

CITY OF SHELTON STORMWATER MANAGEMENT PLAN



MS4 GENERAL PERMIT 2019 ANNUAL REPORT

Permit Number GSM000045

**OFFICE OF THE CITY ENGINEER
JANUARY 2020**

**CITY OF SHELTON
STORMWATER MANAGEMENT PLAN – MS4 GENERAL PERMIT
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(1) Public Education and Outreach

- During the 2017 calendar year, the City established a dedicated Stormwater Management page on its Website.
- The City continued to maintain its Waste Disposal & Recycling page on its Website. Information on hazardous waste, hazardous waste collection as well as leaf collection and disposal is provided.
- The City implemented a public education program by placing educational pamphlets in three locations citywide. The displays, located in City Hall, the Community Center and the Library, contain information on Septic System Care, Illicit Discharge, Soil Erosion, Animal Waste, Lawn Care and Pesticides. Copies of those pamphlets can be found in Appendix G. A photo of our public information display is in Appendix F.
- A catch basin/storm drain stencil marking program is under consideration for the spring of the 2020 calendar year.

(2) Public Involvement and Participation

- The new City Stormwater Management Plan dated July 2017, prepared by Environmental Partners Group, has been online on our dedicated Stormwater Management webpage since July 2017. No comments from the public were received.
- The annual Hazardous Water Collection Day was held on Saturday, September 28, 2019. See the appendix for additional details and a manifest of materials collected.
- The 2019 MS4 Annual Report is scheduled to be posted on the City website on or before January 17, 2020. The 2018 MS4 Annual Report was posted on December 26, 2018. No comments were received by the City.
- The twelfth annual Shelton Clean Sweep was held during the week of Earth Day (April 20 to April 28, 2019). The Shelton Clean Sweep is sponsored by the Shelton Anti-Litter Committee. The 2020 annual Shelton Clean Sweep has been scheduled for April 19 to April 26. See the news articles in the appendix.
- The Shelton Anti-Litter Committee, an ad-hoc committee formed by the Board of Aldermen, maintains the 'Don't Trash Shelton' website (donttrashshelton.org), hosts a discussion board, and sponsors the clean sweep and the adopt-a-street programs.

- The annual Housatonic River Clean Up/Green Sweep sponsored by Housatonic River Clean Up, Inc., was held on Saturday, April 27, 2019. The Sunnyside Boat Ramp in Shelton was one of the two check-in locations. See the news articles in the appendix.
- Sunnyside Park & Boat Ramp was the site of a clean-up sponsored by FOX pest Control. Twelve bags of garbage were collected by numerous volunteers. See the attached news article in the appendix.
- A list of awards given to local residents and groups being recognized for clean-up efforts is listed in Appendix C.

(3) Illicit Discharge Detection and Elimination

- The City has retained Environmental Partners, a consulting engineer to develop the written IDDE Program, perform the Impaired Waters Monitoring, perform the DCIA tasks, perform the IDDE Monitoring and complete the Detailed Stormwater System Mapping. Proposals were solicited for the consultant to complete those required tasks over the next 30 months based upon the DEEP implementation deadlines. There is insufficient City staff and resources to complete the tasks in-house.
- The lists and maps of all MS4 stormwater outfalls were substantially completed in 2010. New outfalls that were installed as part of new subdivision construction will need to be digitally plotted and added to the outfall list. Catch basins and pipe locations and sizes will be added in the spring of 2020, thereby completing our mapping requirement.
- Formal illicit discharge reporting instructions have been added to the City's website. A copy of the instructions is in the appendix.
- The City now records illicit discharge abatement activities and maintains a Sanitary Sewer Overflow (SSO) inventory. Recordkeeping commenced on July 1, 2017.
- The City adopted Ordinance No. 855, Illegal Discharge and Illicit Connections to the Public Storm Drainage System, in September 2010. The City will review this ordinance for compliance with the new general permit regulations. See Appendix A.
- The City received no reports or complaints about illicit discharge or dumping into the MS4 during 2019.
- There were no records of any illicit discharges during the 2018 calendar year. There were four (4) SSO incidents in 2019. For the period from July 1, 2012 to December 31, 2019, a list of the SSO's is provided in Appendix B.

- The City has currently mapped and listed 585 municipal storm sewer outfalls and nine state owned outfalls. There are no known interconnections at this time.
- The outfall mapping is 100% complete.
- In 2018, the City completed a citywide map and inventory of the 20 stormwater detention ponds that are owned and maintained by the City.
- In 2019, the City added one (1) new stormwater detention pond that is City owned.

(4) Construction Site Runoff Control

- The City of Shelton currently has interdepartmental coordination for site plan review between the conservation, inland wetlands, engineering and the planning & zoning departments.
- Site plans are currently reviewed for stormwater quality concerns. Planning & Zoning issues Soil Erosion and Sediment Control certificates for all subdivisions and site developments. E&S plans are required for each application.
- The Wetlands and the Zoning Enforcement staff continued to inspect and monitor the installation and maintenance of all erosion and sediment control measures on active construction sites. The Planning & Zoning Administrator, who has the supervisory responsibility of overseeing E&S measures on construction sites, notifies City staff and developers of potential heavy rainfall events by email and/or telephone. This procedure has been utilized since at least 2009.
- Soil Erosion and Sediment problems are reported to the Planning & Zoning office by those departments who have personnel in the field and observe deficiencies. Those departments include Engineering, Building, Sewer, Inland Wetlands, Highways & Bridges and the Mayor's office.
- The public has and utilizes their right to comment on site development during both public hearings held by the Inland Wetlands and Planning & Zoning commissions and during the public portion at each regular meeting.
- Developers are informed of their obligation to obtain the DEEP construction stormwater permit. Copies of the DEEP application are on display in the Planning & Zoning Office and are printed for distribution.

- The following development projects that received final approval in 2019 are currently under construction in 2019 and will continue into 2020.

Planning Zoning 2019 Acreage	
<u>Project Name/Address</u>	<u>Acreage</u>
366 Howe Ave - Riverwalk Place	0.29
16 Ripton Rd - Huntington Village	6.15
509 Howe Ave	0.44
801 Bridgeport Ave - Fountain Square- Phase 1, 2,3 & 4	19.08
96 Long Hill Cross Rd	5.57
26 Beard Sawmill Rd - Ridge at Sawmill	3
2 Booth Hill Rd - Booth Hill Rd Estates , Phase II	2.687
325 Coram/62 Center St	0.48
405 Long Hill Ave - Brookview Heights	3.96
505 Huntington St - Aquarion Pump Station	625 acres, 4,029 s.f.
415 River Rd	0.32
320 Howe Ave - Cedar Village	0.95
813 River Rd	0.37
1039 Howe Ave	1.96
705-709 Bridgeport Ave - CVS	4.12
580 Long Hill Ave - United Methodist Homes Welcome Center	1.09
899-905 Bridgeport Ave - PDD # 63	2.84
429 Shelton Ave - Valero	1.13
427 Howe Ave - Bridge Street Commons II	0.53
605 Long Hill Ave - Subdivision	3.17
103 Meadow St - Subdivision	0.73

- The following development projects that received final approval in 2016/2017 were under construction and will continue through 2020:
 - ☐ Hawks Ridge Residential – Long Hill Cross Road (36.4 Acres)
 - ☐ Primrose Companies Realty – 131 Canal/6 Bridge Street (2.71 Acres)
 - ☐ R.D. Scinto Light Industrial – 20 Waterview Drive (7.89 Acres)
 - ☐ R.D. Scinto Mixed Use – 905 Bridgeport Avenue (2.50 Acres)
 - ☐ Brookview Apartments – 309 Bridgeport Avenue (3.29 Acres)
- The following development projects that were approved prior to January 1, 2016, were substantially completed in 2019:
 - ☐ R.D. Scinto Commercial – 100 Commerce Drive (5.31 Acres)
 - ☐ Bishop Management Mixed Use – 762 River Road (4.0 Acres)
 - ☐ Hawks Ridge Assisted Living/Apartments – 30 & 60 Beard Sawmill Road (10.9 Acres)
- The following development has been approved but construction has not yet commenced:
 - ☐ 223 Canal LLC Apartments – 223 Canal Street (1.26 Acres)
- No Notice of Violations were issued to the contractors performing work on these aforementioned developments in 2019.

(5) Post-construction Stormwater Management in New Development or Redevelopment

- The City adopted Ordinance No. 854, Stormwater Management/Operation and Maintenance Requirements, in September 2010. It requires all corporate, light industrial, retail and private residential developments to perform routine maintenance of their stormwater collection systems on an annual basis. The ordinance also authorizes representatives of the City to conduct on-site inspections of BMP's and maintenance activities. See Appendix A.
- While not scheduled for implementation until July 1, 2019, the City has begun the process to inventory all City and private stormwater detention basins. The City owned and maintained structures have been inventoried.
- The City of Shelton currently requires all developments to provide stormwater detention to limit increases in the post development runoff rates. While this requirement is not in the Planning & Zoning regulations, the goal of limiting runoff rates to pre-construction levels has been met with great success.
- The City also requires developments and single family homes to employ some degree of ground infiltration for site generated runoff to be retained on-site.

