



Stormwater Management

SKAGIT COUNTY PLANNING COMMISSION

WORK SESSION 1

MARCH 22, 2022

11/23/2021 16:07

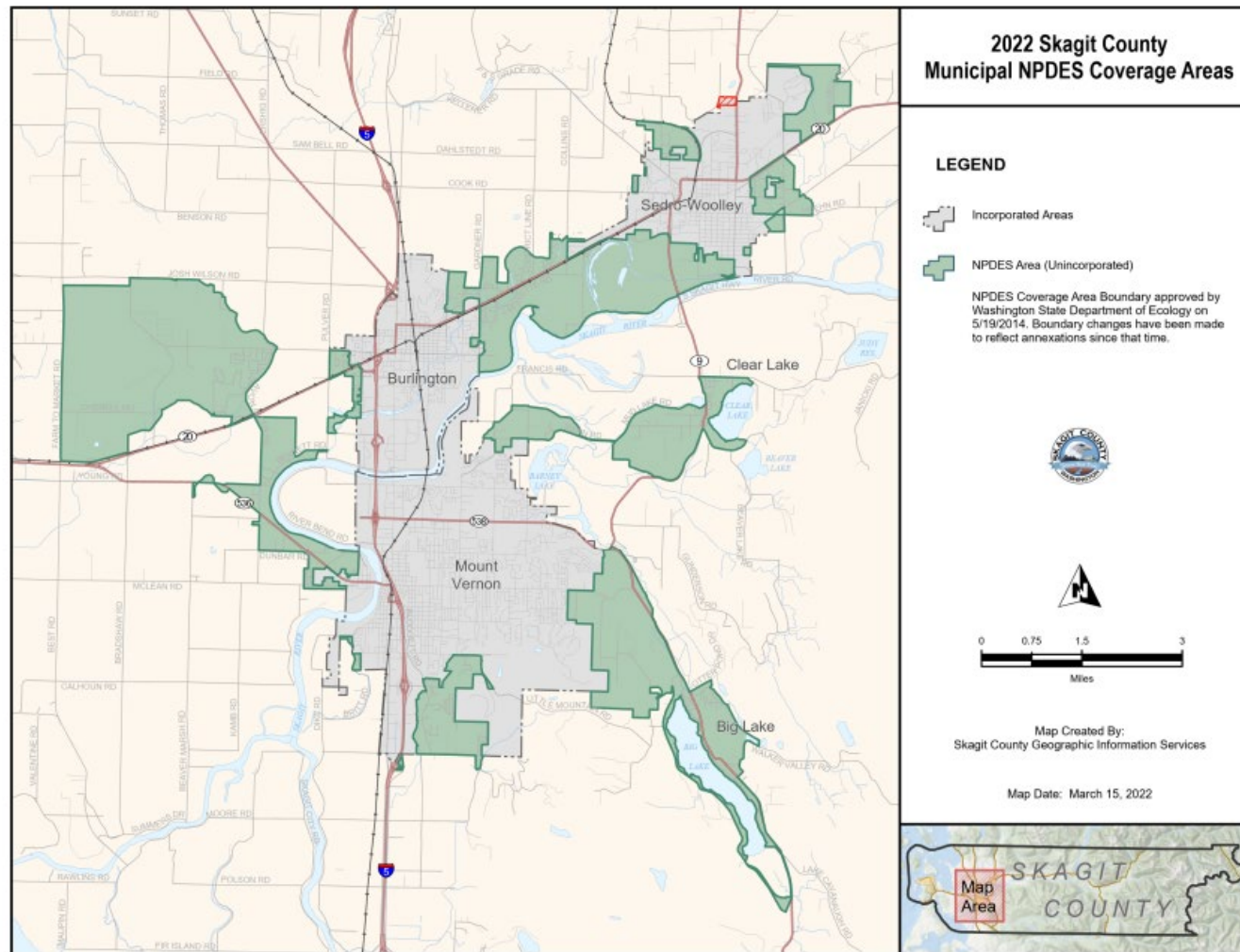
Photo: Shawn Christensen

Why the amendments are proposed



- Simplify the stormwater construction regulations for the customer
- Incorporate stormwater considerations early in the development process
- Maintain compliance with our NPDES permit.

