



Vermont Stormwater Program

Construction Section


The Stormwater Construction Section provides regulatory oversight and technical assistance necessary to minimize the adverse impacts of stormwater runoff to surface waters throughout Vermont.

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Effects of Construction and Soil Disturbance on Stormwater Runoff

- ▶ According to Environmental Protection Agency (EPA),
 - ▶ “During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation’s waters”.
 - ▶ “Pollutants Commonly Discharged From Construction Sites
 - ▶ Sediment
 - ▶ Solid and sanitary wastes
 - ▶ Phosphorous (fertilizer)
 - ▶ Nitrogen (fertilizer)
 - ▶ Pesticides
 - ▶ Oil and grease
 - ▶ Concrete truck washout
 - ▶ Construction chemicals
 - ▶ Construction debris:.



How do we Regulate Construction Activities to Protect Public and Environmental Health Related to Stormwater Pollution?

- ▶ The EPA authorizes the National Pollution Discharge Elimination System (NPDES) under the Clean Water Act (CWA) permit program created in 1972.
- ▶ The Clean Water Act
 - ▶ The CWA prohibits anybody from discharging "pollutants" through a "point source" into a "water of the United States" unless they have a NPDES permit.
 - ▶ CWA Section 402 establishes the NPDES Permit Program
- ▶ The National Pollution Discharge Elimination System program
 - ▶ Regulates point source discharges to Waters of the US and provides an authorization to discharge
 - ▶ Permits establish required construction Best Management Practices (BMP)s and housekeeping measures to mitigate the discharge of pollutants
- ▶ VT ANR is a delegated authority
 - ▶ Section 402(b) allows the EPA to authorize the States to implement the NPDES Program on their behalf.

Stormwater Construction Rules and Guidance

- ▶ [General Permit 3-9020](#) (May 2020)
- ▶ [Low Risk Site Handbook for Erosion Prevention and Sediment Control](#) (Feb. 2020)
- ▶ [The Vermont Standards and Specifications for Erosion Prevention and Sediment Control](#) (Feb. 2020)



Stormwater Construction General Permit

- Known as “Construction General Permit”, “CGP”, “9020”, and/or “INDC”.
- Ensures proper design and construction of stormwater best management practices (BMP)s related to erosion prevention and sediment control.
- Required on active construction sites resulting in 1 acre or more earth disturbance.
- Considers total and concurrent earth disturbance, slopes, soil erodibility, proximity to surface waters, status of receiving body (high quality or impaired), and the presence or absence of buffers.
- Uses a risk-based approach to determine the permit type from the construction site stormwater discharge





Stormwater Construction General Permit (GP) Application Process

- The permitting requirements depend on the risk of having a discharge of stormwater from the construction site. There are two risk categories authorized by the general permit: Low Risk and Moderate Risk. Projects that pose a higher risk must apply under an Individual Permit (INDC).
- Applicants start by determining the risk category of the proposed project by answering the basic project questions in the Appendix A.
- Once the risk is determined, an Notice of Intent (NOI) can be completed using ANR Online to complete the specific site information, contact information, etc.
- A location map and site plan are required for the Low Risk projects and Erosion Prevention and Sediment Control (EPSC) Plans are required for the Moderate Risk and INDC projects.
- A phasing and stabilization schedule along with a concurrent earth disturbance total will be established in the risk scoring and outlined in the authorization.

Low Risk

- Sites that are generally smaller and can be completed in 1 or 2 construction seasons with more favorable site conditions.
- Must comply with the Low-Risk Handbook.
- Site plan/Location map required
- Max 14-day stabilization schedule.
- Max 2 acres of concurrent earth disturbance.

Basic Risk Evaluation		Yes/No
1	Will the proposed project alone result in more than two acres of earth disturbance in total?	NO
2	Is the project located within the watershed of a Class A Water or in the watershed of an Outstanding Resource Water?	NO
3	Will the proposed project have earth disturbance within 50 ft. (horizontal) upslope of any lake, pond, wetland, river, or stream?	NO
4	Will the project have any stormwater discharges from the construction site to receiving water(s) that do not first filter through a 50-ft. vegetated buffer?	NO
<p>Stop. The project is categorized as Low Risk. You do not need to complete Parts II.A and II.B.</p>		<p>Basic Risk Score 0</p>

Moderate Risk

- Sites that generally have more physical constraints, characteristics or management techniques to deal with.
- Must comply with the Low-Risk handbook and the Standards and Specifications for Erosion Prevention and Sediment Control.
- Site Specific EPSC Plans and On-Site Plan Coordinator (OSPC).
- Dependent on Risk Scoring
 - Max 14-day stabilization schedule.
 - Max 5-acre concurrent earth disturbance.

