Stormwater Worksheet and Guidance for Building Permits

CITY OF SEQUIM

Stormwater Worksheet

General site information	Area (square feet)
Lot size	

New and replaced hard surfaces	Area (square feet)
Roofs (including covered decks and sheds)	
Other hard surfaces (including driveways, walkways, and patios)	
Total new and replaced hard surfaces *	

*If the **total new and replaced hard surfaces** is 2,000-5,000 square feet then it is a "SMALL Project" (MR#1-5).
If *less than 2,000 square feet* then it is a "VERY SMALL Project" (only MR #2—see page 3).
If *greater than 5,000 square feet* then it is a "LARGE Project" (MR #1-9—consult with City staff).

Disturbed pervious surfaces	Area
Total land disturbed **	(square feet)
Native ground converted to lawn and landscaped area	(acres)
Native ground converted to pasture	(acres)

If **total land disturbed is 7,000 square feet or more *(with < 3/4 acre converted to lawn/landscaping, or < 2.5 acres converted to pasture)* then this Guidance applies.
If less than these thresholds, requirements for *new and replaced hard surfaces* only apply.

USDA Soil Type—see map provided by City	Area (square feet)	Percent (%) of Lot Size
Type 6 (Carlsborg gravelly sandy loam)		
Type 63 (Sequim very gravelly sandy loam)		
Total combined area * **		

***If the **total combined area** of soil types 6 + 63 = 90% of the lot size or more, then infiltration testing is not required related to selection of permanent on-site stormwater best management practices (BMPs).
(It is assumed that infiltration is likely to be effective. However, while such testing is not required by the City, it may provide additional assurance to the owner and should be considered.)

Guidance on
Stormwater Minimum Requirements

Minimum Requirement #1 – Stormwater Site Plans

Applicants shall prepare a Stormwater Site Plan[1] (a.k.a., "Drainage Plan") for City review including the following:

A. Site Survey[2] prepared by a Washington State registered land surveyor (or other qualified professional)

B. Soils Report

   a. Infiltration Testing is not required if 90% of the site is located within a USDA soil type 6 (Carlsborg) or type 63 (Sequim)—see Worksheet

   b. If <90%, then Infiltration Testing is required and results applied to selection of permanent stormwater best management practices (BMPs)[3]

C. Drainage Plan for the developed lot ("Permanent Stormwater Control Plan")

   a. Written summary of the project and how it complies with ***Minimum Requirements #1-5***

   b. Scale drawing of the lot

      i. Location of permanent stormwater management BMPs

      ii. Area contributing to each BMP

   c. Design details and illustrations of BMPs

   d. Maintenance instructions for each BMP

D. Construction SWPPP—*see City templates*

   a. Narrative

   b. Drawings

What is a BMP?

A best management practice (or BMP) is a structural or management practice known to control and/or treat stormwater runoff.

References

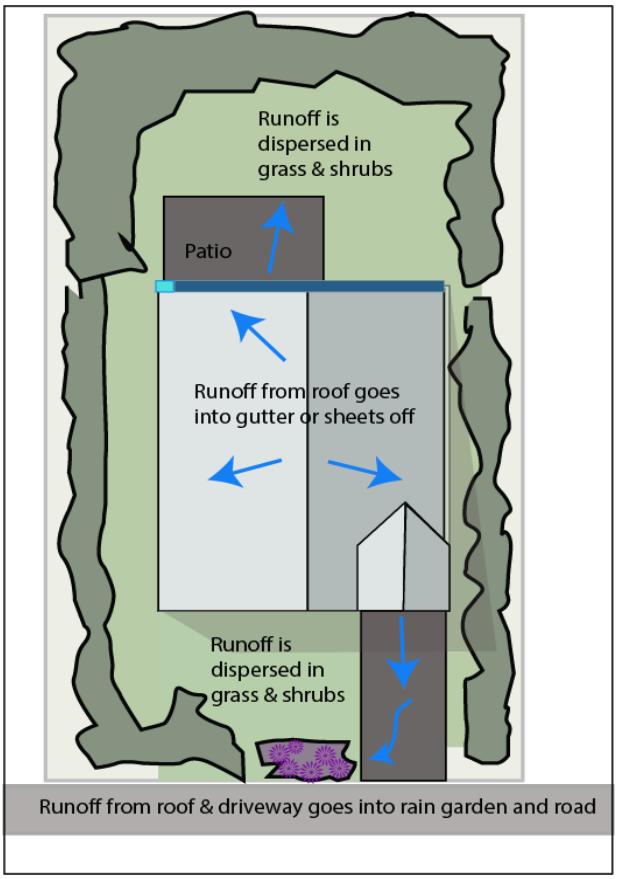
Ecology's 2014 Stormwater Management Manual for Western Washington, referred to as the *stormwater manual:*

www.ecy.wa.gov/programs/wq/stormwater/manual.html

[1] Volume I, Chapter 3 in general

[2] Volume I, Chapter 3, Section 3.1.1 (Step 1 – Site Analysis: Collect and Analyze Information on Existing Site Conditions)

[3] Volume III, Chapter 3, Section 3.3.6



Guidance on
Stormwater Minimum Requirements

Minimum Requirement #2 –
Construction Site Stormwater Pollution Prevention [4]

For part 1D of your submittal, applicants shall include a plan for controlling drainage and pollution (sediment and other elements) from leaving the construction site. The "Stormwater Pollution Prevention Plan" (SWPPP) shall describe existing drainage, site conditions and construction schedules. The narrative and drawings shall describe where and when construction BMPs should be installed for the duration of the construction. *See City templates for SFR permit applicants*

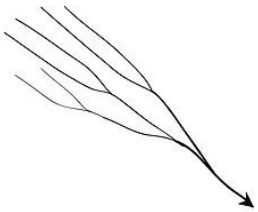
What is erosion control?

