

Unit Twelve

MICHIGAN'S STORM WATER PROGRAM FOR CONSTRUCTION SITES

INTRODUCTION

In 1990, the federal government published rules that required storm water discharge permits for various industrial activities. Construction activities that disturb five or more acres of land were included in those rules. As a result of the federal storm water regulations, the State of Michigan began issuing permit coverage for construction activities in 1992. Permit coverage is obtained through a "Permit-By-Rule" process and is tied to the statewide Soil Erosion and Sedimentation Control (SESC) Program.

In addition, state law requires the permitted discharges be under the supervision of an operator who has been certified as properly qualified to operate soil erosion and sedimentation control measures and stormwater controls. A person can become a Certified Storm Water Operator (Certified Operator) by participating in the Michigan Department of Environmental Quality's (MDEQ), Certified Operator Training Program. To complete the program and receive certification, potential Certified Operators must pass an exam given by the Storm Water Program staff monthly at MDEQ District Offices.

Storm water runoff is a part of the natural hydrologic process. Under natural conditions, the majority of precipitation that falls to the ground either infiltrates or evaporates. Construction activities can disrupt this natural process causing increased volumes of water (runoff) to flow into our lakes, rivers, streams, and wetlands. This excess water can carry sediments or other pollutants into these surface waters.

There are many water quality concerns associated with storm water runoff. Soils and sediments, oils and greases, and fertilizers are a few of the more common concerns associated with construction activities. By far, the most prominent are the problems of soil erosion and sedimentation. Soil erosion is the process by which the surface of the land is worn away by the action of wind, water, ice, or gravity. This wearing of the land causes soil particles to become dislodged and put into motion. Although this is a natural process, it is often accelerated by human activities, especially during the construction process.

Where erosion has occurred, sedimentation is sure to follow. Sedimentation is the process by which dislodged soil particles are deposited elsewhere on the land, or in lakes, rivers, streams, and wetlands.

RULES AND REGULATIONS

Federal Clean Water Act

The Federal Clean Water Act prohibits the discharge of any pollutant to navigable waters from a point source unless a National Pollutant Discharge Elimination System (NPDES) permit authorizes the discharge. Furthermore, the 1987 Amendments to the Act recognized that storm water runoff was a significant source of water pollution. Thus, in the 1987 Amendments, Congress directed the United States Environmental Protection Agency (EPA) to develop regulations requiring permit applications for storm water discharges.

Federal Storm Water Regulations

In response to the 1987 Federal Clean Water Act Amendments, the EPA published its final rules to the NPDES permit programs governing storm water discharges. The rules require storm water discharge permits for a large number of industrial activities. Construction activities are included among those requiring permit coverage.

Natural Resources & Environmental Protection Act

In 1994, the State of Michigan compiled all of its' environmental laws into the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451).

Part 31, Water Resource Protection, of Act 451 (Part 31)

The primary goal of Part 31 is to protect and conserve the water resources of the state. This includes the prohibition of pollution of the waters of the state and any obstruction or occupation of floodways. In response to the federal storm water regulations, the State of Michigan developed administrative rules (Permit-By-Rule) to permit discharges from construction activities.

Permit-By-Rule

The MDEQ is the agency responsible for implementing the storm water program in Michigan, including the Permit-By-Rule. The Permit-By-Rule is the method by which construction activities are permitted. It makes full use of Part 91, SESC, of Act 451 and avoids a double permitting situation. Permit-By-Rule coverage is required for construction activities that have a point source discharge of storm water to waters of the state and disturb one or more acres of land.

A point source discharge is a discharge to the waters of the state by a specific confined conveyance. This may include a pipe, ditch, channel, container, county drain, etc. Under Permit-By-Rule, the "construction permittee" must be the landowner or recorded easement holder of the property where the construction activity is located, or the Authorized Public Agency if the construction activity is carried out by an Authorized Public Agency.

For sites that disturb one acre or more but less than five acres the construction permittee has storm water coverage once they have received a Part 91 permit. They are not required to complete an NOC form or pay a storm water fee but are required to

follow the terms and conditions of the Permit-By-Rule. The construction permittee is liable for any discharge of sediment.

For sites that disturb five or more acres coverage begins immediately once the construction permittee:

- Obtains a Part 91 SESC permit, or be a Part 91 designated Authorized Public Agency (APA), and
- Files a complete Notice of Coverage (NOC) form (Appendix 12A) along with the
- appropriate fee, copy of the SESC permit, and a location map with the MDEQ.

