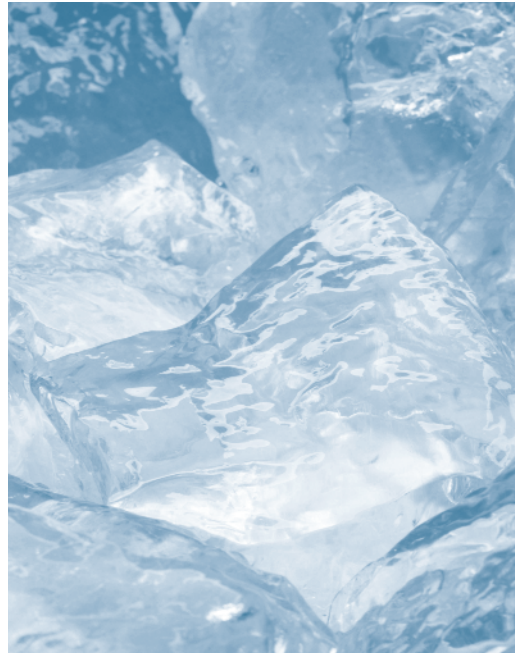


Appendix C
Model Ordinances





This Appendix contains model ordinances for:

- *Illicit Discharge Detection and Elimination (USEPA, 2002)*
- *Stormwater Operation and Maintenance (CWP, 2002)*

A model ordinance that was developed for protection of Long Island Sound is included, as well as examples of specific ordinances or sections of ordinances that have been adopted by various Connecticut municipalities. These model ordinances and examples are not exhaustive and are not necessarily appropriate for adoption in their entirety without modification.

References

Center for Watershed Protection (CWP). 2002a. *Operation and Maintenance*. URL <http://www.stormwatercenter.net/>.

Cromwell, Town of. Zoning Regulations. http://www.cromwellct.com/regs/zregs_03.pdf

Cromwell, Town of. Subdivision Regulations. http://www.cromwellct.com/regs/Subdivision_11_01.pdf

DEP. 1996. Coastal Water Quality Protection: A Guide for Local Officials.

East Lyme Plan of Conservation and Development 1999 <http://www.eltownhall.com/newindex1.htm> (see link to “Plan of Development”)

Enfield, Town of. Zoning Regulations. <http://www.enfield.org/PlanZone/Enfield%20Zoning%20Regs%20On-Line2.pdf>

Farmington, Town of. Zoning Regulations <http://www.farmington-ct.org/government/zoningregulations.pdf>

Glastonbury, Town of. Planning and Zoning Regulations <http://www.glasct.org/communitydevelopment/commtemplateDIV.htm>

South Windsor, Town of. Zoning Regulations. <http://www.southwindsor.org/TownHall/ZBA/zoning%20regs.pdf>

USEPA. 2002. Model Ordinances to Protect Local Resources: Illicit Discharges. <http://www.epa.gov/owow/nps/ordinance/discharges.htm>

Windsor, Town of. Zoning Regulations. <http://townofwindsorct.com/Planning/zoning.pdf>

Woodbury, Town of. Subdivision Regulations. <http://www.woodburyct.org/SubdivisionRegulations041002.pdf>



Model Illicit Discharge and Connection Stormwater Ordinance I

ORDINANCE NO. _____

Section 1. Purpose/Intent.

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of (_____) through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

- (1) To regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user
- (2) To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system
- (3) To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance

Section 2. Definitions.

For the purposes of this ordinance, the following shall mean:

Authorized Enforcement Agency: employees or designees of the director of the municipal agency designated to enforce this ordinance.

Best Management Practices (BMPs): schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act. The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Construction Activity. Activities subject to NPDES Construction Permits. Currently these include construction projects resulting in land disturbance of 1 acre or more. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

Hazardous Materials. Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illegal Discharge. Any direct or indirect non-storm water discharge to the storm drain system, except as exempted in Section X of this ordinance.

Illicit Connections. An illicit connection is defined as either of the following:

Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or, Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Industrial Activity. Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b)(14).

National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit. means a permit issued by EPA (or by a State under authority delegated pursuant to 33 USC § 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general areawide basis.

Non-Storm Water Discharge. Any discharge to the storm drain system that is not composed entirely of storm water.

Person. means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Pollutant. Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides,



and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Premises. Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Storm Drainage System. Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Storm Water. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

Stormwater Pollution Prevention Plan. A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to Stormwater, Stormwater Conveyance Systems, and/or Receiving Waters to the Maximum Extent Practicable.

