

Winter Stormwater Management Practices for Construction Sites

Prior to Winter

- Sequence earthwork and soil disturbance to be complete before ground freeze
- Temporarily or permanently stabilize all exposed soils. Stabilization includes mulching, bonded fiber matrix, erosion control blanket, and seeding.
- Ensure perimeter controls are installed and firmly anchored.
- Establish a stable and enlarged entrance/exit to the site and designate pathways for vehicles to avoid exposed areas.
- Stockpiled material need to be mulched and covered for winter.

Winter Maintenance and Construction

During winter the potential for erosion is increased due to snow melting overtime. The following practices are recommended:

- Check erosion and sediment control measures after each precipitation event or as snow melts to ensure they are functional.
- Minimize new soil exposure and stabilized areas immediately.
- Keep erosion and sediment control products on hand to address potential problems in a timely manner.
- Enlarge and stabilize site entrances to enable stockpiling.
- Remember stockpiles of frozen materials can melt in the spring and become unworkable and difficult to transport because of high moisture content. **Place them at least 25 feet from the street and 100 feet from any surface water.**

Re-establishing BMP's in the Spring

The risk of high sediment discharges are greatest in the spring when vegetative cover is not yet established and snowmelt runoff occurs. The following practices are recommended:

- Conduct weekly (or more frequent) to ensure the integrity of erosion and sediment control practices
- Immediately repair damaged perimeter controls and remove deposition from traps and basins
- Stabilize any exposed soils with a thick cover of mulch or erosion control product within 14 days

Winter Weather and Construction

Frozen soils can make it difficult to stabilize sites or install stormwater BMPs properly or effectively. This often results in bare and open soils throughout winter that erode with snowmelt and spring runoff.

Plan ahead to prepare sites for winter weather, maintain BMPs throughout the entire winter season, and restore BMP effectiveness for sediment control in early spring.

Projects extending into the winter period (October 15th through May 15th) will require temporary measures to stabilize the site on all areas not protected with pavement, gravel, mature vegetation, or riprap.

For projects where construction is complete and you cannot perform stabilization, temporary stabilization measures are required prior to CO issuance.

Construction BMPs for Cold Climate Use

Best Management Practice (BMP)	Objective	Examples
Preconstruction Planning	<i>Focus on sequencing and phasing to avoid open soils during winter and limit grading prior to freeze-up.</i>	<i>Hold meeting for subcontractors and all personnel anticipated to be onsite. Make timelines clear.</i>
Resource Protection	<i>Buffers reduce runoff by providing infiltration and filtration potential. Permit requires 50 feet natural buffer from surface water and 100 feet from special/impaired waters.</i>	<i>Vegetated strips, undeveloped pervious ground, preservation of existing vegetation.</i>
Runoff Control	<i>Stable drainage ways and sediment basins assure erosion control and provide storage opportunities for spring meltwater.</i>	<i>Slope drains, vegetated swales, retention/detention pond, dikes, check dams.</i>
Perimeter Control	<i>These practices are especially effective during winter construction.</i>	<i>Compost berms, logs, fiber rolls, rock logs can be installed over the snow.</i>
Slope Stabilization	<i>Install prior to freeze-up to be effective, they must be checked often and maintained all winter.</i>	<i>Terrace cutting, surface roughening, mulch, berms, anchored hay mulch or erosion control mix.</i>
Soil Stabilization	<i>Seeding, straw mulch, blankets, and sprayed stabilizers must be in place and working before freeze-up, if needed use sandbags or rock logs to hold in place.</i>	<i>Surface roughening, mulching, anchored hay mulch, erosion control blankets. Maintain construction entrances to reduce tracking.</i>
Inspection and Maintenance	<i>Essential for proper operation during entire winter season.</i>	<i>Inspect your site on a weekly basis and repair/replace as needed.</i>

For additional information on the City of Owatonna Stormwater Program please contact Brad Rademacher, Water Quality/Stormwater Specialist, City of Owatonna 507-774-7300 or Bradley.rademacher@ci.owatonna.mn.us