



Roscommon County SESC Program
500 Lake Street
Roscommon, Michigan 48653
Phone: 989-275-8323/ Fax: 989-275-8640
Email: soilerosion@roscommoncounty.net

Roscommon County Soil Erosion and Sedimentation Control (SESC) Program Guide

INCLUDED ATTACHMENTS

***SESC Program information Pages 1-4, Includes Permit Fee Schedule**

***Application:** - Page 1- Project information and Signature
(requires all 3) -Page 2-Construction Schedule
-Page 3- Site Plan form

***Letter of Authorization Form**
(if needed, use of this Roscommon County form is required)

***Silt Fence Detail**

***Erosion Control Information pages 1-2:**
-Why is Erosion and Sedimentation Control Important
-Soil Erosion and Sedimentation Control Measures
-Methods of Acceptable Stabilization of Disturbed Soils

***225 Square Feet Permit Waiver**

***Application For Permit Extension**

TAKING THE TIME TO PROPERLY FILL OUT THE APPLICATION WILL SPEED THE PERMIT APPROVAL PROCESS, THANK YOU



ROSCOMMON COUNTY SOIL EROSION AND SEDIMENTATION CONTROL (SESC) PROGRAM GUIDE

500 Lake Street
Roscommon, Mi. 48653
Phone (989)275-8323 Fax (989)275-8640

THIS PROGRAM GUIDE HAS BEEN PROVIDED TO ASSIST IN THE APPLICATION FOR A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT.

Michigan Law states that any earth change within 500' of any waters of the State or any earth change of one or more acres in size requires a Soil Erosion and Sedimentation Control (SESC) permit.

SESC Program

The *Roscommon County Soil Erosion and Sedimentation Control (SESC) Program* was established under part 91 Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended. The program is regulated by a County Resolution with oversight from the Michigan Department of Environmental Quality. The County Enforcing Agent or CEA is responsible for implementing the program. ***The SESC permit requires that no erosion and resulting sedimentation cross property lines or enter any body of water.***

SESC Permit

Contractors, developers, or landowners are required to submit an application along with a site plan that, among other requirements, illustrates both the temporary and permanent erosion control measures that they will implement during the earth change project to control erosion and resulting sedimentation. The County Enforcing Agent (CEA) reviews the plan, visits the site, and if all criteria are met, issues the permit. The CEA officer has 30 days to review the application and issue the permit. However, the permit is typically issued in 3-10 days depending on completeness of the application. ***The site plan and the construction schedule are part of the information required by Part 91 and must be filled out completely and submitted as part of the application.*** An SESC permit must be extended if a site cannot be stabilized before its permit expires. If a permit is not extended, the coverage will terminate when the permit expires, and all outside work must cease. Permits can be extended for 12 months. ***Part 91 requires the SESC permit to be posted on site and visible from the road until the site is fully stabilized.***

Permit Waiver

A permit waiver (also considered an Affidavit) for an earth change within 500 feet of a lake or stream may be granted after receiving a signed affidavit from the landowner stating that the earth change will disturb less than 225 square feet of earth (***inclusive of all earth disturbance including soil stockpiles, tire ruts, etc.***), and the earth change will not contribute sediment to the waters of the State.

Other activities not requiring an SESC permit

A residential property owner may conduct the following activities on individual residential property owned and occupied by him or her and is not required to obtain a permit under Part 91 if the earth change activities do not result in or contribute to soil erosion or sedimentation of the waters of the State or a discharge of sediment off-site. These activities are:

Farming: plowing or tilling of land for the purpose of crop production or harvesting of crops.

Some logging and Mining operations: *some* logging and mining activities are exempt. Access roads to the logging and mining sites and ancillary activities associated with logging and mining operations are not exempt. The removal of clay, gravel, sand, peat or topsoil is not considered "mining" and therefore requires a permit.

Gardening: all residential gardens, unless the natural elevation is raised. (Raised box gardens where fill dirt would be brought in.)

Stump and Root Removal: if tree and shrub stump removal does not exceed 100 sq. ft.

