

Late Season Stabilization Requirements for Sites >1 Acre

Waukesha County Storm Water Management and Erosion Control Program

Background

Developers and contractors often take advantage of mild weather to grade as late as possible into the fall and early winter, and then fail to adequately stabilize the construction site due to rain, frozen ground, and/or snowfall. History shows these sites often become a significant problem when spring snow melt and heavy rains come, and suddenly wash away the exposed soil. Downstream water pollution and property damage are often the result, as well as costly ordinance enforcement action. This practice is a clear violation of the Waukesha County Stormwater Management and Erosion Control Ordinance. This policy is designed to prevent all this from happening by setting strict standards for late season site stabilization, and focused oversight and enforcement of those standards.

I. Planning:

1. Late Season Stabilization Plan required: Permit holder must document in their erosion control plan if any disturbed areas are proposed to remain active beyond September 15. If so, the plan must explain how they will stabilize the site before winter conditions set in, focusing on critical areas, timing of construction, and phases of erosion control BMP installation in accordance with the standards in this document.
2. New road paving/swale stabilization: Stabilizing new roadside swales/ditches before winter conditions is critical to prevent erosion problems. To be successful, this requires good construction planning. Timing is everything. The permit holder needs to understand the growing season limitations in Wisconsin, and comply with the construction standards in the following section. To minimize the time soil is exposed to erosion, careful sequencing of grading and stabilization work is recommended. Since paving increases runoff volumes and channel flow velocities, it is highly recommended to install *and stabilize new roadside swales before paving*. If paving is done first, swale stabilization must follow immediately according to the approved stabilization plans. *Either way, roadside swales must be stabilized within 7 days after final grading, or the site is subject to enforcement action.*
3. Critical Sites: A “critical site” is a land disturbing activity that has a high risk of downstream negative impacts on water resources or property. If the LRD determines a site or a portion of a site fits this definition, all planned permanent vegetative channels and other critical site areas must be stabilized by September 15. If the proposed construction schedule does not allow for this, issuance of the Stormwater Permit will be delayed until the following spring.
4. Utilities: Permit holders are responsible for coordinating construction schedules with utility companies. However, if utilities don’t show up on time, implementation of approved stabilization plans must continue, especially for planned vegetated channels or road ditches.

Note: For new roads, it is highly recommended that utilities be installed in easements along the inside of road frontages, well above channel stabilization BMPs and future maintenance activities. For details, contact Waukesha County Land Resources.)

II. Late Season Stabilization Standards:

1. Vegetated Channels (roadside swales and other stormwater conveyances): All planned vegetated channels shall be treated with soil stabilization BMPs (i.e. erosion control matting, turf reinforcement mat, sod, riprap, soil stabilizers, etc.) by no later than November 15 in accordance with DNR technical standards and the criteria listed below.

Note: Ditch checks, sediment traps, silt fence and other sediment control BMPs are used only during grading work, and must be replaced with soil stabilization BMPs per the approved plans ASAP. None of the sediment control BMPs are acceptable for open channels over winter.
2. Timing Determines Requirements and BMPs: Soil stabilization BMPs that must be implemented depend on the timing of the seeding (cool season grasses), and are organized in three risk categories,

as listed below. The later the timing, the lower the success rates are for timely vegetative cover - and therefore the higher the risks of erosion and off-site sediment discharges.

