limitations and conditions of this permit applicable to reuse of reclaimed water. An annual report covering the approved Clean Water Services Temperature Management Plan An annual report summarizing the results of its credit trading activities for the previous year, as required by Schedule D, 7. An annual report that describes the permittee's industrial pretreatment program during the previous calendar year as required by Schedule E, 11.
July 1	An annual report of grab sampling and visual monitoring data for stormwater discharges from Durham and Rock Creek AWTFs for the previous monitoring period (July 1- June 30). If there was insufficient rainfall to collect samples, the permittee must notify the Department by July 15 of each year. The permittee must also report the minimum detection levels and analytical methods for the parameters analyzed.
November 1	An annual system-wide MS4 report for the time period July 1 through June 30. The report must be coordinated between the co-permittees by Clean Water Services. The second of these annual reports must fulfill the requirements of 1.e. (3) and 3.b. of this schedule. Each annual report must contain: (1) The status of implementing the components of the storm water management program; (2) Proposed changes to the storm water management plan components, including new BMPs identified through implementing adaptive

	management. Such proposed changes must be consistent with 40 CFR § 122.26(d)(2)(iii). A timeline for the implementation of new BMPs must also be included in the report; (3) A summary of total storm water program expenditures and funding sources over the reporting fiscal year, and those anticipated in the next fiscal year; (4) A summary of data, including monitoring data, that is accumulated throughout the reporting year; (5) A summary describing the number and nature of enforcement actions, inspections, and public education programs; (6) Identification of water quality improvements or degradation; (7) A demonstration of continued legal authority to implement the programs outlined in the SWMP; and (8) An evaluation of the consistency of the permittee's planning procedures with the requirements of Schedule D, 8.c.(3)(i)(2), and an overview of concept planning, land use changes and new development activities that occurred within UGB expansion areas during the previous year and those forecast for the following year This overview must include a description of the storm water impacts of such changes.
At time of permit renewal application	Clean Water Services will submit a report that will summarize the status and progress made under this watershed-based permit towards achieving continued improvement in the health of the Tualatin watershed.

b. **Additional Reporting for MS4:**

(1) Requirements for 2nd year annual report-Storm Water Management Plan revision

The co-permittees submitted SWMPs designed to reduce pollutant discharges from the MS4 to the maximum extent practicable (MEP) as part of their permit renewal application package in June of 2000. As explained in Schedule A above, by implementing the SWMP and other provisions of this permit, including any improvements and modifications to the SWMP as required by this permit, the co-permittees will be deemed to be in compliance with Schedule A, 2. and Schedule D, 8.c.(4) and 8.c.(5). The SWMP and its improvements and modifications cover the duration of the permit.

In addition to the annual reporting requirements listed in Schedule B, 3.a., the second annual report must contain the following:

(a) An evaluation of, and proposed revisions to, the previously submitted SWMP which addresses the requirements of Schedule D, 8.c.(2) and Schedule B, 1.e.(3).

(b) A description of the current source identification components of the SWMP and the rationale regarding the adequacy of these components.

(c) For each of the listed non-storm water discharges [Schedule A, 2.c.] expected to occur in a co-permittee's area, the co-permittee must identify the appropriate control measures and the rationale for the selection of these control measures (or the rationale for why control measures are deemed not necessary).

(d) The required information regarding TMDL pollutants as described in Schedule D, 8.c.(4)(e) and the corresponding proposed revisions to the SWMP, and/or the required information regarding 303(d) listed pollutants as described in Schedule D, 8.c.(5) and the corresponding proposed revisions to the SWMP.

(e) An executive summary of the SWMP, no more than 15 pages in length, which describes the main elements of the SWMP.
(f) Maps providing updated information as described in 40 CFR § 122.26(d)(1)(iii), where applicable.

The Department may, upon review of this report submittal, require revisions to the SWMP described therein to ensure that the requirements of Schedule B, 3.b.(1) are met.

(2) MS4 Permit Renewal Submittal

180 days prior to permit expiration the co-permittees must submit a permit renewal application package that synthesizes the implementation and findings of the current permit cycle to support the proposed SWMP for the renewed permit. The application documents must evaluate the adequacy of the SWMP in reducing pollutants to the maximum extent practicable. This application must contain:

(a) An updated evaluation of the SWMP as outlined in Schedule D, 8.c.(2), including proposed changes to the plan and the underlying rationale for the proposal(s).
(b) An updated estimate of annual storm water pollutant loads for the original pollutants of concern listed in the Part 2 of the application, or other storm water pollutants on the 303(d) list as directed by the DEQ. The permittee will be notified of such a requirement no later than two (2) years prior to the expiration of the permit.
(c) Estimates of the changes of various land use areas within the permittees jurisdictional boundaries, the storm water runoff from those changed areas for the appropriate design storm criteria, and volume and percentage of storm water runoff from those changed areas that is treated using structural and nonstructural controls, that have occurred since the previous permit renewal submittal.
(d) A suggested storm water management program focus, if appropriate, (e.g. land use, storm water system function, system management practice) for the next permit cycle.
(e) For each of the listed non-storm water discharges [Schedule A, 2.c.] expected to occur in a co-permittee's area, the co-permittee must identify the appropriate control measures and the rational for the selection of these control measures (or the rationale for why control measures are deemed not necessary).
(f) An evaluation of overall program effectiveness, including non-structural BMP activities. This analysis will include an analysis of monitoring and other data, including a water quality trend analysis and a discussion of likely or potential factors for the presence of observed trends in water quality.
(g) A fiscal evaluation summarizing program expenditures for the current permit term and projected program allocations for next permit cycle based on the proposed SWMP.
(h) If TMDL wasteload allocation(s) were established at the time of permit issuance, an evaluation of progress towards achieving applicable waste load allocations to the maximum extent practicable. Progress will be measured through the TMDL performance measures and benchmarks established in accordance with Schedule D, 8.c.(4).
(i) Any evaluation conducted on the effectiveness of activities designed to reduce, to the maximum extent practicable, pollutants on the Department's 2002 303(d) list for waterbodies to which permittee's MS4 discharges storm water. Although such an evaluation is not a requirement of this permit, the permittee may choose to demonstrate progress in reducing potential future TMDL pollutants.
(j) Maps providing updated information as described in 40 CFR §122.26(d)(1)(iii), where applicable.

(k) A description and summary of the public involvement process and response to on the revised draft SWMP.
(l) An update of the source identification portions of the permittee's original Parts 1 and 2 NPDES MS4 Permit Application.

c. **Additional Reporting Requirements for Storm Water Discharges from Rock Creek and Durham Advanced Wastewater Treatment Facilities**

(1) The permittee must submit written notification when exercising the monitoring reduction condition in Schedule B, 1.f.(2).

(2) The permittee must prepare or update the SWPCP in accordance with Schedule C of the permit. The permittee must submit an updated or completed SWPCP within 14 days after completion.

(3) The permittee must submit any revisions to the SWPCP required by Schedule A, 3.b. within 14 days after the SWPCP is revised. If the Department does not review and comment on the revised SWPCP within 30 days, the permittee must implement the revisions as proposed. The permittee may proceed immediately with implementation of the following management practices as described in Schedule A, 3.b without waiting for Department comment: waste chemical and materials disposal, debris control, storm water diversion, covering activities, housekeeping, and preventative maintenance.

SCHEDULE B NOTES:

1. *E. coli* monitoring must be conducted according to any of the following test procedures as specified in **Standard Methods for the Examination of Water and Wastewater, 19th Edition**, or according to any test procedure that has been authorized and approved in writing by the Director or his authorized representative:

Method	Reference	Page	Method Number
MTEC agar, MF	Standard Methods, 18th Edition	9-28	9213 D
NA-MUG, MF	Standard Methods, 19th Edition	9-63	9222 G
Chromogenic Substrate, MPN	Standard Methods, 19th Edition	9-65	9223 B
Colilert QT	Idexx Laboratories, Inc.		

2. In the event of malfunction of continuous monitoring equipment, monitoring using 6 grab samples per day may be substituted.