Post Hole Digging: for fencing, decks, utility posts, mail boxes or similar applications - *if no additional grading is done.*

If Stabilized Within 24 Hrs. Property Owners May:

- Plant trees, shrubs, or other similar plants.
- Seed or reseed lawns of less than 1 acre if the seeded area is at least 100 feet from the waters of the State.
- Temporarily stockpile of soil, sand, or gravel not greater than a total of 10 cubic yards on the property if the stockpiling occurs at least 100 ft. from the waters of the State.
- Seawall maintenance that does not exceed 100 square feet.

Beach nourishment projects: requires a DEQ permit under part 325 of Act No. 451

Normal road and driveway maintenance: such as grading or leveling, that does not increase the width or length of the road or driveway and that will not contribute sediment to lakes or streams.

Any earth change of a minor nature: that is stabilized within 24 hours of the initial earth disturbance and that will not contribute sediment to lakes or streams.

All of these exemptions listed here are not exemptions from enforcement procedures if the activities cause erosion or sedimentation in the waters of the State or onto adjoining properties.

Inspections

The County Enforcing Officer (CEA) visits the site prior to issuing the permit and then re-visits the site periodically and after significant rain events for program compliance along with a final inspection. ***The CEA inspects to, among other things, ensure dirt is not tracking onto the road, the silt fence is installed and functioning properly, and the permit is posted and visible from the road.***

Permit Closeout

The owner or contractor should call this office to ask for a final inspection when they believe that all permanent vegetation is in place and stabilized (90% grass growth, 1 inch tall on every square foot). Rule 1709 states that "disturbed areas must be seeded within five calendar days of achieving final grade or within 30 calendar days of substantial completion of the exterior of the building".

"On Site" Responsible Party

Even though a contractor or other party is listed on the permit as the "on site" responsible person, it is ultimately the property owners' responsibility that the Part 91 rules are followed. The "on site" responsible person should be someone who will be on the project for its duration. If the onsite person changes during the project it is important to notify the CEA with the name and contact information of the new "on site" responsible person. ***It is very important that when a contractor obtains the permit on behalf of the property owner, for the contractor to make the property owner aware of their responsibilities under Part 91.*** This insures that, should the contractor or onsite listed person leave the site before it's fully stabilized and the property owner takes "onsite" responsibilities he or she will be aware of those Part 91 responsibilities to maintain the site until it is fully stabilized.

Violations and Penalties For Not Complying With Permit Conditions or Part 91

If violations of Part 91 or a violation of a permit of an approved soil erosion and sedimentation control plan occurs, depending on the violation, ***the CEA will contact the "on site" responsible person as listed on the permit and give them a specific number of days to correct the problem. If the listed "on site" responsible person on the permit application does not comply, the property owner will be contacted and informed of the violation.*** If the violation is not corrected a letter from the CEA will be sent to the property owner saying that you are not in compliance and you have 5 days to fix the items listed. If they are not corrected, the property owner could be subject to one or all of the following:

- A fine of up to \$25,000 a day.
- Roscommon County may install or maintain the control measures, to bring the site into compliance with Part 91, and bill the landowner for the costs incurred.
- A cease and desist order and/or other legal action to get the site into compliance.
- A person may be ordered to restore all areas affected by the violation.

Projects requiring extra inspections due to the lack of implementation of the approved plans, and maintenance of the SESC controls, may be charged an additional fee of \$50.00 per visit.

Property transfers and the SESC Permit

When a property with an active SESC permit all or in part changes ownership, a "Permit Transfer Notification of Existing Soil Erosion and Sedimentation Control Permit" form needs to be filed with the Roscommon County SESC Program prior to the transfer. The current owner and new owner sign a written agreement transferring the remaining permit obligations, including any current violations, to the new owner. The forms are available from our office.

Is An SESC Permit Required If I Obtained A Permit From The DEQ For A Land/Water Interface Activity

Yes, if the project involves earth work within 500 feet landward of a lake or stream or disturbs one or more acres of land. A common example is a seawall that's permitted through the DEQ still requires an SESC Part 91 permit.

Starting A Earthwork Project Without A SESC Part 91 Permit

Qualifying earth change projects started without a permit are subject to double the permit fees along with other enforcement actions as listed in violations above.



