

Town of Winchester
REGULATIONS GOVERNING SEDIMENT AND EROSION CONTROL
AND STORMWATER MANAGEMENT

SECTION I: Authority

These regulations are adopted pursuant to RSA 674:16, Grant of Power, RSA 674:17, Purposes of Zoning Ordinance, and RSA 674:21, Innovative Land Use Controls, Environmental Characteristics.

SECTION II: Purpose

The purpose of these regulations is to protect and maintain public health, safety, welfare, and the environment by developing and implementing minimum standards and procedures to control the adverse affects of stormwater runoff during construction or land disturbance and the management of stormwater after construction or land disturbance.

SECTION III: Applicability

- A. The requirements of these regulations shall apply to all land disturbance, development, or exterior construction activities in any zoning district where one or more of the following conditions are proposed:
- a subdivision of more than three lots,
 - an activity that is within a critical area as hereby defined by these regulations,
 - the activity involves the construction or reconstruction of a road,
- B. Land clearing, grading or other site disturbance involving the removal of vegetation or grading of land that is greater than 20,000 square feet or more of cumulative site activity shall require the use of Best Management Practices for Sediment and Erosion Control (refer to Section X).

SECTION IV: Definitions

Best Management Practice (BMP): A proven or accepted practice used to prevent or reduce increases in stormwater volumes or flow; to reduce erosion, sediment, peak storm discharge, and point-source and non-point-source pollution; and to improve stormwater quality.

Critical Areas: Disturbed areas of any size within 75 feet of a stream, intermittent stream, bog, water body, or poorly or very poorly drained soils; disturbed areas of any size within 50 feet of a property line; disturbed areas exceeding 2,000 square feet in highly erodible soils; or disturbed areas containing slope lengths exceeding 25 feet on slopes greater than 15 percent.

Disturbed Area: An area where the natural vegetation has been destroyed or removed leaving the land subject to accelerated erosion.

Drainage Area: A geographic area within which stormwater, sediments, or dissolved materials drain to a particular receiving waterbody or to a particular point along a receiving waterbody.

Erosion: The detachment and movement of soil and rock fragments by water, wind, ice, or gravity.

Grading: Any excavating, grubbing, filling, or stockpiling of earthen material.

Hay Bale Barrier: A temporary sediment filter consisting of a row of entrenched and anchored bales of hay or straw used to intercept or detain small amounts of sediment from disturbed areas.

Impervious Surface: Land surface with a low capacity for soil infiltration, including but not limited to pavement, roadways, structures, and densely compacted soils.

Land Disturbance: Any exposed soil resulting from activities such as clearing of trees or vegetation, grading, blasting, and excavation.

Low Impact Development: Alternative designs for the treatment and management of stormwater that minimize disturbance to the natural drainage patterns. They require high standards for water quality discharge and recharge.

Recharge: The amount of water from precipitation that infiltrates into the ground.

Sediment: Solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site of origin.

Sensitive Area: For the purposes of these regulations, these areas include lakes, ponds, streams, vernal pools, wetlands, floodplains, floodways, intermittent streams, and areas with highly erodible soils.

Sheet flow: The natural flow of runoff from a site.

Stabilization: The condition in which all soil-disturbing activities at a site have been completed and a uniform, perennial vegetative cover with a density of 85 percent has been established or equivalent stabilization measures (such as mulch) have been utilized on all unpaved areas and areas not covered by permanent structures.

Stormwater: Water resulting from precipitation that runs off the land's surface, is transmitted to the subsurface, or is captured by separate storm sewers or other man-made or natural drainage facilities.

Stormwater runoff: The water from precipitation that is not absorbed, evaporated, or otherwise stored within the contributing drainage area.

Swale: A type of drainage way consisting of a shallow longitudinal depression that carries stormwater. It is commonly heavily vegetated and is normally without flowing water.

Temporary Seeding: Establishment of temporary groundcover by seeding and mulching soils that will be exposed for a period greater than one month but less than one year.

Vegetation: Live plant material including grass, trees, shrubs, vines, or other forms of plant or fungal growth.

Water Supply Intake Protection Area: A designated protection area for a surface water intake used as a source by a public water system.