(6) Pollution Prevention/Good Housekeeping

- City snow management practices include using only straight pre-treated salt for de-icing operations. A small supply of a sand/salt mix is maintained for limited use in locations with significant grades and only during specific hazardous road conditions.
- The 2019 street sweeping program included funding for contract sweeping. The number of curb miles swept in 2019 was 121.
- The Highways & Bridges facility, located at 41 Myrtle Street, continues to accept the following liquid waste products from residents Monday through Friday:
 - ☐ Diesel Fuel
 - ☐ Kerosene
 - ☐ Transmission Fluid
 - ☐ Hydraulic Oil
 - ☐ Motor Oil
 - ☐ Antifreeze
- The current catch basin cleaning program consists of periodically assigning the foremen to perform visual inspections of the catch basins. The inspections are done by both snow plow routes and streets scheduled for resurfacing. The City repaired or replaced 17 catch basins in 2019. Only 24% of the inspected catch basins needed cleaning by machine, which can be attributed to the use of straight pre-treated salt for the last seven years.
- There were no redevelopment or retrofit projects that resulted in a reduction of Directly Connected Impervious Areas (DCIA) from the City MS4.
- Catch Basin Cleaning Metrics
 - ☐ Total catch basin in MS4 – approximately 4,000
 - ☐ Catch basins inspected - 444
 - ☐ Catch basins cleaned – 106
 - ☐ Volume of material removed – 12 tons
- Street Sweeping Metrics
 - ☐ Curb miles swept – 121 miles
 - ☐ Volume of material collected – 50 tons
 - ☐ Dates – 4/4/19 to 7/10/19

- Snow Management Metrics
 - ☐ Type of de-icing material used – pre-treated salt and salt brine
 - ☐ Amount of de-icing material applied - 2,575 tons of salt
 - 4,500 gallons of salt brine
 - ☐ Amount of sand/salt mix applied - none
 - ☐ Type of de-icing equipment used–All season spreaders with brine application system
 - ☐ Lane miles treated – 442 miles
 - ☐ Snow disposal location – 799 Howe Avenue
 - ☐ Staff training – six (6) employees received winter storm training through CIRMA

- Road Network Mileage Update – No changes in 2019
 - ☐ The miles of city maintained roads – 220 miles
 - ☐ The number of lane miles is 442

APPENDIX A

STORMWATER ORDINANCES

ORDINANCE #855

Illegal Discharges and Illicit Connections to the Public Storm Drainage System

Adopted by the Board of Aldermen: September 9, 2010

Approved by the Mayor:

9.29.10
Date

Mark A. Lewis
Mayor's Signature

Attested to:

Margaret L. Donaldson
City/ Town Clerk

ORDINANCE #855

Illegal Discharges and Illicit Connections to the Public Storm Drainage System

BE IT ORDAINED BY THE BOARD OF ALDERMEN THAT:

Section 1. Purpose/Intent.

The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Shelton 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 7 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 drainage system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

Section 4. Responsibility for Administration.

The Director of Public Works shall be responsible for administration, implementation and enforcement of the provisions of this Ordinance. Any and all powers granted to or imposed upon said Director hereunder may be delegated, in whole or in part, by said Director, in writing, to such employees or officials of the City of Shelton as said Director may determine from time to time. Any such designation shall be made in writing and a copy thereof shall be filed with the City Town Clerk, with the office of the Mayor and with the Clerk of the Board of Aldermen. Said designations shall be updated if the individuals change and, in any event, a current list shall be filed with each of the above entities in January of each year.

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 Access.

Suspension due to Illegal Discharges in Emergency Situations

The Director of Public Works or his designee 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 Illegal 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 illegal discharge. The Director of Public Works or his designee will notify a violator of the proposed termination of its MS4 access and shall specify a reasonable time for abatement. 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 Director of Public Works or his designee 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 Director of Public Works or his designee 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 Director of Public Works or his designee 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 Director of Public Works or his designee 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 Director of Public Works or his designee 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 Director of Public Works or his designee and shall not be replaced. The costs of clearing such access shall be borne by the operator.
- (6) Unreasonable delays in allowing the Director of Public Works or his designee 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 Director of Public Works or his designee 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.

The City of Shelton 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 compliant with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

Section 12. 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 City of Shelton, Director of Public Works 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 13. Enforcement.

1. Notice of Violation.

Whenever the Director of Public Works or his designee 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 14. Appeal of Notice of Violation.

Any person receiving a Notice of Violation may appeal the determination of the Director of Public Works or his designee. Said appeal may be taken to the Housing Board of Appeals, which is hereby designated as the agency to hear all appeals permitted under this Ordinance. The decision of the Housing Board of Appeals shall be final.

Section 15. 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 30 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 16. Cost of Abatement of the Violation.

Within 30 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 15 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.

Section 17. 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 Director of Public Works or his designee 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 18. 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, or watercourse cleanups.

Section 19. 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 20. Penalties.

Any person or entity which knowingly violates a provision of this Ordinance, after the effective date thereof, or any person who unknowingly violates this Ordinance, and continues to violate the Ordinance after notice of a violation shall be liable to criminal prosecution to the fullest extent of the law and shall be subject to a criminal penalty of \$250.00 per violation per day. The Director of Public Works, on behalf of the City, may recover all attorneys' fees, court costs and other expenses associated with the enforcement of this Ordinance, including sampling and monitoring expenses.

Section 21. 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 22. 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.

ORDINANCE #854

Stormwater Management/Operation and Maintenance Requirements

Adopted by the Board of Aldermen: September 9, 2010

Approved by the Mayor:

9.29.10
Date


Mayor's Signature

Attested to:


City/ Town Clerk

ORDINANCE #854

Stormwater Management/Operation and Maintenance Requirements

BE IT ORDAINED BY THE BOARD OF ALDERMEN THAT:

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-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.

APPENDIX B

SANITARY SEWER OVERFLOW (SSO) INVENTORY

SANITARY SEWER OVERFLOW (SSO) INVENTORY

Location (Street address and/or receiving water)	Date	Duration of Occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed
500 River Road	9/25/12	1.75 hours	MS4	100 gallons	Grease	Flushed line (River Road Pump Station)
25 Kneen Street Ext.	2/18/13	2 hours	MS4	500 gallons	Object	Removed object, flushed line
71 Rocky Rest Road	5/22/13	3 hours	MS4	2,000 gallons	Grease	Line flushed, will be televised
75 River Road	3/25/14	2 hours	Housatonic River	1,000 gallons	Roots	Line flushed, will be televised
25 Riverdale Avenue	4/30/14	1 hour	MS4	30,000 gallons	SCADA	SCADA System Logic to be added
30 Little Fawn Drive	8/30/14	4 hours	MS4	30 gallons	Roots	Line flushed, root treatment to follow
14 Regent Drive	11/22/14	1.75 hours	MS4	2,500 gallons	Roots	Line flushed, roots to be removed
1 Trap Falls Road	1/29/15	1.5 hours	MS4	200 gallons	Wipes	Line flushed, will be televised
19 Forest Parkway	4/28/15	1 hour	MS4	50 gallons	MH debris	Line flushed, removed debris
119 Yutaka Trail	6/21/16	1.25 hours	Farmill River	100 gallons	Wipes	Line flushed, will monitor
78 William Street	2/24/18	1.5 hours	MS4	100 gallons	Wipes	Cleaned wipes from manhole, jetted line
11 Cribbins Avenue	5/30/18	1 hour	MS4	50 gallons	Wipes/rags	Jetted line, cleaned manhole of rags & wipes
239/265 Riverview Ave	3/5/2019	1.25 hours	MS4	51-500 gallons	Wipes/debris	Jetted line, cleaned main line of wipes & debris
20 Plaskon Dr Ext 501 Bridgeport Ave/ Woodland Mobile Home Park	3/20/2019	1.25 hours	MS4	51-500 gallons	Wipes/rags	Jetted line with jet foam liquifier
	4/27/2019	1.5 hours	MS4	51-500 gallons	Grease	Jetted line 2x, will monitor
20 Plaskon Dr Ext	12/11/2019	1.75 hours	MS4	25 gallons	Rags/grease/debris	Jetted line of rags, grease & debris

Lori Vano

From: DEEP.BOG@ct.gov
Sent: Tuesday, March 05, 2019 11:09 AM
To: Tom Sym; Lori Vano
Subject: Shelton: Sewage Bypass

Reporting Municipality or Utility: Shelton

Town where event occurred: Shelton

Submitted by: Thomas Sym

Phone number: 203-924-1555 x1511

Closest street address: 265 Riverview Ave

Weather conditions: Snowmelt

Date and time event started: Tue Mar 05 08:15:00 EST 2019

Date and time event ended: Tue Mar 05 09:30:20 EST 2019

Location of bypass: Manhole

Type of bypass: Raw Sewage

Cause of bypass: Sewer Line Blockage - Other

How was event discovered? Bubbling manhole reported

Estimated volume or quantity of bypass: 51 - 500 gallons

How was quantity determined? Visual

If reported, final volume or quantity: null

Did bypass reached a waterbody: No

Waterbody name: null

Comments: Jetted line, cleaned main line of flushable wipes and debris.