3. A positive bisulfite residual is considered proof of no chlorine in the effluent.

4. The permittee shall conduct bioassay tests, either quarterly during the year prior to submission of the next NPDES permit renewal application, or annually during the four years prior to submission of the next NPDES permit renewal application. The permittee shall conduct separate tests for the discharges from the Rock Creek, Durham, Forest Grove, and Hillsboro treatment facilities. Note that bioassay test results will be required along with the next NPDES permit renewal application.

5. Daily maximum temperature shall be recorded as a 1 hour average.

6. Biosolids grab samples shall be representative of the final material to be land applied. Inorganic pollutant monitoring must be conducted according to Test Methods for Evaluating Solid Waste,

Physical/Chemical Methods SW-846, Second Edition (1982) with Updates I and II and third Edition (1986) with Revision I.

7. Calculation of the % volatile solids reduction is to be based on comparison of a representative composite sample of total and volatile solids entering the digestion process and a representative grab sample of solids exiting the active dewatering feed tank withdrawal line.

8. The permittee shall perform chemical analysis of its influent, effluent and biosolids to be beneficially used for the specific toxic pollutants listed in Tables II and III of Appendix D of 40 CFR Part 122 in accordance with the sampling frequency in Schedule B. The influent and effluent samples shall be 24-hour daily composites, except where sampling volatile compounds. In this case, six (6) discrete samples (not less than 100 mL) collected over the operating day are acceptable. The permittee shall take special precautions in compositing the individual grab samples for the volatile organics to insure sample integrity (i.e. no exposure to the outside air). Alternately, the discrete samples collected for volatiles may be analyzed separately and averaged. For biosolids analyses, a grab sample collected after dewatering, prior to the storage hopper shall be used. The results of the Priority Pollutant Scan analysis shall be submitted with the annual pretreatment report.

9. UV disinfection effectiveness is reduced as effluent light transmittance decreases. A bench test may be used to measure UV % transmittance and provide the operator with a verification of the UV disinfection systems effectiveness. Online UV % transmittance meters may also be used.

10. Daily 24-hour composite samples shall be analyzed and reported separately. Toxic monitoring results and toxics removal efficiency calculations shall be tabulated and submitted with the Pretreatment Program Annual Report as required in Schedule E. Submittal of toxic monitoring results with the monthly Discharge Monitoring Report is not required.

11. For influent and effluent cyanide samples, at least six (6) discrete grab samples shall be collected over the operating day. Each aliquot shall not be less than 100 mL and shall be collected and composited into a larger container which has been preserved with sodium hydroxide for cyanide samples to insure sample integrity.

12. Should the Farmington stream gauge station malfunction, be rendered inaccurate, daily monitoring requirements shall be suspended until such time as the gauge is repaired or recalibrated. Repairs and recalibrations shall be done as promptly as is reasonably possible. If the Farmington Bridge gauge is taken out of service, the Tualatin River flow value will be calculated as follows: gauged Tualatin River flow at Rood Bridge (R.M. 38.4) + gauged Rock Creek flow at Highway 8 + Rock Creek AWTF effluent flow. The primary gauge will be used unless it is unavailable, in which case the secondary gauge will be used.

13. The permittee must monitor the in-stream dissolved oxygen meters to ensure that they are properly functioning, and in the event of equipment failure or loss, deploy new equipment to minimize interruption of data collection.

SCHEDULE C
COMPLIANCE CONDITIONS AND SCHEDULES

1. Within 90 days from the issuance of this permit, the permittee shall submit for Department review and approval a revised Clean Water Services Temperature Management Plan.

   a. In addition to any other proposed modifications, the revised plan will add the following watershed temperature management elements to the Clean Water Services Temperature Management Plan:

      (1) A description of the cooling benefits of flow augmentation.
      (2) A description of long range plans for increasing in-stream water supply within the watershed.
      (3) An explanation of how an increase in stream shade that will result from riparian re-vegetation will offset thermal load discharges from the permittee's facilities.
      (4) A description of how stream shade in existing high quality riparian areas will be protected to offset thermal load discharges from the permittee's facilities.
      (5) An explanation of how and when stream surface area shading via riparian revegetation will be accomplished. This information will be used to form the basis for compliance with the permit during the time it takes for shade to become established.
      (6) A methodology for prioritizing areas throughout the Tualatin Basin where riparian re-vegetation/protection could take place in order to maximize the benefits of the proposed projects for the protection of the most sensitive beneficial uses.
      (7) Criteria for plant selection and the plant list. The plants on the list must be appropriate given the native plant communities found in the Tualatin Basin.
      (8) An approach for working with potential growers and contractors involved in riparian restoration so that adequate plant materials are available, and contractors have adequate time to mobilize resources.
      (9) A description of the kinds of approaches that will be implemented to reach the target increase in stream shade.
      (10) A planting plan. The plan should include expected plant survival rates, justification for planting densities, and should reflect natural succession.
      (11) A monitoring plan to assess plant survival.
      (12) A monitoring plan to assess the amount of shade that is created; and
      (13) A maintenance plan that will promote plant survival and reduce the impact of invasive species.

   b. The revised Clean Water Services Temperature Management Plan will also include a Thermal Load Credit Trading Plan (TLCTP). This plan will describe the mechanisms for using water quality credit trading to offset thermal loads. The plan will include the following elements:

      (1) A description of the thermal load to be offset based on Schedule D, 10. Any reuse of reclaimed water will directly reduce the thermal load discharged by the facilities. The TLCTP will specify a baseline for thermal credit trading.

      (2) A discussion of how the permittee will create, purchase, or otherwise arrange for thermal credits generated by the following types of actions, activities, and projects:

         (a) Thermal loadings relative to applicable baselines;

(b) Flow augmentation resulting from permittee's voluntary purchase and release of stored water to the Tualatin Basin; and

(c) Stream surface area shading.

(3) The methodology for calculating the amount of thermal credit that will be generated by flow augmentation that can be applied to offset the thermal load.

(4) The methodology for calculating the amount of thermal credit that will be generated by stream surface water shading through riparian re-vegetation and high quality area protection that can be applied to offset the thermal load.

(5) If the permittee wishes to propose other thermal credit trading options for consideration by the Department along with a technical justification for how much thermal credit it should be granted for such actions, it may do so.

(6) Reporting requirements for thermal load trading credit.

2. Wastewater Treatment Facilities Storm Water Pollution Control Plan (SWPCP)(for a facility with an NPDES storm water discharge permit assigned prior to June 30, 2002):

a. Not later than 90 days after receiving this permit, CWS must revise and begin implementation of the SWPCP to meet any new permit requirements.

b. Except for site controls that require capital improvements (see Schedule F, Definitions), the SWPCP must be implemented within 90 days after revision of SWPCP. Site control activities that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP.

3. Within 90 days from the issuance of this permit, Clean Water Services shall review and refine, if needed, any intergovernmental agreements with the Cities that allow Clean Water Services to effectively implement and enforce the relevant Municipal Separate Storm Sewer System provisions of this permit as required by Schedule D.8.(b) of the permit.

4. The permittee is expected to meet the compliance dates that have been established in this schedule. Either prior to any anticipated lapsed compliance date, or no later than 14 days following any lapsed compliance date, the permittee shall submit to the Department a notice of compliance or non-compliance with the established schedule. The Director may revise a schedule of compliance if he/she determines good and valid cause resulting from events over which the permittee has little or no control

SCHEDULE D
SPECIAL CONDITIONS

1. Biosolids

   a. All biosolids shall be managed in accordance with the current, DEQ approved biosolids management plan, and the site authorization letters issued by the DEQ. Any changes in solids management activities that significantly differ from operations specified under the approved plan require the prior written approval of the DEQ.

