



The Construction Stormwater Permit mandates certification for individuals responsible for the implementation and amendment of their SWPPP, and for individuals that are performing or overseeing the inspection, installation, and maintenance of erosion and sediment control best management practices (BMP's). To assist you with this requirement, WSB & Associates is now providing a MPCA approved Erosion and Sediment Control Certification Program that is primarily focused on erosion and sediment control issues on a local level, such as residential and commercial building and development sites, reconstruction, and utility projects.

If you are interested in signing up for the WSB Erosion and Sediment Control Certification Program, please contact Barb Bersie-Ashfeld at 763.541.4800 / bbersieashfeld@wsbeng.com. For questions or if you would like to learn more about the program, contact Jeff Peters at 763.287.7150.



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Erosion and Sediment Control

CERTIFICATION PROGRAM

SITE MANAGEMENT &
BMP INSPECTION/INSTALLATION

OF THE NPDES CONSTRUCTION STORMWATER PERMIT

WSB EROSION AND SEDIMENT CONTROL CERTIFICATION PROGRAM

SITE MANAGEMENT CERTIFICATION-

Attend Day One & Day Two of training

BMP INSPECTION/INSTALLATION CERTIFICATION-

Attend Day Two of training only

DAY ONE - MONDAY, MAY 9, 2011

8:00-8:15 Erosion and Sediment Control (ESC) Introduction and Overview

8:15-9:45 Section 1-1 NPDES Program and Construction Stormwater (CSW) Permit Overview

This section will cover the NPDES Program in its entirety from program inception to how it applies to construction activity. Session will cover in-class exercises which will include permit application, modification, and termination exercises and review of the CSW Permit.

9:45-10:00 15 Minute Discussion

10:00-12:00 Section 1-2 SWPPP Design and Specifications

This section covers the essential components of SWPPP's from narratives, plan sheets, and BMP details. Training also covers resource identification, design factors, specifications, quantities, and special provisions. Attendees will also participate in a SWPPP design exercise.

12:00-12:45 Lunch (provided)

12:45-1:45 Section 1-3 SWPPP Implementation and Amendment

This section covers Mn/DOT, municipal, and private project SWPPP plan review, implementation, phasing and effective ways to keep SWPPP's up to date to reflect any in-field changes.

1:45-2:00 15 Minute Discussion

2:00-3:00 Section 1-4 Environmental Assessment

This section covers effective ways of identifying and assessing special and impaired waters, using the MPCA's website, and how to address TMDL requirements. Training also covers how to assess risk within your project and how to determine which BMP's are adequate for protecting your resources. You will also learn how to identify and address additional agencies that may have jurisdiction and permitting authority for your project.

Guest Speaker (T.B.D.) Section 1-5 Minnesota Pollution Control Agency's Role in Construction Activity
Representative, from the Minnesota Pollution Control Agency (MPCA), will discuss the NPDES Permit Program, the MPCA's role in the construction process, enforcement process, and appeal process.

DAY TWO - TUESDAY, MAY 10, 2011

8:00-8:30 Review of Day 1 and Erosion and Sediment Control (ESC) Introduction and Overview

8:30-9:30 Section 2-1 Inspection and Site Maintenance

This section discusses how to perform a comprehensive site inspection for Mn/DOT, municipal, and private projects. From site access to SWPPP review, SWPPP amendment, and resource evaluation, training will help develop methods to perform consistent and thorough site inspections.

9:30-9:45 15 Minute Discussion

9:45-10:45 Section 2-2 Dewatering (Active Water Discharging)

This session covers the difference between dewatering and water pumping. Training also covers rules governing active water discharging, dewatering, and monitoring methods that are currently available to ensure reduced pollution during dewatering activities.

10:45-11:45 Section 2-3 Emergency Response and Waste Management

This session covers effective management and reporting of construction related emergency situations from unexpected water resource impacts to chemical spills. Training will also cover proper storage, removal, maintenance, documentation, and clean up for construction debris and materials.

11:45-12:45 Lunch (provided)

12:45-1:45 Section 2-4 BMP's from A to Z (Brock White)

Dan Larsen, from Brock White, will present on the current state of erosion and sediment control products that are available on the market today.

1:45-2:00 15 Minute Discussion

2:00-2:45 Section 2-5 Communication, Coordination, and Innovation

This section covers how to effectively communicate with individuals involved with the project and how to effectively develop channels to ensure proper site management. Training will also cover innovative ways to manage erosion and sediment control proactively to reduce pollution, ensure permit compliance, and develop better projects.

2:45-3:45 Examination

Final examination for certification will begin promptly at 2:45. One hour will be allowed for the final examination. Exams will be graded with a discussion of each question.

