



# Tier 2 Revised Stormwater Control Plan Checklist

## Instructions

### Industrial Stormwater Discharge 1200-Z Permits

#### Tier 2 Parameters

Only exceedances of the geometric mean from statewide benchmarks are subject to Tier 2 corrective action. Please see the tables below for a list of the statewide parameters and associated benchmarks.

**Table 4 from the permit: Statewide Benchmarks**

Georegion	pH s.u.	Total Copper mg/L	Total Lead mg/L	Total Zinc mg/L	TSS mg/L	BOD mg/L	Total Phosphorus mg/L	E. coli organism/100 mL
Columbia Slough	5.5-9.0	0.017 <sup>2</sup>	0.10 <sup>2</sup>	0.24 <sup>2</sup>	30	24	0.16	406 <sup>1</sup>
Portland Harbor	5.5-9.0	0.015 <sup>2</sup>	0.24 <sup>2</sup>	0.24 <sup>2</sup>	30			
Cascades	5.5-9.0	0.016	0.018	0.068	100			
Coastal	5.5-9.0	0.017	0.039 <sup>2</sup>	0.086	100			
Columbia River Mainstem	6.0-9.0	0.023	0.21	0.35	100			
Eastern	5.5-9.0	0.031	0.077 <sup>2</sup>	0.16	100			
Willamette Valley	5.5-9.0	0.015 <sup>2</sup>	0.11 <sup>2</sup>	0.14 <sup>2</sup>	100			
Marine Waters	6.0-9.0	0.025	1.10	0.46	100			

<sup>1</sup>Columbia Slough dischargers are only subject to benchmark monitoring, no impairment monitoring

<sup>2</sup>Applied regional translators

#### Monitoring point, Parameter and Corresponding Geometric Mean Exceedance

- Please indicate the monitoring point, as identified on the Site Plan in your Stormwater Pollution Control Plan and also on your Discharge Monitoring Report.
- Please indicate the parameter, units and geometric mean associated with each monitoring point exceedance.
- Please note, if you are not sampling all of your stormwater discharge points and your pollution control plan has identified substantially similar effluent based on a site analysis and/or monitoring, then you must install the same treatment on those representative discharge points. Once implemented, you must sample substantially similar discharge points for the parameters that triggered Tier 2.

#### Projected Reduction of Pollutant Concentration Treated

Please provide the projected percent reduction in concentration for the proposed treatment measure associated with the corresponding geometric mean exceedance. Regardless if a facility is proposing one treatment system to address more than one geometric mean exceedance or multiple treatment measures with the goal of reaching a single benchmark, please list the percent reduction for each parameter. The projected percent reduction should reduce the pollutant discharged to or below the benchmark.

