

How to Meet Ecology's Construction Stormwater General Permit Requirements:

A Guide for Construction Sites

**Washington State Department of Ecology
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Background on the permit

What is the Construction Stormwater General Permit?

The Department of Ecology implements the Federal Clean Water Act. Because of this federal law, Ecology's construction stormwater general permit is required for certain construction activities. The goal of the permit is to reduce or eliminate stormwater pollution and other impacts to surface waters from construction sites.

Construction site activities disturb the land and, when it rains, can create a lot of muddy, polluted stormwater. When this muddy stormwater runs off-site (also known as a discharge), it often causes sediment increases and alters the water chemistry in local streams, rivers, wetlands, and lakes. This lowers water quality and often harms the uses that humans, fish, and other wildlife rely upon.

This guide summarizes the requirements of the Construction Stormwater General Permit:

- Which construction sites it applies to.
- How to get a permit.
- What the permit requires construction site operators to do.

On page two of this publication, there are links to useful forms, such as an application for permit coverage and a notice of termination. For more details on the 2005 Construction Stormwater General Permit, please read the final permit. A copy is available from Ecology or on our website at:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/>

Which construction sites need to apply for a permit?

Construction activities that require this permit are **any land disturbing activities such as clearing, grading, excavating, and/or demolition** that:

1. Disturb **one or more acres of land area**
OR
2. Are "part of a ***larger common plan of development or sale***" that will ultimately disturb one or more acres of land
AND
3. **Discharge stormwater** from the site into ***state surface water(s)*** or into storm drainage systems, which discharge to state surface waters.

Ecology can also require a permit for any size construction site, if it determines the site is a **significant contributor of pollutants** to waters of the state.

Construction activities that require a permit also include clearing forested areas, if the clearing is in preparation for construction activities.

Definitions

Larger common plan of development or sale:

An area where multiple, separate, and distinct construction activities may be taking place on different schedules under one plan. In a larger common plan, the disturbed area of the entire plan is used to determine if a permit is required.

Surface waters of the state:

include wetlands, ditches, rivers, unnamed creeks, rivers, lakes, estuaries, and salt water. Most construction sites discharge to waters of the state.

Exemptions to the permit

The following types of sites and activities *do not require* a permit:

- Construction activity for routine maintenance of an original line and grade, hydraulic capacity, or the facility's original purpose.
- Sites that retain all stormwater on site. For example, if all stormwater is discharged to the ground through infiltration basins, dry wells, drain fields, or other means of discharge into the ground.
- Construction sites on federal land or Indian Reservations, except for construction on the Puyallup Indian Reservation.
- Forestry activities such as nurseries, reforestation, thinning, prescribed burning, or timber harvesting that are NOT part of preparation for construction.
- Sites covered by an existing NPDES individual permit for stormwater discharges.
- Sites covered by an erosivity waiver (see below).

Low rainfall erosivity waiver

Sites under five acres may be exempt from the permit, if the site meets the low rainfall erosivity waiver conditions below:

- ✓ The erosivity factor during the project is less than five according to a calculator found online at: <http://ei.tamu.edu/>.
- ✓ Construction disturbance starts and finishes within the following timelines for the different areas of the state.
 - West of the Cascades Crest: June 15 - September 15 of the *same year*.

- East of the Cascades Crest, except the Central Basin: June 15 - October 15 of the *same year*.
 - The Central Basin, east of the Cascades Crest:
No time restrictions apply.
The Central Basin is an area of central eastern Washington with less than 12 inches of precipitation per year (see Region 2 on the map attached to the erosivity waiver form).
- ✓ If construction extends beyond this period, the owner or operator must follow public notice requirements and apply for a stormwater permit.
 - ✓ Project disturbs less than five acres of area. If part of a common plan, the total land area disturbed must be less than five acres.

The low rainfall erosivity waiver:

- Does not apply to non-stormwater discharges such as wastewaters and hydrostatic test waters.
- Only applies to the requirements of this permit.
- Does not replace the authority of other local agencies.
- Is not available for sites determined to be a significant contributor of pollutants or sites excluded from this permit, such as sites with post-construction discharges.

The construction site operator must apply for a low rainfall erosivity waiver at least **one week prior** to beginning land disturbance.

Who needs to apply?