      All new biosolids application sites shall meet the site selection criteria set forth in OAR 340-050-0070 and must be located within Oregon. All currently approved sites are located in Oregon. No new public notice is required for the continued use of these currently approved sites. Property owners adjacent to and abutting any newly approved application sites shall be notified, in writing or by any method approved by DEQ, of the proposed activity prior to the start of application. For proposed new application sites that are deemed by the DEQ to be sensitive with respect to residential housing, runoff potential or threat to groundwater, an opportunity for public comment shall be provided in accordance with OAR 340-050-0030.

   b. This permit may be modified to incorporate any applicable standard for biosolids use or disposal promulgated under section 405(d) of the Clean Water Act, if the standard for biosolids use or disposal is more stringent than any requirements for biosolids use or disposal in the permit, or controls a pollutant or practice not limited in this permit.

2. Whole Effluent Toxicity Testing

   a. The permittee shall conduct whole effluent toxicity tests as specified in Schedule B of this permit.

   b. Bioassay tests may be dual end-point tests, only for the fish tests, in which both acute and chronic end-points can be determined from the results of a single chronic test (the acute end-point shall be based upon a 48-hour time period).

   c. Acute Toxicity Testing - Organisms and Protocols

      (1) The permittee shall conduct 48-hour static renewal tests with the *Ceriodaphnia dubia* (water flea) and the *Pimephales promelas* (fathead minnow).

      (2) The presence of acute toxicity will be determined as specified in **Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms**, Fourth Edition, EPA/600/4-90/027F, August 1993.

      (3) An acute bioassay test shall be considered to show toxicity if there is a statistically significant difference in survival between the control and 100 percent effluent, unless the permit specifically provides for a Zone of Immediate Dilution (ZID) for biotoxicity. If the permit specifies such a ZID, acute toxicity shall be indicated when a statistically significant difference in survival occurs at dilutions greater than that which is found to occur at the edge of the ZID.

d. Chronic Toxicity Testing - Organisms and Protocols

(1) The permittee shall 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.

(2) The presence of chronic toxicity shall be estimated as specified in **Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms**, Third Edition, EPA/600/4-91/002, July 1994.

(3) A chronic bioassay test shall be considered to show toxicity if a statistically significant difference in survival, growth, or reproduction occurs at dilutions greater than that which is known to occur at the edge of the mixing zone. If there is no dilution data for the edge of the mixing zone, any chronic bioassay test that shows a statistically significant effect in 100 percent effluent as compared to the control shall be considered to show toxicity.

e. Quality Assurance

Quality assurance criteria, statistical analyses and data reporting for the bioassays shall be in accordance with the EPA documents stated in this condition and the Department's **Whole Effluent Toxicity Testing Guidance Document**, January 1993.

f. Evaluation of Causes and Exceedances

(1) If toxicity is shown, as defined in sections c.(3) or d.(3) of this permit condition, another toxicity test using the same species and Department approved methodology shall be conducted within two weeks, unless otherwise approved by the Department. If the second test also indicates toxicity, the permittee shall follow the procedure described in section f.(2) of this permit condition.

(2) If two consecutive bioassay test results indicate acute and/or chronic toxicity, as defined in sections c.(3) or d.(3) of this permit condition, the permittee shall evaluate the source of the toxicity and submit a plan and time schedule for demonstrating compliance with water quality standards. Upon approval by the Department, the permittee shall implement the plan until compliance has been achieved. Evaluations shall be completed and plans submitted to the Department within 6 months unless otherwise approved in writing by the Department.

g. Reporting

(1) Along with the test results, the permittee shall include: 1. the dates of sample collection and initiation of each toxicity test; 2. the type of production; and 3. the flow rate at the time of sample collection. Effluent at the time of sampling for bioassay testing should include samples of required parameters stated under Schedule B, condition 1. of this permit.

(2) The permittee shall make available to the Department, on request, the written standard operating procedures they, or the laboratory performing the bioassays, are using for all toxicity tests required by the Department.

h. Reopener

If bioassay testing indicates acute and/or chronic toxicity, the Department may reopen and modify this permit to include new limitations and/or conditions as determined by the Department to be appropriate, and in accordance with procedures outlined in Oregon Administrative Rules, Chapter 340, Division 45.

3. The permittee shall meet the requirements for use of reclaimed water under Division 55, including the following:

a. All reclaimed water shall be managed in accordance with the approved Reclaimed Water Use Plan. No substantial changes shall be made in the approved plan without written approval of the Department.

b. No reclaimed water shall be released by the permittee to another person, as defined in Oregon Revised Statute (ORS) 468.005, for use unless there is a valid contract between the permittee and that person that meets the requirements of OAR 340-055-0015(9).

c. The permittee shall notify the Department within 24 hours after it has been determined that the treated effluent is being used in a manner not in compliance with OAR 340-055. When the Department offices are not open, the permittee shall report the incident of noncompliance to the Oregon Emergency Response System (Telephone Number 1-800-452-0311).

d. No reclaimed water shall be made available to a person proposing to recycle unless that person certifies in writing that they have read and understand the provisions in these rules. This written certification shall be kept on file by the sewage treatment system owner and be made available to the Department for inspection.

4. The permittee shall comply with Oregon Administrative Rules (OAR), Chapter 340, Division 49, "Regulations Pertaining To Certification of Wastewater System Operator Personnel" and accordingly:

a. The permittee shall have its wastewater system supervised by one or more operators who are certified in a classification and grade level (equal to or greater) that corresponds with the classification (collection and/or treatment) of the system to be supervised as specified on page one of this permit.

Note: A "supervisor" is defined as the person exercising authority for establishing and executing the specific practice and procedures of operating the system in accordance with the policies of the permittee and requirements of the waste discharge permit. "Supervise" means responsible for the technical operation of a system, which may affect its performance or the quality of the effluent produced. Supervisors are not required to be on-site at all times.

b. The permittee's wastewater system may not be without supervision (as required by Special Condition 4.a. above) for more than thirty (30) days. During this period, and at any time that the supervisor is not available to respond on-site (i.e. vacation, sick leave or off-call), the

permittee must make available another person who is certified at no less than one grade lower then the system classification.

c. If the wastewater system has more than one daily shift, the permittee shall have the shift supervisor, if any, certified at no less than one grade lower than the system classification.

d. The permittee is responsible for ensuring the wastewater system has a properly certified supervisor available at all times to respond on-site at the request of the permittee and to any other operator.

e. The permittee shall notify the Department of Environmental Quality in writing within thirty (30) days of replacement or redesignation of certified operators responsible for supervising wastewater system operation. The notice shall be filed with the Water Quality Division, Operator Certification Program, 811 SW 6th Ave, Portland, OR 97204. This requirement is in addition to the reporting requirements contained under Schedule B of this permit.

f. Upon written request, the Department may grant the permittee reasonable time, not to exceed 120 days, to obtain the services of a qualified person to supervise the wastewater system. The written request must include justification for the time needed, a schedule for recruiting and hiring, the date the system supervisor availability ceased and the name of the alternate system supervisor(s) as required by 4.b. above.

5. Peak wet weather discharges containing both effluent routed around biological treatment units and effluent from the biological units are allowed where all the following conditions are met:

a. Influent flows exceed the secondary hydraulic capacity.

b. The final discharge meets the effluent limits of this permit.

c. The treatment system has been operated as designed.

6. Emergency Overflows from New Pump Stations. During the term of this permit, the permittee may add new pump stations to its system. If the permittee requests the Department to add emergency overflows from these new pump stations to this permit and the Department approves this request in writing, then emergency overflows from the new pump stations shall be included in the permit as "Sources Covered by this Permit" and no permit modification or other Department action shall be required.

7. Water Quality Trading Plans

a. General Authority

The permittee is authorized to develop and implement water quality credit trading plans, subject to and consistent with Schedule C of this permit, and any attachments thereto, for the purposes of complying with the waste discharge limitations and the TMDL-related requirements of this permit (Schedule A), and otherwise fulfilling its stated and documented organizational goals and objectives relating to watershed management.