SECTION V: Design Standards

Adequate provisions must be made to provide for proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage

system. The following standards and requirements shall be applied for erosion control and stormwater management:

1. A Sediment and Erosion Control Plan must be submitted for all construction activities that meet the applicability requirement as stated in Section III above.
2. Appropriate methods of erosion control and stormwater management shall be selected to accommodate the unique conditions of the site and the surrounding area. Additional protection from stormwater runoff and construction activity is required in critical areas.
3. When the area of disturbance is greater than 40,000 square feet of contiguous area, unless it is associated with the installation of a road, larger areas of disturbance shall be separated by at least 20 feet of area maintained at natural grade and retaining existing, mature vegetative cover that is at least 20 feet wide at its narrowest point.
4. Stockpile areas shall be protected from stormwater runoff using temporary barriers and stormwater run-on using diversion methods. Stockpile locations and control methods shall be included in the Sediment and Erosion Control Plan.
5. Best management practices set forth in Section X of this regulation and in the N.H. Stormwater Management Manual shall be used in all plans. The use of innovative stormwater management techniques shall be used wherever possible. These include site selection and design, infiltration methods, minimizing site disturbance, maintaining natural flow paths, and disconnecting impervious surfaces.
6. Erosion control measures and stormwater management systems shall be designed and installed to control the post-development peak rate of runoff so that it does not exceed the pre-development runoff for the 2-year, 10-year, and 25-year/24-hour storm event and for additional storm frequencies. Emergency spillways and down slope drainage facilities shall have capacity to accommodate a 100-year/24-hour storm.
7. Stormwater management systems shall not discharge to surface waters, ground surface, subsurface, or groundwater within the wellhead protection area.
8. The Sediment and Erosion Control Plan and the Stormwater Management Plan shall include the use of low impact development techniques to intercept, treat, and infiltrate runoff from developed areas distributed throughout the site or shall demonstrate why on-site infiltration methods are not possible or adequate for the proposal. Acceptable methods include but are not limited to: bioretention areas, rain gardens, infiltration trenches, dry wells, vegetated swales, vegetated strips, etc.
9. Stream crossings for roads and driveways shall meet the following minimum standards or the New Hampshire Stream Crossing Guidelines as amended, whichever is more restrictive:
 - a. sized for 1.2 times bank-full stream width (i.e. the width of the stream during the 1.5-year flow event),
 - b. open bottom culvert or natural covering bottom,
 - c. round culverts must be imbedded at least 25 percent,
 - d. culverts must have a narrow channel in the bottom running the length of the culvert to support fish and aquatic amphibian passage during-low flow periods,
 - e. culverts and bridges shall be designed to have an openness ratio that is greater than or equal to .25 (calculated in meters) for perennial storms,

- f. culverts and bridges shall be designed to maintain water velocity at a variety of flows that are comparable to upstream and downstream flows.
10. Erosion control and stormwater management designs shall not conflict with the minimum requirements set forth by the N.H. Department of Environmental Services (NH DES) for Alteration of Terrain or any other environmental permits required.

SECTION VI: Application Requirements

The Sediment and Erosion Control Plan shall contain proper provisions to adequately control accelerated erosion and sedimentation and reduce the danger from stormwater runoff on the proposed site based on the best available technology. The following information shall be submitted with all applications to the Planning Board that include activities as previously defined in Section III, Applicability:

1. Pre-Construction and During-Construction Plan

- a. Topographic map showing contours at two (2) foot intervals to the property boundaries with surveyors seal and signature.
- b. Title block including at a minimum; property location, owner, applicant, scale, date of survey, and all revisions
- c. Critical areas relating to natural resources, including wildlife habitat areas if referenced in a natural resource inventory or other natural resource plan
- d. All wetlands, watershed areas, vernal pools, flood plain areas, drainage patterns, or other water bodies
- e. Grading Plan
- f. All structures, roads, utilities, and easements
- g. Stockpiles, materials storage areas, and equipment storage
- h. Stump disposal areas
- i. Areas of soil disturbance and remediation areas
- j. A soil survey of the areas of disturbance
- k. Notes should include:
 - 1. Construction Schedule
 - 2. Inspection Schedule- including responsible party and contact information for emergency repairs
 - 3. Operations and Maintenance Plan

