

Soil Erosion and Sedimentation Control and Construction Stormwater 101

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Overview

1. Introduction to SESC/CSW
 - a) Stormwater Regulations
2. CSW Operator Certification
3. CSW Inspections
 1. Common BMPs
 2. Example CSW Inspection
 3. Stabilization

Introduction to CSW/SESC

1. Stormwater Regulations in Michigan



Stormwater Regulations

1. Part 91, Soil Erosion and Sedimentation Control (SESC)

- a) State of Michigan-mandated program
- b) Protects waters of the state and adjacent properties from soil erosion and off-site sedimentation

Part 91 Requirements

- 1 acre or more in earth change
- Within 500 feet of lake or stream
- Part 91 permits are issued by enforcing agencies

Part 91 - Enforcing Agencies

- County Enforcing Agency (CEA)
 - Required
 - Ordinance or Resolution
- Municipal Enforcing Agency (MEA)
 - Approved by EGLE
 - Ordinance
- Authorized Public Agency (APA)
 - State and local agencies (MDOT, Road Commission, DPW)
 - Self regulating

What do enforcing agencies do?

- CEAs/MEAs
 - SESC Application/Plan
 - SESC permits
 - Inspections
 - Compliance and Enforcement of Part 91
- APAs
 - Self-regulating
 - Inspections
 - Compliance and Enforcement of Part 91

SESC Plan Requirements (Rule 1703)

1. Map (<200 ft=1 inch)
2. Legal description
3. Site location sketch
4. Proximity to lakes and streams
5. Predominant land features
6. Contour intervals or slope description
7. Soils information
8. Physical limits of earth change
9. Drainage and dewatering facilities
10. Timing and sequence of earth change
11. Temporary SESC measures
12. Permanent SESC measures
13. Maintenance Plan

Stormwater Regulations

2. Construction Stormwater (CSW)/Permit-by-Rule

- a) Nationwide program implemented by the State –
Clean Water Act
- b) Protects waters of the state from soil erosion, off-site sedimentation, and other construction materials

CSW/Permit-By-Rule Requirements

- 1 acre or more in earth change
- Point source discharge of stormwater to waters of the state
- Certified Construction Stormwater Operator (CSWO) inspections
 - Weekly and within 24 hours of precipitation event

Obtaining CSW Coverage

- Obtain a SESC permit
- If the site is 1-5 acres in earth disturbance, coverage is automatic under Permit-By-Rule
- If the site is >5 acre, a Notice of Coverage (NOC) is obtained through EGLE
- Retain a certified construction stormwater operator

Notice of Coverage (NOC)

- 5 acres or more in earth change
- NOC issued through EGLE
- Apply for NOC via MiEnviro
 - NOC application, SESC permit, SESC plan, permit fee
- NOC Expiration – 5 years, tied to SESC Permit

Which Regulations Apply?



What if my site is less than 1 acre in earth disturbance and greater than 500 feet from a lake or stream?

- Part 91 regulations and rules to be met
- Check with enforcing agency prior to earth disturbance

What if my site is greater than 1 acre and less than 5 acres in earth disturbance?

- Part 91 permit
- Permit-By-Rule automatic
- Inspections from site certified CSWO and enforcing agency staff

What if my site is greater than 5 acres in earth disturbance?

- Part 91 permit
- Permit-By-Rule automatic
- Notice of Coverage (NOC)
- Inspections from site certified CSWO, enforcing agency staff, and EGLE compliance staff

District Staff



Water Resources Division

Soil Erosion and Sedimentation Control (SESC)
and Construction Stormwater Staff

Main Office

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District Offices

1 Bay City District (BCDO)

2 Cadillac District (CDO)

3 Gaylord District (GDO)

4 Grand Rapids District (GRDO)

5 Jackson District (JDO)

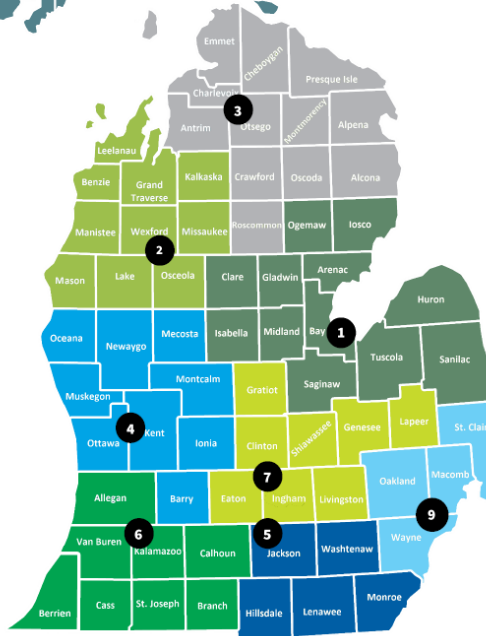
6 Kalamazoo District (KDO)