NPDES Coverage Area



NPDES Permit

Current Permit cycle August 1, 2019 - July 31, 2024

- S5.C.6 Controlling Runoff from New Development, Redevelopment, and Construction Sites
 - ❖ Permit section requiring continued implementation of the current County program, with some new requirements, to reduce pollution in stormwater runoff from new development, redevelopment, and construction site activities, both public and private, including transportation projects.
- Permit establishes "minimum performance measures" that must be met to stay compliant.
- The minimum performance measures for S5.C.6 include:
 - ❖ Ability to enforce on the updated requirements established in the current version of the Stormwater Management Manual for Western Washington and the Western Washington Phase II Municipal Permit.
 - ❖ Dates that establish adherence to the mandated code updates, based on the date an application gets submitted.
 - ❖ Inspection and enforcement authority for maintenance standards for private stormwater facilities.
 - ❖ This code must be active by June 30, 2022, as mandated by the county's Phase II Municipal Permit.

Frequently Used Terms and Definitions

- Best Management Practice (BMP)
 - A strategy to control pollutants whether by structural means (oil-water separators, infiltration basin, bioretention, etc.) or non-structural means, through the use of operations/maintenance procedures (street sweeping, modified landscaping practices, soil disturbing activity scheduling, etc.)
- Stormwater Management Manual for Western Washington (“SWMMWW”, “Ecology Manual”)
 - Governing document for stormwater compliance in Western Washington. The manual has five volumes covering what requirements apply to my site, construction stormwater pollution prevention, as well as a library of BMPs
- Impervious surface/Hard surface
 - A non-vegetated surface area which either prevents or slows down the entry of water into the soil
- Minimum Requirements-
 - The nine stormwater requirements defined in the SWMMWW and in the NPDES Municipal Stormwater Permit . They are referred to as “MR1” through “MR9”. The size of a project determines which MRs apply. For definitions, and helpful information regarding the minimum requirements see slides 17-27.



Proposed Stormwater Construction Thresholds

Inside NPDES Area:

2,000 sqft impervious/hard surface or
7,000 sqft of land disturbance

Outside of NPDES Area:

4,000 sqft of impervious/hard surface or
14,000 sqft of land disturbance

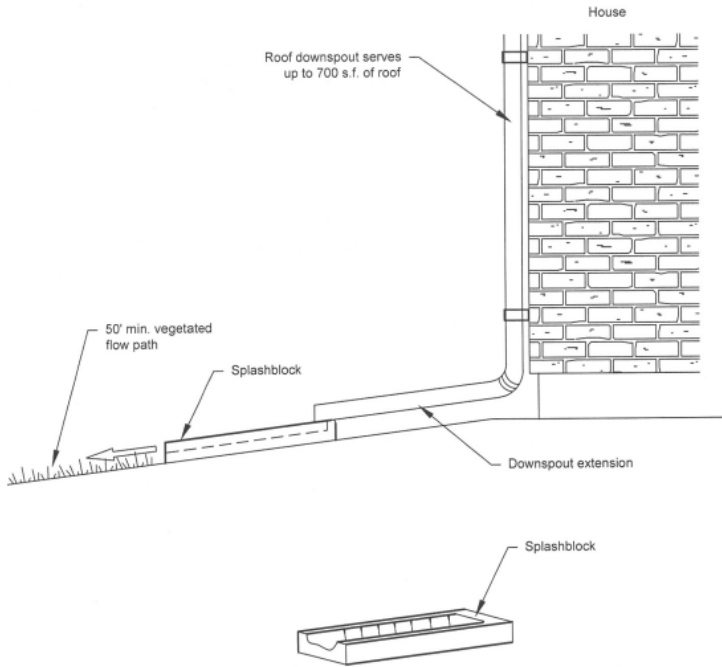
SCC14.32.020 Exemptions to the stormwater requirements are:

- Forest practices (except Class IV general forest practices)
- Commercial agriculture
- Oil and gas field activities
- Pavement maintenance
- Underground utility projects

All listed exemptions have specific applications and limitations.