3:45-4:30 Q & A/End of Training Session

OUR INSTRUCTORS

Dan Larsen, Geotextile Products Market Manager

Dan is an expert in the field of Geosynthetics, Geotextiles, hydraulically applied soil stabilizers, and sediment control products. His experience extends over 15 years as a product and sales representative with territories ranging from the upper Midwest to British Columbia, Canada. Dan's extensive territory and experiences have given him many challenges to overcome over the years. This experience provides him knowledge of many different products and solutions for any situation, as all sites have their own challenges.

Erick Francis, Erosion Control Specialist

Erick, who has nine years of experience, is a skilled and experienced engineering specialist with an emphasis in erosion and sediment control, NPDES permitting, storm water pollution prevention design, implementation, inspection, and enforcement. In addition, Erick has developed erosion control policies and practices for project and city specifications and design manuals. He has also written several erosion control ordinances.

Travis Fristed, Water Resource Biologist

Travis Fristed has six years of combined experience in environmental regulation, planning, field, and research biology. His experience includes NPDES (MS4, industrial, and construction) SWPPP design and permitting; water resource permitting and assessment (wetland comprehensive planning, delineations, LGU administration, Clean Water Act and DNR permitting); local ordinance development and administration; water quality research through chemical analysis; dredge materials management; environmental review (EAW/AUAR development); and the Index of Biological Integrity research with the MPCA.

Jeff Michniewicz, Senior Engineering Specialist

Jeff Michniewicz has 20 years of experience in the civil/structural engineering fields. Jeff has been the Project Supervisor/Inspector on State and State Aid Projects, ranging from \$55 million inner city interchanges, to \$14 million dollar highway interchanges, to smaller county bridge and roadway projects. Jeff's duties include oversight on all phases of the construction operations, including erosion and sediment control inspection.

Jeff Peters, CPESC, CESWII

Jeff is an environmental compliance specialist. With more than 10 years of experience, he specializes in issues surrounding the NPDES requirements, Storm Water Pollution Prevention Plans (SWPPP), and erosion and sediment control plans. He is also experienced in performing on-site inspections for review of erosion and sediment Best Management Practices (BMPs).



Minnesota
Pollution
Control
Agency

Construction Stormwater Permit

Training Requirements

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Since March of 2003, the federal Phase II National Pollution Discharge Elimination System (NPDES) stormwater regulations have required all construction projects disturbing one or more acres of land to obtain an NPDES/SDS General Stormwater Permit for Construction Activity (Permit). The Permit has many requirements regarding Best Management Practices (BMPs) for erosion prevention and sediment control in addition to requirements for permanent, post-construction stormwater-treatment systems.

Through construction site inspections the Minnesota Pollution Control Agency (MPCA) has documented that the rate of compliance with the Permit is low. As identified in a report by the Minnesota Stormwater Steering Committee, a prevalent cause of noncompliance with the permit is a lack of education among owners, developers, contractors, inspectors, designers, installers, construction supervisors, and other key construction site personnel. For this reason, the NPDES/SDS Construction Stormwater General Permit issued by the MPCA, in August 1, 2008, contains new training requirements.

Who must be trained

Under the new Permit, permittees have until February 1, 2010, to meet the new training requirements including projects covered under the previous permit. This should give most permittees time to find appropriate training. Projects covered under the previous construction-stormwater general permit are also expected to update

their stormwater pollution prevention plans (SWPPP) to comply with the new permit regulations by February 1, 2010.

The owner of the project must ensure that training has been received by individuals who are:

- Preparing the SWPPP (typically the project engineer or consultant)
- Overseeing implementation of, revising, and amending the SWPPP and performing inspections as required in Part IV.E. (this may be the prime contractor, site manager or foreman)
- Performing or supervising the installation, maintenance and repair of erosion and sediment control Best Management Practices (crew supervisor or laborer).

Length of training

There are construction projects, particularly smaller projects, in which some of the permit requirements do not apply. Training for individuals working on these types of projects may not need to be as extensive as others. However, for typical projects the minimum amount of training should be as follows:

Category 1: (SWPPP designer) 12-14 hours

Category 2: (site manager) 12-14 hours

Category 3: (BMP installer) 5-8 hours

Training Content

The content and extent of training must be commensurate with an individual's job responsibilities with regard to activities covered under the permit for the project. For example if an individual's only job is to supervise the installation of silt fence, then the training may be limited to that one particular activity. However, for most individuals identified in the permit the training must be more comprehensive.