Remember, pursuant to Permit-By-Rule, the required information must be filed with the MDEQ before initiation of construction activities.

By submitting the NOC form and gaining permit coverage, the construction permittee shall comply with the following terms and conditions established in the Permit-By-Rule.

A construction permittee shall:

1. Not directly or indirectly discharge any substance into the waters of the state in violation of Part 31, specifically Section 3109, which includes substances that are or may become injurious to any of the following:
 - (a) To the public health, safety, or welfare.
 - (b) To domestic, commercial, industrial, agricultural, recreational, or other uses that are being made or may be made of such waters.
 - (c) To the value or utility of riparian lands.
 - (d) To livestock, wild animals, birds, fish, aquatic life, or plants or to the growth, propagation, or the growth or propagation thereof be prevented or injuriously affected; or whereby the value of fish and game is or may be destroyed or impaired.
2. Be in compliance with the SESC permit for the site or, if the construction activity is being carried out by an APA, the approved SESC procedure, including the selected control measures that are applicable to the site.
3. Properly maintain and operate the SESC measures.
4. Have the SESC measures under the specific supervision and control of a Certified Operator.
5. Cause the construction activity to be inspected by a Certified Operator once per week and within 24 hours after every precipitation event that results in a discharge from the site and ensure that any needed corrective actions are carried out. A log of the inspections and corrective actions shall be maintained on file by the construction permittee for review and shall be retained by the construction permittee for a period of three years from the date of the inspection or corrective action.
6. Be in accordance with the requirements for on-land facilities as set forth in spillage of oil and pollution materials. The construction permittee shall provide facilities and

comply with reporting procedures for containment of any accidental losses of oil or other polluting materials.

7. Dispose of solids, sediment, filter backwash, or other waste that is removed from or results from the treatment or control of storm water in compliance with applicable state laws and regulations and in a manner that prevents any waste from entering waters of the state.
8. Allow the MDEQ or an authorized representative to enter upon the site at any reasonable time before the expiration of the authorization to discharge, upon presentation of credentials and other documents as may be required by law, for the purpose of inspecting conditions relating to the pollution of any waters or determining compliance with the provisions of this rule.
9. Upon request, make available for public inspection or provide to the MDEQ all reports or logs prepared pursuant to the provisions of this rule.
10. File a revised NOC form before any expansion of the construction activity or change in the SESC measures that require a change in the SESC permit.

It is very important to note that the requirements of Permit-By-Rule are the responsibility of the construction permittee. However, the construction permittee relies on the Certified Operator to keep them in compliance with the permit. Any non-compliance with the terms and conditions of Permit-By-Rule is a violation of Part 31 and is subject to the fines and penalties of up to **\$25,000 per day of violation** (Section 3115).

Certified Storm Water Operator

All construction activities covered under Permit-By-Rule must be inspected by a Certified Operator. It is recommended that the Certified Operator be familiar with the construction activities occurring on the site.

Site Inspections

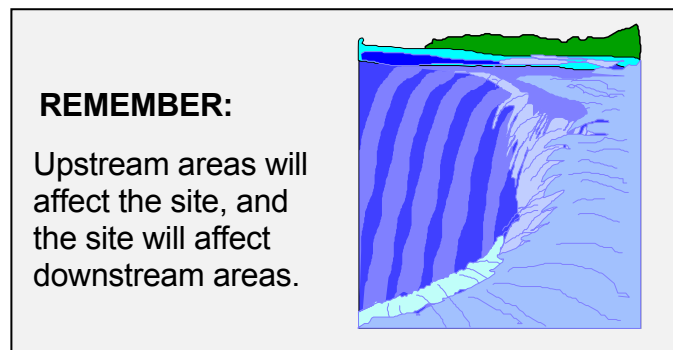
The Certified Operator is required to inspect the construction activities once each week and within 24 hours after every precipitation event that results in a discharge from the site and ensure that any needed corrective actions are carried out. These inspections are conducted to insure that SESC measures are adequate for the site and are operating properly. Thus, when conducting the site inspections, the entire site must be inspected, not just the prescribed SESC measures. If erosion problems are occurring at other locations, the construction permittee needs to be made aware of this. The construction permittee is dependent on the Certified Operator to keep them informed.