- a. **Risk Level 1: Permanent Vegetation (before September 15):** To ensure successful fall seed germination, topsoil, seed and fertilize all disturbed areas by September 15 in accordance with the following:
 - i. *Seeding.* Prepare seedbed and sow seeds per the rates and mixes of Wisconsin Department of Transportation (WisDOT) Roadway Standard Section 630.
 - i. *Erosion Control:* Immediately apply mulch, erosion control matting, turf reinforcement mat, sod, riprap, soil stabilizers, or other soil stabilization BMPs as specified in the approved erosion control plans. Application of all BMPs shall follow DNR technical standards.
 - ii. *Maintenance:* Inspect all seeded areas weekly. Ensure adequate water is provided until full vegetative cover is obtained, and repair any erosion problems, wash outs, etc.
- b. **Risk Level 2: Temporary Vegetation (before October 15):** Due to the cooler soil temperatures and the likelihood of overnight frost conditions, perennial cool season plant growth is slow and survival is at risk from September 15 – October 15. To offer more protection from soil erosion during this period, topsoil, seed and fertilize all disturbed areas by October 15 in accordance with the following:
 - i. *Seeding:* The above noted seeding mix must include a minimum of 2 lbs. per 1,000 sq. ft. of a temporary cover (i.e. winter wheat or annual rye grass for fall plantings) per WisDOT Roadway Standard Section 630.
 - ii. *Erosion Control:* Immediately apply mulch, erosion control matting, turf reinforcement mat, sod, riprap, soil stabilizers, or other soil stabilization BMPs as specified in the approved erosion control plan, following DNR technical standards. The following are minimum requirements for stabilizing sites during this period. Approved plans may be more restrictive due to site conditions:
 1. *Channel Flow (roadside swales, etc.) and Backslopes:* Stake erosion matting over the entire channel cross-section and all back slopes. A minimum WisDOT Erosion Control Product Acceptability (PAL) Class 3 matting shall be used for all channel bottoms up to the 10-year, 24-hour flow depth. For all channel back slopes down to the 10-year, 24-hour depth, a minimum Class 2, Type A erosion control matting shall be used.
 2. *Other disturbed areas:* Apply Type B Soil Stabilizer, mulch and tackifier from the WisDOT Product Acceptability List to all disturbed areas that remain exposed.
 3. *Infalls/Outfalls:* Install sod pads (2 rolls) at all culvert outfalls, and other high-erosion locations in accordance with County standards.
 - iii. *Maintenance:* Inspect all seeded areas weekly. Ensure adequate water is provided until full temporary cover is obtained, and repair any erosion problems, wash outs, etc.
- c. **Risk Level 3: Dormant Seeding (before November 15):** For areas not stabilized by October 15, erosion risks are high and additional erosion control measures and oversight are required, as described below. Temporary seeding must still be done, but fall germination and survival may be very limited. For perennial plants, dormant seeding should be done between October 20 and November 15. This means seed germination is planned for the following spring. To offer more protection from soil erosion during this period, topsoil, seed and fertilize all disturbed areas by November 15 in accordance with the following:

- i. *Seeding Rate:* Same seed mix as Risk Level 2 (including temporary cover crop) except the rates for perennial species must be applied at 1.5 x WisDOT section 630 rates (apply rates of 3-5 lbs./1000 sq.ft.). Rates are increased to allow for poor germination rates associated with dormant seeding due to frozen conditions.
- ii. *Erosion Control:* In addition to applying topsoil, the above noted seed mix and starter fertilizer, the following are minimum requirements for stabilizing sites during this period. Approved erosion control plans may be more restrictive:
 1. *Channel Flow (roadside swales, etc.) and Backslopes:* Apply Type A soil stabilizer and staked PAL Class 3 erosion matting over the entire channel bottom up to a 10-year 24-hour flow depth. All channel back slopes must be treated with Class II, Type A soil erosion control matting.
 2. *Other Areas:* Apply Type A Soil Stabilizer from the WisDOT Product Acceptability List to all other disturbed areas that remain exposed.
 3. *Infalls/Outfalls:* Install sod pads (2 rolls) at all culvert outfalls, and other high-erosion locations in accordance with County standards.
- iii. *Maintenance:* Inspect all seeded areas weekly. Ensure adequate water is provided until full temporary cover is obtained, and repair any erosion problems, wash outs, etc.
- iv. *Reports:* The Project Engineer shall be responsible for emailing a report to the LRD by 4:30 pm every Wednesday after October 15, which shall include the following information:
 1. Detailed status of all land disturbing and soil stabilization activities as of the day of the report.
 2. Results of erosion control site inspections since October 15 or the previous report, whichever is shorter.
 3. Any erosion control failures encountered and actions taken to rectify.
 4. Projections for completion of all stabilization activities, including a 10-day plan based on the latest weather predictions.

Policy Definition Notes:

1. “Disturbed areas” means the soil is exposed to erosion. It does not include roads and parking areas that have been graded and covered with stone. Some disturbed area in the immediate vicinity (i.e. 30 feet) of buildings may continue to be under active construction activity over winter months if effective temporary sediment control BMPs have been installed. The LRD inspector will meet with the permit holder up front to establish a reasonable disturbed area boundary needed to complete building construction work beyond the normal stabilization deadlines, and plan for “permanently” or “temporarily stabilizing” other areas as much as possible. If building exterior work is concluded during the winter, inactive disturbed areas should be mulched until final stabilization can be completed.
2. “Permanently stabilized” means a minimum of 70% perennial vegetative cover or other permanent surfacing material, such as riprap or pavement is in place. Vegetative cover must be uniform. It is not acceptable to leave large patches of the site unstabilized, on the concept that dense coverage in other areas makes up for the lapses. Percent coverage may be tested at any point with a 50-foot long transect rope, following the County Planting Verification procedure.
3. “Temporarily stabilized” means:
 - a. 70% coverage with a temporary vegetation such as winter wheat, oats, or annual rye grass (see vegetative notes above);
 - b. 100% coverage of disturbed areas with mulch, erosion control matting, Type A or B soil stabilizer, or stone base (for pavement); or
 - c. Temporary perimeter sediment controls are in place in addition to a combination of the above noted practices, as approved by the LRD.