Roscommon County
Soil Erosion and Sedimentation Control (SESC) Program
 500 Lake Street,
 Roscommon, Mi. 48653
 Phone (989)275-8323 Fax (989)275-8640

OFFICE USE ONLY

PERMIT APPLICATION for Part 91 SESC

1. APPLICANT Please check if applicant is () Landowner or () *Designated Agent

Permit Number
Date Issued
Expiration Date
Renewed on

Name			
Address			
City	State	Zip Code	Phone

2. LOCATION

Section	Town	Range	Township	City/Village	County ROSCOMMON
Subdivision	Lot No.	Property Tax ID Number-MANDATORY 072-		Street Address	

3. PROPOSED EARTH CHANGE

Project Type: Residential Land clearing / balancing Industrial
 Multi-family Commercial

Describe Project			Size of Earth Change (acres or square feet)	
Distance To Nearest Lake or Stream	Watercourse Name	Project Start Date	Completion Date	

4. PARTIES RESPONSIBLE FOR EARTH CHANGE

Name of Landowner (if not provided in box #1)		Address		
City	State	Zip	Phone Number	
Name of Individual "On Site" Responsible For Earth Changes, landscaping, silt fence, etc., until site is fully established. If more than one individual, list on separate sheet.			Company Name	
Address	City	State	Zip Code	Phone Number

5. DIRECTIONS TO SITE

6. SOIL EROSION AND SEDIMENTATION CONTROL PLAN (Refer to Rule 323.1703)

Note: One (1) complete set of plans must be submitted for our records	Estimated Cost of Erosion and Sediment Control \$
Site Plan Preparer's Name	Phone Number

7. PERFORMANCE DEPOSIT (if required by the permitting agency)

Amount required \$	Cash <input type="checkbox"/> Certified Check <input type="checkbox"/> Irrevocable Letter of Credit <input type="checkbox"/> Surety Bond <input type="checkbox"/>
Name of Surety Company	
City	State Zip Code Phone

Commercial Use Only

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, applicable local ordinances, and the documents accompanying this application.		
Landowner's Signature	Print Name	Date
Designated Agent's Signature*	Print Name	Date

* Designated agent must have a written statement from landowner authorizing him/her to secure a permit in the landowner's name. **YOU MUST USE THE ROSCOMMON COUNTY AUTHORIZATION FORM**

ROSCOMMON COUNTY SESC PROGRAM
SESC CONTROLS INSTALLATION AND
CONSTRUCTION SCHEDULE. (INCLUDE WITH PERMIT
APPLICATION PER DEQ RULE 1703).



AN SESC MEASURE IS A METHOD USED TO CONTROL EROSION AND RESULTING SEDIMENTATION. THERE ARE TEMPORARY MEASURES DURING EARTH WORK LIKE SILT FENCE AND STONE ENTRANCE DRIVES THAT ARE INSTALLED PROIR TO AND DURING CONSTRUCTION. THEN THERE ARE PERMANENT MEASURES LIKE SEED AND MULCH, LANDSCAPING, MULCH BLANKET, AND SOD INSTALLED AT THE COMPLETION OF THE EARTHWORK.

Install Temporary SESC Measures: LIST BELOW	<u>Enter Date or N/A</u>
a. Perimeter Silt Fence	Date:
b. _____	Date:
Land Cleared/Foundation Excavation Started:	Date:
Rough Grade:	Date:
Construct Structure(s):	Date:
Final Grade:	Date:
Spread Topsoil	Date:
Install Permanent SESC measures: (Sod, Stone, Seed and Mulch, etc.) LIST BELOW	
a. _____	Date:
b. _____	Date:
Remove Temporary SESC measures after site is stabilized (silt fence, etc.)	Date:

Circle One

Re-vegetation of the site is the responsibility of who? OWNER or CONTRACTOR

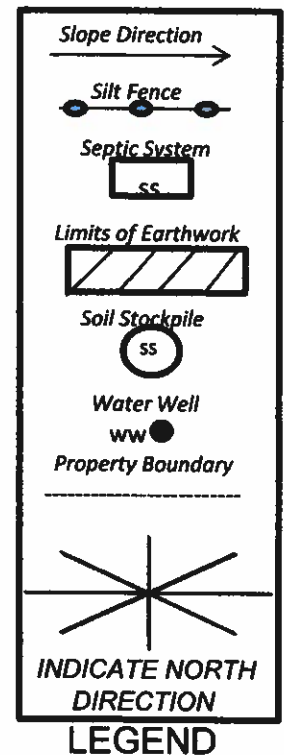
Provide a written description of your proposed maintenance plan for all permanent SESC measures for your project site and who will maintain them until the site is stabilized. A residential project example could be "the owner will water the seed and mulch as needed until it reaches full growth". (Attach separate sheet if nec.)