A project may have many individuals with varying levels of responsibility; however, most should fit within one of the three groups listed above. If an individual's job responsibility is identified under one of the categories listed below, the training must include information regarding that specific duty. For certain projects, there may be other duties related to stormwater management that are not identified on the listed categories and the training must include those subjects. Note: it is required by the Permit that at least one individual responsible for implementing and revising the SWPPP must be available for an on site inspection within 72 hours.

Because each state issues an NPDES construction stormwater permit, specific requirements may vary, even if all have similar goals regarding proper stormwater management during construction. Training does not need to be specific to the Minnesota permit, however all personnel that are required to have training are expected to know the specific permit requirements for the State of Minnesota. Therefore, it is important to read and understand the permit and related guidance found on the MPCA's Construction Stormwater Web page: www.pca.state.mn.us/water/stormwater/stormwater-c.html

SWPPP designer training requirements

Training content must include the following as it applies to an individual's job duties under the permit. Training for individuals preparing the SWPPP must include the following topics:

- understanding the environmental impacts of construction activity
- general NPDES permit requirements including erosion prevention and sediment control
- dewatering requirements
- understanding that local stormwater requirements may differ from the state requirements

- inspections and maintenance requirements and timeframes
- good housekeeping, how to handle trash, waste, and chemicals
- liability and consequences of enforcement
- use of contracts for delegating SWPPP responsibility
- recordkeeping (inspections, BMP maintenance, SWPPP amendments)
- understanding that in some states the requirements may be different when discharging to certain waters
- SWPPP flexibility and knowing when amendments are required
- SWPPP phasing
- legible plans, better formats, readable by contractors
- specification writing
- narrative writing
- detailed work materials list – estimated preliminary quantities tabulation
- low impact development (LID) innovations and new products
- permanent stormwater management requirements
- TMDL and Special Waters requirements
- concrete washout facilities
- permit application, permit transfers and the notice of termination

The Construction Stormwater General Permit issued in Minnesota has one unique aspect that differs from most other states: Part III.C of the Permit requires post-construction stormwater-management systems to be constructed if the project is creating one or more acres of new impervious surfaces.

Whether the designer chooses to provide a wet sedimentation basin, infiltration basin or trench, rain gardens, filtration system, etc. the permit has very specific design and sizing requirements for each. These systems are usually designed by a licensed Professional Engineer (P.E.) however, this is not required by the permit. In most cases a P.E. certification will still be needed in order to obtain a building permit or to fulfill other local requirements.

A well-designed functional stormwater treatment system contains design elements beyond the permit requirements. For example, for an infiltration basin (or rain garden) the permit specifies sizing requirements and some performance criteria but gives little information on

how that can be accomplished successfully. Soil types must be checked, pre-treatment must be designed properly, construction techniques must be described in detail, and vegetation established at the end of infiltration basin construction. A trained individual must have enough engineering knowledge to understand the specific hydraulic design requirements set forth in the permit in addition to training that covers the additional specifics involved in a good design. Both of these elements are laid out in detail in the Minnesota Stormwater Manual:

www.pca.state.mn.us/water/stormwater/stormwater-manual.html

Training must include detailed design examples similar to the examples found in the manual.

Site manager training requirements

Training for contractors overseeing implementation of, revising, and amending the SWPPP and performing inspections must include the following topics:

- understanding the environmental impacts of construction activity
- general NPDES permit requirements including erosion prevention and sediment control
- dewatering requirements
- inspections and maintenance requirements and timeframes
- good housekeeping, how to handle trash, waste, and chemicals
- liability and consequences of enforcement
- contracts
- recordkeeping (inspections, BMP maintenance, SWPPP amendments)
- understanding that there is more than one solution to a problem, promote innovation
- reading plans and specifications
- risk management - taking initiative before bad things happen
- communication between site staff and subcontractors, dissemination of knowledge
- emergency response – weekends, storms, freezes, notification, reclamation of sediment plumes
- requirements regarding concrete washout facilities
- permit application process, permit transfers and the notice of termination

- local availability of specific erosion and sediment control BMPs

- BMPs
 - installation
 - maintenance (to repair, replace or if necessary upgrade to better BMP)
 - are they installed in correct location
 - parking/access

Training should include many examples, group participation and discussions. Field demonstrations may also be appropriate. Individuals who are considered trained must also be knowledgeable about requirements specific to the State of Minnesota.

Training for individuals performing or supervising the installation, maintenance and repair of BMPs must include the following topics.

BMP installer training requirements

The third category of individuals who are required to be trained are those who are physically installing the BMPs or supervising that activity. The type of training for this group may be highly specialized for a particular task or more encompassing for an individual who operates a full service erosion and control business. Some of the typical BMPs that require installation by a trained individual include:

- silt fence
- dewatering
- mulch
- erosion control blankets
- ditch checks
- compost logs
- inlet protection
- hydro seeding or liquid soil stabilizers
- flocculants

The list of BMPs being used today for erosion-prevention and sediment control is extensive and growing. Construction site owners must ensure that individuals installing BMPs (to fulfill a requirement within the permit) be properly trained or supervised by a properly trained individual.