In addition to the Plan, a written report shall be submitted containing the following information:

- a. Drainage report-volume, peak discharge, pre- and post-construction runoff rates
- b. Construction Sequence, including land disturbance
- c. Description of all structural and non-structural control methods with detailed drawings
- d. Description of all vegetative erosion control methods, including seeding specifications
- e. Inspection Schedule
- f. Maintenance plan for temporary and permanent erosion control measures, including the contact information of the responsible party for emergency repairs

2. Post-Construction Plan

- a. Drainage Plan
- b. Detail sheet with drainage specifications

- c. Engineers seal and signature
- d. Title block including at a minimum; property location, owner, applicant, scale, date of plan preparation, and all revisions
- e. Drainage Report with calculations to support Drainage Plan
- f. Spill Prevention Plan and Emergency Management Plan for spills of potentially hazardous materials
- g. Maintenance Plan for stormwater management including a note stating that the Maintenance Plan shall be recorded in the Registry of Deeds as a Maintenance Covenant

SECTION VII: Plan Review

1. The Winchester Conservation Commission shall review the Sediment and Erosion Control Plan and supporting documentation within 30 days of receipt of the plan. They shall send a recommendation to the Planning Board including information such as findings, compliance, concerns, etc.
2. Upon completion of the review by the Conservation Commission, the Planning Board shall approve the Sediment and Erosion Control Plan if it complies with these regulations or shall deny it if it is found that it does not comply. Any denial shall contain reasons for such action.
3. The Planning Board may seek technical review of the Sediment and Erosion Control Plan and supporting documentation by a qualified professional consultant if it is determined that additional assistance is necessary. Any fee associated with a technical review shall be at the applicant's expense.

SECTION VIII: Prior to site clearing and other activity

1. The applicant shall supply information to the Planning Board regarding the pre-development and the proposed post-development stormwater runoff rates.
2. All clearing activity that has occurred within the past five years shall be considered in the pre-cleared state for the purpose of these regulations.

SECTION IX: On-Site Plan Implementation (Pre- and During Construction)

It is the responsibility of the applicant/owner to ensure that the work is carried out in compliance with these regulations and the approved plan, including any supporting documentation.

1. It is a requirement of these regulations to conduct a pre-construction meeting between the applicant/owner, site engineer, and site contractor along with appropriate town personnel as deemed necessary to discuss the approved plans, phasing, permitting, bonding and other relevant information regarding the development. This meeting shall be initiated by the applicant and must occur prior to site work.
2. The installation of erosion and sedimentation control devices shall be properly installed in accordance with current installation requirements prior to the commencement of site disturbance, including tree removal.
3. Building Permits shall not be issued until certification has been submitted to the building inspector that the erosion and sedimentation control devices have been properly installed in

accordance with the approved plan for the section, or phase that may be affected by construction activity.

4. Critical areas must be clearly flagged and have appropriate construction barriers to ensure protection of these areas. Additional erosion control measures may be required.
5. Inspections shall be made on a weekly basis and within 24 hours of a storm with one-half an inch of rainfall or greater. Inspections should include all silt fences, hay bales, and other erosion control methods as well as stormwater management controls. A record of all inspections, installations, modifications required, storm events, and erosion observed shall be maintained by the site operator or designee. This record shall be available to the town's inspector upon request.
6. Dust shall be kept to a minimum through the use of water and other dust inhibiting agents as approved by the NH DES when necessary.
7. Storm drain inlets and culverts must be protected from sediment during site work and construction. Regular inspections and cleaning are necessary during construction and upon project completion.
8. Measures shall be taken to prepare the site for the winter season. A pre-winter meeting with the applicant, site contractor, site engineer, and town staff shall be held no later than September 15 of each year to discuss the appropriate measures needed to secure the site for winter weather.

SECTION X: Best Management Practices (BMP's)

Best management practices for temporary and permanent erosion control include both structural and non-structural methods. In general, it is a "common sense" approach to maintaining control of the stormwater runoff of a site in order to protect water quality, public safety, and personal property. The use of BMP's through all stages of land development can control and minimize the negative impacts caused by construction activities. The Sediment and Erosion Control Plan should include the use of best management practices to the greatest extent possible.