ROSCOMMON COUNTY SESC SITE PLAN SHEET

THE FOLLOWING ITEMS ARE REQUIRED BY PART 91 OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT PRIOR TO OBTAINING A PERMIT

- 1) CHECK BOX TO INDICATE ITEM IS ON DRAWING OR ON CONSTRUCTION SCHEDULE
- 2) SITE LOCATION SKETCH (SHOWING THE SITE AND IMMEDIATE SURROUNDING ROADS).
- 3) PLAN DRAWING SCALED TO NOT OVER 200' PER IN. OR LESS OR LIST EXACT DISTANCES BETWEEN FEATURES
- 4) DISTANCE FROM THE EARTH CHANGES IN FEET TO NEAREST LAKE, STREAM OR OTHER WATER.
- 5) LAND FEATURES (SHOW HILLS, DITCHES, ETC.)
- 6) EXISTING AND PROPOSED CONTOUR INTERVALS IF ANY, AND SLOPE DIRECTION WITH ARROWS, UNLESS FLAT.
- 7) FULL PHYSICAL LIMITS OF PROPOSED EARTH WORK / GRADING CHANGES-NOT JUST BUILDINGS**
- 8) SOILS INFORMATION/WRITTEN DESCRIPTION CIRCLE ONE- SAND CLAY LOAM OTHER _____
- 9) A DESCRIPTION AND THE LOCATION OF ALL EXISTING AND PROPOSED DRAINAGE FACILITIES (CULVERTS, ETC.)
- 10) EARTHWORK SCHEDULE **SEE ATTACHED CONSTRUCTION SCHEDULE TO LIST DATES**
- 11) A DESCRIPTION AND LOCATION FOR INSTALLING AND REMOVING ALL PROPOSED TEMPORARY SESC MEASURES (SILT FENCE, MULCH BLANKET, ETC.)
- 12) A DESCRIPTION AND LOCATION OF ALL PROPOSED PERMANENT SESC MEASURES (SEEDING, RIP RAP, ETC.)
- 13) A WRITTEN MAINTENANCE PROGRAM (WATERING OF SEED, ETC.) INCLUDING PERSON RESPONSIBLE FOR MAINTENANCE. **THERE IS A SPACE ON THE CONSTRUCTION SCHEDULE TO WRITE THIS INFO**

Draw site plan below. Items #10 and #13 go on the construction schedule attachment.



SIGNATURE: _____

DATE: _____



Part 91, Soil Erosion and Sedimentation Control Plan

Minimum Requirements

Project: _____

Rule 1703 Requirement	Included In Plan?*	Comments
Map with scale: 1" = 200' or less, or indication of exact distances between noted features on site plan, including site location sketch	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Legal description of property (town, range, section, quarter-quarter section)	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Proximity of any proposed earth change to lakes and/or streams	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Predominant land features	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Slope description or contour intervals	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Soils survey or written description of the soil types of the proposed exposed land area	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description and location of the physical limits of each proposed earth change	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description and location of all existing and proposed on-site drainage and dewatering facilities	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Timing and sequence of each proposed earth change	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Location and description for installing and removing all temporary SESC measures	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description and location of all proposed permanent SESC measures	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Maintenance program for all permanent SESC measures and designation of person responsible for maintenance	Yes <input type="checkbox"/> No <input type="checkbox"/>	

*If No is checked above, the plan must be revised to include the missing element prior to submittal/approval.

Other Comments:



Roscommon County
Soil Erosion and Sedimentation Control (SESC) Program
500 Lake Street
Roscommon, Mi. 48653
Phone (989)275-8323 Fax (989)275-8640

Effective immediately, the State of Mi. requires each Authorized Agent applying for a Soil Erosion Permit on behalf of a property owner to include a statement authorizing him/her to secure the permit. Please have the landowner complete this Letter of Authorization to be submitted with the application.