Recommended training for construction-site owners and others

Training is also recommended for owners of construction projects and for sub-contractors that have the potential to inadvertently cause or contribute to violation of the permit. This training is not required by the permit; it can, however, can be extremely beneficial to site owners.

A site owner should be aware of the basic requirements within the permit and understand that enforcement actions can result if a site is found out of compliance. Owners should understand the potential for environmental harm that exists during a typical construction project. Other topics owners should be aware of include:

- application procedure
- how to transfer a Permit if a portion of a project is sold
- liability and consequences of enforcement
- notice of Permit termination requirements
- SWPPP basics
- erosion prevention and sediment control basics
- dewatering requirements
- good housekeeping, how to properly handle trash, waste and chemicals
- local requirements
- role of post-construction stormwater treatment systems and potential value of LID or conservation design methods
- costs and bidding concepts
- contracts
- inspection and maintenance requirements

There are also subcontractors that should be aware of certain Permit requirements. Owners are advised to inform anyone on site about the presence of erosion and sediment control BMP's. For example, an operator delivering building supplies should know what a silt fence is and understand that it is a Permit violation to damage the fence and not repair or replace it. Another example: owners are required to provide a leak proof system to be used for concrete washout and concrete truck operators should understand that a site has such a facility and concrete washout activities can only occur using the washout system.

Where training is available

The MPCA has partnered with the University of Minnesota for the past five years to provide various certification courses for individuals working within the stormwater program. These certification courses are also sponsored by the Minnesota Department of Transportation (MnDOT) and are required for those individuals working on MnDOT projects.

There are currently three different classes targeted at the three different categories of individuals required to obtain the training outlined in the permit. When selecting a class be sure to select the class that best fits your role. For example SWPPP designers should enroll in the SWPPP design course while a site foreman in charge of the day-to-day activities in the field should take the site-management course. In order to remain certified for work on MnDOT projects, the course must be repeated every three years.

There is, however, no expiration period associated with the training requirements in the permit. It is highly recommended that ongoing education is repeated at least once every three years as the stormwater management industry is rapidly changing. The classes generally run in the fall and winter. More information and a class schedule can be found at: www.erosion.umn.edu

Other training opportunities exist and there are qualified individuals offering training. If you have received training in another state, it may satisfy the training requirements if the course curriculum was adequate and the individual has familiarized themselves with the specific requirements in the permit.

When selecting training courses or reviewing your past training, be sure to review the course content and verify that it meets all of your SWPPP-related duties.

Training should be provided by instructors with some background in education methods. Individuals that are widely accepted as experts in erosion control or SWPPP design, and who have provided training in the past, are considered trained for the purposes of this construction permit. These individuals usually have ten or more years of experience in the field.

Other entities that may offer training opportunities include:

- University of Minnesota
- Minnesota Erosion Control Association
- Private industries

- Other local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control or permanent stormwater management.

Nationally recognized certifications

There are other nationally recognized certification programs regarding construction stormwater. These certifications include Certified Professional in Erosion Sediment Control (CPESC), Certified Professional in Storm Water Quality (CPSWQ) and Certified Erosion Sediment and Storm Water Inspector (CESSWI).

These certifications may fulfill the training requirements if the individual is knowledgeable about the stormwater requirements that are specific to the State of Minnesota and the content of the certification covers all of the individual's responsibilities regarding the permit. For example, an individual that holds a CPESC certification may be considered trained as a site manager but would not be considered a trained SWPPP designer if the SWPPP was required to have stormwater treatment systems constructed such as rain gardens or detention basins as the CPESC course does not cover those topics.

Likewise, a professional engineer is not considered trained to design an entire SWPPP as the typical engineering curriculum does not cover any erosion prevention or sediment control techniques. However a professional engineer would be considered trained to design the permanent stormwater treatment system as the sizing and hydrology principals are a part of the engineering curriculum if the individual is knowledgeable about the stormwater requirements that are specific to the State of Minnesota.

Documentation of training

The permit requires that documentation of the individuals working on a project be documented in the SWPPP or made available with 72 hours upon request by the MPCA. Documentation must include:

- names of the personnel associated with this project that are required to be trained
 - dates of training and names of instructor(s) and entity that provided training
- content of training course or workshop (including the number of hours of training)

More information

If you have questions, call the MPCA Stormwater Hotline at 651-757-2119 or 800-657-3804.