This authority for the trading plan is derived from: ORS 468B.030, 468B.035 and 468B.048; Section 402 of the Federal Clean Water Act 33 U.S.C.§ 1342; and the U.S. Environmental Protection Agency's policies on Water Quality Trading (1/13/03) and Watershed-Based NPDES Permitting (1/7/03) endorse water quality credit trading. Additionally the TMDL authorizes water quality trading as a means of achieving the allocations established by the TMDL.

b. Authorized Parameters

(1) Oxygen Demanding Parameters. A water quality credit trading plan for oxygen demanding parameters (i.e., $CBOD_5$ and ammonia-nitrogen) between and within the Durham and Rock Creek AWTPs is authorized by this permit subject to the conditions in Schedule A, 1.a.(4) of this permit. These conditions constitute the water quality credit trading plan for oxygen demanding parameters and the permittee is not required to submit any additional plan to conduct credit trades for these parameters.

(2) Temperature. The permittee is authorized to develop a Thermal Load Credit Trading Plan (TLCTP) that will govern the permittee's thermal credit trading relating to this permit. The TLCTP shall be submitted to the Department for its review and approval as part of the Clean Water Services Temperature Management Plan required by Section 1 of Schedule C. This review and approval process will include an opportunity for public review and comment.

(3) Other Parameters. The permittee may request authorization to develop water quality trading credit plans for other pollutants.

c. Amendments to the Water Quality Credit Trading Plans.

If the permittee proposes to develop a water quality credit trading plan for a pollutant other than oxygen-demanding parameters and temperature, the permittee's proposal shall be classified by the Department as a permit modification. In any proposed trading plan for another pollutant, such as phosphorus, the permittee may propose a methodology for calculating a trading baseline and related credits associated with the benefits of the effluent discharge and flow augmentation releases. Once a water quality credit trading plan has been initially approved by the Department, all subsequent amendments will be addressed by submitting the proposed amendment to the Department for its review and approval.

d. Trading Baseline

Trading baselines for oxygen demanding parameters are specified in Schedule A, and for thermal load in Schedule D. Trading baselines for all other parameters will be established by the permittee in each individual water quality credit trading plan.

e. Definition of Water Quality Credit and General Provisions for all Water Quality Credit Trades

One credit shall be defined as one (1) unit of pollutant reduction or other defined environmental improvement, multiplied by any applicable trading ratio detailed in this permit or in plans covered by this permit. The credit is applied at the location where compliance with the baseline is measured, for the applicable time period. All valid credits are tradable. To be valid, credits must be generated prior to or during the period they are applied to the permittee's baselines, except as provided for thermal credits generated by stream surface area shading in the TLCTP required by Schedule C. Credits may be generated so long as the pollution control, best management practice, or other environmental improvement project is documented as providing pollutant reductions and/or other improvements beyond those required by the permittee's baseline or other applicable requirement established in this permit.

f. Applying Credits for Compliance

The permittee may apply valid credits toward compliance with trading baselines and waste discharge limitations by offsetting loadings above the baseline with an equivalent number of credits.

g. Thermal Credit Trading Agreement(s).

The permittee may enter into one or more Thermal Credit Trading Agreements with one or more reputable land or water conservation organization or governmental entities (the "Conservation Entity") to implement one or more components of the Clean Water Services Temperature Management Plan referenced in section of Schedule C. For an organization or governmental entity that will implement the riparian shading portion of a thermal load trade, the Thermal Credit Trading Agreements shall include the following terms:

(1) A commitment by the Conservation Entity to fully implement the Trading Agreement in accordance with its terms, including the initial planting and long-term maintenance, monitoring and reporting.

(2) A provision that the Credit Trading Agreement is enforceable by the Permittee and the Department and any successor agency. A breach of the Credit Trading Agreement by the Conservation Entity shall not be deemed a violation of this permit by the permittee. In the event of a breach, the permittee will be required to update its Clean Water Services Temperature Management Plan to demonstrate they will still be able to offset the thermal load.

h. Compliance and Enforcement

The permittee shall be deemed in compliance with the wastewater discharge limitations described in Schedule A of this permit and the trading baselines described in this Schedule and approved water quality credit trading plans if:

(1) Each facility's discharge, in concentration or load as applicable, is less than or equal to the waste discharge limitation for that facility for the applicable compliance period (day, month, season, year) specified in Schedule A; or the permittee owns, holds, or has otherwise secured valid credits equal in number to the amount necessary to achieve a specified trading baseline; and

(2) The permittee complies with all other conditions of this Schedule.

i. Water Quality Credit Trading Reporting and Evaluation

(1) Monthly Reporting of Oxygen Demanding Parameter Credit Trading

All trading credit for Oxygen Demanding parameters shall be reported to DEQ in the permittee's monthly DMR.

(2) Reporting of Thermal Load Credit Trading

Reporting requirements for thermal load credit trading shall be specified in the Thermal Load Credit Trading Plan, to be developed as part of the Clean Water Services Temperature Management Plan according to Schedule C. This plan will be available for public review and comment before approval by the Department.

(3) Annual Program Evaluation and Other Periodic Reporting

The permittee shall submit to the Department an annual report summarizing the results of its credit trading activities for the previous year. At a minimum, the report shall include:

(a) Identification of Trading Baselines;

(b) Summary of Actual Loads Discharged;

(c) Summary of Credit Trades, including credits used to meet baselines, as well as credits generated, purchased, or held but not applied to baseline compliance;

(d) Environmental Benefits Summary, describing how the credit trades supported watershed management objectives; and

(e) Efficiency Summary, describing how the credit trades supported cost-effective and timely watershed management.

The permittee is encouraged to post the annual report on its website in the area covering its watershed permitting and credit trading plan activities. The permittee is also encouraged to provide additional periodic information to the Department and the public via postings on its website

8. Municipal Separate Storm Sewer System - MS4

a. Co-Permittee Relationship: Clean Water Services and Washington County are co-permittees under the Municipal Separate Storm Sewer System (MS4) provisions of this permit, but not the other provisions. (Note: The co-permittees are currently negotiating an intergovernmental agreement to establish operating principles between the parties for the operation, maintenance and management of storm water facilities within Clean Water Services boundaries, and to transfer NPDES permit responsibilities. If such an agreement is finalized during the term of this permit, then the permit may be modified to remove Washington County as a co-permittee.)

b. Each co-permittee must maintain adequate legal authority, through ordinance(s), interagency agreement(s) or other means, to effectively implement and enforce the relevant provisions of this permit. The legal authority must enable the co-permittee to:

(1) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.

(2) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.

(3) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water.

(4) Control through interagency agreements among the co-permittees the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.

(5) Require compliance with conditions in ordinances, permits, contracts or orders.

(6) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

c. MS4 STORM WATER MANAGEMENT PLAN (SWMP)

(1) Adaptive Management

Adaptive management is the appropriate process for assessing new opportunities for improving program effectiveness in controlling storm water pollution to the maximum extent practicable. The co-permittees are required to use adaptive management to assess options for improving controls on storm water discharges. Co-permittees must use the monitoring data and analyses required under this permit as well as applicable information from other sources in the adaptive management process. Where TMDL wasteload allocations have been established for pollutant parameters associated with the co-permittee's MS4 discharges, the co-permittees must use the estimated pollutant load reductions (benchmarks) established in the SWMP to guide the adaptive management process during the current and subsequent permit term. Any revisions to control measures derived from the adaptive management process must be implemented by the co-permittees, to the maximum extent practicable.

Adaptive management requires the co-permittees to assess and modify, as necessary, any or all existing SWMP components and adopt new SWMP components to optimize reductions in storm water pollutants to the maximum extent practicable, through an iterative process. The iterative process includes routine assessment of the need to further improve water quality and protection of beneficial uses, review of available technologies and practices to accomplish the needed improvement, and evaluation of resources available to implement the technologies and practices. Changes to the SWMP are considered a part of adaptive management , and such changes do not require modification of this permit, unless new data or information is obtained that demonstrates significant new, or previously unknown, water quality impacts from storm water discharged by the co-permittee's MS4. In such instances, the permittee or Department may initiate a permit modification action in accordance with OAR 340-045-0040 and 0055.

(2) Evaluation of SWMP

The specific components that established the basis for the co-permittee's original SWMPs are given in the federal rules at 40 CFR §122.26(d)(2)(iv)(A) through (D) and in Schedule D, 8.c.(3) of this permit.

