

Training requirements for the Construction Stormwater Permit

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/State Disposal System (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.

The NPDES/SDS Construction Stormwater (CSW) General Permit requires training for personnel implementing permit requirements on construction sites. A refresher-training course must be attended every three (3) years.

Who must be trained?

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

- Individuals preparing the SWPPP (typically the project engineer or consultant). Stormwater Pollution Prevention Plans (SWPPPs) must be developed prior to construction. The SWPPP describes the measures to be implemented during construction in order to comply with the permit.
- Overseeing implementation of, revising and/or amending the SWPPP and performing inspections as required in Section 11. (This may be the general contractor, site manager or foreman).
- Performing or supervising the installation, maintenance and repair of erosion and sediment control BMPs (crew supervisor or laborer).

Length of training

The minimum amount of training to perform these job duties for the majority of projects should be as follows:

Category 1: (SWPPP designer) 12-14 hours

Category 2: (site manager) 10-12 hours

Category 3: (BMP installer) 5-8 hours

Training content

The content and extent of training must be commensurate with an individual's job duties and responsibilities with regard to activities covered under the permit for the project. For example, if an individual's only job is to conduct dewatering activities at sites, 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.

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 webpage: <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>.

Stormwater Pollution Prevention Plan 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 Stormwater Pollution Prevention Plan (SWPPP) must include the following topics:

- Understanding the environmental impacts of construction activity
- General NPDES permit requirements including erosion prevention and sediment control BMPs
- Dewatering requirements
- Chemical treatments and their requirements
- Recordkeeping requirements (inspections, BMP maintenance, SWPPP amendments)
- Pollution prevention measures regarding storage and handling of construction products, materials and wastes; including solid wastes, hazardous wastes, sanitary wastes, petroleum products, herbicides and fertilizers, wash water from concrete pouring or equipment washing
- Estimated preliminary material quantities tabulation
- Fueling planning and spill prevention and response procedures use of contracts for delegating SWPPP responsibility
- Understanding that in some states the requirements may be different when discharging to certain waters
- Construction phasing
- Readable and effective plans
- Specification writing
- Narrative writing
- Understanding that local stormwater requirements may differ from state requirements
- Low impact development (LID) innovations and new products
- Permanent stormwater management requirements
- Total Maximum Daily Load (TMDL) and Special Waters requirements
- Concrete washout facilities
- Procedures for permit application, permit transfers and the notice of termination
- Understanding Minnesota requirements for discharging to certain waters

The Construction Stormwater General Permit requires post-construction stormwater-management systems to retain one inch of water volume from the net increase of impervious surfaces created by the project, if the project is creating one or more acres of new impervious surfaces.

Whether the designer chooses to provide an infiltration basin or trench, rain gardens, filtration system, other volume reduction methods, 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. A SWPPP designer must have enough engineering knowledge to understand the specific hydraulic design requirements set forth in the permit in addition to training that covers other specifics involved in a good design. Training must include the kind of detail design information and examples found in The Minnesota Stormwater Manual.

Minnesota Stormwater Manual: www.pca.state.mn.us/water/stormwater/stormwater-manual.html.

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 BMPs)
- 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.

Best management practice 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 sediment 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

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, 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
- Potential value of LID or conservation design methods
- Costs and bidding concepts
- Contracts
- Temporary BMP 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 BMPs. 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 training must be obtained from local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control, or permanent stormwater management. It is required by the Permit that at least one trained individual responsible for implementing and revising the SWPPP must be present on the site or available for an onsite inspection within 72 hours. The Minnesota Pollution Control Agency (MPCA) has partnered with the University of Minnesota to provide 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.

These include Installer, Site Management and Design of Stormwater Pollution Prevention Plans (SWPPP). 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. The Permit also requires individuals to attend a refresher-training course at least once every three years. The classes generally run through the fall, winter and early spring. 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 commensurate with the individual's job duties and responsibilities with regard to activities covered under the permit and the individual has familiarized themselves with the specific requirements in the Minnesota NPDES/SDS 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. Regardless of the source of the training, a refresher course must be taken every three years and documentation of the training must be available and provided upon request of the MPCA or owner of the project.

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:

- The University of Minnesota
- The 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
- The Minnesota Utility Contractors Association offers trade specific training. Information on training opportunities can be found at: www.muca.org.

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 and Certified Erosion Sediment and Storm Water Inspector.

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 would not be considered trained to design an entire SWPPP if their engineering curriculum did not cover any erosion prevention or sediment control techniques. However, a P.E. would be considered trained to design the permanent stormwater treatment system as the sizing and hydrology principals are a part of the engineering curriculum. The individual must also be knowledgeable about the stormwater requirements that are specific to the state of Minnesota.

Documentation of training

The permit requires documentation of the individuals trained in the SWPPP. 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 (including the number of hours of training)

More information

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