The operator of the construction site must apply for permit coverage. The operator can be either the party with operational control over construction plans and specifications or the party in charge of day-to-day activities related to the **Stormwater Pollution Prevention Plan (SWPPP)**. The operator, also known as the permittee, is responsible for applying and following the terms of the Construction Stormwater General Permit.

All municipal governments must apply for permit coverage for construction projects with one acre or more of disturbed area that discharge stormwater to state waters.

Stormwater Pollution Prevention Plan (SWPPP):

A document that reflects the specific practices, physical structures and plans on the construction site that will prevent discharges of turbid or polluted stormwater to waters of the state.



Stormwater discharging from a pipe outflow

Individual stormwater permits

If local conditions indicate that the general permit will be ineffective to protect water quality, Ecology may require a construction site to obtain an individual stormwater permit. An individual permit is written specifically for the site. Contact your local regional office for more information (see page 13).

You must get Ecology's stormwater permit even if you already have permits from your local government. Ecology's permit does not replace more stringent requirements by local government.



A Stormwater Pollution Prevention Plan (SWPPP) uses many different practices on the construction site to prevent erosion and pollution of stormwater runoff.

At this construction site, several practices are in place including: a terraced and revegetated slope, silt fences, and covered soil with straw and hydro-seeding.

What does the permit require?

1. Apply for coverage.
2. Develop and use a stormwater pollution prevention plan.
3. Pay permit fees.
4. Monitor stormwater and inspect best management practices.
5. Record and report results.
6. Terminate the permit.

1. Applying for permit coverage

In order to receive coverage by the *2005 Construction Stormwater General Permit* you must follow these steps:

Submit a completed Notice of Intent (NOI) Application

The NOI is the official permit application, which requests information about your site. Submit your NOI prior to the first public notice (see below) and **at least 60 days prior to discharging stormwater**. If your operation is located in Seattle, King County, Tacoma, Pierce or Clark Counties, you must also submit a copy of your NOI to that jurisdiction.

You are ***not required*** to submit a copy of your SWPPP along with your application. Your SWPPP must be finished before you begin construction.

Public notice

As part of obtaining a permit, you are required to publish two public notices. The applicant must publish a public notice one time each week, for two weeks in a row, with seven days between publishing dates. You must place the public notice in a newspaper that has general circulation in the county where the construction will take place. A 30-day public comment period begins after you publish the second

notice. Unless notified by Ecology, **your permit coverage begins 31 days after the second notice is published.**

The public notice must include the following information:

- ✓ The name and address of applicant.
- ✓ The name, address or location description of the construction site.
- ✓ The total area of soil disturbance, in acres, for the applicant's project.
- ✓ A description of the applicant's construction activities and areas from which a stormwater discharge will occur.
- ✓ The name(s) of receiving water(s). If the discharge will be to a storm sewer, include the name of the storm sewer operator.

Sample Public Notice

Applicant XYZ Construction Company, 555 Sunny Ave, Anywhere, WA 98000, is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit.

The proposed 150-acre residential project, known as Clearview Heights, is located on the corner of 55th and Sunny Ave, in the city of Anywhere. Approximately 120 acres will be disturbed for construction of stormwater facilities, roads, utilities, sidewalks, a park, and single-family homes. Stormwater will be collected in an on-site detention system and bio-filtration swale, prior to discharge to Anywhere Creek and Wetlands. The wetlands will be protected by established buffers. A pre-developed discharge rate of stormwater will flow to the wetlands.

Any person desiring to present their views to the Department of Ecology regarding this application, or interested in the Department's action on this application may notify the Department of Ecology in writing within 30 days of the last date of publication of this notice. Comments can be submitted to: Department of Ecology, PO Box 47696, Olympia, WA 98504-7696, Attn: Water Quality Program, Construction Stormwater. (Dates of publication in the Anywhere Times, August 10 & August 17, 2005.)

- ✓ The statement: "Any person desiring to present their views to the Department of Ecology regarding this application, or interested in the Department's action on this application may notify the Department of Ecology in writing within 30 days of the last date of publication of this notice. Comments can be submitted to: Department of Ecology, PO Box 47696, Olympia, WA 98504-7696, Attn: Water Quality Program, Construction Stormwater."