LETTER OF AUTHORIZATION

Type of Project: _____

Location of Project: _____

Township/Village: _____

As landowner of the property described above, I authorize the person indicated below to act on my behalf for the purposes of this application for a Soil Erosion and Sediment Control Permit pursuant to Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, Act No. 451 of the Public Acts of 1994, as amended.

I understand that I am responsible for all earth changes related to this project and understand that Part 91, Act 451 may be enforced against me in the event of any violation of that Act.

Signature of Landowner

Date

Print Name of Landowner

Signature of Landowner's Authorized Agent

Date

Print Name of Landowner's Authorized Agent



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AFFIDAVIT FOR SOIL EROSION AND SEDIMENTATION CONTROL PERMIT
225 SQUARE FEET WAIVER

Pursuant to Rule 323.1705(2) of Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended.

Landowner's Name: _____

Mailing Address: _____

Property Address: _____

Phone Number: _____

Legal Description: Section ____ Town ____ Range ____ Township _____

Description of Earth Change/Project:

I, _____ as the landowner, do hereby certify that the earth change at the above referenced property will disturb less than 225 square feet **(the 225 sq. ft. includes all disturbed earth including ruts, soil stockpiles, etc.)** and the earth change will not contribute sediment to lakes or streams.

Signature: _____ Date: _____

-----AGENCY USE ONLY-----

This request for a Soil Erosion and Sedimentation Control permit waiver has been reviewed by the Roscommon County Enforcing Agency, and is hereby issued in accordance with Rule 1705(2) of Part 91.

Reviewed by: _____ Date: _____



Roscommon County
Soil Erosion and Sedimentation Control Program
500 Lake Street
Roscommon, Michigan 48653
Phone: (989)-275-8323 Fax: (989)-275-8640

APPLICATION FOR SESC PERMIT EXTENSION

If a permittee is unable to complete the permitted SESC work within the permits' specified time, he or she may apply in writing to the County Enforcing Agent for an extension at least ten (10) days prior to the expiration date of the permit. The permit may be extended for 12 months.

LANDOWNER NAME: _____ **PERMIT #** _____

Address work is taking place:

Applicants name and address:

Describe the portion(s) of project not completed and the schedule for completion (examples; insufficient grass growth that should be complete by May, landscaping to be completed by March, etc.):

Who is the onsite person responsible for completing the remainder of the earthchanges?

_____ Phone # _____

Signature: _____

Date: _____

Print/type name: _____

AGENCY USE ONLY

This request for a Soil Erosion and Sedimentation Control permit extension has been reviewed by the Roscommon County Enforcing Agency, and is hereby issued in accordance with Rule 1705(2) of Part 91.

Reviewed by: _____

Date: _____

ROSCOMMON COUNTY
SOIL EROSION AND SEDIMENTATION CONTROL DEPT.

500 Lake Street
Roscommon, MI 48653

Phone: (989) 275-8323
Fax: (989) 275-8640

Effective immediately, the State requires each Authorized Agent applying for a Soil Erosion Permit on behalf of another person to include a Statement authorizing him/her to secure permit. Please have the landowner complete this Letter of Authorization to be submitted with the application.

LETTER OF AUTHORIZATION

_____ is authorized to secure a Soil Erosion
(Name of Designated Agent)

Erosion Permit in my name for a project requiring said permit at _____
(Address of

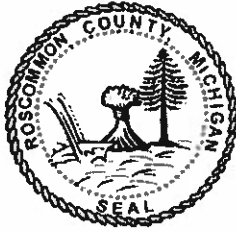
(Project Location.)

(Print name of Landowner)

(Signature of Landowner)

(Date)