Wastewater means any water or other liquid, other than uncontaminated storm water, discharged from a facility.

Section 3. Applicability.

This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

Section 4. Responsibility for Administration.

The _____ [authorized enforcement agency] shall administer, implement, and enforce the provisions of this ordinance. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Director of the authorized enforcement agency to persons or entities acting in the beneficial interest of or in the employ of the agency.

Section 5. Severability.

The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof

to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance.

Section 6. Ultimate Responsibility.

The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

Section 7. Discharge Prohibitions.

Prohibition of Illegal Discharges.

No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

- (1) The following discharges are exempt from discharge prohibitions established by this ordinance: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wetland flows, swimming pools (if dechlorinated – typically less than one PPM chlorine), fire fighting activities, and any other water source not containing Pollutants.
- (2) Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.
- (3) Dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test.
- (4) The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval



has been granted for any discharge to the storm drain system.

Prohibition of Illicit Connections.

- (1) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.
- (2) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
- (3) A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

Section 8. Suspension of MS4 QAccess.

Suspension due to Illicit Discharges in Emergency Situations

The _____ [authorized enforcement agency] may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

Suspension due to the Detection of Illicit Discharge

Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for a reconsideration and hearing.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

Section 9. Industrial or Construction Activity Discharges.

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of

compliance with said permit may be required in a form acceptable to the _____ [authorized enforcement agency] prior to the allowing of discharges to the MS4.

Section 10. Monitoring of Damages.

- 1. Applicability.

This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

- 2. Access to Facilities.

(1) The _____ [authorized enforcement agency] shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.

(2) Facility operators shall allow the _____ [authorized enforcement agency] ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

(3) The _____ [authorized enforcement agency] shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's storm water discharge.

(4) The _____ [authorized enforcement agency] has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the _____ [authorized enforce-



ment agency] and shall not be replaced. The costs of clearing such access shall be borne by the operator.

- (6) Unreasonable delays in allowing the _____ [authorized enforcement agency] access to a permitted facility is a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with a NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.

- (7) If the _____ [authorized enforcement agency] has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

Section 11. Requirement to Prevent, Control, and Reduce Storm Water Pollutants by the Use of Best Management.

[Authorized enforcement agency] will adopt requirements identifying Best Management Practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent

practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPP) as necessary for compliance with requirements of the NPDES permit.

Section 12. Watercourse Protection.

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

Section 13. Notification of Spills.

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the authorized enforcement agency in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the _____ [authorized enforcement agency] within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

Section 14. Enforcement.

- 1. Notice of Violation.

Whenever the _____ [authorized enforcement agency] finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the authorized enforcement agency may order compliance by



written notice of violation to the responsible person. Such notice may require without limitation:

- (a) The performance of monitoring, analyses, and reporting;
- (b) The elimination of illicit connections or discharges;
- (c) That violating discharges, practices, or operations shall cease and desist;
- (d) The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property; and
- (e) Payment of a fine to cover administrative and remediation costs; and
- (f) The implementation of source control or treatment BMPs.

If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by a designated governmental agency or a contractor and the expense thereof shall be charged to the violator.

Section 15. Appeal of Notice of Violation.

Any person receiving a Notice of Violation may appeal the determination of the authorized enforcement agency. The notice of appeal must be received within ___ days from the date of the Notice of Violation. Hearing on the appeal before the appropriate authority or his/her designee shall take place within 15 days from the date of receipt of the notice of appeal. The decision of the municipal authority or their designee shall be final.

Section 16. Enforcement Measures After Appeal.

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within ___ days of the decision of the municipal authority upholding the decision of the authorized enforcement agency, then representatives of the authorized enforcement agency shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth above.

Section 17. Cost of Abatement of the Violation.

Within ___ days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within ___ days. If the amount due is not paid within a timely manner as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment. Any person violating any of the provisions of this article shall become liable to the city by reason of such violation. The liability shall be paid in not more than 12 equal payments. Interest at the rate of ___ percent per annum shall be assessed on the balance beginning on the ___ st day following discovery of the violation.

Section 18. Injunctive Relief.

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this ordinance, the authorized enforcement agency may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

Section 19. Compensatory Actions.

In lieu of enforcement proceedings, penalties, and remedies authorized by this Ordinance, the authorized enforcement agency may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, etc.