2. Developing and using a stormwater pollution prevention plan

The permit requires you to develop and use a stormwater pollution prevention plan (SWPPP). The purpose of a SWPPP is to reduce or eliminate erosion and prevent stormwater pollution from your site. **The most important part of the SWPPP is designing, installing, and maintaining best management practices (BMPs).** You must update and maintain the SWPPP throughout the life of the construction project.

You can apply for a permit prior to completing your SWPPP. However, your SWPPP must be complete before you break ground. You must **install and maintain appropriate and adequate BMPs** prior to beginning construction and throughout the construction project.

You must keep the SWPPP onsite. You also need to designate a contact person who will be available 24 hours a day to respond

Best management practices (BMPs):
The specific practices and physical structures used on the construction site to prevent pollution of stormwater runoff.

to inquiries and inspections by Ecology.

Overview of SWPPP requirements

This section provides a brief overview of

the objectives, contents and requirements of the stormwater pollution prevention plan (SWPPP) as set out in the general permit. For more details on specific best management practices (BMPs) refer to the *2005 Construction Stormwater General Permit* and Ecology's two stormwater management manuals.

Objectives of the stormwater pollution prevention plan

- ✓ Use best management practices (BMPs) for identifying, reducing, eliminating, or preventing sediment and erosion problems on-site.
- ✓ Prevent violations of surface and ground water quality and sediment management standards.
- ✓ Prevent impacts to receiving waters from peak rates and volumes of stormwater runoff.

What needs to be in the SWPPP?

The SWPPP must contain a narrative and drawings including:

- ✓ Information on the site topography, drainage, soils, and vegetation.
- ✓ Potential erosion problem areas.
- ✓ Types of BMPs used to address the SWPPP requirements and their locations.
- ✓ Construction phasing and sequence.
- ✓ Your actions in the event that BMPs do not meet performance criteria. An example is preventing soil erosion through additional soil stabilization.
- ✓ Engineered calculations for designed structures such as retention ponds.
- ✓ Site log book.

What's required in a SWPPP?

The permit requires the following 12 elements be included and addressed in the SWPPP. This section provides a brief summary of SWPPP requirements. If specific site conditions make certain elements unnecessary, the operator must provide written evidence in the SWPPP explaining why the elements are not needed.

The twelve elements of a SWPPP

1. Preserve vegetation and mark clearing limits

Protect natural vegetation and trees. Use vegetated buffers.

Before grading, mark clearing limits and sensitive areas for protection.

2. Establish construction access

Reduce vehicle access points and stabilize entrance with crushed rock or similar material.

Minimize mud and dirt tracked onto paved roads. Clean road surfaces on a regular basis. Shovel and sweep mud off roadway.



*This muddy ramp is **NOT** a good access point for construction vehicles. The mud tracked onto streets will wash out in stormwater. Instead, use crushed rock pads to stabilize entrances.*

3. Control flow rates

Protect properties and waterways downstream from the site from impacts of stormwater runoff. Reducing flow and preventing erosion are two ways to do this.

4. Install sediment controls

Pass stormwater through a sediment pond, sediment trap, filter, or other equivalent measure **before it leaves** the site or enters drain inlets.

Construct sediment ponds, traps, perimeter dikes, sediment barriers, and silt fences as first step in grading.

5. Stabilize soils

Soil stabilization includes temporary and permanent seeding, mulching, geotextiles, erosion control fabrics, and sod stabilization.



An example of stabilizing stockpiles with plastic and hydro-seeding.

6. Protect slopes

Divert runoff around slopes and disturbed areas with pipe slope drains.

Design and construct cut and fill slopes to minimize erosion. Methods may include terracing and diversions, and reducing steepness.



An example of slope stabilization of exposed dirt using straw and plastic.

7. Protect drain inlets

Protect all operable storm drain inlets from sediment.

Clean and remove sediment from inlet protection devices when they fill to 1/3 of their capacity.

8. Stabilize channels and outlets

Stabilize drain outlets, adjacent stream banks, slopes and channels with armoring such as rocks or gravel.

9. Control pollutants

Prevent chemicals and other pollutants from contact with stormwater. Handle and dispose of pollutants properly. Typical

pollutants include: waste materials, chemicals, liquid products, petroleum products, oil, demolition debris, and batteries.

Prevent or treat contamination of stormwater runoff by alkaline sources such as: bulk cement, cement kiln dust, fly ash, and water used to wash and cure concrete.

