ORDINANCE # 854

Stormwater Management / Operation and Maintenance Requirements

Section 1. Purpose and Authority

In accordance with the provisions of Chapters 98, 124, 126, 440, 444, and 446h of the General Statutes of the State of Connecticut, as amended, the City of Shelton hereby adopts the following Stormwater Management Ordinance for the following purposes:

Increased development without proper consideration of stormwater impacts can be a significant source of pollution to Long Island Sound, its tributaries, and other waters of the state. The state's water resources are valuable natural, economic, recreational, cultural and aesthetic resources. The protection and preservation of these waters is in the public interest and is essential to the health, welfare and safety of the citizens of the state. It is, therefore, the purpose of this ordinance to protect and preserve the waters within Shelton from nonpoint sources of pollution through the proper management of stormwater flows and minimization of inputs of suspended solid, pathogens, toxic contaminants, nitrogen and floatable debris to these flows.

Section 2. Definitions

aquifer – a geologic formation, group of formations or part of a formation that contains sufficient saturated, permeable materials to yield significant quantities of water to wells and springs

BMPs – best management practices - techniques or structural devices that are effective practical ways of preventing or reducing the discharge of pollutants directly or indirectly to receiving waters or stormwater conveyance systems. BMP's also include treatment practices, operating procedures and maintenance requirements.

"first inch of rain" – the first inch of rainfall during a single event. The initial runoff from the first inch of rain contains higher pollutant concentrations than the subsequent runoff, due to initial washing off of dry weather deposits in significantly higher concentrations than those washed off later in a storm. This effect is particularly pronounced with initial heavy rainfalls.

groundwater – water found beneath the ground surface that completely fills the open spaces between particles of sediment and within rock formations

impervious surface – material or structure on, above or below the ground that does not allow precipitation or surface water to penetrate directly into the soil

site – a single parcel, together with any adjacent waters, which is the subject of an application for zoning approval, subdivision approval, coastal site plan review, or an inland wetlands permit

site stormwater management plan – a document approved at the site design (application) phase that outlines the measures and practices used to control stormwater runoff at a site. The document shall include an operation maintenance manual with schedules.

sediment – solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site or origin by erosion

trash hood – feature in a catch basin which traps debris such as litter and keeps it from being discharged from the catch basin

urban stormwater runoff – precipitation that falls onto the surfaces of roofs, streets, parking lots, roads and the grounds of developed areas. Urban precipitation is not absorbed by the ground or retained in its surface, but collects and runs off, carrying a wide variety of pollutants such as oil-based contaminants, heavy metals (copper and lead), nutrients and bacteria

Section 3. Application Thresholds for Requiring Stormwater Management Plans

A stormwater management plan shall be included as a part of any application for zoning approval, subdivision approval, coastal site plan review, or an inland wetlands permit where:

(1) the application pertains to a development or construction project disturbing one or more acres of total land area on a site
(2) the application pertains to any site with one acre or more of impervious cover;
(3) the application proposes new residential development of five or more units;
(4) the application pertains to any new industrial or commercial project.

Section 4. Stormwater Management Plan Content

Where a stormwater management plan is required, such plan shall provide, at a minimum, the following information:

(1) Soil characteristics of the site.
(2) Location of the closest surface water bodies and wetlands to the site, and the depth to any groundwater or aquifer areas on or adjacent to the site. In the case of tidal waters, provide the mean high water and high tide elevations.
(3) Location and description of all proposed stormwater control BMPs for both construction activities and post-construction long-term stormwater control.
(4) An operation and maintenance manual and schedules for any trash hoods, catch basins, or other BMP devices used to treat runoff, plus a BMP inspection plan with maintenance report forms.
(5) Calculations of stormwater runoff rates, suspended solids removal rates, and soil infiltration rates before and after completion of the activity proposed in the application.
(6) A hydrologic study of pre-development site conditions. Hydrology studies shall be conducted at a level of detail commensurate with the probable impact of the proposed activity.
(7) An executive summary of the plan.
(8) As As-Built Record Drawing of the onsite collection system and post construction BMPs.

