




Revisions	No.	Description	Date	By



Slow Down Channelized Runoff 22

7. Construct Permanent Controls

Purpose:
Permanent stormwater treatment practices are constructed to maintain water quality, ensure groundwater flows, and prevent downstream flooding. Practices include detention ponds and wetlands, infiltration basins, and stormwater filters.

Requirements:
If the total impervious* area on your site, or within the common plan of development, will be 1 or more acres, you must apply for a State Stormwater Discharge Permit and construct permanent stormwater treatment practices on your site. These practices must be installed before the construction of any impervious surfaces.

How to comply:
Contact the Vermont Stormwater Program and follow the requirements in the Vermont Stormwater Management Manual.
The Stormwater Management Manual is available at: www.vtwaterquality.org/stormwater.htm

*An impervious surface is a manmade surface, including, but not limited to, paved and unpaved roads, parking areas, roofs, driveways, and walkways, from which precipitation runs off rather than infiltrates.



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8. Stabilize Exposed Soil

Purpose:
Seeding and mulching, applying erosion control matting, and hydroseeding are all methods to stabilize exposed soil. Mulches and matting protect the soil surface while grass is establishing.

Requirements:
All areas of disturbance must have temporary or permanent stabilization within 7, 14, or 21 days of initial disturbance, as stated in the project authorization. After this time, any disturbance in the area must be stabilized at the end of each work day.
The following exceptions apply:
• Stabilization is not required if earthwork is to continue in the area within the next 24 hours and there is no precipitation forecast for the next 24 hours.
• Stabilization is not required if the work is occurring in a self-contained excavation (i.e. no outlet) with a depth of 2 feet or greater (e.g. house foundation excavation, utility trenches).
All areas of disturbance must have permanent stabilization within 48 hours of reaching final grade (See page 33).

How to comply:
Prepare bare soil for seeding by grading the top 3 to 6 inches of soil and removing any large rocks or debris.

Seeding Rates for Temporary Stabilization
April 15 - Sept. 15 – Ryegrass (annual or perennial): 20 lbs./acre
Sept. 15 - April 15 – Winter rye: 120 lbs./acre

Choose from:	Variety	lbs./acre	lbs./1000 sq.ft.
Ernsdorf trefoil	Ernsdorf/Pardue	5 ²	0.10
or	Common white clover	Common	8
plus	Tall Fescue	KY31/Rebel	10
plus	Redtop	Common	2
or	Ryegrass (perennial)	PennTine/Linn	5
			0.10


² Mix 2.5 each of Ernsdorf and Pardue OR 2.5 lbs. of Redtop and 2.5 lbs. white clover per acre.

Mulching Rates
April 15 - Sept. 15 – Hay or Straw: 1 inch deep (1-2 bales/1000 s.f.)
Sept. 15 - April 15 – Hay or Straw: 2 in. deep (2-4 bales/1000 s.f.)

Erosion Control Matting
As per manufacturer's instructions

Hydroseed
As per manufacturer's instructions

Stabilize Exposed Soil 26



Stabilize Exposed Soil 27



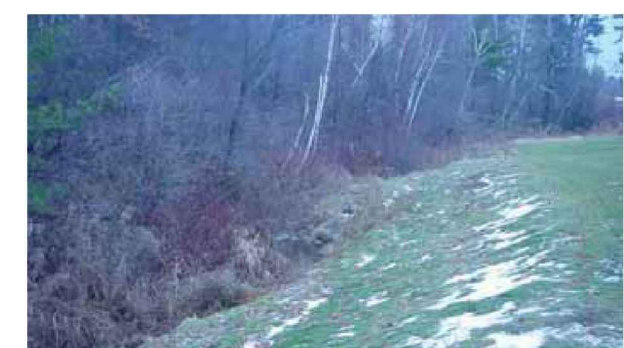
Stabilize Exposed Soil 28

9. Winter Stabilization

Purpose:
Managing construction sites to minimize erosion and prevent sediment loading of waters is a year-round challenge. In Vermont, this challenge becomes even greater during the late fall, winter, and early spring months.
Winter construction* as discussed here, describes the period between October 15 and April 15, when erosion prevention and sediment control is significantly more difficult.
Rains in late fall, thaws throughout the winter, and spring melt and rains can produce significant flows over frozen and saturated ground, greatly increasing the potential for erosion.