004 1-2018

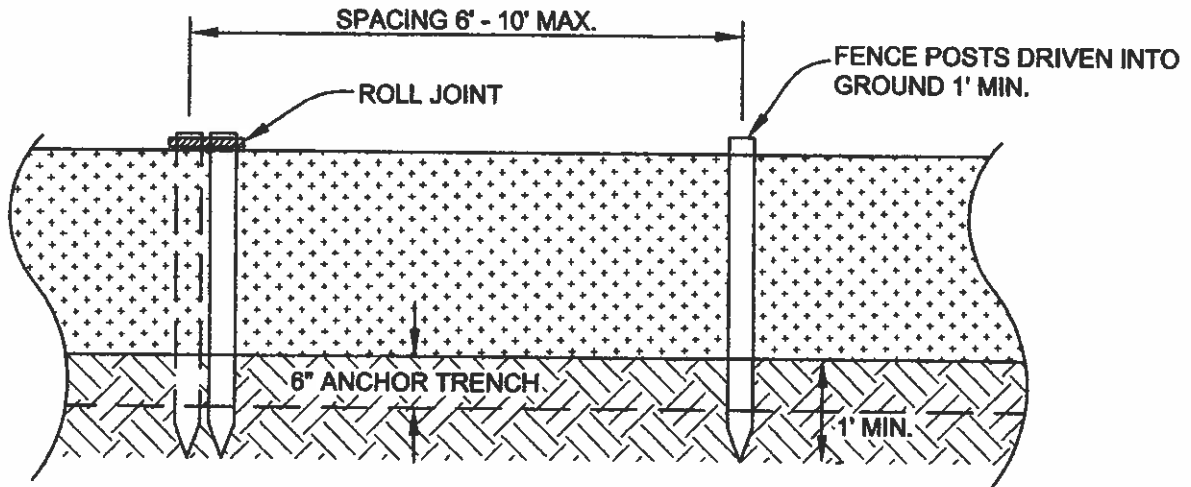


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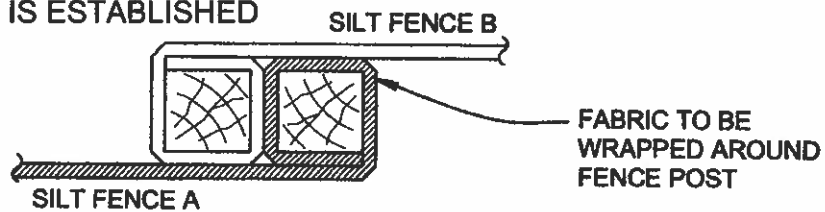
Residential-earthwork and demo	\$180.00
Residential building	\$180.00
Residential demo and building combo	\$280.00
Residential extension 6-month 1-time only	\$90.00
Seawall	\$105.00
Residential Landscape, Drainfield, Driveway, and water well 60 day permit	\$65.00
Commercial, Industrial	\$300.00
Plan review (non-refundable)	\$100.00
Site Visits-each (# visits to be determined by CEA)	\$50.00
Ponds, Soil Stripping, one acre	\$150.00
Plan review (non-refundable)	\$50.00
Site visits-Each (to be determined by CEA)	\$50.00
Additional acre-each	\$10.00
Sand and Gravel Mining, per location (4 year permit)	\$250.00

Projects requiring extra inspection due to the lack of implementation of the approved Plans, and maintenance of the SESC controls, may be charged an additional fee of \$75.00 per visit.

