

Stormwater Management and Erosion Control Rules and Regulations

These regulations were adopted by the Board of Selectmen on DATE pursuant to the authority granted by the Belmont Stormwater Management and Erosion Control Bylaw (“Bylaw”), § 60-325 of the Belmont General Bylaws. They apply to all activities subject to the Bylaw.

I. Permit Process

A. Regulated Activities

The Bylaw requires a Stormwater Management and Erosion Control Permit for any of the following activities:

- Connection of a pipe or other appurtenance to the Belmont sanitary sewer system*;
- Connection of a pipe or other appurtenance to the Belmont Municipal Separate Stormwater System (MS4);
- Any land disturbance (except exempt activities specified in the Bylaw) that involves:
 - An alteration that will result in land disturbances of 2,500 square feet of total area or more, or that is part of a common plan for development that will disturb 2,500 square feet or more;
 - An alteration that will increase the amount of a lot’s impervious surface area to more than 25% of the lot’s total area; or
 - Storage or permanent placement of more than 100 cubic yards of excavated material, fill, snow or ice.

The Belmont Office of Community Development (“OCD”) is the permit-granting authority.

*Sanitary sewer connections also require a Sanitary Sewer Connection Permit; please see the OCD for more information.

B. Fee Schedule

The following fees apply to Stormwater Management and Erosion Control Permits according to the regulated activity or activities requiring the permit:

Sanitary Sewer or Storm Drain Pipe/Appurtenance Connection	\$100.00
Land Disturbance – (1 and 2 family)	\$300.00
Land Disturbance – (other)	\$500.00

Fees shall be additive where multiple regulated activities are involved. For example, the fee for a Stormwater Management and Erosion Control Permit for construction of a new single-family house involving land disturbance, sanitary sewer connection, and storm drain connection shall be \$500.

Some permit applications may require the OCD to secure the services of a Licensed Professional Engineer with expertise in stormwater management and erosion control to assist with the

administration of this bylaw. These services shall be paid for by the Applicant prior to the issuance of the Stormwater Management and Erosion Control Permit.

II. Sanitary Sewer and Storm Drain Connections

A. Submittal Requirements

1. A Stormwater Management and Erosion Control Permit Application with the relevant sections completed.
2. A plan showing:
 - Location, size, length and slope of proposed service
 - Structures to be serviced*
 - Location of all clean-outs and/or manholes and/or catchbasins
 - Property lines
 - Other underground utilities as necessary
 - Measurements to relevant points (i.e. connection at main, connection at house, manholes, etc).

*Permit applications will not be processed prior to new addresses being assigned as required.

B. Design and Installation Requirements

New sanitary sewer and storm drain connections shall be designed and installed per the Sanitary Sewer and Storm Drain Regulations and Specifications included with each Permit Application.

A Street Opening Permit is required from the Department of Public Works prior to the start of work. The Department of Public Works will not issue a Street Opening Permit until the required Stormwater Management and Erosion Control Permit and/or Sanitary Sewer Connection Permit is/are issued.

The Town of Belmont storm drain system is impacted by sanitary sewage and the sanitary sewer system is impacted by clean water in the form of Infiltration and Inflow. Consistent with the requirements of Section E of the Stormwater Management and Erosion Control Bylaw and state and federal law, new services are required to be installed from the main line. Existing portions of sanitary sewer and storm drain services shall not be reused unless they are lined in place.

Abandoned services shall be cut at the main, filled with controlled density fill, and capped at the upstream and downstream end. The connection at the main shall be removed and the main shall be repaired with new pipe.

The Town of Belmont reserves the right to require lining and reuse of an existing sanitary or storm drain service on roads that have been reconstructed within the previous 5 years prior to application of a new service connection.

Pipe of different material shall be joined using a Fernco Coupling or other equivalent item meeting industry standards.

Saddle connections are allowed for 6 inch diameter services connecting to mains with a diameter of 12 inches or greater. Connections for larger diameter services require approval by the Town Engineer.

New wye connections are required for 6 inch diameter services connecting to mains with a diameter of less than 12 inches. The main shall be replaced to the nearest joint or to a section of pipe that is free from defects. A Fernco Coupling or another equivalent item shall be used to join new pipe to existing pipe.

New catch basins shall have a minimum depth of sump of 4 feet. The Office of Community Development reserves the right to require a minimum depth of sump of 6 feet when conditions require such.

C. Inspections

Inspection is required prior to backfilling. Any work backfilled without the approval of the Office of Community Development will be excavated and exposed for inspection before final approval is given.

III. Land Disturbance

Note: An Erosion Control Plan must be approved and its features and BMPs installed prior to the issuance of a Demolition Permit.