Section 20. Violations Deemed a Public Nuisance.

In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this Ordinance is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and 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.

Section 21. Criminal Prosecution.

Any person that has violated or continues to violate this ordinance shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to



a criminal penalty of _____ dollars per violation per day and/or imprisonment for a period of time not to exceed _____ days. The authorized enforcement agency may recover all attorney’s fees court costs and other expenses associated with enforcement of this ordinance, including sampling and monitoring expenses.

Section 22. Remedies Not Exclusive.

The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to seek cumulative remedies.

Section 23. Adoption of Ordinance.

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

PASSED AND ADOPTED this _____ day of _____, 20____, by the following vote:

Stormwater Operation and Maintenance Model Ordinance

Unlike other model ordinances, the Operation and Maintenance ordinance language is not “stand-alone.” Operation and Maintenance language would be a part of a broader stormwater ordinance.

Section I. Definitions

Stormwater Treatment Practice: Structural device, measure, facility, or activity that helps to achieve stormwater management control objectives at a designated site.

Site Stormwater Management Plan: A document approved at the site design phase that outlines the measures and practices used to control stormwater runoff at a site.

Section II. Design

1. 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 _____ (local or state stormwater manual).

Rather than incorporate specific stormwater design or maintenance standards into the ordinance itself, it is best to reference “the most recent version” of a stormwater manual. This way, tech-

nical information can remain up-to-date without making legal changes to the ordinance.

2. Stormwater easements and covenants shall be provided by the property owner for access for facility inspections and maintenance. Easements and covenants shall be recorded with (stormwater agency) prior to the issuance of a permit.
3. Final design shall be approved by (stormwater agency)

Section III. Routine Maintenance

1. All stormwater BMPs shall be maintained according to the measures outlined in the most recent version of _____ (local or state stormwater manual), and as approved in the permit.
2. The person(s) or organization(s) responsible for maintenance shall be designated in the plan. Options include
 - Property owner
 - Homeowner’s association, provided that provisions for financing necessary maintenance are included in deed restrictions or other contractual agreements
 - _____ (stormwater management agency)
3. Maintenance agreements shall specify responsibilities for financing maintenance.

Section IV. Nonroutine Maintenance

1. Nonroutine maintenance includes maintenance activities that are expensive but infrequent, such as pond dredging or major repairs to stormwater structures.
2. Nonroutine maintenance shall be performed on an as-needed basis based on information gathered during regular inspections.
3. If nonroutine maintenance activities are not completed in a timely manner or as specified in the approved plan, _____ (stormwater agency) may complete the necessary maintenance at the owner’s/operator’s expense.

Section V. Inspections

1. The person(s) or organization(s) responsible for maintenance shall inspect stormwater BMPs on a regular basis as outlined in the plan.



2. Authorized representatives of _____ (stormwater agency) may enter at reasonable times to conduct on-site inspections or routine maintenance.
3. For BMPs maintained by the property owner or homeowner's association, inspection and maintenance reports shall be filed with _____ (stormwater agency) as provided for in the plan.
4. Authorized representatives of _____ inspections to confirm the information in the reports filed under Section V(3).

Model Ordinance for Stormwater Management¹

Background

In 1991, the Connecticut General Assembly passed Public Acts 91-398 (amending CGS Section 8-23(a)) and 91-170 (amending CGS Sections 8-2(b), 8-3b and 8-35a). These acts require, in part, that zoning regulations and plans of conservation and development adopted by coastal municipalities be made with reasonable consideration for greater protection of Long Island Sound water quality. In particular, the Acts required municipalities to adopt regulations and plans with reasonable consideration and protection of the ecosystem and habitat of Long Island Sound and to design them to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. It is well documented that improperly managed stormwater flows do make significant contributions to coastal pollution, resulting in hypoxic (low dissolved oxygen) conditions and increases in pathogens, toxic contaminants and floatable debris. Therefore, improved stormwater management and treatment will result in decreases in these pollutants.

In order to assist municipalities in meeting the substantive as well as legal requirements of this legislation, the Connecticut Department of Environmental Protection's Office of Long Island Sound Programs developed this Model Stormwater Ordinance for municipal use. The approach of providing a model ordinance as opposed to zoning regulations was selected due to the need for consistent approaches to stormwater management in various municipal regulations such as zoning regulations, wetlands regulations, coastal site plan review and aquifer protection regulations. Thus, rather than provide model site plan regulations, which may conflict with existing municipal regulations, an ordinance provides a more appropriate means of ensuring consistency among various municipal regulations.