The co-permittees must review Schedule D, 8.c.(3) and, for each component, determine whether implementation of the components in the SWMP as submitted is sufficient to reduce the discharge of pollutants to the maximum extent practicable. The co-permittees must submit to the Department details on how each of the components are, or will be, addressed and the rationale for the continued existing or revised level of implementation. (If certain components are not included in the plan, then the rationale for exclusion must also be submitted.) The level of implementation for each component must, when practicable, have

measurable performance indicators to assist with the reporting on the status of implementation as part of the annual reports.

During this evaluation, it may be found that the SWMP will need improvement and/or modification to ensure continued reduction of pollutants to the maximum extent practicable. The results of the evaluation, including any proposed revisions to the SWMP, must be reported to the Department as described in Schedule B, 3.b.(1).

(3) Required SWMP Elements

(i) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description must include:

(*1*) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.

(*2*) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers that receive discharges from areas of new development and significant redevelopment. Such a plan must address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in Schedule D, 8.c.(3)(iv).

(*3*) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.

(*4*) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.

(*5*) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste. The description must identify priorities and procedures for inspections and establishing and implementing control measures for such discharges [this program can be coordinated with the program developed under Schedule D, 8.c.(3)(iii)].

(*6*) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer that will include, as appropriate, controls such as educational activities, permits, certifications

and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

(ii) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program must include:

(*1*) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description must address all types of illicit discharges, however the following category of non-storm water discharges or flows must be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, start up flushing of groundwater wells, aquifer storage and recovery (ASR) wells, potable groundwater monitoring wells, draining and flushing of municipal potable water storage reservoirs, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash waters, discharges of treated water from investigation, removal and remedial actions selected or approved by the Department pursuant to Oregon Revised Statute (ORS) Chapter 465, the state's environmental cleanup law; and discharges or flows from emergency fire fighting activities where discharges or flows from fire fighting are identified as not significant sources of pollutants to the waters of the state.

(*2*) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

(*3*) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as e. coli, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such a description must include the location of storm sewers that have been identified for such evaluation);

(*4*) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.

(*5*) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.

(*6*) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

(*7*) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.

(iii) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, 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 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program must:

(*1*) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.

(*2*) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in Schedule D 8.c.(3)(iii), to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen; and any information on discharges required under 40 CFR §122.21(g)(7)(vi) and (vii).

(iv) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system that must include:

(*1*) A description of procedures for site planning which incorporate consideration of potential water quality impacts.

(*2*) A description of requirements for nonstructural and structural best management practices.

(*3*) A description of procedures for identifying priorities for inspecting sites and enforcing control measures that considers the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

(*4*) A description of appropriate educational and training measures for construction site operators.

(4) Total Maximum Daily Loads (TMDLs)

The requirements of this section apply to the co-permittees' MS4 discharges to receiving waters with established TMDLs and associated allocations as noted on page 1 of this permit. It is the intent of this section to ensure pollutant discharges for those parameters listed in the TMDL are reduced to the MEP. This would be

deemed as achieving adequate progress toward achieving assigned wasteload allocations (WLAs) given in the TMDLs to these MS4 sources.

(a) Progress towards reducing TMDL pollutant loads must be evaluated by the co-permittee through the use of performance measures and pollutant load reduction benchmarks developed and listed in the SWMP.

(i) Performance measures are estimates of the effectiveness of various best management practices (BMPs) implemented by the permittee as per the SWMP; and are not numeric effluent limits. Performance measures must, where appropriate, be pollutant reduction estimates. The performance measures for the BMPs addressing TMDL pollutants may be based on the same metrics developed in accordance with the program effectiveness monitoring requirements in Schedule B, 1.e.(2)(a).

(ii) A benchmark is a total pollutant load reduction estimate for each parameter or surrogate, where applicable, for which a WLA is established at the time of permit issuance. A benchmark is used to measure the overall effectiveness of the storm water management program in making progress toward the wasteload allocation (this estimate will be related to the statistical variability of the underlying data and may be stated as a range)and is intended to be a tool for guiding adaptive management activities. A benchmark is not a numeric effluent limit; rather it is a goal that is subject to the "maximum extent practicable" standard. The permittees must provide the rationale for the proposed benchmark, which includes an explanation of the relationship between the benchmarks and the TMDL wasteload allocations. Any limiting factors related to the development of a benchmark, such as data availability and data quality, must also be included in this rationale.

(b) The SWMP must describe a program that includes BMPs, monitoring triggers, narrative conditions, or other elements, designed to achieve reductions in the TMDL pollutants. The SWMP must include a specific strategy for implementing monitoring designed to enable the permittee to gauge the effectiveness of the SWMP in reducing TMDL pollutant loads to the maximum extent practicable.

(c) When the co-permittees apply for permit renewal, the co-permittees must include an evaluation of the effectiveness of the storm water management program with respect to all pollutant parameters addressed in an applicable TMDL. This evaluation must assess progress towards meeting the pollutant load reductions (benchmarks) using the reporting and monitoring programs and other methods described in Schedule B, 1.e. and 3.b. and Schedule D, 8.c.(4)(e) of this permit. If the co-permittees have failed to meet the estimated pollutant load reductions during the permit term, they must use the adaptive management process described in Schedule D, 8.c.(1) of this permit to reassess the SWMP and determine what additional or alternative control measures are practicable. The co-permittees must update the SWMP to include these measures. The co-permittees must submit the evaluation and any SWMP revisions to the Department as specified in Schedule D, 8.c.(4)(e).

(d) If within 3 years following permit issuance a TMDL is approved by the Environmental Protection Agency (EPA) and the TMDL has wasteload allocations assigned to storm water within the geographic area covered by this permit, the permittee must, at the time of the next permit renewal application, complete a review and strategy development, and propose changes, if appropriate, to the SWMP to address the urban storm water discharges.

(e) If, at the time of permit issuance, TMDL wasteload allocations have been established for pollutant parameters associated with the MS4 discharges, each co-permittee must, as appropriate, review their SWMP to determine its adequacy in reducing TMDL pollutant discharges to the maximum extent practicable and develop pollutant load reduction benchmark(s) and performance measures in the SWMP as defined in Schedule D, 8.c.(4)(a)(i) and (ii). As part of the SWMP review and the benchmark and performance measure development process, the permittee must document, and subsequently report in accordance with Schedule B, 3.b., the following information:

- A description of the methodology and rationale used to develop and select pollutant reduction benchmarks and performance measures. The methodology must address current estimated discharge loadings and TMDL wasteload allocations.
- Any proposed modifications to the SWMP resulting from the adaptive management process [Schedule D, 8.c.(1)] necessary to give reasonable assurance that the SWMP is designed to reduce TMDL pollutants to the MEP. This must include selection of control measure(s) and any assumptions related to the proposed control measures.
- Any proposed modifications to the monitoring component of the SWMP that are necessary to ensure adequate data and information are collected to assess SWMP implementation, control measure effectiveness, progress towards the pollutant load reduction benchmarks, discharge characterization, and impacts on receiving waters.
- A description of the public participation process, including a summary of material public comments and the responses to those comments.

(5) <u>303(d) Listed Pollutants</u>

The requirements of this section apply to receiving waters without established TMDL wasteload allocations. The co-permittees must qualitatively review the pollutants that are on the 2002 303(d) list that are relevant to the co-permitee's MS4 discharges. The review and corresponding summary of proposed actions must be incorporated into the second year annual report. The review and summary must do the following:

(a) Determine whether there is a reasonable likelihood for storm water discharges from the MS4 to cause or contribute to water quality degradation of receiving waters through the discharge of pollutants on the 2002 303(d) list. Provide the rationale for the conclusion, including the results of an evaluation.

(b) If the discharges from the MS4 is a contributor to specific listed pollutants, determine and describe the relationship between the 303(d) listed pollutant and the MS4 discharges.
(c) Determine whether the BMPs in the existing SWMP are effective to address the 303(d) pollutants. If not, describe how the plan could be adapted to more appropriately address these pollutants. A summary of the rationale for this determination must also be included in the report.