The Stormwater Management Plan shall be sealed/endorsed by a Professional Engineer registered in the State of Connecticut.

Section 5. Stormwater Management Plan Goals

Stormwater Systems shall be designed for the following goals and objectives:

(1) Prevent flooding of onsite or offsite properties
(2) Feed and recharge inland wetlands, surface and subsurface waters.
(3) Minimize pollutant loads in stormwater runoff into inland wetlands, surface and subsurface waters.

(4) Maintain the hydrology of existing sub watersheds including wetlands and watercourses.
(5) All on-site stormwater facilities shall be properly maintained by the owner such that they do not become nuisances.
(6) All stormwater management systems and runoff control structures located on private property shall be accessible at all times for inspection by City forces.

Section 6. Design Standards

The stormwater management plan shall be consistent with the following design criteria. If an application is also subject to the requirements of an aquifer protection overlay zone or any other requirements for nonpoint source pollution control, the more stringent requirements shall control.

(1) Direct channeling of untreated surface water runoff into adjacent ground and surface waters shall be discouraged.
(2) No adverse increase in urban stormwater runoff from the site shall result from the proposed activity.
(3) Design and planning for site development shall provide for minimal disturbance of pre-development natural hydrologic conditions, and shall reproduce such conditions after completion of the proposed activity, to the maximum extent feasible.
(4) Pollutants shall be controlled at their source to the maximum extent feasible in order to contain and minimize contamination.
(5) Stormwater management systems shall be designed and maintained to manage site runoff in order to eliminate surface and groundwater pollution, prevent flooding and, where required, control peak discharges and provide pollution treatment.
(6) Stormwater management systems shall be designed to collect, retain and treat the first inch of rain on-site, so as to trap floating material, oil and litter. BMP techniques to achieve treatment of the first inch of rainfall include oil and grit separators, and trash hoods.
(7) On-site storage of stormwater shall be employed to the maximum extent feasible. On-site storage methods include but are not limited to landscaped depressions, grass swales, infiltration trenches and retention or detention basins.
(8) Post-development runoff rates and volumes shall not exceed pre-development rates and volumes where required. Stormwater runoff rates and volumes shall be controlled by slowing runoff velocities and encouraging infiltration. BMP methods for controlling runoff and encouraging infiltration include the minimization of impervious surfaces, minimization of curbing and collection, the use of grass or vegetative filter zones, landscape depressions, slotted curb spacers, perforated pipes for conveying stormwater, establishment of buffers from streams, wetlands and waterbodies, and any combination of methods, where appropriate.
(9) Stormwater treatment systems shall be employed where necessary to ensure that the average annual loadings of total suspended solids (TSS) following the completion of the proposed activity at the site are no greater than such loadings prior to the proposed activity. BMP methods for stormwater treatment include infiltration through vegetative strips, grass swales and detention basins.
(10) All stormwater BMPs shall be designed in a manner to minimize the need for maintenance and reduce the chances of failure. Design guidelines are outlined in the most recent version of the Connecticut Stormwater Quality Manual.

Section 7. Requirements for Site Plan Revisions/Modifications

In cases where an application for a site plan revision or modification is submitted to Planning and Zoning or Inland Wetlands, the following requirements shall apply:

(1) Any site plan application that proposes a major expansion of the development footprint i.e. the expansion of surface parking or the increase of impervious surface shall require the submission of a Stormwater Management Plan for the new construction proposed for the site.
(2) Any site plan application that proposes a modification or expansion shall require the submission of an Operation and Maintenance Manual with a Maintenance Schedule for the entire stormwater collection system on the site, in the event that no such document was submitted to and approved by the City when the original development was constructed.
(3) A site plan application that proposes a modification or expansion may require the applicant/property owner to retrofit the existing stormwater collection system with catch basin hoods.
(4) The requirements of Section 7 shall apply to any development approved or constructed prior to the effective date of this ordinance.