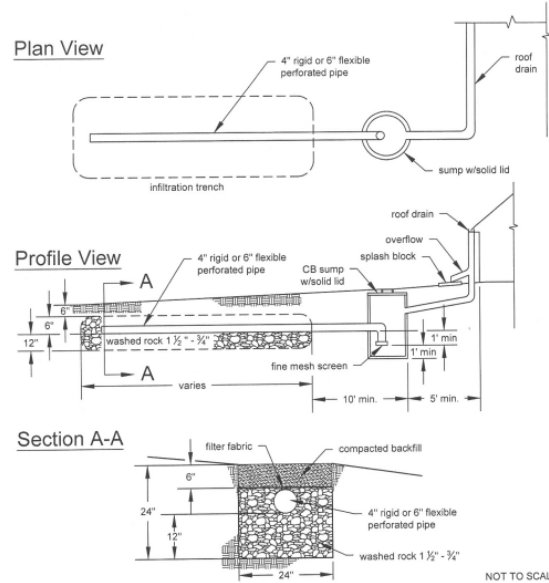
SD 7 Downspouts to splashblocks (BMP T5.10B)

- Minimum 50 foot vegetated flow path from discharge point.
- Positive slope away from the structure.
- Must have outlet protection such as a splashblock or outlet pad.
- A maximum of 700 square feet of roof area may drain to each splashblock



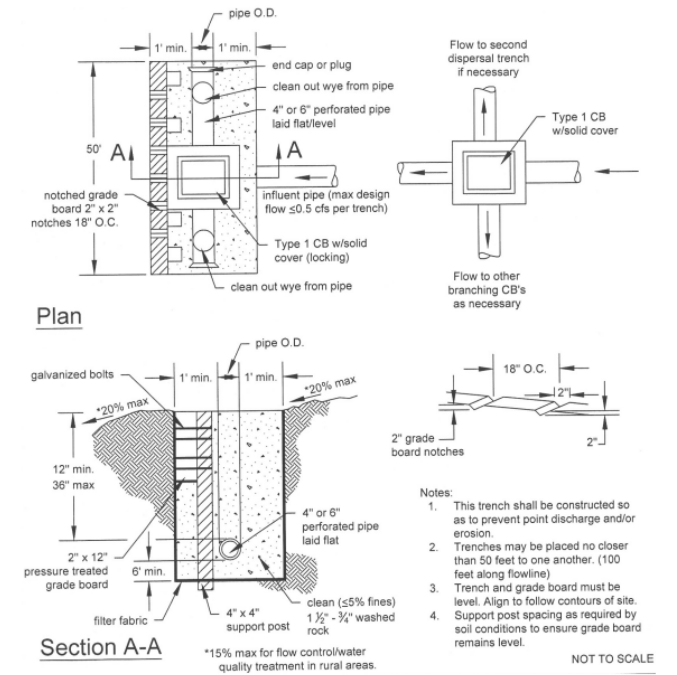
SD 1 Infiltration Trench (BMP T5.10A)

- To be used in good, well draining, permeable soils. See Skagit County's **Infiltration Test Worksheet**.
- Must have a minimum of 1 foot vertical separation between the bottom of the infiltration trench, and the water table or other impermeable layer.
- Maximum length of trench shall not exceed 100 feet from the inlet sump.
- Minimum spacing between trench centerlines shall be 6 feet.
- General sizing criteria: minimum trench length in lineal feet (LF) per 1,000 square feet of roof area
 - Coarse sands and cobbles: 20 LF
 - Medium sand: 30 LF
 - Fine sand, loamy sand: 75 LF
 - Sandy loam: 125 LF
 - Loam: 190 LF