Requirements for Winter Shutdown:
For those projects that will complete earth disturbance activities prior to the winter period (October 15), the following requirements must be adhered to:

- For areas to be stabilized by vegetation, seeding shall be completed no later than September 15 to ensure adequate growth and cover.
- If seeding is not completed by September 15, additional non-vegetative protection must be used to



Winter Stabilization 30

Requirements for Winter Construction
If construction activities involving earth disturbance continue past October 15 or begin before April 15, the following requirements must be adhered to:

- Enlarged access points, stabilized to provide for snow stockpiling.
- Limits of disturbance moved or replaced to reflect boundary of winter work.
- A snow management plan prepared with adequate storage and control of meltwater, requiring cleared snow to be stored down slope of all areas of disturbance and out of stormwater treatment structures.
- A minimum 25 foot buffer shall be maintained from perimeter controls such as silt fence.
- In areas of disturbance that drain to a water body within 100 feet, two rows of silt fence must be installed along the contour.
- Drainage structures must be kept open and free of snow and ice dams.

Winter Stabilization 31

- Silt fence and other practices requiring earth disturbance must be installed ahead of frozen ground.
- Mulch used for temporary stabilization must be applied at double the standard rate, or a minimum of 3 inches with an 80-90% cover.
- To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:
 - If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.
- Disturbed areas that collect and retain runoff, such as house foundations or open utility trenches.
- Prior to stabilization, snow or ice must be removed to less than 1 inch thickness.
- Use stone to stabilize areas such as the perimeter of buildings under construction or where construction vehicle traffic is anticipated. Stone paths should be 10–20 feet wide to accommodate vehicular traffic.

Winter Stabilization 32

10. Stabilize Soil at Final Grade

Purpose:
Stabilizing the site with seed and mulch or erosion control matting when it reaches final grade is the best way to prevent erosion while construction continues.


Requirements:
Within 48 hours of final grading, the exposed soil must be seeded and mulched or covered with erosion control matting.



Lawn is fully established before construction is completed at this home site.

Stabilize Soil at Final Grade 33

How to comply:
Bring the site or sections of the site to final grade as soon as possible after construction is completed. This will reduce the need for additional sediment and erosion control measures and will reduce the total disturbed area.
For seeding and mulching rates, follow the specifications under Rule 8, "Stabilizing Exposed Soil".



Within 48 hours of final grading, erosion control matting and mulch have been applied.

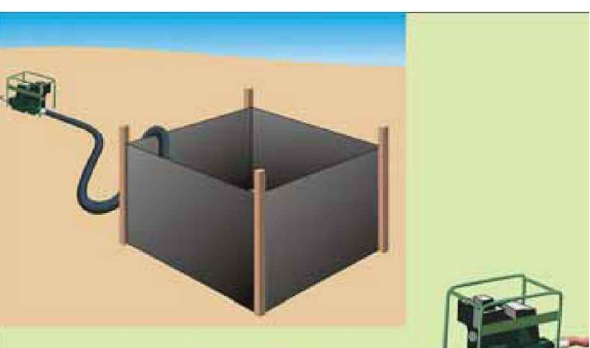
Stabilize Soil at Final Grade 34

12. Dewatering Activities

Purpose:
Treat water pumped from dewatering activities so that it is clear when leaving the construction site.

Requirements:
Water from dewatering activities that flows off of the construction site must be clear. Water must not be pumped into storm sewers, lakes, or wetlands unless the water is clear.

How to comply:
Using sock filters or sediment filter bags on dewatering discharge hoses or pipes, discharge water into silt fence enclosures installed in vegetated areas away from waterways. Remove accumulated sediment after the water has dispersed and stabilize the area with seed and mulch.



Dewatering Activities 36

12. Inspect Your Site

Purpose:
Perform site inspections to ensure that all sediment and erosion control practices are functioning properly. Regular inspections and maintenance of practices will help to reduce costs and protect water quality.

Requirements:
Inspect the site at least once every 7 days and after every rainfall or snowmelt that results in a discharge from the site. Perform maintenance to ensure that practices are functioning according to the specifications outlined in this handbook.
In the event of a noticeable sediment discharge from the construction site, you must take immediate action to inspect and maintain existing erosion prevention and sediment control practices. Any visibly discovered stormwater runoff to waters of the State must be reported.
Forms for reporting discharges are available at: www.vtwaterquality.org/stormwater.htm

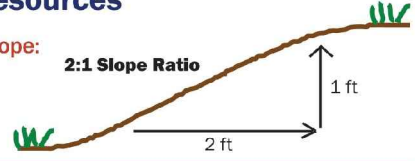
Example Site Inspection Form	Y	N
1. Boundary Limits		
• Site boundary markers are up and visible		
• Disturbance is only occurring within marked boundaries		
2. Limit Disturbance Area		
• Only the average level on the authorization is		
Discharge is disturbed at one time		
3. Construction Entrance		
• Off-site tracking of mud prevented		