Obtain written approval from Ecology prior to using chemical treatment other than CO₂ to adjust pH.

10. Control de-watering

Carefully control de-watering. If you have muddy or contaminated de-watering water, then treat it separately from other stormwater runoff.

11. Maintain BMPs

Regularly inspect, maintain, and repair all BMPs. Inspect erosion and sediment control BMPs at least once every seven days and within 24 hours after any discharge from the site.

Remove all temporary erosion and sediment BMPs within 30 days of final site stabilization. Remove or stabilize on-site trapped sediment.

12. Manage the project

Construct projects in phases when possible.

The goal of this permit is to reduce or eliminate stormwater pollution and other impacts to surface waters from construction sites. Having all of the twelve elements in the SWPPP **and implementing those elements** will help you meet this goal and keep you in compliance with this permit.

Avoid discharges of polluted stormwater runoff like this one. Minimize soil erosion and other pollution by using and maintaining appropriate BMPs.



SWPPP template

You can produce your own SWPPP using the Ecology SWPPP template. This template is available online in Microsoft Word format. The template steps you through the required elements of a SWPPP. You can fill in your specific site information in various stages and save it as your own final SWPPP document. It is important to follow the instructions for setting up Word prior to downloading the template. To download the template and instructions, visit the construction website:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction>

Stormwater management manuals

Ecology developed two manuals, one for western Washington and one for eastern Washington. These manuals provide more specific erosion control and pollution prevention guidance to developers, engineers, and construction contractors. These manuals contain the specific information you need to meet all required SWPPP elements.

To get a copy of the manual:

- **Download from the web at:**
Western Washington
<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

Eastern Washington
<http://www.ecy.wa.gov/pubs/0410076.pdf>
- **For a CD or printed copy, mail a check or money order to:**

Washington State Department of
Printing
PO Box 798
Olympia, WA 98507-0798

Include your name, mailing address, phone number, and the name of the publication (Stormwater Manual, specify which one). Allow two weeks for delivery. If you have questions about ordering the manual, call Department of Printing at: 360-753-6360.

Prices

CD = \$14.78 (includes files showing the changes from the 2001 version).
Manual = \$65.23
Manual & CD = \$72.42

3. Pay permit fees

There is no application fee. However, state law requires all permittees to pay an annual permit fee. Fees are set by state regulation. The minimum annual permit fee is \$353, but the fee is higher for larger disturbance areas. Ecology will bill permittees soon after issuing the permit. After the first bill, Ecology will bill permittees annually. Call Bev Poston, Fee Administrator, at 360-406-6425 with any questions regarding fees.

4. Monitor stormwater and inspect BMPs

The permit requires permittees to perform stormwater sampling on a weekly basis when and where stormwater and authorized non-stormwater discharges off site. Ecology has developed a monitoring guide called [How to Do Stormwater Monitoring: A guide for construction sites](#). For more details on where and how to perform stormwater sampling, consult this guide.

All permittees must also perform visual site inspections of their BMPs to ensure they are functioning correctly. Conduct site inspections of all BMPs weekly and within 24 hours of any discharge from the site. The permittee must modify the SWPPP, if inspections show: 1) BMPs are not working as intended or 2) the SWPPP is, or would be, ineffective in preventing or minimizing soil erosion that will lead to a discharge of polluted stormwater.

Beginning **October 1, 2006, a Certified Erosion and Sediment Control Lead (CESCL) must conduct the site inspections** for sites one acre or larger. Ecology has a list of approved CESCL training courses. See Ecology's [website](#) for CESCL course contact information.

The permit requires you to keep a site log book containing the results of all site inspections, stormwater sampling, and other SWPPP records on-site or readily accessible.

*Construction sites 5 acres and over must begin **sampling** stormwater on October 1, 2006.*

*Construction sites 1 acre and larger, but less than 5 acres do not need to begin **sampling** stormwater until October 1, 2008.*

The permit also phases-in stormwater sampling requirements. Depending on the size of the construction site, you will have different required sampling methods and start dates. See table below for details.

