State of Oregon
Department of
Environmental
Quality

Mass Reduction Measures Certification Form and Instructions
Industrial Stormwater Discharge Permit No. 1200-Z

Under Schedule A.6.e of the 2021 1200-Z general permit, permit registrants must submit a Tier 2 mass reduction measures checklist and certification developed and stamped by a professional engineer (PE) or Oregon certified engineering geologist (CEG) and the accompanying form under the following circumstances:

- The permit registrant of a mass reduction measures (i.e., a best management practice or structure whose function is to capture and infiltrate stormwater) installed prior to the issuance of the 2021 1200-Z general permit that reduced the mass of the pollutants discharged at or above DEQ-approved design storm capacity not in response to a Tier 2 mass reduction waiver corrective action.

The mass reduction measures certification form below should be used instead of the Tier 2 mass reduction waiver checklist.

Permit registrants should submit one copy of the form in addition to the stamped certified required under Schedule A.6 of the permit. Certifications should be developed and stamped by a PE/CEG consistent with the requirements in Schedule A.6.a.i – vi of the permit.

Permit registrants who have previously installed a mass reduction measures in response to a Tier 2 mass reduction waiver do not need to submit this form since the information it contains was collected at the time of the original Tier 2 mass reduction waiver.

Instructions for Completing the Mass Reduction Measures Certification Form

Below are descriptions of the information needed to complete the tables in the form.

Table 1. Facility/Site Information

Facility Name – The name of the facility whose industrial stormwater discharge is permitted under the 1200-Z general permit.

SIC Code – The Standard Industrial Classification code which describes the primary business activity of the facility.

Preparer Name, Preparer Phone No., and Preparer Email – The name and contact information (phone number and email address) of the person responsible for completing this form which accompanies the *Mass Reduction Measures Certification*.

Date Submitted – The date on which the mass reduction measures certification and accompanying form were submitted to DEQ or to the appropriate agent office listed below. DEQ sites must submit the reporting requirement through Your DEQ Online.

AGENT OFFICES		
Clean Water Services 2550 SW Hillsboro Highway Hillsboro, OR 97123 503-681-5175 *Includes Banks, Beaverton, Cornelius, Durham, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin, and portions of Washington Co.*	**City of Portland** Bureau of Environmental Services Water Pollution Control Laboratory 6543 N. Burlington Ave. Portland, OR 97203-5452 503-823-7584	**City of Eugene** Industrial Source Control 410 River Ave. Eugene, OR 97404 541-682-8616

Table 2. PE/CEG Certifier Identifying Information

Name, Phone, and Email – The name, phone number and email address of the PE/CEG who certified the performance of the mass reduction measure.

Table 3. Certification Document Information

Mass Reduction Measure Drainage Area Name/ID – Provide the name or other identifying information for the drainage area or area which drains to the mass reduction measure being certified.

Requirements for Schedule A.6.a.i – vi – These are the requirements listed in Schedule A.6.a which must be met in order for DEQ or agent approval of the certification. For each requirement, indicate whether the requirement has been certified as met by the PE/CEG in the *Requirement Met* column by marking "Y" for a met requirement and "N" for a requirement which was not met. In the *Certification Document Page Number* column, indicate the page number in the certification memo or report prepared by the PE/CEG which documents how the requirement was met.

Table 4. Critical Design Storm Infiltration Demonstration

Use the Rational Method to estimate the *critical control volume* for the area which drains to the mass reduction measure based on the Water Quality Design Storm.

The Rational Method (or Rational Formula) is documented in Appendix F of the ODOT Hydraulics Design Manual (2014; hereafter the ODOT Manual) and may be referenced for any additional information not contained in these instructions.

Line a. Area of Drainage Area (in square feet) – Provide the total area, in square feet, of the drainage area which drains to the mass reduction measure being certified.

Line b. Impervious Area of Drainage Area (in square feet) – Provide the impervious area, in square feet, of the drainage area which drains to the mass reduction measure being certified.

Line c. Runoff Coefficient (no units) – Provide the runoff coefficient from the Rational Method, described in Chapter 7 Appendix F of the ODOT Manual, using Equation 2 from Appendix F and the runoff coefficients contained in Table 1 of Appendix F. Note that drainage areas with multiple land cover types should compute an area-weighted or composite runoff coefficient for the entire drainage area, as described in Appendix F.

Line d. Critical Storm Depth (in inches) – Provide the critical storm depth, in inches, for the mass reduction measure. The critical storm depth is the maximum of the following:

