

Chapter 32
Stormwater Management and Erosion Control
(Rep. & recr. #34-05)

32.09 Erosion Control Plan Requirements (Am. #14-18)

(a) General Erosion Control Plan Requirements and Performance Standards. An erosion control plan shall describe how the permit holder and other responsible party will minimize, to the maximum extent practicable, soil erosion and the transport of sediment from land disturbing activities to waters of the state or other property. To meet this requirement, the following performance standards shall apply:

1. All erosion control plans and associated BMP(s) shall comply with the planning, design, implementation and maintenance requirements of this ordinance.
2. All erosion control plans submitted after 1/1/2013 shall by design, discharge no more than 5 tons per acre per year, or to the maximum extent practicable, of the sediment load carried in runoff from initial grading to final stabilization.
3. Erosion and sediment control BMP(s) may be used alone or in combination to meet the requirements of this section. The Authority may give credit toward meeting the requirements of this section for limiting the duration or area, or both, of land disturbing construction activity, or for other appropriate mechanisms.
4. The Authority may recognize other methods for determining compliance with sediment performance standards as they are standardized, including any methods that may come from the procedures under subch. V. of ch. NR 151, Wis. Adm. Code.
5. If BMP(s) cannot be designed and implemented to meet the sediment performance standard, the plan shall include a written, site-specific explanation of why the sediment performance standard cannot be met and how the sediment load will be reduced to the maximum extent practicable.
6. Erosion and sediment control BMP(s) must be constructed or installed before land disturbing construction begins.

(b) Guiding Principles for Erosion Control. To satisfy the requirements of this section, an erosion control plan shall, to the maximum extent practicable, adhere to the following

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guiding principles:

1. Propose grading that best fits the terrain of the site, avoiding steep slopes, wetlands, floodplains and environmental corridors; and complies with any applicable regulatory setbacks from these areas.
2. Minimize, through project phasing and construction sequencing, the time the disturbed soil surface is exposed to erosive forces.
3. Minimize soil compaction, the loss of trees and other natural vegetation and the size of the disturbed area at any one time;
4. Locate erosion control BMPs prior to runoff leaving the site or entering waters of the state and outside of wetlands, floodplains, primary or secondary environmental corridors or isolated natural areas;
5. Emphasize the use of BMPs that prevent soil detachment and transport over those aimed to reduce soil deposition (also known as sedimentation) or repair erosion damage.
6. Develop spill prevention and response procedures.

(c) Specific Erosion Control Plan Requirements. To the maximum extent practicable, erosion control plans shall comply with the minimum requirements set forth in subs. 1 - 17 of this subsection. The Authority may establish more stringent erosion and sediment control requirements than the minimum requirements set forth in this subsection if the Authority determines that an added level of protection is needed to protect an environmentally sensitive area or other property, or to address any plan modifications approved or required by the Authority.

1. Access Drives and Tracking. Provide access drive(s) for construction vehicles that minimize tracking of soil off site using BMP(s) such as stone tracking pads, tire washing or grates. Minimize runoff and sediment from adjacent areas from flowing down or eroding the access drive.
2. Diversion of Upslope Runoff. Divert excess runoff from upslope land, rooftops or other surfaces, if practicable, using BMP(s) such as earthen diversion berms, silt fence and downspout extenders. Prevent erosion of the flow path and the outlet.