7 Lansing District (LDO)

8 Marquette District (MDO)

9 Warren District (WDO)

Michigan.gov/SoilErosion



Water Resources Division
SESC and Construction Stormwater Staff

Statewide SESC Program Coordinator: Cheryl Petroski, PetroskiC@Michigan.gov, 586-601-7684

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Counties: Arenac, Bay, Clare, Gladwin,
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Saginaw, Sanilac, Tuscola

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Oscoda, Otsego, Presque Isle, Roscommon

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Ottawa

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Counties: Alger, Chippewa, Delta, Luce,
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Houghton, Iron, Keweenaw, Menominee,
Ontonagon

9 Warren District Office

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Counties: Macomb, Oakland, St. Clair,
Wayne

Questions on Certification Process?

For registration, certification, and exam-specific questions, contact our Operator Certification Staff:

For stormwater certifications:

Marian Maier

MaierM3@michigan.gov

517-582-4848

For renewals:

Sarah Marshall

MarshallS15@michigan.gov

517-388-6679

CSW Inspection Essentials

- Overview of Inspections
- Common BMPs and Proper Installation/Maintenance
- CSW Inspection Scenario
- Site Stabilization

CSW Inspections

- Earth changes 5 acres or greater with a stormwater discharge to surface waters of the state require an NOC
- Earth changes between 1 and 5 acres with a stormwater discharge to surface waters of the state is covered by Permit-By-Rule
- **Both must be...**
- Inspected by a Certified Construction Stormwater Operator (CSWO) at least once per week **AND** within 24 hours of a precipitation event resulting in a stormwater discharge from the site

SOIL EROSION & SEDIMENTATION CONTROL/CONSTRUCTION STORM WATER INSPECTION LOG

Project Name or Description: _____ NPDES Number (if applicable): _____ Page _____ of _____

Date: _____ Time: _____ Reason for Inspection: ☐ Weekly Inspection ☐ Inspection **within 24 hrs. of** Storm Water Runoff

Current extent of the project work: _____

SESC measures installed since the last inspection and their location: _____

Are SESC measures installed according to the SESC Plan? ☐ Y ☐ N Are there other potential areas of concern? ☐ Y ☐ N
If **NO**, identify measures, locations, and actions needed below.

Are the SESC measures: Properly installed? ☐ Y ☐ N Maintained? ☐ Y ☐ N Appropriate for site conditions? ☐ Y ☐ N
Failed? ☐ Y ☐ N
If **NO**, identify measure locations and actions needed below.

Are additional SESC measures recommended? ☐ Y ☐ N Are there other concerns or improvements noted for the site? ☐ Y ☐ N
If **YES**, identify locations and recommendations below.

Corrective Actions Taken/Needed **to repair or improve the prescribed control measures:**

Certified Operator Signature: _____ Operator Number: _____

Print Name: _____

The details included in this report were provided to: _____ Date: _____ By method of delivery: _____

Silt Fence

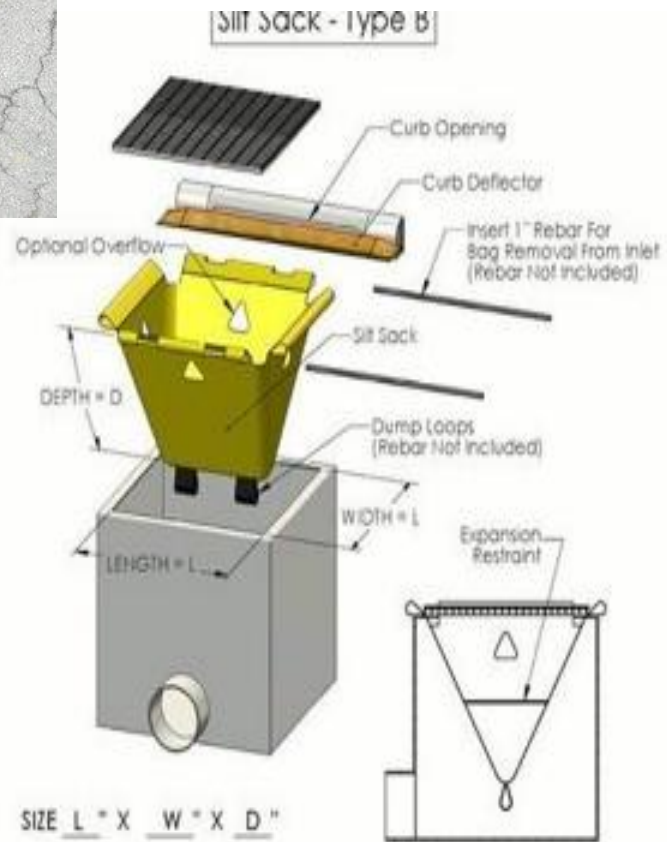


- Trenched in
- Backfilled
- Material is taut
- Staked appropriately
- Ends wrapped around each other
- Not being used in areas of concentrated flow
- Sediment has not accumulated to no more than 50%
- Silt fence has been removed in stabilized areas