Section 8. Stormwater System Operation and Maintenance

The operation and maintenance of a private stormwater management or collection system is the sole responsibility of the property owner. The requirements and responsibilities detailed in this section applies to all sites and existing developments, whether commercial, industrial or residential. Private stormwater management and collection systems constructed before the effective date of this ordinance are subject to these operation and maintenance regulations.

Routine Maintenance

(1) All stormwater BMPs shall be maintained according to the measures outlined in the most recent version of the Connecticut Stormwater Quality Manual and as detailed in the Stormwater Management Plan for the approved development.
(2) All Stormwater BMPs shall be maintained by the property owner of any development constructed prior to the effective date of this ordinance, whether or not there is an operations and maintenance manual for the existing stormwater collection system.
(3) The person(s) or organization(s) responsible for maintenance shall be designated in the Stormwater Management Plan. Options include:
    - Property owner
    - Homeowner's association, provided that provisions for financing necessary maintenance are included in deed restrictions or other contractual agreements
    - The City of Shelton through an executed maintenance agreement
(4) Maintenance agreements shall specify responsibility for financing maintenance

Non-routine Maintenance

(1) Non-routine maintenance includes maintenance activities that are expensive but infrequent, such as pond dredging or major repairs to stormwater structures.
(2) Non-routine maintenance shall be performed on an as-needed basis based on information gathered during regular inspections.

Annual O&M Certification

(1) The Property Owner is required to obtain an annual certification from a Registered Professional Engineer (P.E.) that maintenance is being performed on structural best management practices (BMPs) and the onsite stormwater collection system. The annual certification must be submitted to the City with the appropriate maintenance report forms."

Failure To Maintain

(1) If routine or non-routine maintenance activities are not completed in a timely manner or as specified in the approved Stormwater Management Plan or Operation and Maintenance Manual, the City of Shelton may complete the necessary maintenance at the owner's/operator's expense.
(2) The City reserves the right to require the owner of any development constructed before the effective date of this ordinance to prepare an Operation and Maintenance Manual for a private stormwater management system that is not properly maintained and/or causes a nuisance.

Inspections

(1) The person(s) or organization(s) responsible for maintenance of a commercial, industrial or residential development shall inspect stormwater BMPs on a regular basis as outlined in the Operation and Maintenance plan. If there is no Operation and Maintenance Plan, the stormwater collection system shall be inspected at least once per calendar year, preferably on or about April 15th. All sidewalks and parking lots shall be swept clean of all accumulated sand or grit applied for winter traction purposes at or about the same time.
(2) Authorized representatives of the City of Shelton may enter a property at reasonable times to conduct on-site inspections of stormwater BMPs and maintenance activities being performed on those BMPs.
(3) For BMPs maintained by the property owner or homeowner's association, inspection and maintenance reports shall be filed with the Office of the City Engineer as provided for in the plan.

Section 9. Violations Deemed a Public Nuisance

Any condition caused or permitted to exist in violation of any of the provisions of Section 8 of this Ordinance, or is a threat to public health, safety and welfare and is declared and deemed a nuisance, may be summarily abated or restored at the violator's expense and/or a civil action to abate, enjoin or otherwise compel the cessation of such nuisance may be taken.

Any person or entity permitting such condition to exist in violation of Section 8 or who permits a declared deemed nuisance to exist, may be fined a penalty not to exceed $250.00 for each violation which may be enforced pursuant to Section 7-148 10a of the Connecticut General Statutes. The persons authorized to issue such citations are the City Engineer, the Assistant City Engineer or the Director of Public Works.

Section 10. Adoption of Ordinance

This ordinance shall be in full force and effect 30 days after its final passage and adoption. All prior ordinances and parts of ordinances in conflict with this ordinance are hereby repealed.