Depending upon the current format of your regulations, portions of this ordinance can be inserted where appropriate. Therefore, the first task is to identify appropriate sections. For example, should your regulations have an environmental section, this may be the most appropriate place for incorporation; however, you may have a drainage section that would be more appropriate. Since the system of regulations varies from town to town, this model may have to be reorganized in order to match an existing format. Prior to adopting any stormwater regulations, the municipality's corporation counsel should be consulted.

Although this model ordinance was initially developed for use by coastal municipalities in meeting a legislative requirement, it is clear that stormwater must be better controlled statewide. Therefore, all Connecticut municipalities can adopt this ordinance, which can also help municipalities meet requirements contained in state stormwater general permits for municipal separate stormwater sewer systems. In reviewing the model ordinance, please note that suggested ordinance language is in normal type; explanations or commentary are in italics.

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 Town of _____ 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 (town name) 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.

¹Excerpted from *Coastal Water Quality Protection: A Guide for Local Officials* (DEP, 1996).



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 pollution

“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

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

Application Requirements

Stormwater management plans should be strongly encouraged for all land use and development projects, even where they are not required. 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; *Applicants should be made aware that any development which calls for*

a total disturbance of over 5 acres also requires the submission of registration to the Connecticut DEP under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.

2. the application pertains to any site with one acre or more of impervious cover;
3. the application proposes new residential development of three or more units;
4. the application pertains to any new industrial or commercial project; or
5. the commission which has jurisdiction over the application has required submission of a stormwater management plan pursuant to written findings that the activity proposed in the application has the potential to cause significant nonpoint source pollution to groundwater or surface water drinking supplies, or to Long Island Sound or any other waters of the state. Such findings may be based upon a written request by the Commissioner of Environmental Protection.

If the commission determines that the activity proposed in an application may result in significant nonpoint source pollution to groundwater or surface water drinking supplies, or to Long Island Sound or any other waters of the state, it may refer the application, including the stormwater management plan, to the Commissioner of Environmental Protection for a determination as to whether a discharge permit under section 22a-430 of the General Statutes, or other state authorization, is required.

Contents of stormwater management plan:

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. DEP ground and surface water quality classification of waterbodies on and adjacent to the site.
4. Identification of any waterbodies on and adjacent to the site documented by DEP as not meeting water quality standards. *The list of impaired waterbodies, documented by DEP pursuant to Section 303(d) of the Federal Clean Water Act, and can be accessed online at <http://www.dep.state.ct.us/wtr/wq/impaired2002.pdf>*



5. Location and description of all proposed stormwater control BMPs for both construction activities and post-construction long-term stormwater control.
6. Proposed maintenance and operation manual or schedule for any trash hoods, catchbasins, or other BMP devices used to prevent runoff, encourage sheet flow or infiltration, or treat stormwater.
7. Calculations of stormwater runoff rates, suspended solids removal rates, and soil infiltration rates before and after completion of the activity proposed in the application.
8. 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 and should extend downstream to the point where the proposed activity causes less than a five percent change in the peak flow rates.

Standards and Criteria for Decision

In order to approve any application for which a stormwater management plan is required, the commission shall find the stormwater management plan consistent with the following criteria. If such 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 prohibited.
2. No net increase in urban stormwater runoff from the site, to the maximum extent possible, 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. *Such an approach is not only cost-effective but more efficient, by reducing the need for extensive restoration efforts.*

Methods include but are not limited to sweeping of streets and parking lots, especially in the early spring, the use of oil traps and sediment basins prior to infiltration, the use of pervious surfaces and encouragement of sheet flow to filter strips.

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. 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. Alternatively, stormwater treatment systems shall remove 80% of TSS from the site on an average annual basis. *BMP methods for stormwater treatment include infiltration through vegetative strips, grass swales and detention basins.*



Excerpts from Local Regulations

From Cromwell SECTION XI – SPECIAL REGULATIONS

11.2 STORMWATER RUNOFF CONTROL REGULATION

- a. Stormwater Runoff Control Plans. Site Plans shall be accompanied by plans providing measures for detention and controlled release of stormwater runoff when proposed developments contain an area of five (5) acres or more or the impervious area is 60.0% or greater. All other developments may be required to provide such measures if deemed necessary to protect the public health, safety and well-being by the Planning and Zoning

Commission.