Table 1. Stormwater Sampling

Size of Soil Disturbance	Sampling w/ Turbidity Meter	Sampling w/ Transparency Tube	pH sampling
Less than 1 acre	No	No	No
1 to 5 acres	Beginning October 1, 2008 Yes, either meter or tube	Beginning October 1, 2008 Yes, either meter or tube	Beginning October 1, 2008 Yes
5 acres or more	Beginning October 1, 2006 Yes	No	Beginning October 1, 2006 Yes

5. Recording and reporting results

Record data

The person conducting stormwater sampling needs to record the results of stormwater monitoring. For each measurement, record the following information:

- Date, place, method, and time of sampling or inspection.
- Name of the person doing the sampling or inspection.
- Observations made during inspections.
- Any maintenance performed.
- Dates that samples were analyzed.
- Analytical method used.
- Result of analysis.

Monthly report to Ecology

Permittees required to conduct sampling must submit a monthly discharge monitoring report (DMR) to Ecology. The DMR forms are mailed to permittees when permit coverage is granted for the project. If you have no discharges during the month, you must still submit a form stating "no discharge."

Send DMRs by mail to:

Department of Ecology
Water Quality Program
Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

Ecology must receive DMRs within 15 days after the end of each month. If the permittee monitors more frequently than required by the permit, these results also need to be submitted in the DMR.

Phone report of high turbidity

Permittees must call their Ecology regional office within 24 hours of analysis if either:

- Turbidity measurements is 250 NTU or greater.
- Or
- Transparency is 6 cm or less.

Keep records for three years

Keep all monitoring information, the SWPPP, and all other documentation of compliance with permit requirements throughout the construction project and for at least 3 years after the permit is terminated.

The SWPPP and site log book must be kept onsite. Designate a contact person who will be on call 24 hours a day.

6. Terminate upon completion

You can terminate your permit once you have:

- 1) Stabilized all soils with permanent vegetative cover (or the equivalent).
- 2) Eliminated construction-related stormwater.
- 3) Removed all temporary BMPs.

Permit fees will continue until Ecology receives a completed Notice of Termination form and the Notice of Termination is granted.

You can also terminate your permit if all portions of the permitted construction site have been transferred to other operators.

Send a completed Notice of Termination (NOT) to the same address as the monthly reports (see left). Termination is effective when Ecology receives the form, unless Ecology notifies you in writing within 30 days that your termination is denied

because you have not met the conditions for termination (see above).

How do I transfer coverage under the permit?

If you are in compliance with your permit and another operator is managing the remainder of the project, you may modify or transfer coverage of your permit.

You need to fill out and submit a Transfer Form and an updated permit application to Ecology.

You may also transfer a portion of your operation with a partial transfer. The partial transfer option is located on the same Transfer form.

Additional resources

Web resources

All forms and additional information will be accessible online at Ecology's construction web site:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/>

You can also search for specific publications by number or name at:

<http://www.ecy.wa.gov/biblio/wq.html>

Certified Erosion and Sediment Control (CESC) courses:

<http://www.ecy.wa.gov/programs/wq/stormwater/cescl.htm>

Contact Ecology

For questions on the application or other forms:
Seattle, Kitsap, Pierce, Thurston

Josh Klimek

360-407-7451

jokl461@ecy.wa.gov

Island, King, San Juan

Elaine Tomita

360-407-7229

ewor461@ecy.wa.gov

Adams, Asotin, Columbia, Franklin, Ferry, Garfield, Grant, Lincoln, Pend Oreille, Skagit, Snohomish, , Spokane, Stevens, Walla Walla, Whatcom, Whitman

Charles Gilman

360-407-6437

carr461@ecy.wa.gov

Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grays Harbor, Jefferson, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Skamania, Wahkiakum, Yakima

Joyce Smith

360-407-6858

josm461@ecy.wa.gov

For questions about permit fees:

Bev Poston

Phone: 360-407-6425

Email: bpos461@ecy.wa.gov

For questions about a specific construction

site, call the regional or field office that covers your county. Ask for a stormwater inspector, when you call.

Bellingham Field Office 360-738-6250
Whatcom

Central Regional Office 509-575-2490
Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima

Eastern Regional Office 509-329-3400
Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Whitman

Northwest Regional Office 425-649-7000
Kitsap, King, Island, San Juan, Skagit, Snohomish

Southwest Regional Office 360-407-6300
Clallam, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Thurston

Vancouver Field Office 360-690-7171
Clark

Forms

Send all completed forms to:

Department of Ecology
Water Quality Program
Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696