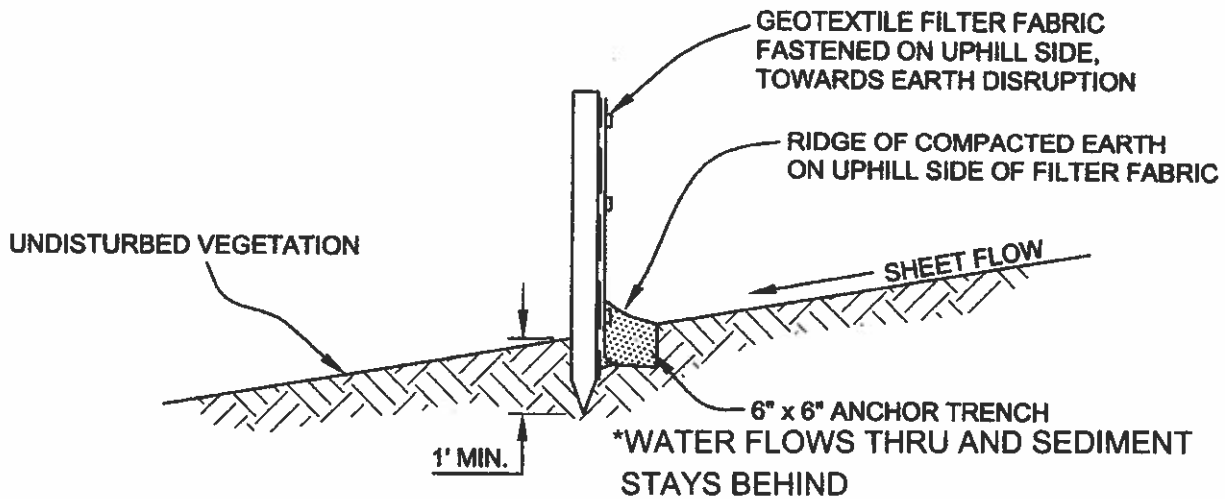
SILT FENCE



- *FABRIC MUST BE TUCKED INTO THE TRENCH AS INDICATED
- *MAINTAIN THE FENCE REGULARLY
- *REMOVE AFTER GRASS IS ESTABLISHED



ROLL JOINTS



ROSCOMMON COUNTY SESC PROGRAM

Goal

The purpose of the Soil Erosion and Sedimentation Control Program is to serve the public by protecting the waters of the State of Michigan, and to ensure clean water for drinking, swimming, fish and wildlife habitat.

Why Is Soil Erosion and Sedimentation Control Important?

Economic Reasons

- Excess sediment can increase the cost of treating drinking water and negatively affect the equipment used in the treatment process.
- Sites developed with sound erosion control avoid the costs of removing sediment from storm water structures. Clean sites are also more appealing to potential buyers.

Health & Safety Reasons

- Eroded soils enter water bodies and channels, raising water levels and blocking culverts, flooding surrounding land.
- Sediment can be deposited onto streets and roads by vehicles leaving the site or by storm water runoff. These sediments can make roadways dangerous.
- Soil particles carry pollutants such as pesticides, oil and herbicides, that enter water bodies along with the soil, creating unhealthy conditions for wading and swimming, and affecting water quality.

Environmental Reasons

- Sediment in water bodies can cover the eggs of fish and other organisms, preventing them from hatching.
- Excess sediment that is suspended in streams and rivers acts like sandpaper on fish and other organisms and can clog their gills, making breathing difficult.
- Sediment reduces light penetration, making photosynthesis more difficult for water plants.
- Soil particles absorb heat, raising the temperature of the water and driving off desirable fish populations.

Aesthetic & Recreational Reasons

- Clear water is more desirable for swimming, boating, canoeing and fishing than muddy water.
- Excess sediment builds up in lakes and rivers. This raises the water level but reduces water depth, which decreases canoeing and fishing opportunities.

Soil Erosion Control Requirements

- Earth moving activity can not begin without a Soil Erosion Permit. The Soil Erosion Permit must be posted and be clearly visible from the road.
- Soil erosion and sedimentation control measures as designated on plans and/or as required must be installed prior to any earth moving activities.
- Earth changes to a property must not adversely affect drainage to surrounding areas.
- Detention/retention/sedimentation ponds must be constructed and stabilized prior to other earth moving activities.
- Outlets of detention/retention/sedimentation ponds shall be designed and constructed to reduce the water flow to a non-erosive velocity. Rip-rap must be installed on all storm water outlets.
- All earth moving shall be designed, constructed and completed in such a manner that limits the exposed area of any disturbed land for the shortest possible period of time. The site must be stabilized within 5 calendar days after final grading or earth moving activity has been completed.
- Stone access drives, if required, must be installed prior to construction for purposes of mud tracking.
- Soil, sediment, and miscellaneous debris must be kept off streets and out of drainage ditches and catch basins throughout the duration of the project.
- Silt fencing, if required, must be trenched in and backfilled. Fencing may be toed-in with pea gravel if installed in winter.
- Stockpiling of any excavated material must be kept clear of sensitive areas. Adequate controls must be in place to ensure this requirement.
- Erosion control blankets are required on slopes of 4:1 or steeper.
- All permanent erosion control measures shall be permanently maintained by the owner or homeowner association.

Soil Erosion and Sedimentation Control Measures

CATCH BASIN FILTER Geotextile filter fabric placed inside a catch basin (storm drain) to filter suspended sediment from water. Must have regular maintenance after storm or snow melt events to function properly.