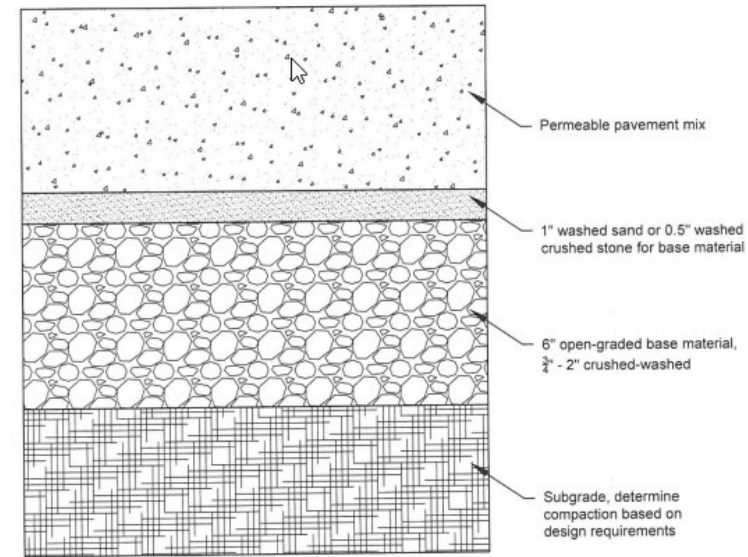
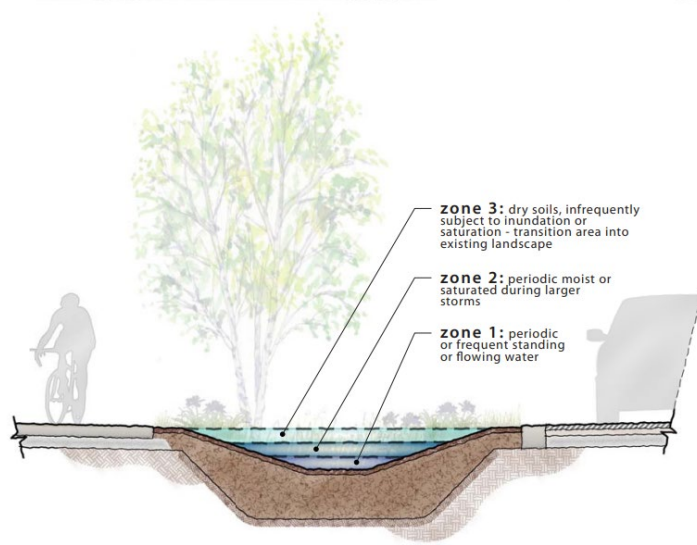


SD 4 Dispersion Trench (BMP T5.10B)

- To be used in poor, impermeable soils and/or sites with high groundwater.
- Maximum length of trench shall not exceed 50 feet from the inlet sump.
- General sizing criteria: 10 feet of trench for every 700 square feet of roof area.
- Minimum 25 foot vegetated flow path from discharge point.



Conventional Stormwater BMPs



Asphalt or Concrete Permeable Pavement

Low Impact Development BMPs

SAMPLE PLANTING PLAN OF A BIORETENTION FEATURE – FROM KING COUNTY’S [LOW IMPACT DEVELOPMENT TECHNICAL GUIDANCE DOCUMENT](#)









Stormwater requirements for my site?

Currently Complicated:

Multiple variables are used to determine stormwater manual and minimum requirements –

1. Location (in or out of NPDES area)
2. Type or Intensity of Use
3. Parcel size
4. Amount of hard surfaces
5. Area of land disturbance or of conversion (native vegetation to lawn or pasture)



① NPDES Permit Area	Inside	Outside				
② Land Use	 All land uses	 All land uses other than those at right, including commercial, industrial, multifamily ¹	 <ul style="list-style-type: none"> • Single-family residence or accessory use on a parcel ≥ 1 acre • Agricultural building in Ag-NRL • Seasonal roadside stand • Road 	 <ul style="list-style-type: none"> • Single-family residence or accessory use on a parcel < 1 acre • Land division into ≤ 4 lots • Minor utility development • Trail or trailhead 		
③ Hard Surface ④ Land Disturbing Activity	Follow manual	Follow manual	$< 7,000$ sq ft AND $< 14,000$ sq ft	$\geq 7,000$ sq ft OR $\geq 14,000$ sq ft	$< 4,000$ sq ft AND $< 14,000$ sq ft	$\geq 4,000$ sq ft OR $\geq 14,000$ sq ft