Detailed Risk Evaluation – Identify Risk Factors		Yes/No
A	Will the proposed project have earth disturbance within 50 ft. (horizontal) upslope of any lake, pond, wetland, river, or stream?	NO
B	Is the project located within the watershed of a Class A Water or in the watershed of an Outstanding Resource Water?	NO
C	Will the project include more than one acre of disturbance on soil that is greater than 15% slope?	NO
D	Will the project disturb, in total, more than one acre of soil with an erodibility rating greater than $K=0.36$?	NO
Risk Factor Score		0

INDC

- INDC - sites that are not eligible for coverage under the GP due to relative risk to water quality, max. concurrent disturbance, stabilization schedule outside of GP requirements, or site conditions that warrant additional permit conditions beyond the GP. Custom permit conditions can be included.
- Must comply with the Low-Risk handbook and the Standards and Specifications for Erosion Prevention and Sediment Control.
- Site Specific EPSC Plans, OSPC and Erosion Prevention and Sediment Control (EPSC) Specialist

Detailed Risk Evaluation – Identify Risk Mitigation Factors		Yes/No
F	Will stormwater from the construction site filter through at least 50-ft. of established vegetated buffer before entering a receiving water?	NO
G	Will the project be limited to two acres or less of earth disturbance at any one time?	NO
H	Will the project, in total, involve two acres or less of earth disturbance on slopes greater than 5%?	NO
I	Will the project, in total, involve two acres or less of earth disturbance on soil with an erodibility rating of greater than K=0.17?	NO
Risk Mitigation Score		0

Common Best Management Practices (BMP)s utilized during construction

- ▶ Limits of Disturbance (LOD)
- ▶ Silt Fence
- ▶ Hay Mulch, Chip Mulch, Hydro Seed
- ▶ Stabilized Construction Access
- ▶ Filter Socks and Straw Wattles
- ▶ Storm Inlet Protection
- ▶ Check Dam
- ▶ Erosion Control Matting



-Photos on the next slide include “good” (green outline) and “bad” (red outline) photo examples-

Limits of Disturbance (LOD)

- Construction area outline, prevent unauthorized disturbance, preserve existing vegetation, and limit erosion potential on the site.



Silt Fence

- Silt fence intercepts runoff and allows suspended sediment to settle or filter out.



Stabilized Construction Access

- ▶ A stabilized construction access helps remove mud and sediment from vehicles and equipment to prevent tracking onto roads.



Hay Mulch, Chip Mulch, Hydroseed

- ▶ Seeding and mulching, and hydroseeding are all methods to stabilize exposed soil and prevent soil erosion prior to vegetative growth. Mulches protect the soil surface while grass is establishing.



Filter Socks and Straw Wattles

- Filter socks and straw wattles intercept runoff and allow suspended sediment to settle or filter out.



Storm Inlet Protection

- Storm inlets on construction sites constitute a site perimeter and must be protected from sediment runoff. Inlet protection will allow stormwater to settle and filter through the practice and not bypass the inlet entirely.



Check Dam and Stone Lined Swale

- Stone check dams and stone lined swales reduce erosion in drainage channels by slowing down stormwater flow.



Erosion Control Matting

- Surface covering to protect and stabilize an area prone to erosion where seeding and mulching may be inadequate, generally slopes 3:1 or greater.





Permit Compliance

- ▶ Permit Authorization requires compliance with the permit conditions, Low Risk handbook and site specific EPSC plans.
 - ▶ This is accomplished through:
 - ▶ Permittee/Permitee's representative onsite inspections and reporting.
 - ▶ Department of Environmental Conservation (DEC) representatives' Inspections/Reporting review.
 - ▶ EPA representatives' inspections.



Construction Reporting

- ▶ OSPC Inspections and Reporting
- ▶ EPSC Reports – weekly or bi-weekly site reports related to the INDC authorization submitted by the On-Site Plan Coordinator (OSPC) and Erosion Prevention and Sediment Control (EPSC) Specialist to ensure proper site conditions and schedules.
- ▶ Discharge Reports
- ▶ Any changes made to the disturbance areas may require permit amendments.
- ▶ Any adjustments to the planned EPSC measures should be recorded.



On-Site Inspections

- Site Inspections are conducted by the stormwater program (or EPA) to ensure proper site conditions for Low Risk, Moderate Risk and INDC construction sites.
- Physical copies of EPSC plans, public permit posting and other records should be kept on site and reviewed.
- A complete walk of the site with the contractors to review EPSC measures and/or BMPs planned and installed at the site.
- Take site photos and notes.
- The stormwater program will follow up with the permittees to adjust the site work, if necessary.

Stabilization Timeline

- Stabilization is required and can vary from 7-14 days depending on the risk scoring and is outlined in the authorization. Stabilization is also required prior to a runoff producing event; in which the construction site would produce runoff and or erosion from the site itself.
- Stabilization is intended to protect the soils from erosion by rainfall, runoff, or wind, etc.
- Stabilization can include temporary stabilization or final stabilization.
 - Temporary stabilization includes temporary surface covering by established ground vegetation, application of mulch, rolled erosion control products, graveling, or paving while this area is not being constructed.
 - Final Stabilization includes all soil disturbing activities have been completed and have reached 70% vegetative cover and/or final pervious surface.





Winter Construction

- Winter Construction Period is from October 15th through April 15th
- Winter construction notes should be included in the NOI and/or the EPSC Plans.
- There are specific winter EPSC measures to include and can be referenced in the VT Standards and Specifications for Erosion Prevention and Sediment Control.
- If winter construction was not planned in the initial application but subsequently plans to construct through winter, the EPSC Plans should be revised, and a Notice of Winter Construction form shall be submitted to the Stormwater Program.

Questions/Comments?

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