Note: A copy of this email is being sent to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Municipal Wastewater Section. If the bypass event is reported to have reached a waterbody and have a volume greater than 1,000,000 gallons then a copy of this email is sent to Department of Energy and Environmental Protection Public Affairs Office. If the bypass is reported to have reached a waterbody and the location is in Ansonia, Branford, Bridgeport, Clinton, Darien, Derby, East Haven, East Lyme, Fairfield, Greenwich, Groton, Guilford, Ledyard, Madison, Milford, Montville, New Canaan, New Haven, New London, North Stonington, Norwalk, Norwich, Old Lyme, Old Saybrook, Orange, Seymour, Shelton, Stamford, Stonington, Stratford, Trumbull, Waterford, West Haven,

Lori Vano

From: DEEP.BOG@ct.gov
Sent: Thursday, October 24, 2019 10:02 AM
To: Tom Sym; Lori Vano
Subject: Shelton: Sewage Bypass

Reporting Municipality or Utility: Shelton

Town where event occurred: Shelton

Submitted by: Thomas Sym

Phone number: 203-924-1555 x1511

Closest street address: 239 Riverview Ave

Weather conditions: Snowmelt

Date and time event started: Tue Mar 05 08:15:00 EST 2019

Date and time event ended: Tue Mar 05 09:30:00 EST 2019

Location of bypass: Basement

Type of bypass: Raw Sewage

Cause of bypass: Sewer Line Blockage - Other

How was event discovered? AMENDMENT: Initial bubbling manhole. However, homeowner reported backup in basement next day upon returning from vacation.

Estimated volume or quantity of bypass: 51 - 500 gallons

If reported, final volume or quantity:

How was quantity determined? Visual

Did bypass reached a waterbody: No

Waterbody name:

Comments: AMENDMENT: First incident discovered through bubbling manhole. However, due to the fact that the homeowner at 239 Riverview Ave was away on vacation, further impact of the original bypass wasn't discovered until the following day in their basement. On March 5, 2019, jetted line, cleaned main line of flushable wipes and debris. Cleaning services hired and in process for 239 Riverview Avenue basement.

Note: A copy of this email is being sent to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Municipal Wastewater Section. If the bypass event is reported to have reached a waterbody and have a volume greater than 1,000,000 gallons then a copy of this email is sent to Department of Energy and

Lori Vano

From: DEEP.BOG@ct.gov
Sent: Thursday, October 24, 2019 10:02 AM
To: Tom Sym; Lori Vano
Subject: Shelton: Sewage Bypass

Reporting Municipality or Utility: Shelton

Town where event occurred: Shelton

Submitted by: Thomas Sym

Phone number: 203-924-1555 x1511

Closest street address: 20 Plaskon Drive Ext

Weather conditions: Dry

Date and time event started: Wed Mar 20 09:00:00 EDT 2019

Date and time event ended: Wed Mar 20 10:15:17 EDT 2019

Location of bypass: Manhole

Type of bypass: Raw Sewage

Cause of bypass: Sewer Line Blockage - Grease

How was event discovered? Bubbling manhole reported

Estimated volume or quantity of bypass: 51 - 500 gallons

If reported, final volume or quantity:

How was quantity determined? Visual

Did bypass reached a waterbody: No

Waterbody name:

Comments: Jetted line with jet foam grease liquifier

Note: A copy of this email is being sent to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Municipal Wastewater Section. If the bypass event is reported to have reached a waterbody and have a volume greater than 1,000,000 gallons then a copy of this email is sent to Department of Energy and Environmental Protection Public Affairs Office. If the bypass is reported to have reached a waterbody and the location is in Ansonia, Branford, Bridgeport, Clinton, Darien, Derby, East Haven, East Lyme, Fairfield, Greenwich, Groton, Guilford, Ledyard, Madison, Milford, Montville, New Canaan, New Haven, New London, North Stonington, Norwalk, Norwich, Old Lyme, Old Saybrook, Orange, Seymour, Shelton, Stamford, Stonington, Stratford, Trumbull, Waterford, West Haven,

Lori Vano

From: DEEP.BOG@ct.gov
Sent: Thursday, October 24, 2019 10:02 AM
To: Tom Sym; Lori Vano
Subject: Shelton: Sewage Bypass

Reporting Municipality or Utility: Shelton

Town where event occurred: Shelton

Submitted by: Thomas Sym

Phone number: 203-924-1555 x1511

Closest street address: 501 Bridgeport Ave/Woodland Mobile Home Park

Weather conditions: Dry

Date and time event started: Sat Apr 27 18:00:00 EDT 2019

Date and time event ended: Sat Apr 27 19:30:51 EDT 2019

Location of bypass: Manhole

Type of bypass: Raw Sewage

Cause of bypass: Sewer Line Blockage - Grease

How was event discovered? Mobile park manager called police station.

Estimated volume or quantity of bypass: 51 - 500 gallons

If reported, final volume or quantity: same

How was quantity determined? visual

Did bypass reached a waterbody: Yes

Waterbody name: Wells Hollow Brook

Comments: Jetted line two times to remove grease, will monitor.

Note: A copy of this email is being sent to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Municipal Wastewater Section. If the bypass event is reported to have reached a waterbody and have a volume greater than 1,000,000 gallons then a copy of this email is sent to Department of Energy and Environmental Protection Public Affairs Office. If the bypass is reported to have reached a waterbody and the location is in Ansonia, Branford, Bridgeport, Clinton, Darien, Derby, East Haven, East Lyme, Fairfield, Greenwich, Groton, Guilford, Ledyard, Madison, Milford, Montville, New Canaan, New Haven, New London, North Stonington, Norwalk, Norwich, Old Lyme, Old Saybrook, Orange, Seymour, Shelton, Stamford, Stonington, Stratford, Trumbull, Waterford, West Haven,

Lori Vano

From: DEEP.BOG@ct.gov
Sent: Wednesday, December 11, 2019 2:21 PM
To: Ernie Hutchinson; Lori Vano
Subject: Shelton: Sewage Bypass

Reporting Municipality or Utility: Shelton

Town where event occurred: Shelton

Submitted by: Ernest Hutchinson IV, Lori Vano

Phone number: 203-924-1555 x1511

Closest street address: 20 Plaskon Drive Ext

Weather conditions: Snowmelt

Date and time event started: Wed Dec 11 10:45:00 EST 2019

Date and time event ended: Wed Dec 11 12:30:50 EST 2019

Location of bypass: Sewer Main

Type of bypass: Raw Sewage

Cause of bypass: Sewer Line Blockage - Other

How was event discovered? Bubbling manhole reported

Estimated volume or quantity of bypass: 1 - 50

If reported, final volume or quantity:

How was quantity determined? Visual

Did bypass reached a waterbody: No

Waterbody name:

Comments: Jetted line which cleaned main line of 8 inch ball of rags, grease, and debris.

Note: A copy of this email is being sent to the Department of Energy and Environmental Protection, Bureau of Water Protection and Land Reuse, Municipal Wastewater Section. If the bypass event is reported to have reached a waterbody and have a volume greater than 1,000,000 gallons then a copy of this email is sent to Department of Energy and Environmental Protection Public Affairs Office. If the bypass is reported to have reached a waterbody and the location is in Ansonia, Branford, Bridgeport, Clinton, Darien, Derby, East Haven, East Lyme, Fairfield, Greenwich, Groton, Guilford, Ledyard, Madison, Milford, Montville, New Canaan, New Haven, New London, North Stonington, Norwalk, Norwich, Old Lyme, Old Saybrook, Orange, Seymour, Shelton, Stamford, Stonington, Stratford, Trumbull, Waterford, West Haven,

APPENDIX C

NEWS ARTICLES



Shelton Litter Cleanup Reporting Form

This is a volunteer reporting form for any group or individual who has picked up litter in Shelton, CT, including Adopt-a-Street and Clean Sweep participants as well as anyone else who has picked up litter in a public place. While completion of this form is not required, we do encourage our volunteers to record their efforts. This gives us a better idea of how many people are involved and how much is getting picked up. It also inspires other people to clean up their neighborhood. Thank you! Note: For Clean Sweep patches and certificates, you also need to fill out a second form. See the Clean Sweep webpage at www.DontTrashShelton.org.

* Required

Name *

Of group or individual who did the cleanup. Shy volunteers can enter "anonymous."

Contact Name

For groups only

Location Cleaned *

This should be a public place, such as a street, park, school, or waterway. If doing a road, please specify the road section you actually cleaned.

Date(s) of the cleanup *

Please estimate how much was picked up. *

(Example: "7 large bags and a TV.")

How many people participated in your cleanup? *

This helps us estimate the number of people involved throughout the city.

Submit

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MENU

Shelton Clean Sweep

Banishing Litter from Shelton, CT

The 12th annual Clean Sweep will be held the *entire week* of Earth Day, April 22, 2019.

Begins: Saturday, April 20, 2019

Ends: Sunday, April 28, 2019

[Event Registration Form](#)

[See Registered Events](#)

[Record a Cleanup](#)

How to participate in Shelton Clean Sweep:

[See recent cleanups](#)

[Patch & Certificate Request](#)

1. Join a cleanup or plan a cleanup in your neighborhood to remove litter from public spaces or waterways.

Cleanup events open to the public:

[Clean Sweep FAQs](#)

[Find a Location](#)

[Neighborhood Clean-Up Form \(MS Word\)](#)

Shelton Lakes Cleanup: Details to be announced.