A. Applicability

All land disturbance activities subject to the Bylaw (as set forth in Section F) must obtain a Stormwater Management and Erosion Control Permit. The "Applicability" section of the Massachusetts Stormwater Standards is superseded by the explicit jurisdictional provisions of Section F of the Bylaw.

The exemption of Section F.2 (d) of the Bylaw applies only to stormwater runoff governed by an Order of Conditions from the Belmont Conservation Commission. In some situations, the Conservation Commission may not be required to apply the Massachusetts Stormwater Standards to a project within its jurisdiction, because of exemptions in the Wetlands Protection Act and Regulations and/or in the Massachusetts Stormwater Standards. In these cases, the stormwater runoff is not governed by the Order of Conditions, and thus the exemption of Section F.2(d) of the Bylaw does not apply. In addition, projects which have received an Order of Conditions are subject to the Bylaw if a direct connection to the MS4 is required.

B. Submittal Requirements

- A completed Stormwater Management and Erosion Control Permit Application with the relevant sections completed.
- A Stormwater Management and Erosion Control Plan.
 - The Checklist for Stormwater Management and Erosion Control Plan (available from OCD) must be submitted with the Stormwater Management and Erosion Control Plan.
- An Operation and Maintenance Plan.

C. In Lieu Fees

The OCD may require the applicant to contribute to the cost of design, construction, and maintenance of a public or shared stormwater facility in lieu of an onsite stormwater facility where the OCD determines that there are not sufficient site conditions for onsite Best Management Practices that will satisfy the design criteria and the performance standards set forth in the Bylaw and these Regulations. Funds so contributed may be used to design, construct, and maintain stormwater projects that will improve the quality and quantity of surface waters in Belmont by treating and recharging stormwater from existing impervious surfaces that is now discharged to said waters with inadequate treatment or recharge. The amount of any required contribution to the fund shall be determined by the OCD pursuant to standards established in the Regulations adopted pursuant to this bylaw.

The in lieu fee for one and two family projects shall be a reasonable flat fee to be set by the OCD, taking into account the typical range of costs of designing, constructing and maintaining onsite stormwater facilities on lots where such facilities are feasible.

For projects other than one and two family residential developments, the fee shall take into account each applicable Stormwater Standard that cannot be met onsite.

The fee shall be based on the estimated cost to the Town of constructing and maintaining an offsite facility to provide compensatory stormwater mitigation. The calculation of storm water fees shall be based on a uniform procedure, as determined by and on file with the OCD.

Partial fees shall be paid in lieu of full compliance for any development where the OCD determines that only partial implementation of onsite Best Management Practices is feasible. The partial fees shall be based upon the percentage of required storm water control, treatment and/ or infiltration that the practices to be implemented fail to achieve.

The OCD will not waive the requirement to construct a stormwater facility if it finds that runoff from the development may materially adversely exacerbate an existing problem.

D. Operation and Maintenance (O&M) Plan

A long-term Operation and Maintenance (O&M) Plan shall be developed and implemented to ensure that stormwater management systems function as designed. As-built drawings showing all stormwater management systems shall be submitted to the Office of Community Development at the completion of a project.

All stormwater BMPs shall be operated and maintained in accordance with the design plans and manufacturer's requirements and the Operation and Maintenance Plan approved by the OCD.

The long-term Operation and Maintenance Plan shall at a minimum include:

- (1) Stormwater management system(s) owners;
- (2) The party or parties responsible for operation and maintenance, including how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance;
- (3) The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks;
- (4) A plan that is drawn to scale and shows the location of all stormwater BMPs in each treatment train along with the discharge point;
- (5) A description and delineation of public safety features; and
- (6) An estimated operations and maintenance budget.

In addition to the Operation and Maintenance (O&M) Plan the following is required at the completion of the project:

- (1) A copy of a recorded instrument identifying the Owner of the property (or other entity if applicable) as the party responsible for the maintenance and operation of the systems. The instrument shall include the Operation and Maintenance Plan. The instrument shall state that the Owner (or other entity) of the property shall:
 - (a) maintain a rolling operation and maintenance log for the last three years, including inspections, repairs, replacement and disposal (for disposal, the log shall indicate the type of material and the disposal location);
 - (b) make this log available to the Office of Community Development upon request; and
 - (c) allow members and agents of the Office of Community Development to enter and inspect the premises to evaluate and ensure that the responsibility party complies with the Operation and Maintenance Plan requirements for each BMP.
- (2) An Operation and Maintenance Compliance Statement, certified by a registered professional engineer, stating that:
 - (a) the site has been inspected for erosion and appropriate steps have been taken to permanently stabilize any eroded areas;
 - (b) all aspects of the stormwater BMPs have been inspected for damage, wear and malfunction, and appropriate steps have been taken to repair or replace the system or portions of the system so that the stormwater at the site may be managed in accordance with the Stormwater Management Standards;
 - (c) responsible parties have been notified of their responsibility to operate and maintain the structures; and
 - (d) the Operation and Maintenance Plan for the stormwater BMPs is being implemented.