Improper Silt Fence Installation/Maintenance



Storm Sewer Inlet Protection



Poor Storm Sewer Inlet Protection Installation/Maintenance



Access Roads

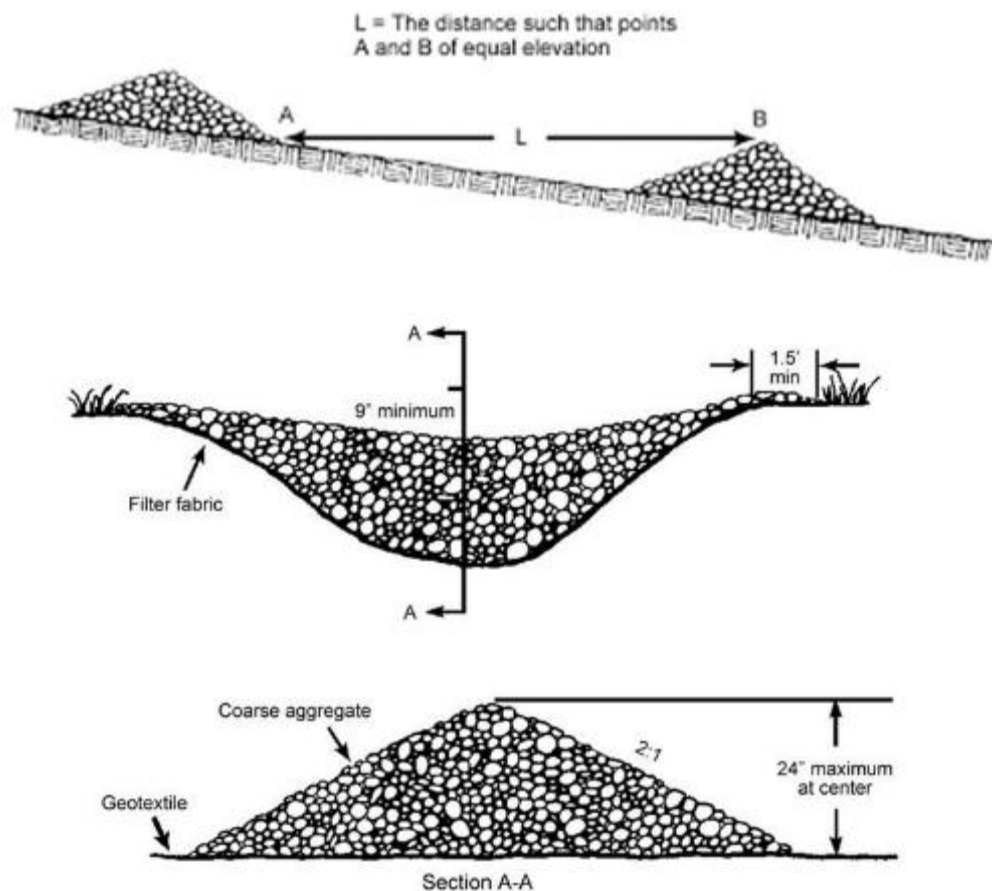


Sweeping of paved roads and removal of sediment is being done to reduce runoff to sewers

Poor Access Road Maintenance



Check Dams



- Check dams are not made out of silt fence
- Each check dam is lower in the middle than the sides
- Each check dam has rock up the side of the bank
- The toe of the upstream/upslope check dam is even with the top of the downstream check dam all the way down the channel



Poor Check Dam Installation/Maintenance



Erosion Control Blankets



- Blankets were rolled out on smoothed surface and pulled tight
- Blankets are trenched in at top of slope and staked
- If more than one blanket is in use, the sides of the blanket overlap according to manufacturer's specifications (or about 4 inches)