[Clean Sweep Recognitions](#)

We encourage Sheltonites to organize cleanups in their neighborhoods. There are plenty of open space properties, waterways, roadways, and schools with litter problems. Clean-up event examples: one person cleaning up their roadway, a neighborhood group cleaning up an open space property where litter blows in from the street, a Scouting group cleaning up a park or school, and a business cleaning up a roadway.



[See our blog](#)



2. Organize some volunteers to clean that location, or work alone, whatever works best for you. We have a [neighborhood flyer](#) that can help.

3. [Register your cleanup event](#) as early as possible so others can see what you plan to clean up and we avoid multiple groups cleaning up the same spot. See what other people have already signed up to clean so there's no conflict with clean-ups (if you want to clean up the same location as someone else, please choose a date AFTER the clean-up that was already scheduled). Note that we are flexible: Cleanups do not actually need to be held April 18-26. If some other date in April works better for you, that's fine (earlier is better).

4. Pick up bags and gloves from the Community Center or City Hall (Mayor's office, 2nd floor, or from the Natural Resource Manager Teresa Gallagher, Room 102).

5. Clean up litter anytime during the WEEK of Earth Day, April 22. If another day in April works better, that's OK, too. Consider taking photos for us.

6. If necessary, call [Highways and Bridges](#) to pick up the accumulated litter 203-924-9277 during business hours. Do not bring the trash home if you plan for Highways and Bridges to make a special trip - leave it along the nearest roadway.

7. File a [Cleanup report](#) that lets everyone know how much you picked up. This gives us a better picture of how many people have picked up litter throughout the city. If you didn't register, you can still file a cleanup report. We encourage it.

8. For certificates from the Mayor and/or free iron-on patches, please complete the request form (see left menu).



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Recognitions for Clean Sweep 2019



Shelton Clean Sweep was another great success this year. Many thanks to everyone involved!

2019 VOLUNTEERS OF THE YEAR



Ellen Cramp
(Individual Category)

Boy Scout Troop 25 and Cub Scout Pack 25
(Group Category - Joint Project)



Tighe & Bond
(Business Category)

As always, we would like to give special recognition to the [Housatonic River](#)

Cleanup, Inc., whose efforts each year result in an incredible pile of garbage taken from the shores of the Housatonic River.

Results reported via the online Cleanup Reporting Form for March - May 2019 (does not include Adopt-a-Street cleanups or the many cleanups that were not reported!):

Gil Pastore & family	Removed 5 bags from Seneca Road
Th Scerbo Girls	Cleaned up 1 large bag from a River Road fishing spot
Pack 27	Filled 7 bags and removed a tire from East Village Park
A. Farmer	Removed a pet crate, cable wire, and alcohol bottles from Lane Street near the meadow entry
The P's	Cleaned up 5 bags from Seneca Trail
Ellen Cramp	Picked up 2 large bags of household trash from Coram Ave.
Tighe & Bond	Removed 25 large bags of litter from Isinglass Road and Huntington Street
Girl Scout Troop 63140	Picked up a large bag of litter from Birchbank Trail
The Three P's	Removed 26 very heavy bales of CT Post newspapers and 6 bags of litter from Moulthrop Lane
Mica Corporation	Filled up 6 large bags of litter from Ivy Brook Road
BS Troop 25 and Pack 25	Assisted Adopt-a-Street participant First United Methodist Church in cleaning up Todd Road
Shelton Litter Committee	Volunteers removed 25 bags of litter, several tires, and other debris from Shelton Ave at Shelton Lakes.
Plavec	Removed 2 large bags from the Rec Path from the lower Wesley Drive crossing to the Dog Park.
Cub Scout Pack 28	Removed 8 large bags and a tire from the Mohegan School grounds and Nike site.
Shelton Land Conservation Trust	Removed ten bags of litter from Leavenworth Road at their Nicholdale and Willis Woods properties



SHELTON HERALD <https://www.sheltonherald.com/news/article/Sunnyside-Park-gets-a-clean-sweep-14484573.php>

Sunnyside Park gets a clean sweep

By Brian Gioiele Published 6:00 am EDT, Wednesday, October 2, 2019



IMAGE 1 OF 3

Employees from Fox Pest Control, an Oxford-based pest control company, spent time Friday, Sept. 27, picking up trash at Sunnyside Park.

Sunnyside Park got a makeover Friday, Sept. 27, thanks to a Shelton native and the area company for which he is now employed.

Fox Pest Control, an Oxford-based company, gathered 35 staffers for a trash pickup project Friday morning. In all, the company staff picking up 12 bags' worth of garbage at the park where Fox Pest Control operations manager and Shelton native Matt Kochanski spent much of his childhood.



"We live and work in this community," said Kochanski. "It's great to be able to give back to the community and volunteer our time and energy to help keep Connecticut clean. I also grew up in Shelton, and our office is next door in Oxford, so this community holds a special place in my heart."

Kochanski said the Oxford Fox Pest Control office tries to perform some volunteer act, whether it be cleanups or food drives, to assist the communities in which the company serves.

"For our first year, I am really pleased at the turnout and the amount of trash we were able to collect," said Kochanski. "Twelve bags is a lot. But now we set the bar for 2020, and we're just going to have to do that much more next year."

brian.gioiele@hearstmediact.com

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HEARST

APPENDIX D

HAZARDOUS WASTE COLLECTION

- NO Infectious & Biological Waste
- NO Prescription Medicines/Syringes
- NO Propane or Pressurized Cylinders
- NO Radioactive Waste
- NO Smoke Detectors

City Resident Tools



View and Pay Taxes



Town Meetings



Waste Collection Schedule



Report Potholes



Public Safety



Public Works



Parks & Rec



Code Red



Bids & RFPs



Connecticut 2-1-1

- Photo Chemicals
- Poisons
- Roofing Tar
- Rubber Cement
- Rug & Upholstery Cleaner
- Solvent Adhesive
- Spot Remover
- Stains & Varnishes
- Swimming Pool Chemicals
- Transmission Fluid
- Weed Killers
- Wood Preservative

How can I Safely Transport These Hazardous Materials???

- Leave material in original containers
- Tighten caps and lids
- Sort and pack separately: paint, pesticides and household cleaners
- Pack containers in sturdy upright boxes and pad with newspaper
- NEVER MIX CHEMICALS
- Pack your car and drive directly to the collection site
- NEVER SMOKE while handling hazardous material

What NOT to bring!!!

- NO Ammunition, Fireworks, Explosives (call first /take to Police Dept.)
- NO Commercial or Industrial Waste
- NO Empty Containers (put in Trash Cart)
- NO Fire Extinguishers

MXI Environmental Services LLC

26319 Old Trail Road

Abingdon, VA 24210

Telephone: 276-628-6636

Fax: 276-623-0599

R4Q 80570

Invoice

Date

9/30/2019

Invoice #

113272

Please note new
remittance address below

Bill To

SHELTON CITY HALL
54 HILL STREET
SHELTON, CT 06484

Ship To

MXI ENVIRONMENTAL SERVICES
26319 OLD TRAIL ROAD
ABINGDON, VA 24210

P.O. No.

Terms

Due Date

Rep

Project

Ship Date

Net 60

11/29/2019

MK

9/28/2019

Quantity	Description	Price Each		Total
1	MANIFEST: 012202988FLE HHW EVENT - 9/28/19 - SEE SUMMARY FOR COST BREAKDOWN	11,742.15		11,742.15

Please remit to:
290 Stone Mill Road
Abingdon, VA 24210

Total

\$11,742.15

We accept Visa and Mastercard. A 5% processing fee will be applied



MXI SUMMARY REPORT

BILL TO/ GENERATOR:

SHELTON CITY HALL
54 HILL STREET
SHELTON, CT 06484

DATE:

9/28/2019

MANIFEST #:

012202988FLE

CLIENT CONTACT:

MARILYN GANNON
203-924-9277

SITE ADDRESS:

41 MYRTLE STREET
SHELTON, CT 06484

CARS:

295

MXI CONTACT:

MARC KODROWSKI

WASTE DESCRIPTION	SIZE	TREATMENT	# UNITS
LP AEROSOLS	Y3	FUELS BLEND	2
BULK FLAMMABLE LIQUIDS	55 GAL	FUELS BLEND	6
LP FLAMMABLE LIQUID	Y3	FUELS BLEND	3
LP FLAMMABLE SOLID	5 GAL	TREATMENT	1
LP OXIDIZING LIQUID	55 GAL	TREATMENT	1
LP OXIDIZING SOLID	55 GAL	TREATMENT	1
LP ORGANIC PEROXIDE	5 GAL	TREATMENT	1
LP PESTICIDE LIQUID	Y3	INCINERATION	3
LP PESTICIDE SOLID	Y3	INCINERATION	1
LP CORROSIVE LIQ ACIDIC	55 GAL	TREATMENT	3
LP CORROSIVE SOL ACIDIC	55 GAL	TREATMENT	1
LP CORROSIVE LIQ BASIC	Y3	TREATMENT	4
LP CORROSIVE SOL BASIC	55 GAL	TREATMENT	1
LP MERCURY	5 GAL	RECYCLING	1
LP NI CAD BATTERIES	5 GAL	RECYCLING	1
LP LITHIUM BATTERIES	5 GAL	RECYCLING	1
LP NICKEL HYDRIDE	5 GAL	RECYCLING	1