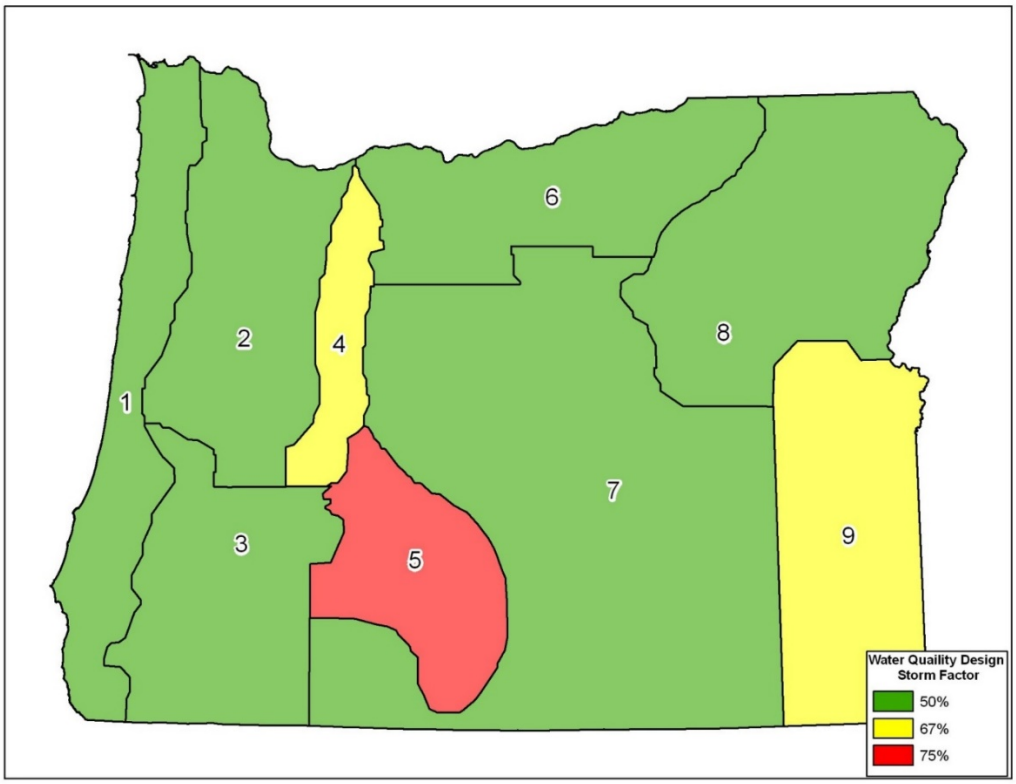
- Water Quality Design Storm Depth (in inches), or
- Local Water Design Storm Depth (in inches), or
- 0.7 inches (depth necessary to, at a minimum, capture the first flush of the storm event)

Use the directions below to estimate each of the storm depths listed above and enter the maximum value in line d.

Water Quality Design Storm Depth: The depth of precipitation occurring during the 2-year, 24-hour water quality design storm. To determine the design storm, perform the following steps:

1. Determine the 2-year, 24-hour rainfall depth for the facility using NOAA's Atlas 14 based on the facility's latitude and longitude; this information can be found here: https://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, included 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 x 50% = 1.5 inches. The *Water Quality Design Storm Depth* is 1.5 inches.



Local Water Quality Design Storm (in inches): Provide the total depth of precipitation occurring during any other design storm event applicable within the facility's local jurisdiction.

First Flush Storm Depth: The critical storm depth used in this assessment may not be less than 0.7 inches to ensure the mass reduction measure captures the first flush of all storm events. Therefore, the critical storm depth should be the maximum value, in inches, of the following:

As previously stated, enter in line d the maximum of the *Water Quality Design Storm Depth*, the *Local Water Quality Design Storm*, or 0.7 inches (i.e., the storm depth for the first flush of a storm event).

Line e. Critical Control Volume – Estimate the total volume of flow associated with the critical storm depth according to the following equation by multiplying line a by line c by line d by 0.6233 (where the last item is a unit conversion factor) as shown in the following equation:

Critical Control Volume = (Area of Drainage Area)(Runoff Coefficient)(Critical Storm Depth)(0.623)

For example, a drainage area of 10,000 square feet composed of flat pavement and a critical water quality design storm depth of 1.5 inches would result in the following critical control volume:

Critical Control Volume = (10,000 ft^2)(0.90)(1.5 inches)(0.6233) = 8,415 gallons

Where the runoff coefficient (0.90) corresponds to flat terrain composed of pavement in Table 1 of Chapter 7 Appendix F in the ODOT Manual.

Line f. Critical Control Volume Infiltrated by Mass Reduction Measure? – Indicate whether the mass reduction measure can infiltrate the critical control volume by checking the box for "yes", or cannot infiltrate the critical control volume by checking the box for "no"

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1200-Z Industrial Stormwater General Permit: Mass Reduction Measures Certification Form

Instructions: For each mass reduction measure installed during a previous permit cycle which you are seeking certification approval, please complete the form below and submit with the certification developed and stamped by a professional engineer (PE) or Oregon certified engineering geologist (CEG).

Table 1. Facility/Site Information	
Facility Name:	
SIC Code:	
Preparer Name:	
Preparer Phone No.:	
Preparer Email:	
Date Submitted:	

Table 2. PE/CEG Certifier Identifying Information	
Name:	
Phone:	
Email:	

Table 3. Certification Document Information			
Mass Reduction Measure Drainage Area Name/ID:			
Requirement		**Requirement Met (Y/N)**	**Certification Document Page Number**
Installed and maintained as originally designed (Sch. A.6.a.i)			
Performance confirmation (Sch. A.6.a.ii)			
Operation and maintenance performed as designed (Sch. A.6.a.iii)			
Drawdown information discussion (Sch. A.6.a.iv)			
Corrective action assessment (Sch. A.6.a.v)			
Design life assessment (Sch. A.6.a.vi)			

Table 4. Critical Design Storm Infiltration Information

a. Area of Drainage Area (ft^2): _____

b. Impervious Area of Drainage Area (ft^2) _____

c. Runoff Coefficient (unitless) _____

d. Critical Storm Depth (not less than 0.7 inches) _____

e. Critical Control Volume (gallons) _____

f. Critical Control Volume Infiltrated by Mass Reduction Measure? ☐ Yes ☐ No