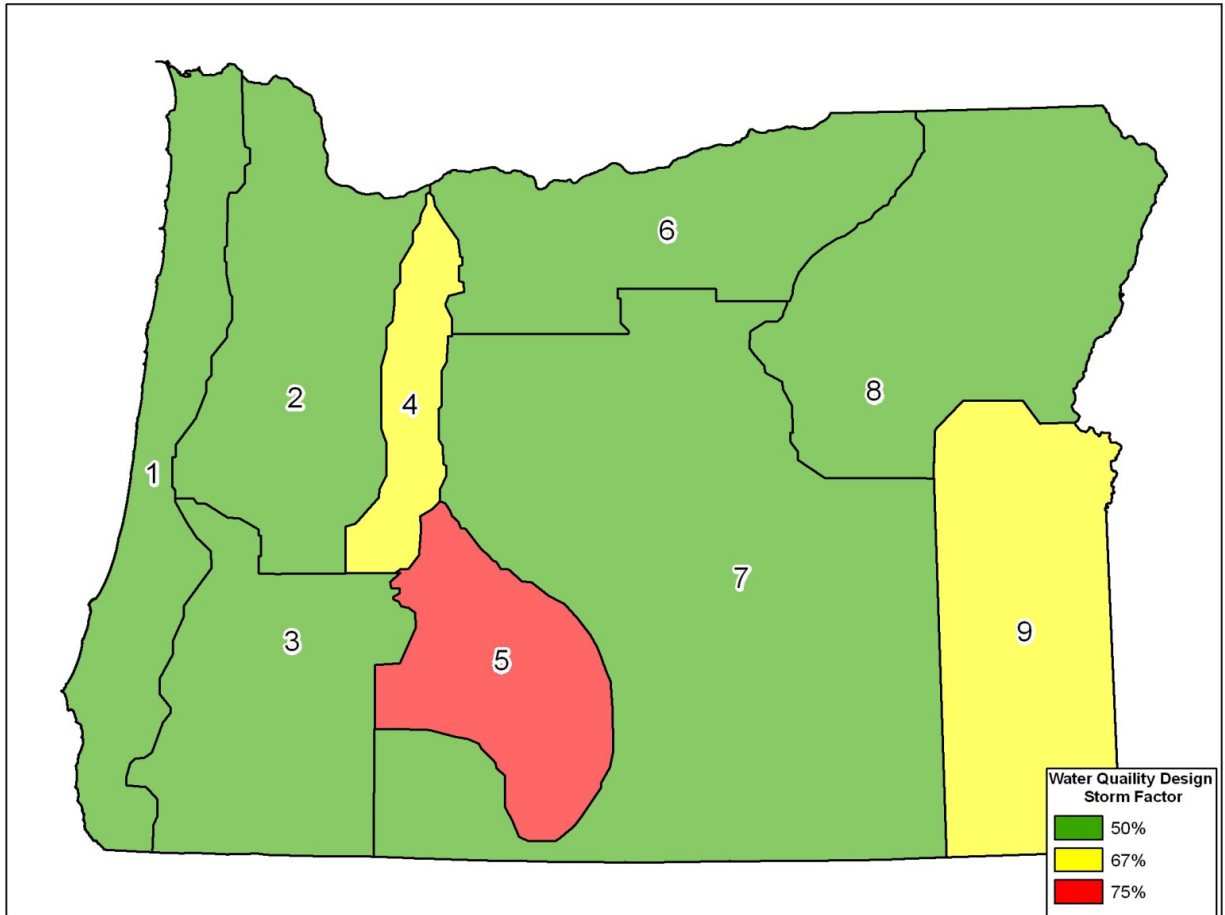
## Percent of Design Storm Volume Infiltrated

Please provide the calculated percent of the design storm that will be infiltrated for the drainage basin being addressed, if applicable. Facilities choosing to submit a Tier 2 Mass Reduction Waiver request need to evaluate their site and show how the remaining mass load of pollutants discharged are at or below the mass equivalent of the statewide benchmarks. In addition, provide the information requested in the Tier 2 Waiver table. This calculation may result in discharge above the benchmark values. The revised Stormwater Pollution Control Plan must provide data and analysis to support this mass load analysis determination, including the detailed description of the measure(s).

## Design Storm Criteria

### Precipitation Data

1. Determine the 2-year, 24-hour rainfall depth for the facility using latitude and longitude; this information can be found here: <http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>
2. Determine the Water Quality Design Storm amount by locating your facility's zone on the Oregon Department of Transportation's Water Quality Design Storm Factor map, attached below. Multiply the 2-year, 24-hour storm rainfall depth from Step #1 by the appropriate factor (50%, 67%, or 75%). The majority of the state will use 50% of the 2-year, 24-hour rainfall depth. For example, if the 2-year, 24-hour rainfall depth according to NOAA is 3.0 inches, and the facility is in Zone 6 on the map below,  $3.0 \times 50\% = 1.5$  inches. The Design Storm amount is 1.5 inches.
3. Design to a minimum storm size of 0.7 inches in 24- hours in order to capture the first flush of industrial pollutants, even if the calculation from Step #2 is fewer than 0.7 inches.
4. Compare the calculated Water Quality Design Storm to the facility's local jurisdiction's water quality design storm and use whichever is more stringent.



More information is available on [Oregon Department of Transportation's Geo-Environmental Hydraulics Manual web page](#).

**Please simply indicate the page numbers of the stamped plan or waiver for the following items:**

**Rationale for the Selection of the Measures**

The permits require the revised Stormwater Pollution Control Plan include data and analysis to support the selection of each treatment best management practice or infiltration measure.

**Schedule for Implementing Measure**

Please include the expected implementation schedule for the proposed measures. The permit deadlines include:

- Submit a proposed Tier 2 corrective action response to DEQ or agent no later than December 31 (six months after the end of the full reporting year that triggered Tier 2) unless DEQ or agent approved a later date.
- Complete construction and implement treatment or mass reduction measures no later than Sept 30 (a year and nine months after the Tier 2 proposal corrective action response submittal deadline) unless DEQ or agent approved a later date.

**Cost of proposed Tier 2 Response**

As part of the rationale in the selection of the measures, the facility must consider cost. In order to meet the implementation schedule, it is highly recommended that all proprietary, capital investment, permitting, operational and maintenance, as well as energy costs are evaluated.