WWW.MXI-ENV.COM

LOCATIONS:

297 ZIMMERMAN LANE
LANGHORNE, PA 19047
(267)590-0043P
(267)590-0050F

26319 OLD TRAIL ROAD
ABINGDON, VA 24210
(276)628-6636P
(276)628-4435F



MXI SUMMARY REPORT

BILL TO/ GENERATOR:

SHELTON CITY HALL
54 HILL STREET
SHELTON, CT 06484

DATE:

9/28/2019

MANIFEST #:

012202988FLE

CLIENT CONTACT:

MARILYN GANNON
203-924-9277

CARS:

295

SITE ADDRESS:

41 MYRTLE STREET
SHELTON, CT 06484

MXI CONTACT:

MARC KODROWSKI

WASTE DESCRIPTION

PRICE PER VEHICLE
SET UP FEE

CARS

285 \$
1

PRICE PER

36.99

COST

\$ 10,542.15
\$ 1,200.00

TOTAL

\$ 11,742.15

www.mxienvironment.com

LOCATIONS:

297 ZIMMERMAN LANE
LANGHORNE, PA 19047
(267)590-0043P
(267)590-0050F

26319 OLD TRAIL ROAD
ABINGDON, VA 24210
(276)628-6636P
(276)628-4435F



CUSTOMER RECEIPT:

BILL TO:

CITY OF SHELTON
DEPARTMENT OF HIGHWAY & BRIDGES
41 MYRTLE STREET
SHELTON, CT 06484
PHONE: 203-924-9277
CONTACT: MARILYN GANNON

DATE: 9/28/2019

MANIFEST NUMBER: 012202988FLE

SHIPPING DESCRIPTION:

FIRE EXTINGUISHER

AEROSOLS

PROPANE

FLAMMABLE LIQUID BULK

PAINT RELATED MATERIAL

FLAMMABLE SOLIDS

OXIDIZING LIQUID

OXIDIZING SOLID

PESTICIDE LIQUID

PESTICIDE SOLID

TOXIC LIQ

CORROSIVE ACID LIQUID

CORROSIVE ACID SOLID

CORROSIVE BASIC LIQUID

CORROSIVE BASIC SOLID

MERCURY

ASBESTOS

NICKEL HYDRIDE

NI CAD BATTERIES

LITHIUM BATTERIES

OF HOUSEHOLDS:

MXI SIGNATURE:

CUSTOMER SIGNATURE:

www.mxiinc.com

LOCATIONS:

297 ZIMMERMAN LANE
LANGHORNE, PA 19047
(267)590-0043P
(267)590-0050F

6319 OLD TRAIL ROAD
ABINGDON, VA 24212
(276)628-6636P
(276)628-4435F

Please print or type.

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CTP000033602	2. Page 1 of 3	3. Emergency Response Phone 800-424-8300	4. Manifest Tracking Number 012202988 FILE	
5. Generator's Name and Mailing Address MXI ENVIRONMENTAL SERVICES LLC 26319 OLD TRAIL RD ABINGDON VA 24210			Generator's Site Address (if different than mailing address) MXI ENVIRONMENTAL SERVICES LLC 41 MYRTLE ST SHELTON CT 06484			
Generator's Phone: 276 828-8838						
6. Transporter 1 Company Name MAUMEE EXPRESS INC			11,000		U.S. EPA ID Number NJD088607380	
7. Transporter 2 Company Name			29,180		U.S. EPA ID Number	
8. Designated Facility Name and Site Address MXI ENVIRONMENTAL SERVICES 26319 OLD TRAIL RD ABINGDON VA 24210			30,840		U.S. EPA ID Number	
Facility's Phone: 276 828-8838			71,020		VAR000503820	
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WL/Vol.
			No.	Type		
	X	1. UN1950, AEROSOLS, FLAMMABLE, 2.1	2	CF	800	P
	X	2. UN1075, PROPANE, 2.1	0		0	P
	X	3. UN1044, FIRE EXTINGUISHERS, 2.2	0		0	P
X	4. UN1993, FLAMMABLE LIQUID, NOS (ISOPROPYL, MINERAL SPIRITS), 3, PG II	6	DM	3000	P	
14. Special Handling Instructions and Additional Information ALL MATERIAL IS HW COLLECTED IN CT. USE DRY CHEMICAL FIRE EXTINGUISHER. USE INERT MATERIAL ON SPILLS. 9A1) ERG#125 9A2) ERG#115 9A3) ERG#125 9A4) ERG#128						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name Mark K. Kowalski		Signature 		Month Day Year 10 08 19		
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:			
	Transporter signature (for exports only):					
DESIGNATED FACILITY	17. Transporter Acknowledgment of Receipt of Materials		Signature		Month Day Year	
	Transporter 1 Printed/Typed Name Luis Neeson				10 28 19	
	Transporter 2 Printed/Typed Name		Signature		Month Day Year	
	18. Discrepancy					
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number					
	Facility's Phone:					
	18c. Signature of Alternate Facility (or Generator) Month Day Year					
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
	1. 2. 3. 4.					
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a					
	Printed/Typed Name Zachary Mitchell		Signature 		Month Day Year 10 11 19	

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number CTP000033602	22. Page 2 of 3	23. Manifest Tracking Number 012202988FLE		
24. Generator's Name MXI ENVIRONMENTAL SERVICES LLC						
25. Transporter _____ Company Name				U.S. EPA ID Number		
26. Transporter _____ Company Name				U.S. EPA ID Number		
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No. Type		29. Total Quantity	30. Unit Wt/Vol.	31. Waste Codes
X	5. UN1983, FLAMMABLE LIQUID, NOS (ISOPROPYL, MINERAL SPIRITS), 3, PG II	3	CF	1200	P	NONE
X	6. UN1325, FLAMMABLE SOLIDS, ORGANIC, NOS (FUSEE, MATCHES), 4.1, PG II	1	DF	10	P	NONE
X	7. UN3130, OXIDIZING LIQUID, NOS (CHLORINE, SODIUM HYPOCHLORITE), 5.1, PG II	1	DF	100	P	NONE
X	8. UN1479, OXIDIZING SOLID, NOS (CHLORINE, SODIUM HYPOCHLORITE), 5.1, PG II	1	DF	100	P	NONE
X	9. UN3105, ORGANIC PEROXIDE, TYPE D, LIQUID, NOS (METHYL ETHYL KETONE PEROXIDE <45%), 5.2 PG II	1	DF	10	P	NONE
X	10. UN2002, PESTICIDES LIQUID, TOXIC, NOS (DINOSEB, ACEPHATE), 6.1, PG II	3	CF	1500	P	NONE
X	11. UN2588, PESTICIDES SOLID, TOXIC, NOS (DINOSEB, ACEPHATE), 6.1, PG II	1	CF	800	P	NONE
X	12. UN2810, TOXIC LIQUID, ORGANIC, NOS (CARBON, TETRACHLORIDE, CHLOROFORM), 6.1, PG II				P	NONE
X	13. RC UN3508, MERCURY CONTAINED IN MANUFACTURED ARTICLES, 8, (6.1), PG III	1	DF	50	P	NONE
X	14. UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, NOS (HYDROCHLORIC, PHOSPHORIC), 8, PG I	3	DF	900	P	NONE
32. Special Handling Instructions and Additional Information 27a(5) ERG#128 27a(6) ERG#133 27a(7) ERG#153 27a(8) ERG#140 27a(9) ERG#145 27a(10-11) ERG#151 27a(12) ERG#123 27a(13) ERG#171 27a(14-17) ERG#154 27a(18) ERG#154 27a(19) ERG#171 27a(20) ERG#136						
33. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
34. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number CTP0000033602	22. Page 3 of 3	23. Manifest Tracking Number 012202988FLE		
24. Generator's Name MXI ENVIRONMENTAL SERVICES LLC						
25. Transporter _____ Company Name				U.S. EPA ID Number		
26. Transporter _____ Company Name				U.S. EPA ID Number		
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		No.	Type			
X	15. UN3201, CORROSIVE SOLID, ACIDIC, INORGANIC, NOS (BORIC ACID, SODIUM BISULFATE), 8, PG II	1	DF	100	F	NONE
X	16. UN3206, CORROSIVE LIQUID, BASIC, INORGANIC, NOS (AMMONIA, SODIUM HYDROXIDE), 8, PG II	4	CF	2000	F	NONE
X	17. UN3252, CORROSIVE SOLID, BASIC, INORGANIC, NOS (SODIUM CARBONATE, SODIUM HYDROXIDE), 8, PG II	1	CF	500	F	NONE
X	18. UN3028, BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE, SOLID, 8, PG III (NICKEL CADMIUM BATTERIES)	1	DF	20	F	NONE
X	19. UN3496, BATTERIES, NICKEL-METAL HYDRIDE, 8	1	DF	20	F	NONE
X	20. UN3090, LITHIUM BATTERIES, 8, PG II	1	DF	20	F	NONE
X	21. UN3028, BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE, SOLID, 8, PG III (NICKEL CADMIUM BATTERIES)	0		0	F	NONE
32. Special Handling Instructions and Additional Information 27A5) ERG#126 27A6) ERG#133 27A7) ERG#152 27A8) ERG#140 27A9) ERG#145 27A10-11) ERG#151 27A12) ERG#129 27A13) ERG#171 27A14-17) ERG#154 27A18) ERG#154 27A19) ERG#171 27A20) ERG#136						
33. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
34. Transporter _____ Acknowledgment of Receipt of Materials Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____						
35. Discrepancy _____						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						

APPENDIX E

PUBLIC EDUCATION DISPLAYS

Book Donations Suspended

Due to library renovation, we're unable to accept any book donations until further notice.

