

Form 1 - SIMPLIFIED APPROACH

FACILITY SIZING WORKSHEET

Total impervious area being developed or redeveloped: → 0 **BOX 1**

1 Impervious Area Reduction

Ecoroof _____ sf
 Pervious asphalt or concrete _____ sf
 Permeable pavers _____ sf

Total Impervious Area Reduction: → 8,556 **BOX 2**

Total impervious area requiring stormwater management: → 8,556 **BOX 3**

2 Surface Facilities	Impervious Area Managed		Sizing Factor		Facility Surface Area
Planter	<u>8,556</u> sf	x	0.06	=	<u>513</u> sf
Swale	_____ sf	x	0.09	=	_____ sf
Basin	_____ sf	x	0.09	=	_____ sf
Vegetated Filter Strip for walks and driveways	_____ sf	x	0.20	=	_____ sf

Overflow will be directed to (check all that apply):

- Subsurface facility Surface water
 Stormwater sewer Combined Sewer

3 Subsurface Facilities

The following subsurface facilities can receive overflow from the facilities listed above or can be used independently to manage stormwater from residential roofs. If stormwater is generated from anything other than residential roofs, the facilities are subject to the UIC (Underground Injection Control) requirements.

(See Section 2.3.3 for sizing information)

	Impervious Area Managed		Facility Size
Drywell	<u>8,556</u> sf		<u>48"</u> Diameter <u>15'</u> Depth
Soakage Trench	_____ sf		_____ Length _____ Width

Sum of
Total Impervious Area Managed

..... → 8,556 **BOX 4**
 (BOX 4 should be greater than or equal to BOX 3)

4 Escape Route

In the event the stormwater facility temporarily fails or rainfall exceeds the facility design capacity, describe where flows will drain to in order to maintain public safety and avoid property damage. Depending on site conditions, this may include storage in an overflow structure, parking lot, street, or landscaped area. In the event of failure, the facility will be designed to overflow into the parking lot, then to landscaped area, then to the parking lot.

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WORKSHEET INSTRUCTIONS

Facility Sizing Worksheet

(The worksheet is on reverse side)

All facilities sized with this form are presumed to comply with the City's pollution and flow control requirements. Infiltration and discharge requirements are site specific and approved with the use of this form.

Instructions

- 1 Enter square footage (sf) of total impervious area being developed into BOX 1.
- 2 Enter square footage (sf) for impervious area reduction techniques.
- 3 Enter sum of the impervious area reduction techniques into BOX 2.
- 4 Subtract BOX 2 from BOX 1 to find BOX 3, the amount of impervious area that requires stormwater management.
- 5 Select appropriate stormwater management facilities based on infiltration rate (page 2).
- 6 Enter the square footage of impervious area managed that will flow into each facility type.
- 7 Check whether the planter, swale, basins, and filter strips are flow-through facilities.
- 8 Multiply each impervious area managed by the corresponding sizing factor. Enter this area as the facility surface area, which is the required size to manage the runoff.
- 9 Where selecting facilities that will overflow, select the final discharge location.
- 10 Enter the sum of the total of all the impervious area managed into BOX 4. Box 4 must be \geq Box 3.

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Simplified Approach Infiltration Testing Instructions (Open Pit Test):

- 1 A simple open pit infiltration test should be conducted where the facility is proposed, or within the direct vicinity.
- 2 Excavate a test hole to the depth of the bottom of the proposed facility (up to 4 feet). The test hole can be excavated with small excavation equipment or by hand using a shovel, auger, or post-hole digger.
- 3 If you encounter a layer that is hard enough to prevent further excavation, or if you come across noticeable moisture/water in the soil, stop and measure this depth from the surface and record S5 below. Proceed with the test at this depth.
- 4 Fill the hole with water to a height of about 12 inches from the bottom of the hole (or to one half the maximum depth of the proposed facility), and record the exact time. Check the water level at regular intervals (every 1 minute for fast-draining soils to every 10 minutes for slower-draining soils) for a minimum of one hour or until all of the water has infiltrated. Record the distance the water has dropped from the top edge of the hole.
- 5 Repeat this process two more times, for a total of three rounds of testing. These tests should be performed as close together as possible to accurately portray the soil's ability to infiltrate at different levels of saturation. The third test should provide the best measure of the saturated infiltration rate.

