

SECTION 5 – POST CONSTRUCTION STORMWATER MANAGEMENT

This minimum control measure is a critical component of the stormwater management program because stormwater runoff from developed sites often flows to storm sewer systems and ultimately is discharged into local rivers and streams. Runoff from these development and/or redevelopment areas has been shown to significantly affect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction stormwater discharges is the most cost-effective approach to stormwater quality management.

There are two significant water quality impacts generally associated with post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans.

The second significant water quality impact occurs due to the increased quantity of water delivered to the waterbody during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving waterbody. The effects of this process include stream bank scouring and downstream flooding, which often leads to a loss of aquatic life and damage to property.

An effective post construction site runoff control program will minimize water quality impacts and attempt to maintain pre-development runoff conditions.

5.1 REQUIREMENTS

The development, implementation and enforcement of a program, or modification of an existing program is required to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development, that discharge into the Departments storm sewer systems or directly to the waters of the State. The program shall ensure that controls are implemented to require appropriate infiltration practices, reduction of pervious surface, creation of or conversion to sheet flow, measures and/or structures to reduce sediment discharge and any other innovative measures that will prevent or minimize water quality impacts and including the following.

- 5.1.1 The development and implementation or modification of strategies which include a combination of structural and / or non-structural best management practices.

5.1.2 Use of an ordinance, regulatory mechanism or procedures to address post construction runoff from new development and redevelopment projects to the extent allowable under State law.

5.1.3 Ensure long term operation and maintenance of Best Management Practices.

Appropriate BMP's and measurable goals for this minimum control measure must be determined. These must include the persons(s) or position(s) responsible and implementation dates for each BMP.

5.2 BEST MANAGEMENT PRACTICES

The following BMP's will be utilized in the implementation of the program to address the minimum control measure for Post Construction Stormwater Management.

5.2.1 Requirements for Structural and Non-Structural BMP's

The Department will require structural and non structural BMP's for projects disturbing greater than or equal to one (1) acre.

The criteria are intended to help evaluate stormwater discharges and the methods that may be used for the treatment of stormwater before it reaches an outlet.

Several documents are utilized for establishing guidelines and procedures for addressing post construction runoff in planning, design and construction for state owned, state funded projects or projects tying into a state owned system. These documents include the following:

- CTDOT Drainage Manual, October 2000 and supplements thereto
- Connecticut Guidelines for Soil Erosion and Sediment Control, DEP Bulletin 34, 2002 and supplements thereto
- Connecticut Stormwater Quality Manual

5.2.2 Procedures for Addressing Post Construction Runoff from Construction and Reconstruction Projects

Following the 2004 Stormwater Quality Manual and the CTDOT Drainage Manual stormwater management BMP's are required and have become design standards for all projects. BMP enforcement and maintenance is outlined in the CT DEEP Construction General Permit renewed on October 1, 2013.

5.2.3 Ensuring Long Term Operation and Maintenance of Best Management Practices

The Department is divided into four maintenance districts across the state. Each maintenance district will be responsible for the long term operation and maintenance of the Department's facilities in each of the respective districts. Maintenance for rails will be handled by the Office of Rails. This will include storm sewer maintenance including cleaning and maintenance of catch basins, stormwater treatment systems and detention / retention and sedimentation structures.

Long term operation and maintenance of best management practices shall be in accordance with Section 6 – Good Housekeeping / Pollution Prevention of this plan.