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3. Inlet Protection. Protect inlets to storm drains, culverts and other storm water conveyance systems from siltation until the site is stabilized.
4. Soil Stockpiles. Locate soil stockpiles away from channelized flow and no closer than 25 feet from roads, ditches, lakes, streams, ponds, wetlands or environmental corridors, unless otherwise approved by the Authority. Control sediment from soil stockpiles. Any soil stockpile that remains for more than 7 days shall be stabilized.
5. Cut and Fill Slopes. Minimize the length and steepness of proposed cut and fill slopes and stabilize them as soon as practicable.
6. Channel Flow. During construction, trap sediment in channelized flow before discharge from the site using BMPS such as sediment traps and sediment basins. Complete final grading and stabilize open channels in accordance with Authority standards as soon as practicable, but in no event later than the first ground freeze or snow cover in the fall.
7. Outlet Protection. Protect outlets from erosion during site dewatering and storm water conveyance, including velocity dissipation at pipe outfalls or open channels entering or leaving a storm water management facility.
8. Overland Flow. Trap sediment in overland flow before discharge from the site using BMPs such as silt fence and vegetative filter strips.
9. Site Dewatering. Treat pumped water to remove sediment prior to discharge from the site, using BMPs such as sediment basins and portable sediment tanks.
10. Dust Control. Prevent excessive dust from leaving the construction site through construction phasing and timely stabilization or the use of BMPs such as site watering and mulch – especially with very dry or fine sandy soils.
11. Topsoil Application. Save existing topsoil and reapply a minimum of 4 inches to all disturbed areas for final stabilization, unless otherwise approved by the Authority, such as for temporary seeding or storm water infiltration BMPs. If adequate topsoil does not exist on the site to meet this requirement, it shall be imported.
12. Waste Material. Recycle or properly dispose all waste and unused building materials in a timely manner. Control runoff from waste materials until they are

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removed or reused.

13. Sediment Cleanup. By the end of each workday, clean up all off-site sediment deposits or tracked soil that originated from the permitted site. Flushing shall not be allowed unless runoff is treated before discharge from the site.

14. Final Site Stabilization. All previous cropland areas where land disturbing activities will not be occurring under the proposed grading plans, shall be stabilized upon permit issuance. Stabilize all other disturbed areas within 7 days of final grading and topsoil application. Large sites shall be treated in stages as final grading is completed in each stage. Any soil erosion that occurs after final grading or the application of stabilization measures must be repaired and the stabilization work redone.

15. Temporary Site Stabilization. Any disturbed site that remains inactive for greater than 7 days shall be stabilized with temporary stabilization measures such as soil treatment, temporary seeding or mulching. For purposes of this subsection, “inactive” means that no site grading, landscaping or utility work is occurring on the site and that precipitation events are not limiting these activities. Frozen soils do not exclude the site from this requirement.

16. Removal of Practices. All temporary BMP(s) such as silt fences, ditch checks and sediment traps shall be removed as soon as all disturbed areas have been stabilized.

17. Site Drainage. Site drainage plans shall comply with the provisions of section 32.10(d)(6).

18. Stormwater BMP Data. When a Stormwater Permit involves the maintenance of an existing BMP, including the removal of accumulated sediment, the Authority may require additional support data such as before/after surveys, design and construction details, and oversight by a professional engineer licensed in Wisconsin.

(d) Erosion Control Plan Contents. An erosion and sediment control plan shall, at a minimum, contain the following:

1. Sites Less than One Acre of Total Land Disturbance.
 - A. A narrative describing the proposed land disturbing activity, construction timeline and sequencing, temporary BMP(s) to be used to minimize off-site impacts during the construction phase, and proposed

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methods to stabilize the site following construction in accordance with the requirements of this ordinance;

B. A survey map or scaled site plan drawing of sufficient clarity showing a north arrow, the location of proposed land disturbance, direction of flow for runoff entering and leaving the disturbed area, upslope drainage area (if known), proposed BMP(s), existing and proposed slopes, ground cover, buildings, roads, access drives, property boundaries, drainage ways, water bodies, trees, culverts, utilities and other structures within 50 feet of the proposed land disturbance;

C. The name, address and daytime phone number of the person(s) charged with installing and maintaining all BMP(s);

D. For underground utility installations, the plans must delineate where utilities will be installed, show the location of the open cut and the topography in the area, and list the total lineal feet to be installed and the lineal feet that will be done by open cut; and

E. Other information determined to be necessary by the Authority to ensure compliance with the requirements of this chapter.

