



Livingston County Drain Commissioners Office

Soil Erosion and Sedimentation Control (SESC) Division

Under the Provisions of Part 91 of Act 451 as Amended,
and the Livingston County SESC Ordinance

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Guide to Soil Erosion and Sedimentation Control (SESC) with Technical Specifications

“Soil erosion and its resulting sedimentation to water systems are identified as the #1 threat to surface waters of the State of Michigan. Each year, millions of tons of soil are deposited into waterways and millions of dollars are spent correcting the problems resulting from this form of environmental impact”

Common Questions

What is the purpose of Soil Erosion Control?

Soil erosion from construction is the number one contributor to pollution in our waterways. Uncontrolled run-off from areas of disturbed soils can move the soil particles, called sediment, off-site and into our lakes, streams, ponds, and wetlands. When deposited in lakes, streams, ponds, and wetlands, this sediment damages the habitats of fish and other wildlife. Sedimentation can clog drains and leave streets a muddy mess and can also cause an increase in flooding due to reduced storm drain capacity.

The LCDC has the responsibility for enforcing the Provisions of Part 91 of Public Act 451, as Amended, and the Livingston County Soil Erosion and Sedimentation Control Ordinance.

What do I need to obtain?

Whether you need a Permit or Waiver will depend on construction activities and site location. Generally, you will need a Permit for construction of a residential single family residence or similar structure, including additions, if construction activity is within 500' of a lake, stream, pond, wetland, stormwater basin or County Drain, and the disturbed area is less than one (1) acre. Residential projects over one (1) acre will be categorized as a Commercial project.

A Waiver is required if the earth disturbance is within 500' of a lake, stream, pond, wetland, stormwater basin or County Drain, and the disturbed area is less than 225 square feet, or if you are not within 500' of a lake, stream, pond, wetland, stormwater basin or County Drain and the disturbed area is less than one acre. For further information please contact our office.

What control measures do I need?

Because every site is different, each has to be assessed separately. However, there are some general requirements. **If construction activity changes the affected area, control measures may need to be adjusted; this is your responsibility.** Sites are inspected a minimum of three times during construction.

If you have obtained a Waiver, you are still required to control erosion from your site. If you are building in a subdivision or on a paved street, you are required to install a coarse aggregate tracking mat and to install silt fence behind the curb or the road ditch, the same as for a Permit.

If you have obtained a Permit, the necessary controls such as tracking mat, silt fence, and vegetative buffer strips, need to be indicated on the site plan you submit to our office. In general, any area where soil has the potential to leave the site needs to have a control measure in place to prevent this from happening. All control measures need to be installed prior to your initial inspection. The coarse aggregate material for the tracking mat must, at a minimum, be piled in the area where the tracking mat will be installed. This material must be spread once construction has commenced.

For more information, please see the Technical Specifications section.

What are my responsibilities?

You are responsible for maintaining the temporary controls until you achieve permanent re-stabilization of the site.

What if I do not maintain my controls?

If your site is found to be out of compliance you will be notified of the violation. Any failed inspection requires a re-inspection. There is a fee charged for each re-inspection. Some reasons a site will fail an inspection are as follows:

- Silt fence missing, not properly trenched in, knocked down, buried, or otherwise damaged.
- Tracking mat missing or not maintained.
- Dirt or mud in the street, or impacting adjacent properties.
- Vegetative buffer strip not maintained and no other control measures installed.

If the site is non-compliant at the time of re-inspection, the inspector will assess the site conditions (e.g. the potential for further sedimentation if the site remains non-compliant) and what, if anything, has been done to address the non-compliance, then determine the appropriate enforcement. This may be:

- Issuance of a second Violation Notice, or
- Issuance of a Municipal Civil Infraction Notice of Violation, the first offense of which carries a fine of \$250.00, or
- Issuance of a Municipal Civil Infraction Citation, the first offense of which carries a civil fine of \$1000.00. In addition to this, you may be found liable for other damages and expenses and may be required to restore areas affected by the violation.

Other fines exist, and for further information regarding violations and fines, please contact our office.

What can I do to prevent sediment from entering our lakes, streams, ponds, wetlands, stormwater basins and County Drains?

The best way to prevent sedimentation is to control erosion. Controlling erosion is the first (primary) line of defense and sedimentation control is the second (secondary) line of defense.

Erosion Controls:

- Exposing the minimum area for the minimum time by staging project activities.
- Apply seed and straw mulch as soon as possible after the earth disturbance.

Sedimentation Controls:

- Using vegetative buffer strips and/or properly installed silt fence and stone tracking mat.
- Implementing a thorough inspection and maintenance program for all control measures.
- Restrict vehicle access to the tracking mat area only. This minimizes the amount of disturbed vegetation due to vehicle traffic.

Can I transfer a Permit?

Residential Soil Erosion Control Permits can be transferred on a completely voluntary basis. ***The site must be in compliance and have no outstanding fees owed. Permit Transfers should be used to transfer responsibility to the New Owner if the property is sold before permanent vegetative re-stabilization has been achieved, and the New Owner has not contracted with the Current Permittee/Builder to complete the vegetative re-stabilization or the property.***

Please be advised that when the property is transferred into the New Owners name(s), they **assume responsibility for maintaining compliance** with all SESC permit obligations and conditions, including plan requirements, maintaining all SESC measures, and ultimately for any violations of the permit from that date forward.

