



Homeowner's Guide to Erosion and Sediment Control

Why is Erosion and Sediment Control so Important?

Soil erosion and sedimentation are major contributors to pollution in our waterways. When rain falls on exposed soil, it washes soil away from the land. Runoff erodes bare ground, washes away valuable topsoil, and makes landscaping more difficult. It also carries nutrients, sediment, and other pollutants into streets, gutters, and ditches, where it then travels untreated to lakes, rivers, streams, or wetlands. Polluted runoff causes excessive growth of lake weeds, algae blooms, and reduced recreational opportunities such as swimming and fishing. Sediment-laden runoff clogs pipes, ponds, lakes and wetlands and increases the risk of flooding.



Temporary Stabilization

During construction, verify that your contractor has installed temporary stabilization measures to minimize erosion and prevent sediment-laden runoff from leaving your property. Sediment control measures should be in place on the down slope perimeter and near gutters, ditches, and all surface water and wetlands.

A Permit May Be Required

Mulch, erosion control blanket, or similar materials must cover exposed soil. Permits from the Village of Machesney Park and the Illinois Environmental Protection Agency may be required before you begin construction.

Permanent Stabilization

Establish permanent vegetation or ground cover as soon as possible. With proper planning, it may be possible to skip many temporary stabilization measures by installing permanent stabilization measures right away. Mulch, silt fences, downspout extenders, or other temporary stabilization measures can be removed following permanent stabilization. When landscaping please consider the following:

- Keep and protect existing native plants on your property
- Remove invasive, non-native species
- Schedule landscaping projects for dry weather
- Plant fast growing annual and perennial grasses
- Use low maintenance native plants that reduce runoff
- Use lawn alternatives like rain gardens or no-mow lawn mixes
- Route downspouts to heavily vegetated areas
- Use alternatives to impervious surfaces for walkways, patios and drives that allow water to seep into the ground
- Leave an un-mowed buffer strip of thick vegetation along stream banks and lakeshores



Village of Machesney Park Public Works Department

300 Roosevelt Road
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815-877-5432
www.machesney-park.il.us



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Erosion and Sediment Control Practices for Homeowners



Mulch

Requirements: If not being actively graded, slopes should be stabilized within one week. Mulch is a recommended practice for stabilization.

Installation: Mulch should be spread at a rate of two tons/acre. Anchor with either a tackifying agent or by disk anchoring.

Maintenance: Inspect and replace all mulch that has been dislocated or failed.



Silt Fence

Requirements: Perimeter control is required before construction can begin.

Installation: Silt fence should be installed along the contour and trenched into the ground at least six inches. Posts should be spaced no more than eight feet apart.

Maintenance: Inspect weekly or after each one-half inch rainfall event. Silt fence must be cleaned out or replaced when silt reaches two-thirds the height of the fence.



Vegetation

Requirements: If not being actively graded, positive slopes within 200' of a storm water conveyance or water body must be stabilized within one week. Temporary vegetation should be combined with mulch, erosion control blanket, or hydraulic soil stabilizers.

Installation: Recommended practice is a mixture of Oats, Winter Wheat, Rye Grass, Alfalfa and Bluegrass at 100 lbs. per acre.

Maintenance: Reseeding if it fails to grow. Mowing or spraying may be needed to control noxious weeds.



Concrete Washout Structure

Requirements: Required any time concrete is to be used on site.

Installation: A lined garbage can may be used or a wooden frame lined with plastic. Many different structures can be used.

Maintenance: Must be cleaned out periodically to remove dried concrete waste. Washout water must be evaporated out and dried debris must be disposed of properly.



Temporary Slope Drains

Requirements: Recommended for conveying runoff down sensitive slopes. Temporary slope drains are chutes, hoses, tubes or pipes used to convey runoff safely down a slope and prevent gulley formation.

Installation: Upslope storm water runoff is directed to slope drains with diversions. Slope drain outlets may require hold-down stakes and energy dissipation and must be directed to stabilized vegetated areas or sediment basins.

Maintenance: Slope drains must be inspected weekly and after 1/2" rainfall events.



Inlet Protection

Requirements: All storm drain inlets must be protected by appropriate BMPs until all sources with potential for discharging to the inlet have been stabilized.

Installation: Reusable drop-in structures are recommended and should fit into the inlet properly. Inlet barrier systems should be secured to the ground and completely cover the inlet.

Maintenance: Inlet protection must be inspected weekly or after 1/2" rainfall events.

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Stabilized Construction Entrances

Requirements: Should be installed where construction ingress/egress can track sediment onto public roads.

Installation: Can be made of manufactured materials or large rip-rap stone.

Maintenance: Must be inspected weekly and after 1/2" rainfall events. Will require periodic replacement if sediment accumulates.



Temporary Ditch Checks

Requirements: Ditch checks should be used in any location where sediment can travel into a ditch system.

