



Construction Stormwater Permit

Training requirements

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) documented that the rate of compliance with the Permit was low. As identified in a report by the Minnesota Stormwater Steering Committee, a prevalent cause of noncompliance with the permit was 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, contained new training requirements.

Who must be trained?

Under the August 1, 2008, permit, permittees had until February 1, 2010, to meet the new training requirements including for projects still covered under the previous August 1, 2003, permit. Projects covered under the previous construction-stormwater general permit were 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 BMPs (crew supervisor or laborer)

Length of training

Training may not need to be as extensive for individuals working on projects where only a limited number of functions are performed. For example, if a permanent stormwater management system is not a required for the site; the SWPPP designer may require less training to prepare a SWPPP. However, 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 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
- 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
- Total Maximum Daily Load (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 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 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 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 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 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:

- 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

Training is also available at the Minnesota Laborers Training Center; training schedules can be found at: www.ltcmn.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 (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 P.E. 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 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, 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 within 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 Program at 651-757-2119 or 800-657-3804.