If sufficient information is not available to make the determinations required above, the permittee must generate the additional information necessary to adequately complete these determinations.

(6) Public Involvement

If not already established, a public involvement component of the SWMP must be developed and implemented that entails the following elements:

(a) A process for obtaining input from the public on significant on-going adaptive management changes to the SWMP and new information and data that may form the basis for such proposed changes. This process may be a notice in a local paper that includes information on the proposed change and how to comment, or a review by an advisory group that has broad community representation, or other established process described in the SWMP for obtaining public input.

(b) A process for obtaining input from the public on the information and analysis submitted to the Department in the second annual report (see Schedule B, 3.b.). The permittee must include in the second annual report a summary of material public comments and how these comments were addressed.

(c) A process for obtaining public input and addressing material public comments on the revised draft SWMP submitted to the Department with the permit renewal application (see Schedule B, 3.b.). This submittal must also include a summary of material public comments and how these comments were addressed. The public input solicitation process must entail, at a minimum, a public notice placed in a local newspaper outlining how the public can provide comments to the MS4 on the proposed SWMP revision.

d. Each co-permittee must be responsible for the portion of the MS4 system-wide report applicable to their individual jurisdiction. Each co-permittee is responsible for compliance with the permit only within its jurisdiction, and is not responsible for compliance outside its jurisdiction.

e. All storm water must be managed in accordance with the current SWMP approved by the Department. Minor changes to management activities as described in the approved SWMP may be made without written approval of the Department. Utilizing the adaptive management process in Schedule D, 8.c. may result in minor changes, which are modifications of implementation tasks within a management component of the SWMP that do not change the intent or overall implementation schedule of that activity. Modifications to implementation tasks that change the intent or overall implementation schedule of the SWMP activities are considered significant changes, and cannot be made without prior

written approval by the Department. All changes to the SWMP must be summarized in the annual report required by Schedule B, 3.a.

f. Permit coverage may be terminated for a single co-permittee without terminating coverage for other co-permittees.

9. Wastewater Facilities Storm Water Management

a. The permittee must prepare and implement a wastewater facilities SWPCP according to the following:

(1) The SWPCP must be prepared according to the requirements listed below by a person knowledgeable in storm water management and familiar with the facility. The person(s) preparing the plan must be identified in the plan.

(2) The SWPCP must be signed in accordance with 40 CFR §122.22. Updates and revisions to the SWPCP must also be signed and certified pursuant to 40 CFR §122.22.

(3) The SWPCP must be prepared and implemented according to the time frames set forth in Schedule C, 3.

(4) The SWPCP must be kept current and updated as necessary to reflect any changes in facility operation.

(5) The SWPCP and updates to the SWPCP must be submitted to the Department in accordance with Schedule B, 3.c.

(6) A copy of the SWPCP must be kept at the facility and made available upon request.

b. The Wastewater Facilities SWPCP must contain the following information:

(1) A description of the industrial activities conducted at the site. Include a description of the significant materials (see Schedule F, Definitions) that are stored, used, treated and/or disposed of in a manner that allows exposure to storm water. Also describe the methods of storage, usage, treatment and/or disposal.

(2) A general location map showing the location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.

(3) A site map including the following:

(a) drainage patterns;
(b) drainage and discharge structures;
(c) outline of the drainage area for each storm water outfall;
(d) paved areas and buildings within each drainage area;
(e) areas used for outdoor manufacturing, treatment, storage, and/or disposal of significant materials;
(f) existing structural control measures for reducing pollutants in storm water runoff;

(g) material loading and access areas; and
(h) location of springs, wetlands and other surface water bodies.

(4) Estimates of the amount of impervious surface area (including paved areas and building roofs) relative to the total area drained by each storm water outfall.

(5) For each area of the site where a reasonable potential exists for contributing pollutants to storm water runoff, identify the potential pollutants that could be present in storm water discharges.

(6) The name(s) of the receiving water(s) for storm water drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters.

(7) Identification of the discharge outfall(s) and the point(s) where storm water monitoring will occur as required by Schedule B, 1.f.

c. The permittee must maintain existing controls and/or develop new controls appropriate for the site. The purpose of these controls is to eliminate or minimize the exposure of pollutants to storm water. In developing a control strategy, the SWPCP must have the following minimum components. A description of each component must be included in the SWPCP.

(1) If technically and economically feasible, the following best management practices must be employed at the site. A schedule for implementation of these practices must be included in the SWPCP if the practice has not already been accomplished. This schedule must be consistent with the requirements for developing and implementing the SWPCP in Schedule C, 3 of the permit.

(a) All hazardous substances (see Schedule F, Definitions) must be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating storm water. If the use of berms or secondary containment devices is not possible, then hazardous substances must be stored in areas that do not drain to the storm sewer system.

(b) Oil/Water separators, booms, skimmers or other methods must be employed to eliminate or minimize oil and grease contamination of storm water discharges.

(c) Wastes must be recycled or properly disposed of in a manner to eliminate or minimize exposure of pollutants to storm water. All waste contained in bins or dumpsters where there is a potential for drainage of storm water through the waste must be covered to prevent exposure of storm water to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.

(d) Erosion control methods such as vegetating exposed areas, graveling or paving must be employed to minimize erosion of soil at the site. Sediment control methods such as detention facilities, sediment control fences, vegetated filter strips, bioswales, or grassy swales must be employed to minimize sediment loads in storm water discharges.

(e) Screens, booms, settling ponds, or other methods must be employed to eliminate or minimize debris in storm water discharges.

(f) Storm water must be diverted away from fueling, treatment, storage, and disposal areas to prevent exposure of uncontaminated storm water to potential pollutants.

(g) Fueling, treatment, storage, and disposal areas must be covered to prevent exposure of storm water to potential pollutants

(h) Areas that may contribute pollutants to storm water must be kept clean. Sweeping, prompt clean up of spills and leaks, and proper maintenance of vehicles must be employed to eliminate or minimize exposure of storm water to pollutants.

(2) Methods to prevent spills along with clean-up and notification procedures must be included in the Wastewater Facilities SWPCP.

(3) A preventative maintenance program must be implemented to ensure the effective operation of all storm water best management practices. At a minimum the program must include:

(a) Monthly inspections of areas where potential spills of significant materials or industrial activities could impact storm water runoff.

(b) Monthly inspections of storm water control measures, structures, catch basins, and treatment facilities.

(c) Cleaning, maintenance and/or repair of all materials handling and storage areas and all storm water control measures, structures, catch basins, and treatment facilities as needed upon discovery. Cleaning, maintenance, and repair of such systems must be performed in such a manner as to prevent the discharge of pollution.

(4) An employee orientation and education program must be developed and maintained to inform personnel of the components and goals of the SWPCP. The program must also address spill response procedures and the necessity of good housekeeping practices. A schedule for employee education must be included in the SWPCP.

d. The following information must be recorded and maintained at the facility and provided to the Department and other government agencies upon request. This information does not need to be submitted as part of the Wastewater Facilities SWPCP.

(1) Inspection, maintenance, repair and education activities as required by the SWPCP.

(2) Spills or leaks of significant materials that impacted or had the potential to impact storm water or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

10. Thermal Load to Offset - Durham and Rock Creek AWTFs

With regard to temperature, the Department has established the following initial requirement for the Thermal Load to Offset at the Durham and Rock Creek AWTFs. These Thermal Loads to Offset have been calculated according to methodologies contained in the TMDL, and as follows:

For each treatment facility, Thermal Load to Offset (kcal/day) = Current Excess Point Source Load Above System Potential (kcal/day) – Allowable Point Source Thermal Load (kcal/day), where:

Current Excess Point Source Load Above System Potential = ΔT_{ZOD} x (Q_{ZOD} + Q_{PS}) x (1000/35.3) x 86400 x 5/9) kcal/day

Allowable Point Source Thermal Load = ((Q_{ZOD} + Q_{PS}) x (1000/35.3) x 86400 x Max ΔT_{ZOD} x 5/9) kcal/day

ΔT_{ZOD} = ((Q_{PS} x T_{PS}) + (Q_{ZOD} x T_{SP})) / ((Q_{ZOD} + Q_{PS}) - T_{SP}) degrees F

Q_{ZOD} = Q_R / Dilution Ratio

Q_{PS} = Treatment plant effluent flow, cfs

Max ΔT_{ZOD} = 0.25 degrees F

T_{PS} = Treatment plant effluent temperature, degrees F.