For each test pit required, submit all three testing results.

S5 Infiltration Test Results: For each test include date, time, initial and final water height, duration of test, and infiltration rate in inches per hour.

Depth of Evacuation: TBD at final design

Test 1: _____

Test 2: _____

Test 3: _____

Date: _____

Date: _____

Date: _____

Time: _____

Time: _____

Time: _____

Initial water depth: _____

Initial water depth: _____

Initial water depth: _____

Final water depth: _____

Final water depth: _____

Final water depth: _____

Duration of test: _____

Duration of test: _____

Duration of test: _____

Infiltration rate: _____

Infiltration rate: _____

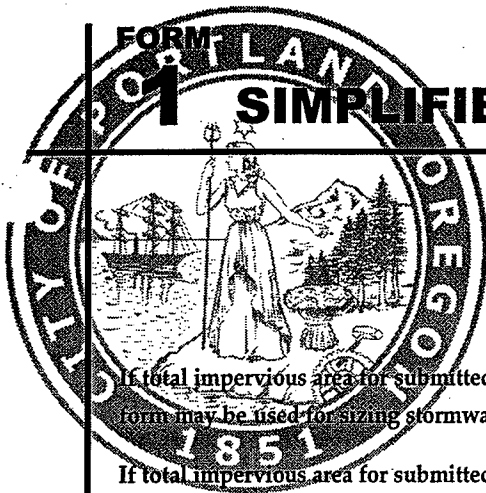
* Infiltration rate: _____

* The pit infiltration rate is the result of the third test.

$$\text{Pit Infiltration Rate} = \frac{\text{Initial Water Depth} - \text{Final Water Depth (inches)}}{\text{Duration of test (hours)}}$$

If the pit infiltration rate is greater than or equal to 2 inches per hour then onsite infiltration is required. Applicants may choose either a surface infiltration facility with overflow to a drywell or soakage trench or a surface infiltration facility with an overflow to an approved discharge point. If the tested infiltration rate is below 2 inches per hour, then a flow-through or partial infiltration facility is required with overflow to an approved discharge point.

Projects that infiltrate roof runoff with private soakage trenches or drywells are not required to provide pollution reduction prior to infiltration. This exemption does not apply to projects that discharge stormwater offsite. Single-family residential (up to three units) roofs and footing drains are excluded from UIC registration. Refer to Section 1.4 for specific pollution reduction requirements for UICs.



FORM

1 SIMPLIFIED APPROACH

Date: 4/12/11

Permit Number: SR-2-11

If total impervious area for submitted development proposal is less than 10,000 square feet, the Simplified Approach form may be used for sizing stormwater facilities.

If total impervious area for submitted development proposal is equal to or greater than 10,000 square feet or includes public or private street improvements, the Presumptive or Performance Approach must be used and a Stormwater Management Report will be required. For more information, refer to the 2008 Stormwater Management Manual (SWMM) Sections 2.2.2 and 2.2.3, respectively.

1 Site Address: 88199 2nd Street, Veneta, Oregon 97487

2 State Property ID (R number): _____

3 Brief Description of Proposed Development Development of a 7,200 sf ft Senior Center/ Food Pantry. All parking areas and walkways will be constructed with pervious concrete to reduce the overall creation of impervious area.

4 Total Amount of Proposed Impervious Area: 8,556

Site Evaluation

Please refer to Stormwater Management Manual (SWMM) References and Resources section for site evaluation maps (including soil drainage class, slopes and groundwater).

S1 NRCS Soil Drainage Class: Veneta Loam

S2 Is the slope anywhere on the project area greater than 20%? yes no

S3 Are there known seeps, springs, or a high groundwater table in the project area? yes no

If answered yes to questions S2 or S3, then a flow-through or partial infiltration facility is required with overflow to an approved discharge point. If no, see S4.

S4 Required Infiltration Testing: Applicant may conduct a simple open pit test or any of the infiltration testing methods prescribed for the Presumptive Approach. (See Appendix F.2 for specifications.)

Please Note: Each individual tax lot is required to manage the stormwater it generates on the same lot to the maximum extent feasible. If the proposal is unable to meet this requirement, the applicant must submit a Special Circumstances request.