Temporary or permanent measures taken to reduce and control the wearing away of the land surface by stormwater runoff.

Minimum Requirement #3 –
Control Sources of Pollution [5]

SFR projects are not required to include specific facilities or devices to control pollution. However, common household items can cause pollution, such as pesticides, herbicides, fertilizers, detergents, and fluids from vehicle maintenance. This should be mentioned in part 1C of your submittal.

Minimum Requirement #4 –
Preserve and Utilize Natural Drainage Patterns [6]



Part 1C of your submittal shall include a description of how natural drainage patterns will be preserved, and whether runoff from the developed property will occur at the natural location (when not infiltrated). Runoff from a site is required to have energy dissipation structures (e.g., rock splash pads, flow dispersal trenches, gabion) to prevent erosion.

Note: One of the best ways to limit runoff is by preserving native vegetation on the lot to the extent feasible.

[4] Volume II of the stormwater manual

[5] Pollution of the City's surface waters and stormwater system is prohibited by Sequim Municipal Code Chapter 13.104.

www.codepublishing.com/WA/Sequim/

[6] Volume V, Section 5.4.3 of the stormwater manual

Guidance on
Stormwater Minimum Requirements

Minimum Requirement #5 –
Permanently Manage Stormwater On-Site

Permanent stormwater management BMPs are divided into three categories depending on the source of the runoff because the likely contaminants found in runoff are different from different types of surfaces. SFR and most Small Project permittees may utilize any of the following BMPs, depending on the surface:

Permanent, On-site Stormwater Infiltration BMPs[7]-- *see templates*

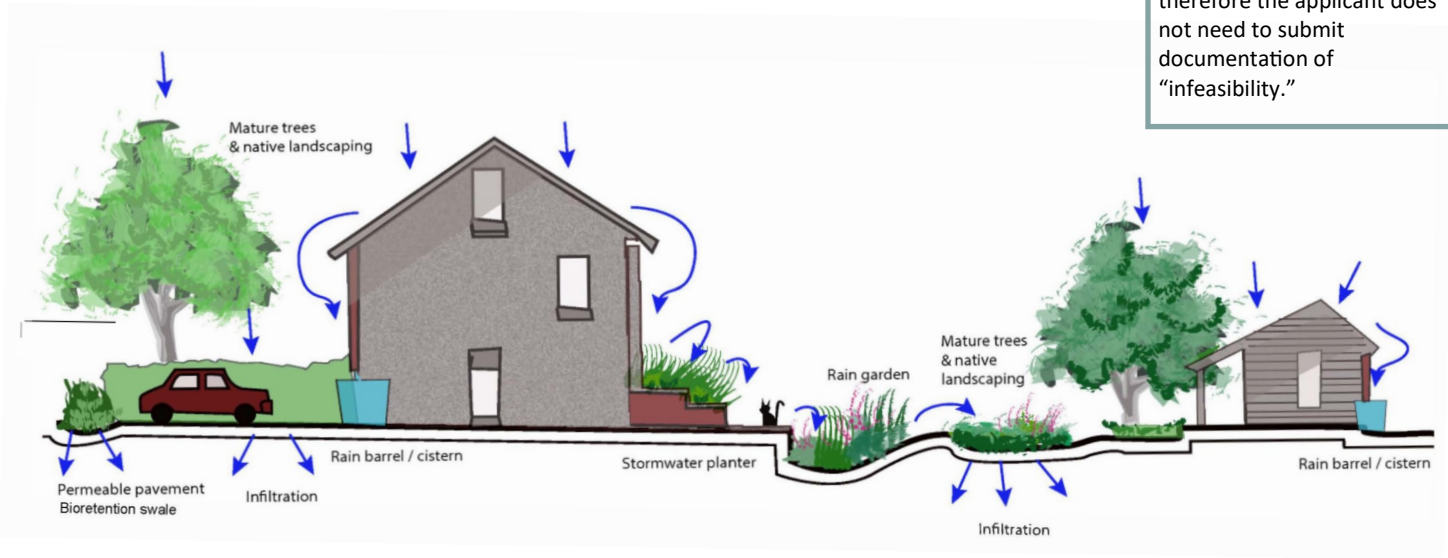
Roofs	Other hard surfaces	Lawn and landscaped areas
• Full dispersion • Downspout full infiltration systems (such as dry wells)[8] • Rain gardens[9] • Bioretention • Downspout dispersion system • Perforated stub-out connections	• Full dispersion • Rain gardens[9] • Bioretention • Permeable pavement • Sheet flow dispersion • Concentrated flow dispersion	• Post-construction amendments to soil quality and depth[10]

[7] This table summarizes List #1 from Volume I of the stormwater manual with the addition of dry wells and infiltration trenches.

Design criteria for each of these BMPs can be found in: Volume III and Volume V of the stormwater manual .

[8] Additional guidance can be found on the City website: http://www.sequimwa.gov/index.aspx?NID=559

[9] Additional guidance for rain gardens can be found in the Rain Garden Handbook for Western Washington (2013 edition): https://fortress.wa.gov/ecy/publications/ documents/1310027.pdf

[10] Building Soil Manual (2016 edition): www.buildingsoil.org/

Note: The City does not require BMPs to be evaluated in priority order as described in the stormwater manual, therefore the applicant does not need to submit documentation of "infeasibility."