An important part of a Certified Operator's responsibility is to recognize the SESC measures on a site and/or SESC plan. The SESC plan should contain the description, location, staging and scheduling of all temporary and permanent SESC measures to be used through the duration of the project.

In addition, complete plans should contain information regarding soil types, soil textures, elevation, the location of surface waters (including wetlands), the location of vegetative buffers, any other resources in need of protection (such as endangered plants or trees and other vegetation that will be preserved), the approximate slopes after grading, areas of soil disturbance, and the direction of drainage patterns.

Becoming familiar with the plans for the sites to be inspected will make the Certified Operator's job easier. The plans will indicate what to look for and where the SESC measures should be located. These areas are a good place to start; however, the entire site needs to be inspected.

It is important to consider the entire watershed when assessing SESC measures for a site. The SESC measures prescribed for a site may be adequate for handling the site's storm water; however, the land upgradient from the site may be delivering additional storm water. This additional runoff may overwhelm the SESC measures unless it is considered during the project design phase.



Record Keeping

The Certified Operator must keep a written log of all inspections. (A blank inspection log form is provided on page 12-11) The logs must contain information regarding the conditions of the SESC measures and any corrective actions that need to be taken. The logs must be kept on the construction site at all times and must be available for public inspection. The log shall be maintained on file by the construction permittee for a minimum of three years.

It is recommended that the Certified Operator use a sketch or a reduced photocopy of the site plan showing the location and type of soil erosion control measures in conjunction with the inspection log. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the form. Include additional narrative as necessary.

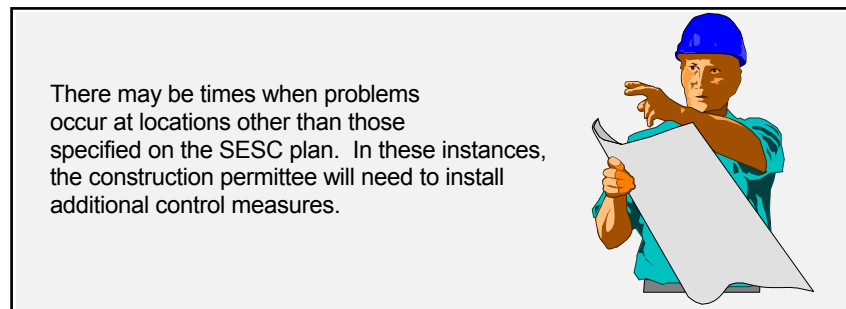
The "Observations Section" in an inspection log should include as much detail as possible about the control measures, even if they are working properly. This is important because they could be working one week and fail the next. Also include observations of areas other than where SESC measures are installed. Any problems on the site must be documented. Refer to the site plan or sketch as much as possible to make sure it is clear where the problems are. The more detail the better.

The “Corrective Action Taken/Needed Section” in an inspection log should include anything done to repair or improve the SESC measures. This could include regular maintenance activities, additional measures installed, or emergency situations. (For example: there may have been a SESC measure that was failing during an inspection one week but was repaired the next, the repairs should be noted). This section is also the place to put any suggestions for improvements or corrections to bad soil erosion situations. The MDEQ does not require that Certified Operators make suggestions, but the construction permittee may expect such help.

Reporting

The Certified Operator is responsible for ensuring corrective measures are carried out. This does not mean the Certified Operator must make the corrections. Rather, they must communicate to the construction permittee what corrections need to be made. To insure the site remains in compliance with the permit, the reporting of all problem areas for the entire site is necessary.

This communication is often accomplished through the written inspection logs. These logs may be the only contact between the Certified Operator and the construction permittee. Since the construction permittee is the person responsible for the site, they must be kept well informed. Thus, when conducting site inspections, it is very important to keep detailed records.



The Certified Operator is required to conduct site inspections, keep a written log of the inspections, and insure corrective measures are carried out by communicating with the construction permittee. They are not responsible for designing, installing, or maintaining the soil erosion and sedimentation control measures. It is the responsibility of the construction permittee to keep the site in compliance with the permit. However, the construction permittee will turn to the Certified Operator for help. In addition, there may be instances where the construction permittee may delegate authority to others on site in order to make the project run more efficiently. Thus, the details of each construction permittee/ Certified Operators relationship needs to be worked out by the individuals involved. As the expectations may change from job to job, it is important to discuss them at the onset of each project.