1. The existing terrain of the land and drainage patterns should be considered during the site selection and design of a project. Alternative design and location of structures should be explored to minimize the effects of site runoff.
2. Site disturbance should be limited to those areas that are necessary and consistent with the plan. Maintain native vegetative cover to the maximum extent possible.
3. Phasing of larger projects should be considered in an effort to keep areas of site disturbance to a minimum.
4. Stock piles should be temporarily seeded if they will not be used within 14 days. Areas where soil disturbance has occurred should also be seeded and mulched within 14 days after disturbance in that area has ended.
5. Structural erosion control measures should be used to prevent stormwater from entering the site and reaching disturbed soils. Methods to consider include but are not limited to: stone check dams, swales, filter socks, rip rap, mulch berms, etc.

6. Prevent sedimentation from being carried off site by using methods such as silt fences, hay bales, erosion control blankets, swales, vegetated strips, sediment traps and basins, etc.
7. Additional erosion control supplies should be stored on the site and accessible in the event of an emergency.
8. Steep slopes must be stabilized during construction and may require terracing. Stormwater should be diverted around these areas or otherwise dispersed if it is not possible to divert due to the site constraints.
9. Construction site entrances should have an adequate tracking pad to prevent mud from being tracked onto roads and catch basins or other roadway drainage areas.
10. Impervious surfaces shall be kept to a minimum to allow for groundwater recharge. Large impervious surfaces should be separated by vegetative strips.
11. Winter stabilization should be completed no later than September 15. All exposed soils, including stock piles, should be seeded and mulched or protected by erosion control blankets. Areas should remain stabilized until permanent measures are put into place.
12. Remove temporary erosion controls structures when area is stabilized by revegetation and permanent stormwater management methods are implemented to allow the stormwater management plan to function properly.

SECTION XI: Surety

A bond may be required to cover the cost of repair or replacement of temporary and permanent erosion control methods. The applicant may submit a written request for a bond reduction upon completion of an area or phase of the development. The request will be considered after an inspection is performed by the town's representative. A total of up to 85% of the original bond may be released upon completion of construction. The remaining 15% will be held in escrow for a period of two years after completion of construction as surety that the stormwater management controls are functioning as intended and have been properly maintained. All temporary erosion control measures shall be removed prior to the release of the final bond.

SECTION XII: Responsibility

The applicant shall bear full responsibility for the installation, construction, and maintenance of erosion control and stormwater management methods contained in the approved plan. He/she shall also notify the Planning Board of any modifications, temporary or permanent, necessary to provide adequate erosion control and stormwater protection and the reason(s) for the change.

SECTION XIII: Inspections

The applicant is responsible for conducting weekly inspections of the erosion controls and stormwater management controls and providing a copy of the reports to the Town of Winchester representative weekly. Inspections shall also be conducted within 24 hours after every storm event that produces one-half an inch or greater of rainfall. Inspections may be made by an agent of the town during development to ensure compliance with the approved plan and that control measures are properly installed or performed and maintained. This shall be one at the developer's expense.

SECTION XIV: Waivers

Any portion of these regulations may be waived where, in the opinion of the Planning Board, strict conformity would pose an unnecessary hardship to the applicant, and such waiver would not be contrary to the spirit and intent of the regulations. The applicant shall submit any waiver request in writing and shall include the specific part of these regulations they are seeking to waive and the reason for the request.

SECTION XV: Administration and Enforcement

These regulations shall be administered by the Planning Board. The enforcement of these is vested with the Selectmen or the Building Inspector/Code Enforcement Official.

SECTION XVI: Appeals

Decisions of the Planning Board are appealable to Superior Court as set forth in RSA 677:15.

SECTION XVII: Validity

If any section or part of a section or paragraph of these regulations shall be declared invalid or unconstitutional, it shall not be held to invalidate or impair the validity, force or effect of any other section or part of a section or paragraph of these regulations.

SECTION XVIII: Amendments

These regulations may be amended by a majority vote of the Planning Board after at least one public hearing following proper notification.

SECTION XIX: Effective Date

These regulations shall take effect on 6-21-10.
Amended 8-3-15