Thanks will be up October 1st, but we'll miss you in May!!

CLEAN WATER STARTS IN YOUR BACKYARD



CITY OF ANSONIA
OFFICE OF THE CITY ENGINEER



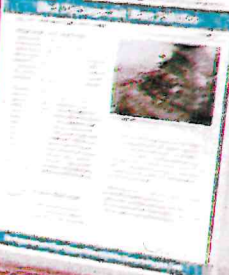
Water Matters
Learn about the importance of water and how to conserve it. Includes tips on saving water in the home and garden.



NONPOINT SOURCE WATER POLLUTION

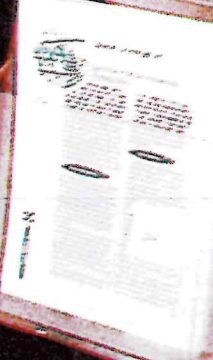
Learn about nonpoint source water pollution and how to prevent it. Includes information on runoff, erosion, and sedimentation.

SC WaterWays



Clean Water's Storage for Rainwater

Learn about the benefits of rainwater storage and how to set up a system. Includes information on collection, storage, and use.



Learn about the importance of water conservation and how to save water in the home. Includes tips on fixing leaks, using water-efficient appliances, and more.

Alter
Dona

My Sister's F
380 Main Str
Ansonia, CT 06
203-734-2960

Big Brothers Big
7 Clifton Avenue
Ansonia, CT 0640
203-308-2610
2 bag/box limit

New Haven Rea
Community Bood
45 Bristol Street
New Haven, CT 06
203-752-1923

Good Stuff Shoppe
185 Coram Avenue
Shelton, CT
Church phone 203-92
(open 10-5 Thurs, Fri)

APPENDIX F

EDUCATIONAL PAMPHLETS

ALL GRASSES ARE NOT CREATED EQUAL

	Shade Tolerance	Drought Tolerance	Wet Soil Tolerance	Low pH Acid Soil Tolerance	Low Fertility Tolerance	Salt Tolerance	Traffic Wear Tolerance
Fine Leaf Fescues	XX	XX	☹	X	XX	☹	☹
Roughstalk Bluegrass (M)	XX	☹	XX				☹
Supina Bluegrass (M)	XX	☹					XX
Tall Fescue	X	XX	XX	XX	X	XX	XX
Zoysia grass	X	XX	X	X	X	X	XX
Kentucky Bluegrass	☹	X	X	☹	☹	☹	X
Canada Bluegrass (C)		XX					
Redtop (C)		XX	XX				
Perennial Rye Grass	☹	X	X	☹	☹	X	X

Key XX = Excellent

X = Good

☹ = Poor

(M) = moist conditions required

(C) = for conservation or erosion control areas

clippings on the lawn after mowing also adds organic matter to the soil.

Lawn health can be affected by soil compaction, as when heavy equipment is driven over the lawn area. Compacted soils prevent water infiltration and deep root growth. Soil coring or aeration helps correct this problem by loosening soils. Spring or Fall is the best time to address compaction. Check for soil compaction by cutting both ends off a large can - like a coffee can. Pound one end at least two inches into the ground. Fill the can with water and measure the water height, then time how long it takes for the water to filter into the ground. A minimum infiltration rate for Connecticut soils would be 0.5 to 1 inch per hour. Anything slower would indicate the soils are probably compacted. [Example calculation: If a full can has 5 inches of water and the water takes 12 hours to completely empty from can, the infiltration rate is $5/12$ or 0.42 inches per hour.]

KNOW YOUR FERTILITY

Before adding ANY fertilizer to the lawn, consider all the "free" sources of nutrients. Rainfall provides about one-half pound of nitrogen per 1,000 square feet every year. Lesser amounts of phosphorus and sulfur also come with the rain. Lawns that have clover in their plant mix require less nitrogen since the clover "fixes" nitrogen and makes it available to the surrounding plants. Leaving the grass clippings on the lawn after mowing is the best kind of fertilizer. Research at the University of Connecticut shows that recycling clippings in place reduces the need for supplemental fertilizer applications by 50 to 100 per cent!

If you must fertilize, avoid over-fertilization by following soil test recommendations. Choose a fertilizer formulation that most closely matches what the soil lacks. Slow release fertilizers improve the chances



Clean Waters is a collaboration of the Connecticut Sea Grant Extension Program and the University of Connecticut Cooperative Extension System's MEMO Project, educating individuals about the impacts of everyday activities on water quality and simple techniques that help protect water resources from the home well to Long Island Sound.

Starting in Your Home and Yard

Lawn Care the Environmentally-Friendly Way

Americans devote an amazing amount of time and money to cultivating the "perfect" lawn. Literally BILLIONS of dollars are spent each year to re-seed, irrigate, and de-thatch lawns. Tons of water, lime, fertilizers and pesticides are applied, with potentially serious environmental and human health consequences, in order to create an expanse of green without the biodiversity or ecological structure of the plant community it replaces. While lawns have roles in the home landscape, including covering septic fields and serving as play areas, they do not have to be meticulously managed to be healthy and look good. Understanding a lawn's environmental needs and tailoring lawn care practices to suit local conditions allows for a dense, healthy, environmentally friendly lawn with less work and expense.

KNOW YOUR GRASSES

Cool-weather turfgrasses flourish in the spring and fall and some can spread by growing lateral stems across and below the soil surface. These grasses, including bluegrasses, fescues, ryegrasses and bent-grasses are not native to New England but have adapted to this environment through three hundred years of natural selection. These grasses still grow best with cool temperatures and adequate moisture and tend to go dormant or semi-dormant during hot, dry weather.

New England's native grasses include both cool-weather grasses and warm-weather grasses, which "green up" later in the spring and grow as a slowly expanding bunch or clump. Zoysia grass, a non-native, warm weather grass, grows best in hot temperatures, providing a green summer lawn, but it browns out early in the fall and is VERY slow to "green up" in the spring.

Different grass species have varying tolerances to the range of growing conditions found even within

one yard. Conditions that can affect turfgrass growth include shade, excessively well-drained or poorly-drained soils, low pH or acid soils, low nutrient availability, high salt concentrations, and heavy foot, play, or animal traffic. The major reason for lawn failure is the improper match of selected grass species to site conditions. An evaluation of the lawn area before selecting a grass seed mix or sod type can go a long way toward preventing lawn problems.

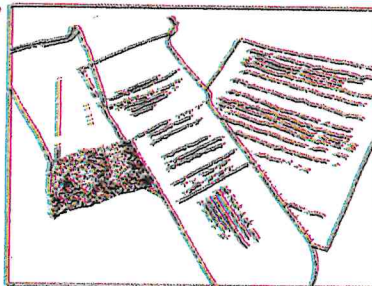
KNOW YOUR SOIL

A soil test is one of the most important steps in maintaining a healthy lawn. Soil pH, organic matter and fertility (or nutrient availability) all affect grass growth. Proper soil pH (6.2 to 6.5) enhances the ability of grass to use available nutrients, tolerate drought, and resist diseases. Most soils in New England are more acidic (lower pH) than is optimal for grass.

So soil pH is adjusted by applying limestone, in powder or pelletized form.

Limestone can be applied, at a rate of no more than 50 pounds per 1,000 square feet, at any time the ground is not frozen.

Organic matter in the soil helps the soil hold water and provides some nutrients. If soil is low in organic matter, compost can be spread in a very thin layer over the surface or tilled in to gradually increase the organic content. Leaving grass



- **The best time to water is in the morning**, because less water is lost through evaporation and transpiration.
- **Avoid watering during mid-day and try not to water in the evenings** since a lawn that remains damp during the night is more prone to disease.

What About Thatch?

Don't worry about grass clippings contributing to thatch problems. Turf experts nationwide agree that clippings do not produce thatch, because they are 80% water and decompose quickly. Rather, thatch is the accumulation of dead roots and stems and is most often caused by over fertilizing and over watering. A thatch layer of more than 1/2" should be removed as a matter of healthy lawn maintenance.

Other Uses For Clippings

Compost clippings at home: Clippings are an excellent source of nitrogen for your home compost pile. No more than 1/3 of the pile should be fresh clippings. Mix thoroughly with "brown" materials such as leaves or straw and turn the pile regularly to keep it well oxygenated and to prevent odors.



Use clippings as mulch: Apply dried grass clippings directly on the soil about 1 inch thick to reduce weeds, moderate soil temperature, and control soil spattering, erosion, run-off and evaporation. Avoid mulching with clippings which have been recently treated with herbicides. This can harm your plants. As a precaution, mulch with clippings from herbicide treated lawns only after two lawn mowings.

