Small Project Stormwater Facility Planning and Design Guidance

For Projects with less than 5000 SF of Disturbance

Intent

The following guidelines are intended for use by property owners and site developers to assist with meeting the Town of Milford's Stormwater requirements when there will be total site disturbance of less than 5000 square feet. Stormwater management is required by the Town to comply with the mandates of the US Environmental Protection Agency (EPA) to minimize the impacts of site-generated stormwater on the Town's stormwater system and surface waters. Construction-related changes to on-site drainage systems and patterns, regardless of size, can result in flooding and degradation of water quality.

Design Considerations for Stormwater and Small Projects

To reduce the burden on the property owner and/or applicant, specific engineering and stormwater facility requirements are intended to be kept to a minimum and appropriate for the size of the project and area of disturbance. Applicants are encouraged to utilize Best Management Practices (see **Resources**) in keeping with the scale of the project. The goal of the design should be:

- Avoiding construction-phase contaminated runoff
- Not increasing the quantity of runoff from the site
- Avoiding the potential for untreated or contaminated runoff from leaving the site in the future.

These plan components can take many forms. Often they will include some means of infiltrating runoff and for providing treatment of runoff before it leaves the site.

Construction Phase

During construction soil will likely be disturbed on-site which often leads to erosion and runoff. Additionally, trucks and equipment running over the disturbed soil will carry soil from the site. Results from this construction activity can lead to sediment-laden runoff which clogs catch basins, culverts, roadside ditches, and stormwater pipes.

Appropriate Best Management Practices (See **Resources**)

- Construction entrances and exits
- Minimizing the area of disturbance
- Keeping disturbed soils covered as much as possible with mulch
- Directing runoff to areas where the sediment can be removed

Post-Construction Phase

Once construction is complete, the final grading and types of groundcover can still allow stormwater to leave the site if adequate techniques are not utilized. Maintaining stormwater on-site is the goal and is strongly recommended.

Appropriate Best Management Practices (See **Resources**)

- Infiltration techniques

If stormwater must leave the site, the goal should be that the **quantity** leaving the site be equal to or less than what would be generated by an equivalent undeveloped property. The **quality** must be such that it cannot degrade receiving waters or create problems at off-site facilities.

Design Guidance

The use of appropriate Best Management Practices for both the **Construction** and **Post-Construction** phases is very much dependent on the size and nature of the storm that creates the runoff. There is always the possibility that a storm, due to its size and unique nature, will not be adequately handled by the Best Management Practices that are used.

However, Best Management Practices should be utilized to address runoff from a **design storm**. A reasonable design storm for engineering of projects with less than 5000 SF of total site disturbance is the **10 year, 24 hour storm**. This is a storm that lasts for approximately 24 hours and whose intensity would be anticipated to occur only once in ten years (although with spring thaw and high intensity storms seen more often in recent year equivalent runoff occurs more often than once in 10 years).

The approach generally used to size onsite facilities to treat runoff during and post-construction is to consider a specific amount of rainfall that falls on the site and collects in any given area. It is recommended that 1" of rainfall be captured and treated. In no case should the runoff treated be equivalent to less than ½" of rainfall.

Some Additional Thoughts

The Town of Milford must comply with and implement EPA stormwater permitting requirements that cover many small communities. The Town is responsible for protecting the stormwater system and valuable receiving waters from stormwater degradation. While these Design Considerations are intended to be as minimally burdensome as possible to the property owner or site developer, there may be instances or specific site conditions where even greater efforts are required to meet environmental standards and protection. The Office of Community Development strongly recommends that you consult with Staff members at the earliest stage possible to discuss your project and determine the most appropriate Best Management Practices.

Resources

Office of Community Development
603.249.0620
www.milford.nh.gov

Staff Resources:
Fred Elkind, Stormwater Coordinator
Dana MacAllister, Building Official/Health Officer
Tim Herlihy, Deputy Building Official/Health Officer
Jodie Levandowski, Town Planner

The Stormwater Ordinance, Development Regulations and all necessary applications and checklists are available at: http://www.milford.nh.gov/town/departments/stormwater

For more information on the EPA's MS4 Program and a menu of Best Management Practices (BMP) see: http://cfpub.epa.gov/npdes/stormwater/munic.cfm

For more information on Stormwater from the State of NH and DES check out: http://des.nh.gov/organization/divisions/water/stormwater/index.htm