

A-3 OVERWINTER CONSTRUCTION AND STABILIZATION**PURPOSE & APPLICATIONS**

If a construction site is not stabilized with pavement, a road gravel base, 75 % mature vegetation cover or riprap by November 15 then the site needs to be protected with over-winter stabilization. An area considered open is any area not stabilized with pavement; vegetation, mulching, erosion control mix, erosion control mats, riprap or gravel base on a road. The winter construction period is from November 1 through April 15.

CONSIDERATIONS

Winter excavation and earthwork shall be completed such that no more than 1 acre of the site is without stabilization at any one time. Limit the exposed area to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event. All area shall be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded and mulched. A cover of erosion control mix performs the best. Refer to the TEMPORARY MULCHING BMP.

Any added measures, which may be necessary to control erosion/sedimentation, must be installed. These may be dependent upon site conditions, the actual site size and weather conditions.

To minimize areas without erosion control protection, continuation of earthwork operations on additional areas shall not begin until the exposed soil surface on the area being worked has been stabilized.

SPECIFICATIONS**Natural Resource Protection**

Any areas within 100 feet from any natural resources, if not stabilized with a minimum of 75 % mature vegetation catch, shall be mulched by December 1 and anchored with plastic netting or protected with an erosion control cover.

During winter construction, a double row of sediment barriers (i.e. silt fence backed with hay bales or erosion control mix) will be placed between any natural resource and the disturbed area. Projects crossing the natural resource shall be protected a minimum distance of 100 feet on either side from the resource. Existing projects not stabilized by December 1 shall be protected with the second line of sediment barrier to ensure functionality during the spring thaw and rains.

Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

Mulching

All area shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4 inch thickness.

Mulch shall not be spread on top of snow. The snow will be removed down to a one-inch depth or less prior to application.

After each day of final grading, the area will be properly stabilized with anchored hay or straw or erosion control matting.

An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible though the mulch.

Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, asphalt emulsion chemical, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

Soil Stockpiling

Stockpiles of soil or subsoil will be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This will be done within 24 hours of stocking and re-established prior to any rainfall or snowfall. Any soil stockpile will not be placed (even covered with mulch) within 100 feet from any natural resources.

Seeding

Between the dates of October 15 and April 1st, loam or seed will not be required. During periods of above freezing temperatures finished areas shall be fine graded and either protected with mulch or temporarily seeded and mulched until such time as the final treatment can be applied. If the date is after November 1st and if the exposed area has been loomed, final graded with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4' of loam and seed at an application rate of 5lbs/1000 s.f. All areas seeded during the winter will be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75 % catch) shall be revegetated by replacing loam, seed and mulch.

If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

Overwinter stabilization of ditches and channels

All stone-lined ditches and channels must be constructed and stabilized by November 15. All grass-lined ditches and channels must be constructed and stabilized by September 1. If a ditch or channel is not grass-lined by September 1, then one of the following actions must be taken to stabilize the ditch for late fall and winter.

Install a sod lining in the ditch: A ditch must be lined with properly installed sod by October 1. Proper installation includes: pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, watering the sod to promote root growth into the disturbed soil, and anchoring sod at the base of the ditch with jute or plastic mesh to prevent the sod from sloughing during flow conditions. See the PERMANENT VEGETATION BMP section.

Install a stone lining in the ditch: A ditch must be lined with stone riprap by November 15. A registered professional engineer must be hired to determine the stone size and lining thickness needed to withstand the anticipated flow velocities and flow depths within the ditch. If necessary, the contractor will regrade the ditch prior to placing the stone lining so to prevent the stone lining from reducing the ditch's cross-sectional area.

Overwinter stabilization of disturbed slopes

All stone-covered slopes must be constructed and stabilized by November 15. And all slopes to be vegetated must be seeded and mulched by September 1. The department will consider any area having a grade greater than 15% to be a slope. If a slope to be vegetated is not stabilized by September 1, then one of the following actions must be taken to stabilize the slope for late fall and winter.

Stabilize the soil with temporary vegetation and erosion control mats -- By October 1 the disturbed slope must be seeded with winter rye at a seeding rate of 3 pounds per 1000 square feet and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1, then the contractor will cover the slope with a layer of erosion control mix or with stone riprap as described in the following standards.

Stabilize the soil with sod -- The disturbed slope must be stabilized with properly installed sod by October 1. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor will not use late-season sod installation to stabilize slopes having a grade greater than 33% (3H:1V) or having groundwater seeps on the slope face.

Stabilize the soil with erosion control mix -- Erosion control mix must be properly installed by November 15. The contractor will not use erosion control mix to stabilize slopes having grades greater than 50% (2H:1V) or having groundwater seeps on the slope face. See the TEMPORARY MULCHING BMP section.

Stabilize the soil with stone riprap -- Place a layer of stone riprap on the slope by November 15. The development's owner will hire a registered professional engineer to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap. See the RIPRAP SLOPE STABILIZATION BMP section.

Overwinter stabilization of disturbed soils

By September 15, all disturbed soils on areas having a slope less than 15% must be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions must be taken to stabilize the soil for late fall and winter.

Stabilize the soil with temporary vegetation -- By October 1, seed the disturbed soil with winter rye at a seeding rate of 3 pounds per 1000 square feet, lightly mulch the seeded soil with hay or straw at 75 pounds per 1000 square feet, and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1, then mulch the area for over-winter protection as described below.

Stabilize the soil with sod -- Stabilize the disturbed soil with properly installed sod by October 1. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

Stabilize the soil with mulch -- By November 15, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 pounds per 1000 square feet on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

MAINTENANCE

Maintenance measures shall be applied as needed during the entire construction season. After each rainfall, snow storm or period of thawing and runoff, the site contractor shall perform a visual inspection of all installed erosion control measures and perform repairs as needed to insure their continuous function.

Following the temporary and/or final seeding and mulching, the contractor shall, in the spring, inspect and repair any damages and/or bare spots. An established vegetative cover means a minimum of 85 to 90 % of areas vegetated with vigorous growth.

STABILIZATION SCHEDULE BEFORE WINTER

- September 15** All disturbed areas must be seeded and mulched.
All slopes must be stabilized, seeded and mulched.
All grass-lined ditches and channels must be stabilized with mulch or an erosion control blanket.
- October 1** If the slope is stabilized with an erosion control blanket and seeded.
All disturbed areas to be protected with an annual grass must be seeded at a seeding rate of 3 pounds per 1000 square feet and mulched.
- November 15** All stone-lined ditches and channels must be constructed and stabilized.
Slopes that are covered with riprap must be constructed by that date.

December 1 All disturbed areas where the growth of vegetation fails to be at least three inches tall or at least 75% of the disturbed soil is covered by vegetation, must be protected for over-winter.

NOTE: The dates given are for projects in South-Central Maine. Adjust the dates given based on the project's location within the state – reducing times up to three weeks for project's in Northern Maine and extending times up to two weeks for project's on the coast in extreme Southern Maine.