Incorporate clippings into garden soil: Mixing fresh grass clippings into the garden adds nutrients and organic matter which improves the texture and moisture retention properties of the soil. A two inch layer of grass can be turned into the soil to a depth of 6" about once a month.

Alternative Landscapes

Consider planting ground covers such as English ivy, pachysandra, and periwinkle; increasing shrub beds; or growing a wildflower meadow as alternatives to turf grass. They look beautiful, don't need mowing and will help reduce lawn maintenance and yard waste!

Video Download

["Don't Trash Grass!"](#)

Resources

There is a myriad of published information on [home composting](#), [grasscycling](#), [worm composting](#), and [organics recycling](#). Please visit our [Composting and Organics Resource Page](#) for suggestions on books, videos and links to related websites. While you're there, read about DEEP's video entitled "Don't Trash Grass !" now available for [free download](#), and in VHS video from the [DEEP Store](#).

Prepared cooperatively by the Connecticut and Massachusetts Departments of Environmental Protection. Funding provided in part by the US Environmental Protection Agency, Region I. 1993

Content Last Updated on June 12, 2008

- **When it's time to replace your mower**, consider buying a mulching, recycling, or a non-polluting reel mower. All of these do a good job of shredding and scattering grass clippings.

Fertilizer Application

Proper fertilizer application is important. And remember, when it comes to fertilizer, *more is not better!* Research shows that most grasses require only *modest levels of nitrogen* for good color and controlled growth. Too much fertilizer will make your lawn grow faster, resulting in more mowing and more clippings!



Apply fertilizer to your lawn in late April and again in September. If a third treatment is needed, apply in late May. Apply only $\frac{1}{2}$ pound of nitrogen per 1000 square feet of lawn at each application. To figure this out simply divide 100 by twice the percentage of nitrogen (N) in the fertilizer. This will give you the application rate in pounds of fertilizer per 1000 square feet of lawn. For example:

Fertilizer N-P-K rating (%)	Divide 100 by twice the % of Nitrogen (N)	Pounds of fertilizer to use Per 1000 sq. ft.
12-4-8	100 divided by 24	= 4.1 lbs.
16-8-8	100 divided by 32	= 3.1 lbs.
20-5-10	100 divided by 40	= 2.5 lbs.
10-10-10	100 divided by 20	= 5.0 lbs.

For slower, more uniform growth, choose fertilizers containing sources of slow-release nitrogen such as methylene urea, ureaformaldehyde, sulfur coated urea, or IBDU. The bag may also read "water insoluble nitrogen" or "slow release nitrogen." All are acceptable and will increase the amount of time the grass can use the nutrient.

Watering Practices

New England has a high precipitation rate, so turf grasses here don't have to be watered to survive. Lawns may turn brown and dormant during periods of drought, but will turn green rapidly when moisture in the soil is replaced. **Remember, the more you water your lawn, the faster it's going to grow and the more you will have to mow it!**

- **Conserve resources by not watering unless the grass really needs it.**
Let Mother Nature water your lawn!
- **If you choose to water, 1 inch of water is adequate to wet the soil to a depth of 4"-6".**
Place an empty can under the sprinkler to measure when an inch has been applied. If water begins to run off the lawn before an inch is applied, turn off the water and let it soak in for an hour or so, then resume watering until 1" is applied.
- **Water deeply and less frequently to encourage deep root growth.** Light, frequent watering encourages shallow roots and may lead to increased disease and stress injury.

Connecticut Department of Energy & Environmental Protection

Don't Trash Grass!

Save Time and Money! Reduce Waste!

Did you know that a $\frac{1}{2}$ acre lawn in New England produces over 3 tons or nearly 260 bags of grass clippings each year? Think of all the time, money and effort it would take to bag all those clippings. Why go through all that hassle when it's really not necessary?



You can have a healthy green lawn by leaving grass clippings where they fall! It's simple...grass clippings left on the lawn will decompose and act as a natural organic fertilizer. This allows you to reduce the amount of additional commercial fertilizer you need to apply. Your lawn will still be healthy and green because each time you mow, you will be returning valuable nutrients to the soil!

The key word is "less" ...less fertilizer, less water, less work, and best of all, less waste!

Recycling clippings back into the lawn requires less effort than disposing of them as waste. No one has to handle the clippings – not you, not your lawn care professional and not the waste management crew. You can reduce your mowing time by nearly 40% by not bagging, and spend less money on fertilizer and trash bags. And by not trashing grass, you'll be doing your part for the environment by reducing waste!

If you follow these "Don't Trash Grass" mowing, fertilizing and watering guidelines, not only will you have a healthy lawn, but you'll never have to bag grass clippings again!

Mowing Techniques & Tips

- **Any mower can recycle grass clippings.** Simply remove the grass catcher! Ask your lawn mower dealer if a special safety plug or adaptor kit is needed to convert your mower into a "recycling" mower. You can also have a mulching blade installed.
- **Keep your grass mowed to 2"- 3" tall.**
- **Do not remove more than 1/3 of the grass blade in any single mowing.** For example, if your lawn is kept at 2" tall, it should not be allowed to grow higher than 3" before it is mowed again.
- **Mow when the grass is dry.**
- **Keep your mower blade sharp** because dull mowers tear the grass blade, injuring the plant, and create a brownish cast to the turf.
- **If the grass gets just a bit too high,** simply mow over the clippings a second time to further shred and scatter them.
- **If excessive growth occurs between mowings,** raise the mower height, mow, and then gradually lower it over a span of several mowings. This will help prevent shock to the plants.



Nonpoint Education for Municipal Officials (NEMO) is a University of Connecticut educational program for local government leaders that addresses the relationship of land use to natural resource protection.

Contact NEMO at:
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Box 70
1165 Shennock Road
Hartford, CT 06133

Phone: (860) 345-4321
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Written by Chester Arnold &
Melissa Bristow, 1993

improperly functioning septic tanks, leaky sewer lines and boat sanitary disposal systems.

Nutrients: Nutrients are compounds that stimulate plant growth, like nitrogen and phosphorous. Under normal conditions, nutrients are beneficial and necessary, but in high concentrations, they can become an environmental threat. Nitrogen contamination of drinking water can cause health problems, including "blue baby" syndrome. Over fertilization of ponds, bays and lakes by nutrients can lead to massive algal blooms, the decay of which can create odors and rob the waters of life-sustaining dissolved oxygen. Nutrients in polluted runoff can come from agricultural fertilizers, septic systems, home lawn care products and yard and animal wastes.

Sediment: Sand, dirt and gravel eroded by runoff usually ends up in stream beds, ponds or shallow coastal areas, where they can alter stream flow and decrease the availability of healthy aquatic habitat. Poorly protected construction sites, agricultural fields, roadways and suburban gardens can be major sources of sediment.

Toxic Contaminants: Toxic contaminants are substances that can harm the health of aquatic life and/or human beings. Toxins are created by a wide variety of human practices and products, and include heavy metals, pesticides and organic compounds like PCBs. Many toxins are very resistant to breakdown and tend to be passed through the food chain to be concentrated in top predators. Fish consumption health advisories are the result of concern over toxins.

Oil, grease and gasoline from roadways, and chemicals used in homes, gardens, yards and on farm crops, are major sources of toxic contaminants.

Debris: Trash is without a doubt the simplest type of pollution to understand. It interferes with enjoyment of our water resources and, in the case of plastic and styrofoam, can be a health threat to aquatic organisms. Typically this debris starts as street litter that is carried by runoff into our waterways.

What Can I Do About All This?

First of all, you can begin to clean up your own act. There are many good publications and programs that can help you to do simple but important things, like conserving water, disposing of hazardous waste properly and gardening in an environmentally responsible manner.

As you can see, polluted runoff is largely the result of the way we develop, use and maintain our land. These policies are largely decided at the municipal level, through the actions of town officials and local commissions like planning, zoning and wetlands. There are many techniques and regulations that can greatly reduce the effects of polluted runoff, and there are more being developed every day. The rest of this fact sheet series is devoted to telling you about your options. If you're on a local commission, learn a little more about polluted runoff and how you can combat it in the course of your everyday decisions. If you're not on a commission, ask your friends and neighbors who are what they are doing about polluted runoff.

NONPOINT SOURCE WATER POLLUTION



*Linking Land Use
to Water Quality*

What is Nonpoint Source Pollution?

Nonpoint source pollution is a fancy term for polluted runoff. Water washing over the land, whether from rain, car washing or the watering of crops or lawns, picks up an array of contaminants including oil and sand from roadways, agricultural chemicals from farmland and nutrients and toxic materials from urban and suburban areas. This runoff finds its way into out waterways, either directly or through storm drain collection systems.

The term nonpoint is used to distinguish this type of pollution from point source pollution, which comes from specific sources such as sewage treatment plants or industrial facilities. Scientific evidence shows that although huge strides have been made in cleaning up major point sources, our precious water resources are still threatened by the effects of polluted runoff. In fact, the Environmental Protection Agency (EPA) estimates that this type of pollution is now the single largest cause of the deterioration of our nation's water quality.