The following is a summary of the steps for transferring a Residential Soil Erosion Control permit:

- The Current Permittee/Builder completes a transfer application including obtaining the New Owners information and signature. **The original signatures of both parties need to either be witnessed by our staff or by a Notary Public and submitted to our office.** If the transfer application is not complete, it will not be accepted.
- The Current Permittee/Builder gives the New Owner copies of the permit documents and the Guide to SESC and the SESC Technical Specifications.
- All outstanding fees due to the Livingston County Drain Commissioner for the permit prior to the date of this transfer must have been paid.
- The LCDC inspects the site to verify compliance with the Provisions of Part 91 of Act 451 as amended, the Livingston County Soil Erosion and Sedimentation Control Ordinance and the approved soil erosion and sedimentation control plan for this site.
- If the site is not in compliance, you will be notified of the violation. A re-inspection fee will be charged for each re-inspection required prior to approval of the transfer. The transfer will be rejected and the Current Permittee will remain responsible for the site.
 - **NOTE:** If the LCDC Inspector determines that the actions of the New Owner caused the non-compliance, the Current Permittee/Builder will not be pursued for the non-compliance and the transfer will be accepted.
- If the inspection passes the transfer will be processed.

Definitions

Concentrated Flow: A stronger, more intense flow of waters confined to a relatively smaller surface area with a much higher erosion potential (e.g. ditch or gully).

Earth Change: A human-made change in the natural cover or topography of land which may result in, or contribute to, soil erosion and sedimentation of surface waters.

Permanent Soil Stabilization: Maintenance-free measures that impede sediment from leaving the site (e.g. thick grass, asphalt driveway, etc.).

Sediment: Solid particulate matter (usually soil) removed from its site of origin and deposited elsewhere.

Sedimentation: The process whereby the detached particles generated by erosion are deposited elsewhere on the land, or in our lakes, streams, ponds, wetlands, stormwater basins and County Drains.

Sheet Flow: Un-concentrated flow of water over a relatively large surface area with a relatively low erosion potential (e.g. lawn).

Soil Erosion: The wearing away of land by the action of wind, water, or gravity.

Temporary Soil Erosion Control Measures: Measures that impede sediment from leaving the site that need to be maintained (e.g. silt fence, tracking mat, etc.).

TECHNICAL SPECIFICATIONS

General Requirements

In order to comply with the Provisions of Part 91 of Act 451, as Amended, those undertaking earth disturbing projects are required to maintain approved soil erosion control measures and to permanently stabilize the disturbed soil within **five (5)** calendar days of achieving final grade (R323.1709(5)).

Permits and Waivers are good for a period of two years from the date of issuance and cannot be extended. Permits require a final inspection prior to the expiration of the Permit. Please call our office to schedule your final inspection within seven (7) days of achieving permanent stabilization.

WAIVERS ARE SUBJECT TO THE FOLLOWING REQUIREMENTS - On sites that front a paved road: Silt fence is required behind the curb or roadside ditch as described in Section 1, and a coarse aggregate tracking mat is required as described in Section 3. These requirements are the same as for Permits. Waivers are subject to enforcement as required.

Standard Temporary Controls

SECTION 1: SILT FENCE

A silt fence is a temporary control measure consisting of fence posts, a support system, and a geotextile filter fabric to prevent soil particles suspended in water from leaving the construction site.

For new home or similar size construction (Permit or Waiver): In subdivisions silt fence may not be required at the back or sides of the site when circumstances allow; but it is always required behind the curb or road side ditch where the site fronts a paved road, and must to be inspected. Outside of subdivisions, there are two circumstances where silt fence installation can be waived behind the curb or road side ditch of the site: where the front of the house (or construction of a similar size structure) is At least 100' from the road or ditch; or where the site drops off from the road in such a manner to limit ingress/egress to the proposed driveway area where the coarse aggregate tracking mat has been installed.

Design Criteria: The LCDDC requires that silt fence be a minimum of **three feet high (36")**. (An exception may be made to use 24" silt fence on a case by case basis.) Silt fence should be installed as shown in **Figure 1** which includes:

- Installing along a contour line on a slope of equal elevation.
- Not installing in an area of concentrated flow.
- Installing with the geotextile fabric attached to the fence posts on the uphill side, toward the disturbed soil.
- Excavating a 6" x 6" anchor trench and burying the tail of the geotextile fabric with the backfill compacted up against it.