2. Sites One Acre or Greater in Total Land Disturbance.

A. A site map in accordance with section 32.10(c);

B. A map at a scale of 1 inch equals no more than 100 feet (unless otherwise noted), delineating and labeling the following applicable items:

- (i) North arrow, graphic scale, draft date, name and contact information for project engineer or planner and designation of source documents for all map features.
- (ii) Proposed site topography at contour intervals not to exceed two feet, proposed percent slope for all open channels and side slopes and all proposed runoff discharge points from the site;
- (iii) Proposed building envelopes and other land area to be disturbed and size in acres;
- (iv) All woodland areas, those proposed to be lost or transplanted during construction and acres or numbers of each. For woodlands proposed to be lost, show individual trees larger than eight (8) inches in diameter that are located within twenty (20) feet of proposed grading boundaries;

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- (v) Temporary access drive and specified surface material and minimum depth;
- (vi) Temporary flow diversion devices for upslope or roof runoff until site is stabilized;
- (vii) Temporary sediment trapping devices for site perimeter and inlets to culverts and storm drains;
- (viii) Temporary settling basin or other BMP to be used for site dewatering during utility or other subsurface work;
- (ix) Temporary soil stockpile sites indicating setbacks from nearby water resources or environmental corridors and the proposed erosion protection methods;
- (x) Detailed drawings and cross-sections for any sediment traps, basins or other major cut or fill areas requested by the Authority, showing side slopes and elevations;
- (xi) Final stabilization measures for open channels and erosion protection for pipe and channel inlets, outlets and emergency spillways;
- (xii) Location of proposed utilities, including: standard cross-section for buried utilities, associated easements, labeling the type of utility and notes on erosion control and restoration plans;
- (xiii) Final site stabilization instructions for all other disturbed areas, showing areas to be stabilized in acres, depth of applied topsoil, seed types, rates and methodology, fertilizer, sod or erosion matting specifications, maintenance requirements until plants are well established, and other BMP(s) used to stabilize the site;
- (xiv) Detailed construction notes clearly explaining all necessary procedures to be followed to properly implement the plan, including estimated starting date of grading, timing and sequence of construction or demolition, any construction stages or phases, utility installation, dewatering plans, refuse disposal, inspection requirements, and the installation, use, and maintenance of BMP(s) proposed in the plan;
- (xv) Location of soil evaluations with surface elevations and unique references to supplemental soil evaluations report forms in accordance with section 32.11(e). A separate map shall show estimated highest groundwater table depths and soil textures down to planned excavation depths with sufficient references to the proposed site plan.
- (xvi) Spill prevention and response procedures.

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(xvii) Other items specified by the Authority as necessary to ensure compliance with this ordinance.

C. Narrative Summary, Reports and Supporting Documentation. The following shall be submitted with the information required for the Storm Water Management Plan under sub (c) of this section:

- (i) A narrative summary of the erosion control plan which briefly explains the overall plan and also provides any unique information that led to the selection of BMP(s) and how the plan meets the guiding principles under sub. (b) and the specific requirements under sub. (c) of this section;
- (ii) Summary of design data for any structural BMP such as sediment basins or sediment traps. A professional engineer, licensed in the State of Wisconsin, shall stamp and sign a statement approving all designs and certifying that they have read the requirements of this ordinance and that, to the best of their knowledge, the submitted plans comply with the requirements;
- (iii) Open channel design and stabilization data to support the selected BMP(s) for stabilization;
- (iv) Soil evaluation reports, in accordance with the standards in Section 32.11(e), with unique references and elevations that match the map under sub. (2)(B)(xv) of this subsection.
- (v) Estimated time soil stockpiles will exist to support the selected BMP(s) for erosion control;
- (vi) Documentation that proposed utility locations and installation scheduling has been coordinated with the affected utility companies.
- (vii) Documentation of any other calculations used to demonstrate compliance with the performance standards in this section.