Inspect Your Site 37

Example Site Inspection Form	Y	N
4. Sediment Barriers		
• Silt fence is trenched into ground with no gaps		
• Accumulated sediment is less than 1/2 way up the fence		
5. Diversion Berms		
• All upland stormwater is diverted around the site		
6. Check Dams		
• Check dams are in place and stretch the width of the channel		
• Check dams are stable with no erosion		
8. Stabilize Exposed Soil		
• Seed and mulch, and/or erosion control blankets are being used in accordance with the permit requirements		
9. Winter Stabilization		
• After September 15, all disturbed areas have been seeded and mulched to 3 inches deep, or covered in erosion control blankets.		
• For ongoing construction, exposed soil is mulched prior to forecasted rain events.		
10. Stabilize Soil at Final Grade		
• Within 48 hours of establishing final grade, soil is seeded and mulched or covered in erosion control matting		
Water flowing off the site		
• Water is free of sediment (water is clear)		
Inspection		38

Section 3 Additional Resources

How to calculate slope:



Approximate Slope Conversions

Steepness	Percent	Slope ratio (ft/ft)	Degrees
Very steep	100%	1:1	45°
	50%	2:1	27°
	33%	3:1	18°
Moderate	25%	4:1	14°
	10%	10:1	6°
Slight	5%	20:1	3°

How to estimate disturbance area:
1 acre = 43,560 square feet = 4,840 square yards


Area in acres (width in feet x length in feet)	100	150	200	300	400	500
100 ft	0.2	0.3	0.5	0.7	0.9	1.1
150 ft	0.3	0.5	0.7	1.0	1.4	1.7
200 ft	0.5	0.7	0.9	1.4	1.8	2.3
300 ft	0.7	1.0	1.4	2.1	2.8	3.4
400 ft	0.9	1.4	1.8	2.8	3.7	4.6
500 ft	1.1	1.7	2.3	3.4	4.6	5.7

Acknowledgements
Design details and standards for sediment and erosion control practices have been adapted from the New York State Standards and Specifications for Erosion and Sediment Control, August 2005.

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This document has been adapted from the Kentucky Erosion Prevention and Sediment Control Field Guide produced by the Tetra Tech Water Resources Division in Fairfax VA for the Kentucky Division of Conservation and Division of Water. Inquiries regarding this publication should be directed to Barry Tinning, Tetra Tech, 1060 Eaton Place, Suite 340, Fairfax VA 22030 (703.385.6000).

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 Water Quality Division - Stormwater Section
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 Tel: 802-241-3770 or 3777
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 VT Relay Service for the Hearing Impaired
 1-800-253-0191 TDD/Voice 1-800-253-0195 Voice/TDD

www.vtwaterquality.org/stormwater.htm

Notice of Addition
 Of Owners or Operators To Coverage
 Under Vermont Construction General Permit 3-9020

Submission of this completed form constitutes notice that the entity in Section C seeks to be added as a co-permittee to an existing authorization to discharge under Vermont's Stormwater Construction General Permit (CGP) from the project identified in Section A. All landowners and persons who meet the definition of Principal Operator (Subparts 2.1B, 3.1B of the CGP) and who were not included on the original NOI must submit a Notice of Addition form.

A. Project Information
 1. Project Name: _____ 2. Notice of Intent Number: _____

B. Original Permittee Information
 1. Name: _____
 2. Mailing Address:
 a. Street/PO Box: _____
 b. City/Town: _____ c. State: _____ d. Zip: _____
 3. Contact Information
 a. Phone: _____ b. Fax: _____ c. Email: _____

C. New Co-Permittee Information
 Check one or both: New Landowner New Principal Operator

1. Name: _____
 2. Business Name: _____
 3. Mailing Address:
 a. Street/PO Box: _____
 b. City/Town: _____ c. State: _____ d. Zip: _____
 4. Contact Information
 a. Phone: _____ b. Fax: _____ c. Email: _____

D. Request for Addition as Co-Permittee
 I hereby request that the entity in Section C be added as co-permittee to the existing authorization to discharge stormwater from construction activities stated in Section A. In requesting co-permittee status, I hereby certify under the penalty of law that I have read, understand, and meet the eligibility conditions of the CGP; that I agree to comply with all applicable terms and conditions of the CGP; that I understand that continued authorization under the CGP is contingent on maintaining eligibility for coverage, and that the applicable practices in the authorized Erosion Prevention and Sediment Control Plan must be implemented and maintained for the duration of the construction activities. I agree to comply with all applicable terms and conditions of the General Permit 3-9020.

Signature: _____ Date: _____

Submit Original Form to:
 Vermont Department of Environmental Conservation
 Watershed Management Division, Stormwater Program
 1 National Life Drive, Main 2
 Montpelier, VT 05620-3522

Project Title

Eastern Development Corporation
 40 Plains Road
 Pittsford, Vermont

Sheet Title

Erosion Prevention & Sediment Control

Date: 11/08/2018
 Scale:
 Project Number: 16-021
 Drawn By:
 Project Engineer: AAD
 Approved By:
 Field Book: 336 + 211