CHECK DAM Temporary measure consisting of a line of 4-8" stone piled a maximum of 2 ft. high that slows the flow of water in ditches, swales or natural drainage areas. Check dams should be built so that the center of the wall is lower than the outside edges, and should be spaced so that the top of the downslope check dam is level with the bottom of the upslope check dam.

ROSCOMMON COUNTY SESC PROGRAM

DETENTION/RETENTION BASIN Drainage basins or ponds designed to hold and filter water draining from developed site so as to prevent flooding and filter suspended sediment from water. Required for most major projects.

EROSION CONTROL BLANKET A blanket composed of a mesh of biodegradable material, usually interlaced with straw mulch, and sometimes containing grass seed, used for controlling erosion on steep downslopes. Erosion Control Blankets must be staked in, trenched in at the top and flat against the ground.

RIP-RAP Rock-type material (usually 6-8' stone) placed on the edges of culverts or drainage outlets to slow water to a non-erosive velocity, preventing erosion. Stone should be arranged in a half-circle around the end of the outlet.

SILT FENCING Temporary measure consisting of wooden fence posts, support system, and a geotextile filter fabric (usually nylon) used to keep suspended soil particles from leaving the site. Required to be trenched in to a depth of 6".

VEGETATIVE BUFFER A strip or area of vegetation used to filter sediment and pollutants from runoff. The minimum width for a filter strip is usually 25'.

Methods of Acceptable Stabilization of Disturbed Soils

The best way to avoid soil erosion is to disturb the least possible amount of soil during grading and construction. If erosion control measures are not functioning properly, causing erosion to occur on the site, the site will not be considered stabilized.

MAINTENANCE IS THE KEY TO PROPER SOIL EROSION CONTROL!

Temporary Stabilization - These measures will temporarily prevent soil erosion.

- 1) **Mulch** - This typically is in the form of straw, spread heavily over a disturbed area to protect the exposed soil from rain and wind erosion. For proper stabilization, the soil must not be visible through the mulch. Mulch should be used:
In flat areas with a low amount of water runoff, and/or in areas with adequate protection from high winds

High velocities of run-off will wash away mulch on moderate to steep slopes. High winds can also carry mulch away. Spreading seed prior to mulching greatly aids in the permanent stabilization of the site.

- 2) **Erosion Blankets** - Consist of straw, coconut fiber or excelsior fiber packed in web netting. Erosion control blankets are suitable for moderate slopes and steep slopes on sites with soil that is susceptible to erosion. The blankets are laid at right angles over a disturbed area, staked in place, and toed in at the top of the slope, with a 6-inch overlap of all edges. Blankets are also available with seed in them to enhance permanent stabilization of the slope. If rills (narrow-bands) and gullies (wide-bands) are eroding underneath the blankets, the soil will not be considered stabilized.
- 3) **Hydro Seed** - Hydro seed may be used as temporary stabilization on relatively flat areas with low volume of runoff. Hydro seed can wash away easily in heavy rains. It is recommended that hydro seed with a high content of mulch be used to provide a better barrier between the weather and the soil. If cared for properly, hydro seed will grow, stabilize the site, and provide permanent stabilization.
- 4) **Tarps** - These are plastic sheets used to cover stockpiles or small disturbances. They may not be used for large disturbances.

Permanent Stabilization - These measures will permanently prevent soil erosion when they are functioning properly. When all exposed soil at a site is permanently stabilized, the project will receive final approval from the Soil Erosion and Sedimentation Control Program.

- 1) **Established Vegetative Cover** - Any form of vegetation that provides a root base in the soil and a barrier between the soil and the weather can be considered permanent stabilization. Forms of acceptable vegetative cover when properly installed and maintained are sod, grass, native trees, shrubs and ground cover.
- 2) **Woodchips** - As part of landscaping a thick layer of wood chips or other "permanent" mulch is acceptable in non-sloped areas.
- 3) **Stone** - A thick layer of stone is considered permanent stabilization on all areas except steep slopes. This includes gravel drives, stone gardens, and pavers used for foot traffic. Geotextile fabric placed underneath stone in swales and drives is advisable.
- 4) **Pavement** - Roads or driveways are considered permanent stabilization.

It is important to remember that none of the above methods guarantee stabilization. Proper maintenance is the key to good stabilization.