Site Stabilization and Permit Termination

The inspecting, record keeping, and reporting responsibilities of the Certified Operator are required to be conducted until the site is stabilized and the NOC is terminated.

Stabilization

A site is considered stabilized once permanent control structures have been installed, maintenance for permanent controls has been arranged, vegetation has been established, and temporary controls have been removed. Part 91 requires that the permanent soil erosion control measures for all disturbed areas are completed within 5 calendar days after final grading or the final earth change has been completed.

Permit Termination

Once the site has been stabilized, the Permit-By-Rule coverage can be terminated. To terminate the NOC, the construction permittee must first have the SESC agency conduct their final site inspection and terminate the Part 91 permit. Upon receiving notification that the Part 91 permit has been terminated, the construction permittee must file a Notice of Termination (NOT) form (Appendix 12B) with the MDEQ. Permit-By-Rule coverage is terminated by the MDEQ upon receipt of the NOT.

It is important to terminate the NOC upon completion of the project. Otherwise, the Certified Operator will still be required to conduct inspections, keep records, and report site conditions once a week and after each rain event. It is even more important not to terminate Permit-By-Rule coverage too soon. If permit coverage is terminated prior to stabilization, any discharge of sediment would be unpermitted and thus a violation of Part 31.

SUMMARY

Construction activities that disturb one or more acres and that have a point source discharge to the waters of the state regulated under the Permit-By-Rule are required to have a Certified Operator.

The roles and responsibilities of the Certified Operator can be broken down into three major items:

1. First, is to inspect the construction activities once each week and within 24 hours of a precipitation event that causes a discharge from the site. These inspections are conducted to insure that SESC measures are operating properly.
2. Second, is to keep a written log of the inspections. The logs must contain information about the conditions of the SESC measures and any corrective actions that need to be taken. The log must be kept on the construction site at all times and must be available for public inspection. The log shall be maintained on file by the construction permittee for three years from the date of construction.
3. Third, is to insure that any needed corrective measures are carried out. This means that the Certified Operator must communicate to the construction permittee when things need to be corrected. The Certified Operator is not necessarily responsible for implementing the corrective measures but he/she must inform the construction permittee about it.

UNIT TWELVE REVIEW

1. The federal government published rules in 1990 that required storm water discharge _____ for various industrial activities, including construction.
2. State law requires that permitted discharges be under the supervision of a _____ operator.
3. If a construction site will have an earth disturbance of _____ or more acres and a _____ source discharge, the owner must apply for coverage under the Permit-By-Rule.
4. Under Permit-By-Rule, the construction permittee must be the _____ or the recorded easement holder.
5. To receive coverage under Permit-By-Rule, the construction permittee must obtain coverage under _____ and send in the Notice of Coverage form.
6. The construction activity should be inspected once per _____ and within _____ hours after a rain event that causes a discharge from the site.
7. The Certified Operator must keep an inspection _____ of all inspections performed on site.
8. The written inspection logs must be kept on site during construction, made available for _____ inspection, and retained on file by the construction permittee for a minimum of _____ years.
9. Under Part 31 of Act 451, the maximum penalty per day per violation of the storm water Permit-By-Rule is _____.
10. When conducting inspections the _____ site should be inspected, not just the SESC measures.
11. A good understanding of storm water runoff is essential to consider when selecting _____ measures.
12. The surrounding _____ should be considered when assessing SESC measures because, though they may be adequate for that particular site, they might not be adequate for storm water from up gradient land.
13. The job of a Certified Operator at a construction site is to _____ and _____ back to the construction permittee (landowner) the SESC measures needing maintenance or repair.
14. The _____ of the SESC measures in need of maintenance must be recorded in the Certified Operator's site log at a construction site.
15. The written inspection logs must contain information regarding the condition of _____ measures and any _____ actions taken or needed.