Requirements

Site Plan	See flowchart 2.4.1	See flowchart 2.4.1	Standard	Consistent with MR1	Standard	Consistent with MR1
MR2 Construction SWPPP	Consistent with MR2	Simplified	Simplified	Simplified	Simplified	Simplified
MR3 Source Control	See flowchart 2.4.1 in Stormwater Management Manual	See flowchart 2.4.1 in Stormwater Management Manual	N/A	N/A	N/A	Yes, but usually N/A
MR4 Natural Drainage			No	Yes	No	Yes
MR5 Onsite Management			No	No	No	Yes
MR6 Runoff Treatment			No	No	No	Yes
MR7 Flow Control			No	No	No	Yes
MR8 Wetlands Protection			No	Yes, but usually N/A	No	Yes, but usually N/A
MR9 O&M			Only if a stormwater facility is installed	Only if a stormwater facility is installed	No	Only if a stormwater facility is installed
LID Required ²	Yes, unless infeasible	No, but recommended	No, but recommended	No, but recommended	No, but recommended	No, but recommended
Engineer Required	Depends on project and site conditions	Depends on project and site conditions	No	Only if stormwater is concentrated, or discharging into wetland	No	Simplified

Stormwater requirements for my site?

Proposed, to Simplify:

Commercial or Industrial – 2019 Manual, Requirements in accordance with 2019 Manual Thresholds

Residential - 2019 Manual, Requirements depend on

- Location (in or out of NPDES area) and
- Area of impervious/hard surfaces
- Area of land disturbance or conversion (native vegetation to lawn or pasture)





Changes

Changes

Land Disturbance Code –

- Land Disturbance Permit replaces Grading Permit.
- Code language and permit review improve integration between requirements from International Building Code, Critical Areas, Stormwater, and Forest Practice Conversions.

Stormwater Management -

- Considers cumulative impacts over a five-year period into determination of stormwater requirement thresholds.
- Regional facilities constructed 20 years ago and older may not be used to satisfy stormwater requirements of new development and re-development, unless updated engineering analysis demonstrates that those facilities meet current stormwater minimum requirements for the proposed development.

Development Code Updates

SCC 14.04: Update definitions.

- Low Impact Development
- Best Management Practices (BMPs)
- Stormwater Facilities
- Construction Stormwater Pollution Prevention Plan (CSWPPP)
- Stormwater Treatment and Flow Control BMPs/Facility



Development Code Updates

14.18: Land Divisions.

- Regional stormwater facilities are designed for all land within the land division with specific amounts of impervious surfaces allocated for each lot.
- Stormwater reviewed with subdivision permit extension requests



Clearing, Grading, Grubbing, and Forest Practices

Planning & Development Services · 1800 Continental Place · Mount Vernon WA 98273
voice 360-416-1320 · inspections 360-416-1330 · www.skagitcounty.net/planning

Many property owners think that the first step toward development of their property is to clear it. However, there is good reason to take that step carefully with due diligence.

☛ Areas to Avoid Clearing

Critical Areas

In clearing your property, you must avoid:

- Wetlands, streams, lakes, ponds, marine shorelines, and the area around them (in some cases 300 feet or more from the water)
- Areas with a high risk of erosion or landslides, generally slopes exceeding 30% gradient
- Special flood hazard areas, i.e., areas shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1-A30, AH, V, V1-V30, or floodway.

Clearing within these areas may result in serious penalties from the County or other agencies. Submit a Request for Critical Areas Review to our department to ensure you avoid these areas.

Conserved Land

Some land, including your own, might be restricted by covenants held by a homeowner's association, or conservation easements held by neighbors, a land trust, or the County. Consider obtaining a title report from a title company prior to clearing to ensure your property doesn't have such restrictions.

Others' Property

It can be difficult to determine property boundaries on uncleared land. The true property owner can sue for timber trespass (cutting someone else's trees or shrubs),¹ which carries triple damages. Consider engaging a professional land surveyor to determine your property boundaries.