T_{SP} = System Potential temperature, degrees F.

Q_R = river flow, cfs

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

Thermal Load to Offset:

Durham AWTF 2.0 x 10^8 kcal/day

Rock Creek AWTF 7.2 x 10^8 kcal/day

Values used in above calculation:

	Durham AWTF	Rock Creek AWTF
Dilution Ratio	4.2:1	4.0:1
Q_{PS}	25.2	43.8
T_{PS}	71.0	71.0
T_{SP}	64.6	58.5
Q_R	144	110

The permittee may request a change in the Thermal Load to Offset if the values and assumptions used in the above calculation change after the issuance of this permit. These values are applicable to one specific set of effluent and river flows and temperatures. The revised Clean Water Services Temperature Management Plan requirements of Schedule C and the water quality trading provisions of Schedule D describe the mechanisms CWS will use to offset the excess thermal load.

A reconciliation process describing how the permittee determines achievement of the thermal load to offset will be included in the revised TMP required by Schedule C. The reconciliation process will focus on how the permittee achieves the thermal load to offset during the critical period of July-August. The flow augmentation released in July-August will be the baseline for defining the shade requirements for the entire season (May 1-October 31). If the permittee achieves the thermal load to offset for this critical time period, the permittee shall be deemed to have achieved the thermal load to offset requirements for the entire season May 1 - Oct 31.

11. The Durham Advanced Wastewater Treatment Facility, the Forest Grove Wastewater Treatment Facility, the Hillsboro Wastewater Treatment Facility, and the Rock Creek Advanced Wastewater Treatment Facility are collectively known as the "NPDES Facilities." These four facilities are addressed under Schedule A, Section 1 of this Permit. Storm water-related matters are addressed in Schedule A, Section 2 of this Permit. Water Quality Credit Trading matters are addressed in Schedule D, Section 7 of this Permit. This Permit includes Schedules A-F, which involve matters related to the NPDES Facilities, the Storm water-related matters and the Water Quality Credit Trading matters of this Permit; Schedule D, which sets forth Special Conditions; Schedule E, which sets forth pretreatment matters and other more general or common matters; and Schedule F, which sets forth the General Conditions applicable both to the Permittee and to all preceding sections of this Permit.

    a. For purposes of enforcement, each of the four NPDES facilities will be treated as though it has a separate permit.

    b. For purposes of enforcement, Schedule A, Section 2 relating to the Municipal Separate Storm Water Sewer System (MS4), will be treated as though it comprises one separate permit.

    c. For purposes of enforcement, any violations of Schedule E or of any of the Schedule F General Conditions (standing alone or together with potential or actual violations at the NPDES Facilities or the MS4 matters) will be treated as though there is one and only one combined permit.

    d. Notwithstanding the above, failure to submit timely DMRs from one or more of the four NPDES Facilities shall result in four violations, one per facility.

SCHEDULE E
PRETREATMENT ACTIVITIES

The permittee shall implement the following pretreatment activities:

1. The permittee shall conduct and enforce its Pretreatment Program, as approved by the Department, and comply with the General Pretreatment Regulations (40 CFR Part 403). The permittee shall secure and maintain sufficient resources and qualified personnel to carry out the program implementation procedures described in this permit.

2. The permittee shall 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 shall 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. The permittee shall update its inventory of industrial users at a frequency and diligence adequate to ensure proper identification of industrial users subject to pretreatment standards, but no less than once per year. The permittee shall notify these industrial users of applicable pretreatment standards in accordance with 40 CFR § 403.8(f)(2)(iii).

4. The permittee shall enforce categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Act, prohibited discharge standards as set forth in 40 CFR § 403.5(a) and (b), or local limitations developed by the permittee in accordance with 40 CFR § 403.5(c), whichever are more stringent, or are applicable to nondomestic users discharging wastewater to the collection system. Locally derived discharge limitations shall be defined as pretreatment standards under Section 307(d) of the Act.

   A technical evaluation of the need to revise local limits shall be performed at least once during the term of this permit and must be submitted to the Department as part of the permittee's NPDES permit application, unless the Department requires in writing that it be submitted sooner. Limits development will be in accordance with the procedures established by the Department.

5. The permittee shall issue individual discharge permits to all Significant Industrial Users in a timely manner. The permittee shall also reissue and/or modify permits, where necessary, in a timely manner. Discharge permits must contain, at a minimum, the conditions identified in 40 CFR § 403.8(f)(1)(iii). Unless a more stringent definition has been adopted by the permittee, the definition of Significant Industrial User shall be as stated in 40 CFR § 403.3(t).

6. The permittee shall randomly sample and analyze industrial user effluents at a frequency commensurate with the character, consistency, and volume of the discharge. At a minimum, the permittee shall sample all Significant Industrial Users for all regulated pollutants twice per year. Alternatively, at a minimum, the permittee shall sample all Significant Industrial Users for all regulated pollutants once per year, if the permittee has pretreatment program criteria in its approved procedures for determining appropriate sampling levels for industrial users, and provided the sampling criteria indicate once per year sampling is adequate. At a minimum, the permittee shall conduct a complete facility inspection once per year. Additionally, at least once every two years the

permittee shall evaluate the need for each Significant Industrial User to develop a slug control plan. Where a plan is deemed necessary, it shall conform to the requirements of 40 CFR § 403.8(f)(2)(v).

Where the permittee elects to conduct all industrial user monitoring in lieu of requiring self-monitoring by the user, the permittee shall gather all information which would otherwise have been submitted by the user. The permittee shall also perform the sampling and analyses in accordance with the protocols established for the user.

Sample collection and analysis, and the gathering of other compliance data, shall 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 shall be performed in accordance with 40 CFR Part 136.

7. The permittee shall review reports submitted by industrial users and identify all violations of the user's permit or the permittee's local ordinance.

8. The permittee shall investigate all instances of industrial user noncompliance and shall take all necessary steps to return users to compliance. The permittee's enforcement actions shall track its approved Enforcement Response Plan, developed in accordance with 40 CFR § 403.8(f)(5). If the permittee has not developed an approved Enforcement Response Plan, it shall develop and submit a draft to the Department for review within 90 days of the issuance of this permit.

9. The permittee shall publish, at least annually in the largest daily newspaper published in the permittee's service area, a list of all industrial users which, at any time in 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)(vii).

10. 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 shall retain all records relating to pretreatment program activities for a minimum of three years, and shall make such records available to the Department and USEPA upon request. The permittee shall also provide public access to information considered effluent data under 40 CFR Part 2.

11. The permittee shall submit by March 1 of each year, a report that describes the permittee's pretreatment program during the previous calendar year. The content and format of this report shall be as established by the Department.

12. The permittee shall submit in writing to the Department 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(b). No substantial program modifications may be implemented by the permittee prior to receiving written authorization from the Department.

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

(All conditions of this Section A apply to both the Wastewater Treatment Facilities and MS4)

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit. In addition, a person who unlawfully pollutes water as specified in ORS 468.943 or ORS 468.946 is subject to criminal prosecution. Each day of violation constitutes a separate offense.

3. 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 which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, 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.

4. 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.

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

5. Permit Actions

This permit may be modified, suspended, 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; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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

6. Toxic Pollutants

The permittee must comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants 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.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

(All conditions of this Section B apply to the Wastewater Treatment Facilities and MS4 as noted)

1. Proper Operation and Maintenance (Wastewater Treatment Facilities and MS4)

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which 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.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, 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 shall not be 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.

3. Bypass of Treatment Facilities (Wastewater Treatment Facilities Only)

a. Definitions

(1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable,

or substantial and permanent loss of natural resources which 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 unless:

(a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;

(b) 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 judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

(c) The permittee submitted notices and requests as required under General Condition B.3.c.