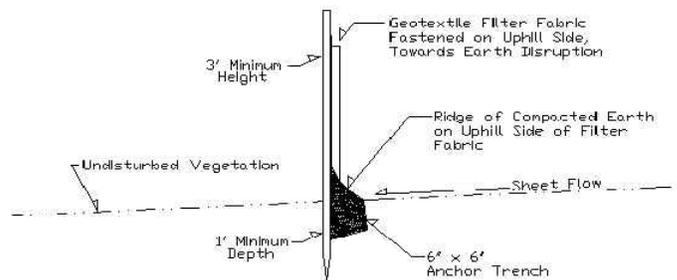


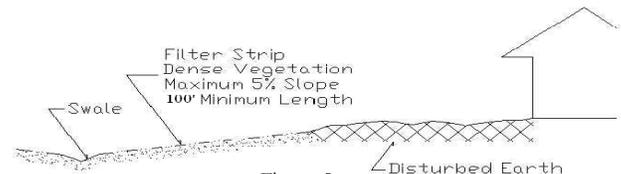
Figure 1

Maintenance Requirements: You are required to maintain your silt fence during the duration of the construction project until permanent stabilization has been achieved. This can be achieved by the following:

- Perform frequent inspections to assure that silt fence is firmly entrenched and in good working condition. **At a minimum**, inspect after each major storm or run-off event.
- Remove accumulated sediment when it is equal to approximately 25% of the fence height.
- Remove any damaged, torn, or knocked down silt fence and replace immediately.
- Remove silt fence when the site has been permanently stabilized.

SECTION 2: FILTER STRIPS

A filter strip is an area of dense vegetation used for removing sediment from runoff water. This can be existing healthy vegetation or something you plant and grow. All filter strips must be approved by the LCDC.



Design Criteria: Used for areas of sheet flow only. Is insufficient by itself in areas of concentrated flow such as a ditch or swale. They are not a substitute for other upland treatment practices. See **Figure 2** for details, which includes:

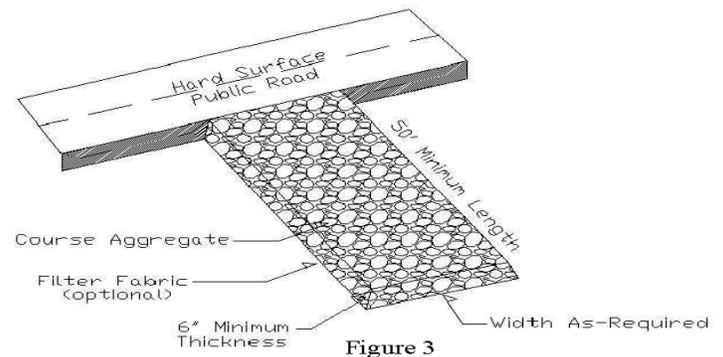
- Land form of the filter area must allow equipment operation for mowing and maintaining the vegetation.
- Wetlands are not to be used as filter strips.

Maintenance Requirements: Vegetation of the filter strip must be maintained in a vigorous growing condition; fertilize as needed. Minimize concentrated flow within the strip area. If concentrated flow occurs, repair and reconstruct the strip to restore sheet flow.

- Remove settled solids as much as possible prior to directing flow to the strip.
- An accumulation of sediment (max. 6") that prevents the strip from performing as intended must be removed.
- Inspect and repair on a seasonal basis and after major storm and run-off events.

SECTION 3: COARSE AGGREGATE TRACKING MAT

The purpose of a tracking mat is to make an access drive of coarse aggregate (1" X 3") which prevents vehicles from carrying mud from the work site onto a roadway. The coarse aggregate for the tracking mat must have been delivered to the site prior to the initial inspection. Whether you have obtained a Permit or a Waiver, if the site fronts a paved road, regardless of whether in a subdivision or not, the absence of the tracking mat or tracking mat material is a violation.



Design Criteria: Tracking mat must be installed for work sites where vehicles exit onto a paved road. See **Figure 3** for details which includes:

- Coarse aggregate must be spread a minimum of 6" thick with optional filter fabric beneath the aggregate.
- A minimum of 50' long to allow an adequate distance for mud to fall off vehicles when leaving the site. A minimum width of 12' is suggested for most sites.
- Place where contractors will use it, and restrict access to the site so all vehicles entering and leaving will drive over the mat.

Maintenance Requirements:

- Maintain a minimum of 6" of coarse aggregate.
- **Clean or refresh with more coarse aggregate as needed to prevent mud from being carried onto the road.**
- Clean/sweep the roadway if mud is tracked onto it from your work site.

There are many other SESC measures available and can be authorized for use on a case by case basis. Please refer to our website for examples.

Permanent Site Soil Stabilization

The objective of permanent soil stabilization is to leave the site erosion-free using maintenance-free methods at the end of construction activities. Generally, a site is deemed permanently stabilized once sufficient vegetation has been re-established to prevent off-site sedimentation.*

Methods of Permanent Stabilization: (The following can be used in combination)

- Establishment of grass or other vegetative cover via seed and mulch.
- Installing sod or planting other vegetative cover.
- Installation of driveways, sidewalks, and other permanent hard-scapes.

** This is meant to be a general guideline and is subject to site inspection. Inspectors may require additional measures if the measures implemented by the Permittee are not sufficient to prevent erosion. Acceptance of permanent site stabilization will be on a case by case basis. Full compliance with the law would involve permanently stabilizing all disturbed areas upon achieving final grade. However, as many builders are the Permittee, not the long-term owners of the sites, property transfers often occur prior to landscaping.*