▨ Grading

- excavation that meets all of the following:
 - outside of critical areas and buffers (unless critical areas review occurred and the location approved);
 - < 2 ft deep;
 - does not obstruct natural drainage;
 - does not create a cut slope > 5 ft high and steeper than 1.5:1;
 - does not exceed 100 cu yards of excavated material.
- fill that is either:
 - Less than 1 ft deep, placed on natural terrain with a slope less than 12%, and outside of critical areas and buffers (unless critical areas review occurred and the location approved); OR
 - Less than 3 ft deep, not more than 100 cu yards, not intended to support structures, and outside of critical areas and buffers (unless there has been critical areas review of the project and the location has been approved).
- excavations for wells
- trenches for utilities
- agricultural activities (e.g., tilling, fertilizing, planting)
- cemetery graves
- refuse disposal sites controlled by other regulations
- exploratory excavations under the direction of a registered design professional
- work located primarily in a public way
- mining, quarrying, excavating, processing, or stockpiling rocks, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties

Any work that changes a natural drainage course requires a permit.

a Stormwater Pollution Prevention Plan (SWPPP) to ensure erosion and sediment control. A model SWPPP is available at skagitcounty.net/stormwaterpermitting.

Land Disturbance

Development Code Updates

New Chapter 14.22: Land Disturbance Chapter.

- Replaces the existing clearing and grading permit, Appendix J of the Building Code (IBC).
- This permit is only required when development is not done in conjunction with a building permit.
- The regulations are designed to permit a suite of clearing and grading activities through a single application.
- Exemptions (Generally):
 - Land disturbing activity totaling less than 7,000 square feet within the NPDES Permit area, 14,000 square feet outside the NPDES Permit Area;
 - Certain fill and grading when it does not exceed 100 cubic feet or less than 3 feet in depth; or,
 - Forest practices not subject to County jurisdiction; or,
 - Existing Agricultural activity; or,
 - New construction of agricultural drainage ditches (including enlargement of existing drainage ditches) that requires 500 cubic yards or less of grading;

Changes

- Residential Development outside the NPDES Permit Area -
 - Remove land use intensity tables based on land use and parcel size.
 - Increases design flexibility for meeting Minimum Requirements (MR's).
 - Parcels less than one acre would have same thresholds as parcels one acre or more.
 - **Current Code** - Less than one acre –
 - MRs 1-9 required at 4000 SF impervious surfaces or 14,000 SF land disturbance.
 - **Current Code** - One acre or greater –
 - MRs 1,2,4,8,9 required at 7000 Sf impervious surfaces or 14,000 SF land disturbance.
 - MRs 1-9 required at 20,000 square feet impervious surfaces.
 - **Updated Code:**
 - All land disturbance or impervious surface – MR2 (construction pollution prevention plan). No changes.
 - Impervious surface 4000 SF or land disturbance 14,000 SF - MRs 1-5 (non-engineered)
 - Impervious surfaces 10,000 SF or 50% of entire lot, Conversion of native vegetation (1.5 acres to lawn, 5 acres to pasture), Fill or excavation of 500 cubic yards or more – MRs 1-9 required (engineered drainage report)

Development Code Updates

SCC Chapter 14.32: Reorganize and update drainage chapter.

- Adopts the [2019 Stormwater Management Manual for Western Washington](#) for unincorporated Skagit County.
- Adopts the [WSDOT Highway Runoff Manual](#) for Road, Bridge, and Municipal Construction
- Raises impervious/hard surface thresholds for hiring an engineer outside of the NPDES area to 10,000 ft² for parcels less than one acre and retains the same thresholds inside the NPDES area.
- Removes thresholds for parcels > 1 Acre outside of NPDES area
- Incorporation of LID design concepts instead of just BMPs.
- Removes of the land use intensities in the code to simplify stormwater requirements for areas outside of the NPDES areas.
- Adds a twenty-year sunset provision for the use of regional stormwater facilities intended to serve new development.

Meeting Date	Topic Area
March 22, 2022	Intro to Stormwater changes
April 12, 2022	Work Session on specific Code Amendments
April 2022	Public Meeting to gather input from Public
April 26, 2022	Work Session on specific Code Amendments
May 2022	Public Hearing and Comment Period
May 24, 2022	Planning Commission Deliberation
June 14, 2022	Planning Commission Deliberation
June 2022	Board adopts proposed changes

Anticipated Schedule

What we need from you...

- Information we can provide?
- Materials
- Explanations
- Who do you want to hear from?