(2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset (Wastewater Treatment Facilities Only)

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 B.4.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 shall 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 D.5, hereof (24-hour notice); and

(4) The permittee complied with any remedial measures required under General Condition A.3 hereof.

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

5. Treatment of Single Operational Event (Wastewater Treatment Facilities Only)

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

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations (Wastewater Treatment Facilities Only)

a. Definitions

(1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.

(3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

(1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and

(3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow (Wastewater Treatment Facilities Only)

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. 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.

8. Removed Substances (Wastewater Treatment Facilities and MS4)

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters along with solids and other polluants removed in the course of maintenance of the MS4 must be recycled, reused and/or disposed of in such a manner as to minimize pollutants from entering public waters or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

(All conditions of this Section C apply to the Wastewater Treatment Facilities and MS4 as noted)

1. Representative Sampling (Wastewater Treatment Facilities and MS4)

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. Monitoring points must not be changed without notification to and the approval of the Director.

2. Flow Measurements (Wastewater Treatment Facilities Only)

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall 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 shall 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.

3. Monitoring Procedures (Wastewater Treatment Facilities and MS4)

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or subsequent permit actions.

4. Penalties of Tampering (Wastewater Treatment Facilities and MS4)

The 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 shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years, or by 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.

5. Reporting of Monitoring Results (Wastewater Treatment Facilities Only)

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall 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.

6. Additional Monitoring by the Permittee (Wastewater Treatment Facilities and MS4)

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 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 (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements (Wastewater Treatment Facilities Only)

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

8. Retention of Records (Wastewater Treatment Facilities and MS4)

Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee must retain records of all monitoring information, including all calibration and maintenance records of 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, 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 the Director at any time.

9. Records Contents (Wastewater Treatment Facilities and MS4)

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.

10. Inspection and Entry (Wastewater Treatment Facilities and MS4)

The co-permittees must allow the Director, or an authorized representative 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.

SECTION D. REPORTING REQUIREMENTS
(All conditions of this Section D apply to the Wastewater Treatment Facilities and MS4 as noted)

1. Planned Changes (Wastewater Treatment Facilities and MS4)

The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance (Wastewater Treatment Facilities and MS4)

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

3. Transfers (Wastewater Treatment Facilities and MS4)

This permit may be transferred, in whole or in part, to a new co-permittee(s) provided the transferee(s) 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 the rules of the Commission. No permit may be transferred to a third party without prior written approval from the Director. The co-permittee(s) must notify the Department when a transfer of property interest takes place that results in a change of co-permittee(s).

4. Compliance Schedule (Wastewater Treatment Facilities and MS4)

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.

5. Twenty-Four Hour Reporting (Wastewater Treatment Facilities Only)

The permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. If the permittee is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall 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;

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and

e. Public notification steps taken, pursuant to General Condition B.7.

The following shall be included as information that must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass which exceeds any effluent limitation in this permit;

b. Any upset which exceeds any effluent limitation in this permit; and

c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

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

6. Other Noncompliance (Wastewater Treatment Facilities Only)

The permittee shall report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports shall 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.

7. Duty to Provide Information (Wastewater Treatment Facilities and MS4)

The permittee must furnish to the Department, within a reasonable time, any information that the Department may request to determine compliance with this permit. The permittee must also furnish to the Department, upon request, copies of records required to be kept by this permit.

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

8. Signatory Requirements (Wastewater Treatment Facilities and MS4)

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

9. Falsification of Information (Wastewater Treatment Facilities and MS4)

A person who supplies the Department with false information, or omits material or required information, as specified in ORS 468.953 is subject to criminal prosecution.

10. Changes to Indirect Dischargers (Wastewater Treatment Facilities Only)

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

a. Any new introduction of pollutants into the Publicly Owned Treatment Works (POTW) from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants;

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; and

c. For the purposes of this paragraph, adequate notice shall 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.

11. Changes to Discharges of Toxic Pollutant - **[Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]**

The permittee must notify the Department as soon as they know of or have reason to believe the following:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:

(1) One hundred micrograms per liter (100 μg/L);

(2) Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

(4) The level established by the Department in accordance with 40 CFR 122.44(f).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 μg/L);

(2) One milligram per liter (1 mg/L) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

(4) The level established by the Department in accordance with 40 CFR 122.44(f).

SECTION E. DEFINITIONS

1. *BOD* means five-day biochemical oxygen demand.

2. *TSS* means total suspended solids.

3. *mg/L* means milligrams per liter.

4. *kg* means kilograms.

5. m^3/d means cubic meters per day.

6. *MGD* means million gallons per day.

7. *Composite sample* means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.

8. *E. coli* means *Escherichia coli* bacteria.

9. *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 340-41.

10. *CBOD* means five day carbonaceous biochemical oxygen demand.

11. *Grab Sample* means an individual discrete sample collected over a period of time not to exceed 15 minutes.

12. *Quarter* means January through March, April through June, July through September, or October through December.

13. *Month* means calendar month.

14. *Week* means a calendar week of Sunday through Saturday.

15. *Total residual chlorine* means combined chlorine forms plus free residual chlorine.

16. The term "*bacteria*" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.

17 *POTW* means a publicly owned treatment works.

18. *CFR* means Code of Federal Regulations.

19. *Clean Water Act or CWA* means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483 and 97-117; 33 U.S.C. 1251 et seq.

20. *Department* means Department of Environmental Quality.

21. *Director* means Director of the Department of Environmental Quality.

22. *Flow-Weighted Composite Sample* means a sample formed by collection and mixing discrete samples taken periodically and based on flow.

23. *Illicit Discharges* means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities

24. *Major Outfall* means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial

activities (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

25. *MS4* means a municipal separate storm sewer system.

26. *Municipal Separate Storm Sewer* means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade 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, storm water 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 §208 of the CWA that discharges to waters of the United States;

    b. Designed or used for collection or conveying storm water;

    c. Which is not a combined sewer; and

    d. Which is not part of a Publicly Owned Treatment Works (POTW) as defined by 40 CFR §122.2.

27. *Permit* means the NPDES Municipal Permit specified herein, authorizing the co-permittee listed on Page 1 of this permit to discharge from the MS4.

28. *Storm Water* means storm water runoff, snowmelt runoff, and surface runoff and drainage.

29. *Storm Water Management Plan* (or SWMP) means the program developed by the co-permittees to satisfy 40 CFR §122.26(d)(1)&(2) as described in the Part 1 and 2 NPDES Permit application and amendments, and approved by the Department.

30. *Year* means calendar year except where otherwise defined.

31. *Essential maintenance* means operational adjustments and/or physical alterations and repairs that cannot be accomplished when the plant is not in operation but are necessary to maintain the performance, stability, removal efficiency, and/or effluent quality of the pollution control units and processes that comprise the treatment works.

32. *cfs* means cubic feet per second.

33. Consecutive-day statistics are based on the previous days – not centered on the range of dates.

34. *mL* means milliliter.

35. *kcals/day* means kilocalories per day

36. *NH_3-N* means total ammonia reported as nitrogen.

37. *TMDL* means total maximum daily load

38. *WLA* means waste load allocation.

39. *NO_2+NO_3-N* means nitrite plus nitrate reported as nitrogen.

40. *NO_3-N* means nitrate reported as nitrogen.

41. *TKN* means Total Kjeldahl Nitrogen reported as nitrogen.

42. *AWTF* means advanced wastewater treatment facility.

43. *µg/L* means micrograms per liter.

44. *NBOD* means nitrogenous biochemical oxygen demand.

45. *Significant Materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with storm water discharges.

46. *Capital Improvements* means the following improvements that require capital expenditures:

    a) Treatment best management practices including but not limited to settling basins, oil/water separation equipment, catch basins, grassy swales, detention/retention basins, and media filtration devices.
    b) Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
    c) Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of storm water to treatment systems.
    d) roofs and appropriate covers for manufacturing areas.

47. *Hazardous Substances* as defined in 40 CFR § 302 (Designation, Reportable Quantities, and Notification).