Poor Erosion Control Blanket Installation/Maintenance



Sediment Basin



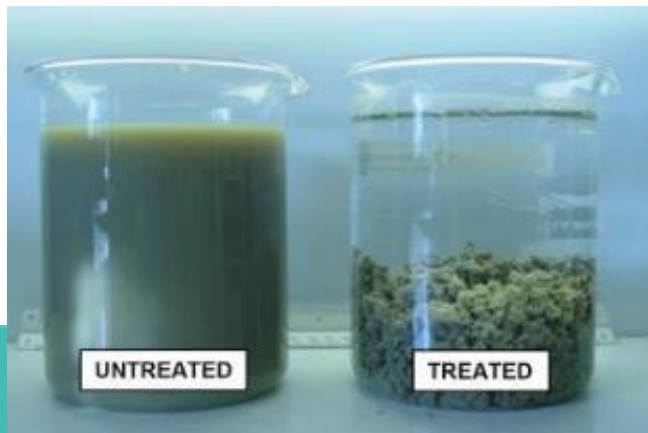
- Sediment basin has accumulated to no more than 50% of design depth
- Riser pipe not "caked" or otherwise clogged
- Outlet stable (non-erosive)



Polyacrylamide (PAMs)

Polymer based material used on fine textured sites in one of the following applications:

- Erosion prevention (land application)
- Storm water treatment (flocculation)
- Some PAM usage require approval through EGLE (Rule 97 certification)



When Is a Site Considered Stabilized?

- “Stabilization means the establishment of vegetation or the proper placement, grading, or covering of the soil to ensure its resistance to soil erosion, sliding, or other earth movement.”
- Temporary SESC measure should still be maintained until permanent SESC measures are established or installed.
- CSW Inspections still need to take place and be logged until the site is permanently stabilized.



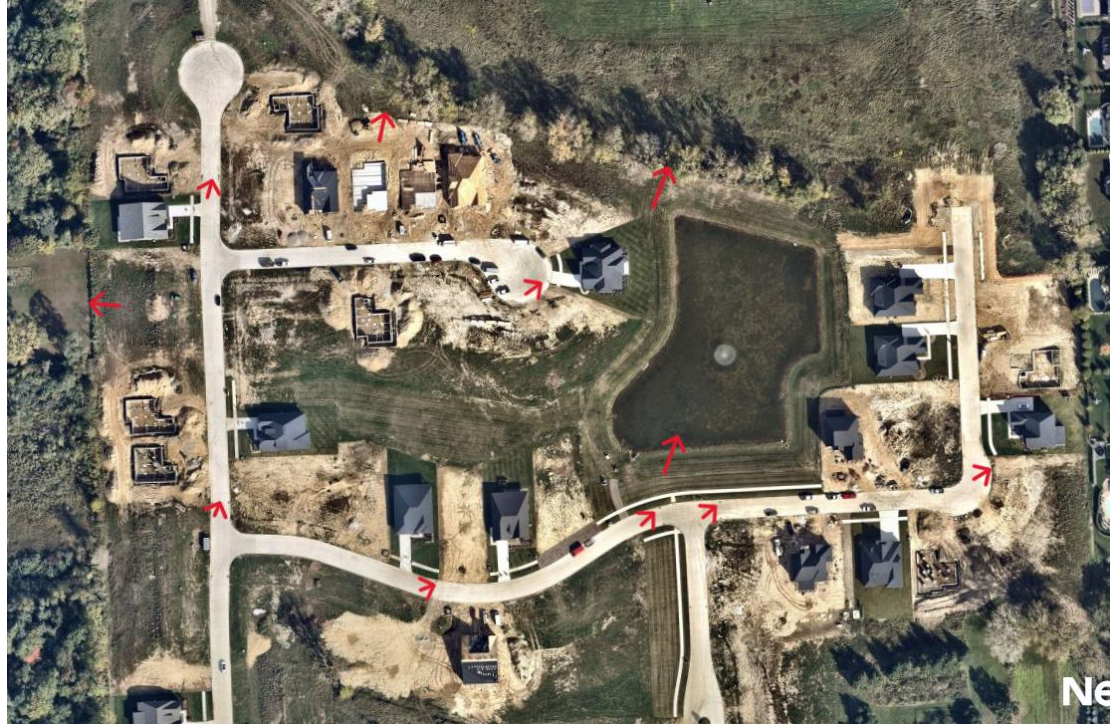


Examples



- 1.5-acre road project
- SESC permit, Permit-By-Rule
- SESC measures
 - Inlet filters, access road, dust control
- Inspections
 - Certified CSWO
 - Enforcing agency

- 32-acre residential development
- SESC permit, Permit-By-Rule, NOC
- SESC measures
 - Silt fence, inlet filters, erosion control blankets, dust control, access road
- Inspections
 - Certified CSWO
 - Enforcing agency
 - EGLE



Questions?

michigan.gov/soilerosion

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