1. When required, measures for the detention and controlled release of stormwater runoff shall meet the following standards:
 - a. Release rate shall not exceed the rate of runoff for the same site in its undeveloped state for all intensities and durations of rainfall.
 - b. Required volume for stormwater detention shall be calculated on the basis of runoff from a 50-year frequency rainfall, as published by the National Weather Service or other recognized agency. The detention volume required shall be that necessary to handle the runoff of a 50-year frequency rainfall, for any and all durations, from the proposed development less that volume discharged during the same duration at the approved release rate as specified above.
 - c. In all cases, runoff shall be computed in accordance with *Technical Release #55*, Engineering Division, Soil Conservation Service, USDA, January, 1975, as amended.
2. The ability to retain and maximize the ground water recharge capacity is encouraged. Design of the stormwater runoff control system shall give consideration to providing ground water recharge.
3. All on-site facilities shall be properly maintained by the owner such that they do not become nuisances.
4. All runoff control structures located on private property shall be accessible at all times for Town inspection.

From Cromwell, Section 300 Regulations, j. STORMWATER RUNOFF CONTROL:

The use of “best management practices” (BMPs) to minimize nonpoint source pollution shall be considered by the applicant, including but not limited to those BMPs discussed in the “Nonpoint Source Pollution Management Plan for the Town of Cromwell” dated October 1992. A written description of this consideration shall be submitted with the application.

From East Lyme Plan of Conservation and Development, Section Seven - Transportation From Parking Recommendations:

Promote the use of permeable lot paving materials that will reduce surface water runoff into the municipal waste water treatment system. Best management practices for roads and parking areas should be examined to include minimized use of curbing where appropriate, minimized disturbance when building new or improving existing roads, minimizing impervious surfaces in new roads and parking areas, regular sweeping of parking areas and roadways and routine catch basin maintenance.

From Enfield, ARTICLE X SITE DEVELOPMENT REGULATIONS

Section 10.10 Off Street Parking and Loading Regulations

10.10.6 Parking Design, Layout, and Location

(The standards of this section shall apply to all parking areas that serve three (3) or more vehicles or two (2) or more uses.)

All off street parking areas and driveways shall be designed, to include drainage design, and constructed to the standards of the Director of Public Works. The Commission may allow an alternate surface to be used for the parking area when such surface is designed to minimize storm water runoff. In such situations, a maintenance plan for the surface must be approved by the Commission.

From Farmington Zoning Regulations: Article IV, Special Regulations

Section 25. STORMWATER SYSTEMS

- A. Stormwater systems designed and installed in conjunction with the development of land must receive the approval of the Commission in consultation with the Town Engineer.
- B. Stormwater systems shall be designed for the following objectives:
 1. Prevent flooding of onsite or offsite property.
 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.
- C. The Commission may withhold the approval of a storm water system design if it fails to meet the above objectives.
- D. The maintenance of a private storm water system is the responsibility of the property owner. The Commission may require that a maintenance program be developed and submitted to them for approval. The Commission may require that a bond be posted and/or that periodic reports be filed with the Town to ensure that the required maintenance has been performed.

From Glastonbury, Zoning Regulations 10.0 Street and Highway Standards

Where permanent cul-de-sac streets are included in a residential subdivision, they shall not exceed fifteen hundred (1500) feet in length. A permanent cul-de-sac shall contain a turnaround which has a minimum right-of-way radius of fifty-five (55) feet and a minimum outside pavement radius of forty-five (45) feet except where a permanent cul-de-sac has classification “Light Local” or “Limited Local” the Commission may permit a turnaround which has a minimum right-of-way radius of fifty (50) feet and a minimum outside pavement radius of forty-five (45) feet. A twenty-five (25) foot pavement width shall be provided around cul-de-sac islands located on “Light Local” or “Limited Local” streets. Low maintenance cul-de-sac islands may be permitted.

From South Windsor Zoning Regulations: SECTION XIII: OFF-STREET PARKING AND LOADING

13.4.1 Modification of Minimum Required Parking Spaces

A reduction in parking spaces will be allowed when the Planning and Zoning Commission deems the reduction to be in the best interest of the Town, according to the following:

- a. The changes in topography of the land can be minimized by reducing the number of parking spaces.
- b. The cutting of trees and other desirable plants can be minimized by reducing the number of parking spaces.
- c. The increase in stormwater run-off rate shall be held to a minimum by reducing the parking spaces.