ANSWERS TO UNIT TWELVE REVIEW

1. The federal government published rules in 1990 that required storm water discharge **permits** for various industrial activities, including construction.
2. State law requires that permitted discharges be under the supervision of a **Certified Operator**.
3. If a construction site will have an earth disturbance of **five** or more acres and a **point** source discharge, the owner must apply for coverage under the Permit-By-Rule. (Sites one to five acres receive automatic coverage upon obtaining a Part 91 permit.)
4. Under Permit-By-Rule, the construction permittee must be the **landowner** or the recorded easement holder.
5. To receive coverage under Permit-By-Rule, the construction permittee must obtain coverage under **Part 91** and send in the Notice of Coverage form.
6. The construction activity should be inspected once per week and within **24** hours after a rain event that causes a discharge from the site.
7. The Certified Operator must keep an inspection **log** of all inspections performed on site.
8. The written inspection logs must be kept on site during construction, made available for **public** inspection, and retained on file by the construction permittee for a minimum of **three** years.
9. Under Part 31 of Act 451, the maximum penalty per day per violation of the storm water Permit-By-Rule is **\$25,000**.
10. When conducting inspections the **entire** site should be inspected, not just the SESC measures.
11. A good understanding of storm water runoff is essential to consider when selecting **SESC** measures.
12. The surrounding **watershed** should be considered when assessing SESC measures because, though they may be adequate for that particular site, they might not be adequate for storm water from up gradient land.
13. The job of a Certified Operator at a construction site is to **inspect** and **report** back to the construction permittee (landowner) the SESC measures needing maintenance or repair.
14. The **location** of the SESC measures in need of maintenance must be recorded in the Certified Operator's site log at a construction site.
15. The written inspection logs must contain information regarding the condition of **SESC** measures and any **corrective** actions taken or needed.

Soil Erosion Inspection Log

Project Name or Description: _____

Page _____ of _____

NPDES Number: _____

Date: _____ Time: _____ Certified Operator: _____ Operator #: _____

Reason for Inspection: _____ Weekly Inspection _____ Inspection After Storm Water Runoff

Observations: _____

Corrective Actions Taken/Needed: _____

Signature: _____ Operator Number: _____

Print Name: _____

REMEMBER TO REFER TO THE SITE PLANS OR SKETCH



NOTICE OF TERMINATION

FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
Storm Water Discharges from Construction Activities
By Authority of R 323.2190 of Act 451, PA 1994, as amended

Filing of this Notice of Termination with the Department of Environmental Quality constitutes notice that the authorization to discharge storm water from the construction site identified below has expired.

| | |
|---|-----------------------------|
| PERMIT INFORMATION | NPDES PERMIT NUMBER: |
| REASON FOR TERMINATION: (check all that apply) list month, day and year for all dates | |
| <input type="checkbox"/> The Soil Erosion and Sediment Control (Act 451, Part 91) permit will expire on: <input type="checkbox"/> The Soil Erosion and Sediment Control (Act 451, Part 91) permit was revoked/terminated on: <input type="checkbox"/> The project was completed by stabilization of the earth change activities on: <input type="checkbox"/> Other: Explain: | |

Print or type in the spaces provided

| CONSTRUCTION PERMITTEE INFORMATION | | |
|---|-------|----------|
| NAME | | |
| MAILING ADDRESS | | |
| STREET | | |
| CITY | STATE | ZIP CODE |
| CONSTRUCTION SITE INFORMATION | | |
| PROJECT NAME | | |
| MAILING ADDRESS | | |
| STREET | | |
| CITY | STATE | ZIP CODE |
| DESCRIPTION | | |
| CERTIFICATION | | |

Michigan state regulations require this form be signed as follows:

Corporation: a principal executive officer of at least the level of vice president, or his designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in this form originates.

Partnership: a general partner.

Sole proprietorship: the proprietor.

Municipal, state, or other public facility: either a principal executive officer, the mayor, village president, city or village manager, or other duly authorized employee.

I certify that all information submitted in this Notice of Termination is, to the best of my knowledge and belief, true, accurate, and complete, and that all storm water discharges associated with construction activities from the site identified above that were authorized by R 323.2190 have been eliminated because of the reason(s) indicated above. I understand, by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activities at this site and that discharging pollutants in storm water associated with construction activities without authorization is unlawful. I also understand that submittal of this Notice of Termination does not release the permittee from liability for any prior violations of R 323.2190.

SIGNATURE OF CONSTRUCTION PERMITTEE OR AUTHORIZED REPRESENTATIVE DATE TELEPHONE #

PRINTED NAME TITLE

MAIL COMPLETED APPLICATION TO: STORM WATER ADMINISTRATION
WATER DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
P O BOX 30438
LANSING, MI 48909-7938

IF YOU HAVE ANY QUESTIONS ABOUT THE PREPARATION OF THIS FORM, CALL 517-241-8993.

EQP 4662 (Rev 10/02)