

Report assessing local regulations pertaining to green roofs, infiltration practices and water harvesting

BURLINGTON, MA

Report assessing local regulations pertaining to green roofs, infiltration practices and water harvesting in Burlington

One of the requirements of the 2016 MS4 permit is to develop a report assessing existing local regulations to determine the feasibility of making, at a minimum, the following practices allowable when appropriate site conditions exist:

- i. Green roofs;
- ii. Infiltration practices such as rain gardens, curb extensions, planter gardens, porous and pervious pavements, and other designs to manage stormwater using landscaping and structured or augmented soils; and
- iii. Water harvesting devices such as rain barrels and cisterns, and the use of stormwater for nonpotable uses.

The assessment should indicate if the practices are allowed in Burlington and under what circumstances they are allowed. If the practices are not allowed, the Town will determine what factors hinder the use of these practices, what changes in local regulations may be made to make them allowable, and provide a schedule for implementation of recommendations. The Town will report in each annual report on its findings and progress towards making the practices allowable.

Members of the Stormwater Committee worked together to review the Town's Bylaws, regulations, rules and policies. Members utilized the Code and Ordinance Scoring Worksheet (and the Mass Audubon Analysis Tool for Local Land Use Regs.) and produced a report that serves to satisfy the requirements of Section 2.3.6(c) of the 2016 MS4 general permit.

Findings

There is some minor conflict in the references to infiltration practices and requirements across the Town Bylaw and Regulations.

The Burlington Stormwater Bylaw was created in 2007 in compliance with the Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit). It was updated in 2021 to require the application, unless infeasible, of

“Low Impact Development (LID) Best Management Practices listed in the Massachusetts Stormwater Handbook” and

“LID BMPs should be considered for their improvements to water quality, and ability to handle water quantity” and

“Low Impact Development techniques where adequate soil, groundwater and topographic conditions allow. These may include but not be limited to reduction in impervious surfaces, disconnection of impervious surfaces, bioretention (rain gardens), and infiltration systems.”

The Burlington Board of Health Regulations for Stormwater and Runoff Management were adopted in 2015 and are administered by the Board of Health. Section 5.2.C states that “Detention or retention basins shall be utilized only in non-residential applications. Rain gardens may be used in residential applications and must be shallow, flat on the bottom, contain deep rooted native plants and grasses, and prevent the collection of standing water.” In practice, detention basins in residential areas are consistently interpreted to mean structures that are designed to and do hold standing water. Detention basins in commercial settings are allowed and rain gardens are allowed throughout town.

Green Roofs

Green roofs are allowed, and even encouraged, and are in place in a few commercial and educational facilities. However, they are not frequently proposed, citing roof space requirements for HVAC equipment.

Recommended Action: The Town does not propose any changes to local regulations with respect to green roofs.

Infiltration Practices

There are no ordinances or regulations that prohibit the use of curb extensions, planter gardens, or porous and pervious pavements in Burlington. As stated above, in the Regulations for Stormwater and Runoff Management detention basins may be used only in commercial districts while rain gardens are allowed throughout the Town. For all infiltration practices to be allowable throughout the MS4, this Regulation would have to be amended.

Recommended Action: This stipulation is not thought to be an impediment to infiltrating stormwater within Burlington, so Town does not propose any changes to local regulations with respect to rain gardens, curb extensions, planter gardens, porous and pervious pavements, and other designs to manage stormwater using landscaping and structured or augmented soils.

Water Harvesting Devices

Water harvesting devices such as rain barrels and cisterns are not directly addressed in the Town’s Bylaws and Regulations. However, they are encompassed within the practices encouraged in the Stormwater Bylaw such as “reduction in impervious surfaces, disconnection of impervious surfaces, bioretention (rain gardens), and infiltration systems.” The Town encourages the use of rain barrels, offering them for sale every other year.

The Massachusetts state plumbing code does not cover re-use of rainwater, as it is not part of the domestic potable water distribution system for outside irrigation, but it is otherwise permitted. The use of rainwater for toilet flushing is prohibited by the plumbing code.

Recommended Action: The Town does not propose any changes to local regulations with respect to water harvesting devices.