From Windsor Zoning Regulations SECTION V: USE REGULATIONS, COMMERCIAL ZONES, I-291 CORRIDOR DEVELOPMENT ZONE

5.9.6 Infrastructure Improvements

5.9.6.D Stormwater Management

1. Design of the stormwater management system shall be consistent with the standards of the Public Improvement Specifications manual. Zero net increase in stormwater runoff (ZIRO) between pre- and post-development conditions is to be maintained for the 2, 10, 25 and 100 year storms, unless it can be demonstrated that there will be no deleterious downstream effects.
2. The applicant shall employ the best available technology in design of the closed drainage system, including oil and sediment separation devices, filtration and discharge techniques.

The Town encourages the use of on-site natural filtration functions as a part of currently accepted Best Management Practices in the reduction of sediment and pollutants.

3. The applicant shall employ, as appropriate, the extended wet-bottom detention basin technique for metering site generated storm runoff prior to discharge to off-site drainage systems.

When accessible, the applicant shall utilize Town-owned lands for construction of the wet basin. Such basins will be ultimately sized to accommodate more than one user. Where location of a detention facility on Town land is not feasible due to distance or access problems, the applicant is encouraged to enter into an easement agreement with adjacent lots to create a shared-use detention facility. Consolidated parcels will share a detention facility.

4. Clean Water: Clean water is defined as that stormwater runoff generated from roof flows collected in roof gutter or other pickup systems and transported via risers to underground pipes and out to a discharge point. These flows may not need to be attenuated (meet ZIRO requirements) if the volume of runoff can be dissipated by infiltration into the groundwater table.
5. Dirty Water: Dirty water is defined as that storm runoff generated from parking and road pavements that carry sands, road salts, oils, etc. These flows are initially treated at catch basins where some heavy particulates are trapped in basin sumps. Prior to discharge, flows will pass through a “water quality inlet” where sediment and oil chambers can provide for secondary separation of particulates and oils. Discharges would then either be directed offsite or into a wet detention basin in accordance with ZIRO requirements for that portion of the site.



**From Windsor Zoning Regulations SECTION 3.
SITE DEVELOPMENT**

3.4 OFF-STREET PARKING

3.4.1 General Provisions

G

The Commission may, depending on the parking needs of a particular use, authorize a phased development of the off-street parking area in compliance with the following criteria:

1. The total number of spaces required to be shown on the Site Plan shall be determined in accordance with the standards for that particular use.
2. The construction of the parking area and installation of the spaces may be phased according to short- and long-term needs of a particular use. Not less than 50 percent of the total required spaces shall be constructed as part of the short term, except that for buildings housing computer equipment and operations, and for wholesale or warehouse uses, this percentage may be reduced to not less than 30 percent. This approval shall become null and void if the use changes.
3. The spaces which are not intended for construction as part of the short term shall be labeled "Reserve Parking" on the plan and shall be properly designed and shown as an integral part of the overall parking layout and must be located on land suitable for parking area development.
4. If at any time after the Certificate of Use and Occupancy is issued the Zoning Enforcement Officer determines that additional spaces may be needed, he shall notify the Commission and the owner of the property concerning his finding.
5. The Commission may, after reviewing the Zoning Enforcement Officer's report, require that all or any portion of the spaces shown on the approved Site Plan as "Reserve Parking" be constructed.

**From Woodbury Subdivision Regulations,
SECTION IV - DESIGN AND CONSTRUCTION
STANDARDS**

**4.18 Watershed/Viewshed Regulated Area
(Effective 4/1/98)**

4.18.1 Intent: The Watershed/Viewshed Regulated Area is adopted in order to:

- a. Promote the goals and objectives of the Woodbury Plan of Conservation and Development.
- b. Encourage the most appropriate use of land.
- c. Preserve the natural environment of distinctive ridgeline areas as a visual and historic asset for the benefit of the community.
- d. Protect the groundwater recharging function and capacity of the ridges by minimizing the potential for pollution and preserving open areas for groundwater recharge.
- e. Prevent the creation of any safety or health hazard including, but not limited to, soil erosion, excessive drainage runoff, and degradation of water quality.
- f. Minimize the adverse effect of development upon both the visual and functional role of the natural landscape to preserve Woodbury's quality of life.