**Treatment System Schematic**

Please include design and site location information for proposed treatment measures. Registrants are responsible for meeting water quality standards, including assurance that any chemical treatment is nontoxic to aquatic organisms. Any state approved program may be cited, such as Technologies Assessment Protocol - Ecology.

**Operation and Maintenance Schedule**

All Tier 2 responses will require some maintenance overtime to optimize pollutant removal and manage break-through. Break-through happens when media is clogged or no longer treats the stormwater pollutants. Although each facility maintenance schedule will vary based on loading, this is an important component of the revised Stormwater Pollution Control Plan. Schedule A.10.b.vii and Schedule A.10.e outline maintenance and repairs which must be recorded and available for review upon request of DEQ, agents or a local municipality. The revised Plan must include a projected maintenance schedule. DEQ recognizes this may vary once installation is complete. Please ensure any Plan revisions related to operations of control measures are submitted to DEQ or agents within 30 days calendar days after the change.

700 Lloyd Building at 700 NE Multnomah St., Suite #600, Portland, OR 97232		165 East 7th Avenue, Suite 100 Eugene, OR 97401		800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801	
Clackamas	Benton	Lane	Baker	Hood River	Sherman
Clatsop	Coos	Lincoln	Crook	Jefferson	Umatilla
Columbia	Curry	Linn	Deschutes	Klamath	Union
Multnomah	Douglas	Marion	Gilliam	Lake	Wallowa
Tillamook	Jackson	Polk	Grant	Malheur	Wasco
Washington	Josephine	Yamhill	Harney	Marrow	Wheeler

**AGENT OFFICES**

<p><b>Clean Water Services</b> 2550 SW Hillsboro Highway Hillsboro, OR 97123 <i>Includes Banks, Beaverton, Cornelius, Durham, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and portions of Washington Co.</i></p>	<p><b>City of Portland</b> Bureau of Environmental Services Water Pollution Control Laboratory 6543 N. Burlington Ave. Portland, OR 97203-5452</p>	<p><b>City of Eugene</b> Industrial Source Control 410 River Ave. Eugene, OR 97404</p>
--	--	--



# Tier 2 Revised Stormwater Control Plan Checklist

## DEQ Industrial Stormwater Permits

**Instructions:** Complete this form and submit with the revised SWPCP and engineered plan or waiver request. Fill in the requested information in the highlighted cells and the appropriate page number(s) indicating the location of information in the revised SWPCP.

Facility Name:

Site ID No.:

Permit Schedule	Requirement					Page number	Comments (for official use only)
A.12.i	Date Revised Plan submitted:						
A.12.f	Monitoring Point	Parameter	Geometric Mean Exceedance	Units	Percent Reduction in Concentration	Percent of Design Storm Infiltrated or Injected	
A.12	<b>Proposed Tier 2 Corrective Action Response</b>						
		Design storm in inches					
A.12.f.iii.1	Rationale for the selection of the measures						
A.12.i.iii	Schedule for implementing these measures						
A.12.f.iii.2	Stamped by PE						
Cost of installation							
Treatment system schematic and operational plan							
Operation and maintenance schedule for treatment measures and/or volume reduction measures proposed							
<b>For DEQ or Agent use only</b>							
A.11	Revised SWPCP complete and acceptable						
<b>Notes:</b>							



# Tier 2 Revised Stormwater Control Plan Checklist

## Information Required for Tier II Waiver Application

If applying for a Tier 2 waiver based on projected volume reduction, please provide the information below *for each drainage area on your site*. If no infiltration is proposed for a particular drainage area, simply fill out the first four (bolded) entries in the Tier 2 Waiver Table. Make additional copies if your site has more than three drainage areas. In addition, fill out the Tier 2 Waiver Summary Table.

### Tier 2 Waiver Table

	Drainage area name:		Drainage area name:		Drainage area name:	
	Value	Page number	Value	Page number	Value	Page number
<b>Area of drainage area (ft<sup>2</sup>)</b>						
<b>Impervious area (ft<sup>2</sup>)</b>						
<b>Runoff coefficients</b>						
<b>Mass (with units) of pollutant discharged based on geometric mean (no infiltration)</b>						
Infiltration rate (gal/day)						
Pond capacity, if applicable (gal)						
Mass (with units) of pollutant discharged based on geometric mean (with assumed infiltration)						
Mass (with units) of pollutant discharged assuming concentration equal to benchmark (no infiltration)						
Approximate depth to groundwater						