Installation: Must be long enough to ensure center of structure is at least six inches lower than outside edges to allow water to flow over the middle. For multiple checks, the top of the downstream check should be at the same elevation as the bottom of the upstream check.

Maintenance: Remove sediment from upstream side of ditch checks when sediment has reached 50% of the height of structure.



Erosion Control Blankets

Requirements: Erosion control blanket is a recommended practice for stabilizing 3:1 and steeper slopes or the normal wetted perimeters of ditches.

Installation: Erosion control blanket must be trenched in at the top of the slope and stapled at a rate of 1.5 to 2 staples per square yard depending on slope steepness and blanket type.

Maintenance: Must be inspected weekly and after 1/2" rainfall events.

Frequently Asked Questions

- **What activities require a permit?** – A permit is required for any project that disturbs 100 square feet of soil or more during the course of construction. An erosion control certification statement is also required in conjunction with any village issued permit including sign permits, fences, building construction, and driveways.
- **How much does erosion control cost?** – Costs can be dramatically reduced by keeping disturbed areas to a minimum.
- **Where can I get erosion control products?** – Many home improvement centers carry basic supplies for complying with erosion and sediment control requirements. Many more products can be found online and in the yellow pages under "Contractor's Equipment and Supplies."
- **There's no water on my site, why do I need a permit?** – Proximity to drainage ditches, drainage swales, catch basins, detention or retention basins, wetlands, and designated drains must be taken into account. These may appear dry for much of the year, but all serve a vital role in the conveyance of surface water, and can carry sediment into the Rock River.
- **What is meant by Best Management Practices (BMPs)?** – Best Management Practices are defined by the United States Environmental Protection Agency as "A structural or non-structural device designed to temporarily store or treat urban storm water runoff in order to mitigate flooding, reduce pollution and provide other amenities."
- **What are the consequences for non-compliance with the Erosion and Sediment Control Ordinance?** – Village inspectors are actively seeking out land disturbing activities to ensure compliance by all Village citizens. The fine for non-compliance is a minimum of \$250 per violation up to \$750 per violation with additional court costs.



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A Clean Jobsite: The Easiest Way to Control Storm Water Pollution

The easiest way to avoid the use of erosion control measures is to keep a clean jobsite and keep the soil disturbance to a minimum.

- Avoid driving in the lawn, if possible
- Avoid over-excavation of any holes
- Load excavated soil into a truck instead of keeping it on site
- Have a plan in place BEFORE you dig
- Watch contractors to be sure they follow the erosion control plan
- Install erosion control measures prior to starting work
- Clean and sweep your site as you work

For More Information:

For General Information:
Village of Machesney Park
Public Works Department
815-877-5432
300 Roosevelt Road
www.machesney-park.il.us

For Information on Erosion Control Practices
Winnebago County Soil and Water
Conservation District
815-965-2392
www.winnebagoswcd.org

For a Free Online Field Guide to Erosion Control
Illinois Department of Transportation
<http://www.dot.state.il.us/desenv/environmental/idot%20field%20guide.pdf>

For a Guide on Developing a Pollution Prevention Plan:
United States Environmental
Protection Agency
http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf

For a Guide on Installing Erosion Control Devices:
State of Kentucky EPA
http://www.kutc.ku.edu/pdf/files/esc_guide.pdf

For General Guidance on Erosion and Sediment Control Plans
Illinois Environmental
Protection Agency
<http://www.epa.state.il.us/water/permits/storm-water/pollution-prevention-plan.html>

Construction Checklist

When doing construction there are a few important things to keep in mind. The following checklist will assist you in ensuring that the appropriate factors have been considered:

- **Evaluate the Site** – Before construction begins, evaluate the entire site, marking for protection any important trees and associated rooting zones, unique areas to be preserved, streams, wetlands, potential hydric soils, and vegetation suitable for filter strips, especially in perimeter areas. Remember to call JULIE at 811, 48 hours before you dig.
- **Create an Erosion Control Plan** – Draw up a plan of your intended construction activity and practices that will be used to protect from erosion and sediment buildup.
- **Obtain a permit from the Village** – Visit Village Hall for a permit form or visit www.machesney-park.il.us
- **Install Perimeter Controls** – Identify the areas where sediment runoff could leave the construction site and install perimeter controls to minimize the potential for off-site sedimentation. This could include leaving a buffer strip, using silt fence, and protection of storm sewer inlets.
- **Build Your Project** – Construct your project in accordance with the permits and your intended plans.
- **Maintenance** – Maintain all erosion and sediment control measures until construction is complete and the lot is stabilized. Inspect at least once per week and after a storm event. Sweep or scrape soil tracked onto roadways.
- **Re-Vegetate the Site** – Immediately after all outside activities are complete, stabilize the lot with seed, sod, and mulch. Redistribute the stockpiled soil, and spread to a depth of four to six inches over rough-graded areas. Spread mulch on newly seeded areas.
- **Remove Remaining Temporary Control Measures** – Once the sod and/or vegetation is established, remove any temporary erosion and sediment control measures.