Prior to final approval, the Office of Community Development shall inspect the site to determine whether the Stormwater BMPs are operating as designed so that the stormwater at the site may be managed in accordance with the Stormwater Management Standards. Final approval shall not be granted unless and until the stormwater BMPs are functioning in accordance with the Stormwater Management Standards.

E. Design Criteria

1. Stormwater Management Standards and Handbook (Bylaw Section F.4(a))

The most recent Massachusetts Department of Environmental Protection **Stormwater Handbook** is the standard for compliance with Section 34.6.4.1(a) of the Town of Belmont Stormwater Management and Erosion Control Bylaw.

For the purposes of the Stormwater Management and Erosion Control Bylaw any reference in the Stormwater Handbook to the issuing authority shall mean the Office of Community Development.

If there is a conflict between the design criteria in the local bylaw (or rules and regulations) and the Stormwater Handbook, the stricter standard shall control.

2. Erosion and Sediment Controls (Bylaw Section F.4(b))

The Stormwater Management and Erosion Control Plan must identify: any potential adverse impacts during disturbance and construction activities; the erosion and sediment controls that the Applicant will implement and maintain to prevent these adverse impacts; and the remaining adverse impacts, if any.

3. Changes to Existing Conditions of Abutting Properties (Bylaw Section F.4(c))

The Stormwater Management and Erosion Control Plan must identify any potential change to the existing conditions of abutting properties from any increase in volume of stormwater runoff or from erosion, silting, flooding, sedimentation or impacts to wetlands, ground water levels or wells. The Report must also describe the practices and controls that the Applicant will implement and maintain to prevent these adverse impacts and the remaining adverse impacts, if any. For compliance with the stormwater runoff volume component of Section 34.6.4.1(c) of the Town of Belmont Stormwater Management and Erosion Control Bylaw, stormwater management systems shall be designed so that the post-development discharge volume does not exceed the pre-development discharge volume.

To prevent storm damage and downstream and off-site flooding, the bylaw requires that the post-development discharge volume is equal to or less than the pre-development discharge volume from the 2-year, 10-year, 25-year, and 100-year 24-hour storms for each design point. BMPs that decrease runoff volume, such as LID techniques, must be provided to meet the bylaw.

The issuing authority relies on TR 20 and 55, which are guides for estimating the effects of land use changes on runoff volume and peak rates of discharge published by Natural Resource Conservation Service (NRCS). The NRCS hydrologic calculation method TR-20 shall be utilized for estimating the effects of land use changes on runoff volume and peak rates of discharge. The OCD may determine that TR-55 shall not be used, except that TR-55 may be used for calculating the Time of Concentration (Tc) for sheet flow, shallow concentrated flow, and channel flow.

For projects that have not received site plan approval by the Planning Board prior to the effective date of these regulations, the OCD may require the use of the most current rainfall data published by the Northeast Regional Climate Center (<http://precip.eas.cornell.edu>) in lieu of Technical Paper 40 for 24-hour design storm precipitation depths for the two (2), ten (10), twenty-five (25) and one hundred (100) year frequency storms, if the OCD determines that the use of such data is necessary to prevent harm to the MS4 or abutting properties from increases in the volume of stormwater to be discharged from the site in extreme weather events.

Applicants must calculate runoff volumes from pre-existing and post-development conditions. The topography of the site may require evaluation at more than one design point, if flow leaves the property in more than one direction and the OCD may require more than one design point. An applicant may demonstrate to the OCD that a feature beyond the property boundary is more appropriate as a design point. However, the OCD has final say in determining design points.

For projects other than one and two family residential developments:

The Stormwater Management and Erosion Control Plan must identify any potential change from pre-existing and post-development conditions in the seasonal high water table and storm-related groundwater mounding at the development site and abutting properties. This shall include potential impacts to wells. The storm-related groundwater mounding analysis shall be based on the 24-hour 10 year design storm. The Plan must describe the practices and controls that the Applicant will implement and maintain the prevention of adverse impacts and the remaining adverse impacts to groundwater and wells, including the lowering of ground water levels.

4. Impact on Streams, Wetlands, or Storm Sewers (Bylaw Section F.4(d))

The Stormwater Management and Erosion Control Plan must identify any potential impact upon streams, wetlands and/or storm sewers, the mitigating measures that the Applicant will implement and maintain to prevent these adverse impacts.

For projects other than one and two family residential developments:

If the discharge is to the MS4, the Stormwater Management and Erosion Control Plan must include a certification that the discharge meets Massachusetts Surface Water Quality Standards and any applicable approved Total Maximum Daily Load (TMDL) waste load allocation is included in the Report.