Whatever They Call It, Why Should I Care About It?

The effects of polluted runoff are not limited to large lakes or coastal bays. In fact, chances are that you don't have to look any farther than your neighborhood stream or duck pond. Water pollution in your town, and perhaps in your own backyard, can result in anything from weed-choked ponds to fish kills to contaminated drinking water.

"The bottom line is that both polluted runoff and its management are likely to affect you and your town in the near future."

There's not much chance that you can ignore this problem, even if you want to. Concern over polluted runoff has resulted in an ever-increasing number of state and federal laws enacted over the last five years. At the federal level, a permit program for stormwater discharges from certain municipalities and businesses is now underway, and coastal zone

management authorities are in the process of adding nonpoint source control to their existing programs. In addition to implementing these federal programs, many states have passed laws altering local land use (planning and zoning) processes and building codes to address the problem of polluted runoff. The bottom line is that both polluted runoff and its management are likely to affect you and your town in the near future.

What Causes Polluted Runoff?

You do. We all do. Polluted runoff is the cumulative result of our everyday personal actions and our local land use policies. Here's a brief rundown on the causes and effects of the major types of pollutants carried by runoff.

Pathogens: Pathogens are disease-causing microorganisms, such as bacteria and viruses, that come from the fecal waste of humans and animals. Exposure to pathogens, either from direct contact with water or through ingestion of contaminated shellfish can cause a number of health problems. Because of this, bathing beaches and shellfish beds are closed to the public when testing reveals significant pathogen levels. Pathogens wash off the land from wild animal, farm animal and pet waste, and can also enter our waterways from



enough to kill the pathogens and using the compost could cause illness.

• Install an underground pet waste digester. These function like small septic tanks. Before buying one, check for local laws that

may restrict their use or location.

2. Keep your yard clean. While there are no laws requiring you to clean up animal waste on your own property, there are good reasons to be careful where you leave it to decay. Some diseases can be transmitted from pet waste to humans through soil contact. Children who play outside and adults that garden are most at risk for infection, so cleaning up waste from play and garden areas is especially important. Washing hands with antibacterial soap and water after working or playing in the dirt is the best protection from disease.

Some of the more common waste-borne diseases and their symptoms are the following. *Campylobacteriosis* causes diarrhea in humans. *Salmonellosis* has symptoms including fever, headache, vomiting and diarrhea. *Toxocariasis* is a roundworm that may cause a rash, fever, and cough or vision loss. *Toxoplasmosis*, a protozoan parasite that can cause severe birth defects if a woman becomes infected during pregnancy, is the reason pregnant women are told to avoid handling used kitty litter. This parasite can also cause problems for people with weak immune systems. Symptoms include headache, muscle aches and lymph node enlargement.

3. Don't feed waterfowl. While one of the pleasures of a trip to the park has always been taking stale bread to feed the ducks, the environmental and health impacts of this activity for both humans and birds can be serious. While ducks, geese and swans all love bread, it lacks in the nutrients and roughage of their natural diet. Feeding these birds bread is similar to feeding a small child a diet of candy and soda; they may love it, but it

does them no good and may cause long-term health problems.

Feeding waterfowl also tends to cause the birds to concentrate in numbers higher than can be supported by the natural food supplies. This can cause problems in the winter months when fewer people come to the park or shore with food. There have been cases along the Connecticut shoreline where swans were so used to being fed at a particular location that they remained in the area long after the feeding stopped, became too weak to fly someplace with a better food supply, and eventually died of starvation. These large flocks of birds also create large quantities of waste and the serious water pollution problems described earlier in this fact sheet.

4. Dispose of kitty litter properly. When cleaning out the litter box, a two-step approach is most effective. Cat waste may be scooped out and flushed down the toilet, and the used litter should be bagged, sealed and placed in the trash. Dumping the entire contents of the litter box down your toilet will cause plumbing problems and prematurely fill up your septic tank or sewer system with indigestible material, but sending untreated cat waste to the landfill can cause pollution problems.

While it may not seem like a big deal if one more dog, cat or bird "contributes" some waste to the neighborhood environment, think about how many animals there are out there. Animal waste may not be the biggest or most toxic pollutant going into your local waters, but it is one of those little problems that, when all the pieces are added together, leads to serious environmental and health problems. So please think twice about your pet's bathroom habits and do your part to help keep our waters and environment clean.

Reference: J.A. Hill and C.D. Johnson, *Pet Waste and Water Quality*. Wisconsin Nonpoint Source Water Pollution Abatement Program, January 1992.

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The Connecticut Sea Grant College Program, based at the University of Connecticut, is part of a national network of university-based programs sponsoring coastal and marine-related research, outreach and education.



PROCEEDING



Clean Waters

Starting in Your Home and Yard

Animal Waste and Water Quality

Clean Waters is a collaboration of the Connecticut Sea Grant Extension Program and the University of Connecticut Cooperative Extension System's NEMO Project, educating individuals about the impacts of everyday activities on water quality and simple techniques that help protect water resources from the home with the Long Island Sound.

It's first thing in the morning and the dog wants to go out right NOW, the cats are standing by their litter box waiting for some fresh kitty litter, and your toddler is demanding a trip to the park to feed the ducks. While none of these activities may sound like a major threat to the environment, animal waste is one of the many little sources of pollution that can add up to big problems for water quality and may cause human health problems as well. While most people connect animal waste problems to aquaculture, studies have shown that pets, waterfowl and other urban wildlife waste can cause significant water pollution problems.

Animal waste contains several types of pollutants that contribute to water quality problems: nutrients, pathogens and a naturally toxic material, ammonia. When animal waste ends up in a lake, stream, or Long Island Sound, it decomposes, using up oxygen and releasing its pollutant load. During summer months when the water is warm, the combination of low oxygen levels and ammonia can kill fish and other aquatic organisms. The nutrients cause excessive growth of aquatic weeds and algae. When these conditions make the water murky green and smelly, or when the surface of the water is completely covered with a thick mat of vegetation, the area becomes unattractive or unusable for swimming, boating or fishing.

Pathogens, the disease-causing bacteria and viruses associated with animal waste, can also make water unsafe for human use. If pathogens or the indicator bacteria associated with animal waste are found during water testing, shellfish beds may be closed to harvest, beaches may be closed to swimming and drinking water supplies may require expensive filtration or disinfection.

Fortunately, there are some simple practices everyone can do to help prevent pollution by keep-

ing animal waste out of the water. While it may seem easier to ignore the problem of animal waste, remember that you are protecting not only the environment but also your own health.

Keeping Animal Waste Out of the Water

1. Pick up after your pet. Preventing water pollution can be as simple as remembering to take along a plastic bag or proper scooper when you walk your dog. For both "quality of life" and public health reasons, many communities actually have laws requiring anyone taking their animal off of their property to immediately clean up the waste after the pet relieves itself. Your choices once you have picked up the waste include:

- Flush it down the toilet so the septic system or sewage treatment plant will treat it in the same manner as human waste.
- Put it in the trash. This is less effective, as waste that ends up in a landfill may still cause pollution problems. Putting animal waste in the trash is actually against the law in some communities.

- Bury it in your yard. The microorganisms in the soil will break down the waste and release the nutrients to nearby plants. Make sure the hole is at least five inches deep and located away from vegetable gardens, children's play areas, or any lake, stream, wetland, well or ditch. CAUTION: Don't bury waste in your compost pile. The pile does not get hot

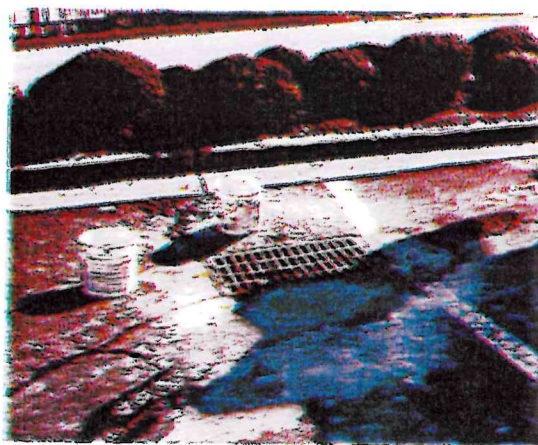


PLEASE
CLEAN UP
AFTER
YOUR PET

How do you report an illicit discharge?

Every county, city and town has its own rules about stormwater discharges. Most charge a fine to individuals or companies who illegally discharge pollutants into storm sewer systems or natural water bodies. Your community also wants to hear from you if you see that an illicit discharge has occurred or is occurring. Contact your local stormwater or public works department and let them know right away. Be prepared to give the address and details about the evidence you saw. You can photo-document what is going on in your stream too. Many communities may also have a stormwater hotline, one-stop phone number, or ombudsman's office to which to report violations.

It is very important that you do your part and report pollution when you see it. While local officials want to prevent illicit discharges, they cannot be everywhere at once. Therefore, communities rely heavily on citizens to raise a red flag on violations. By working together, citizens and local officials can make a positive difference in keeping our water clean and healthy for families in our communities and for future generations.



Quick action to call the appropriate authority may result in identification of both the pollutant and the polluter.

Content reviewed by Scottie Ferguson, Stormwater Manager, Pickens County; Jerry Dudley, Compliance Superintendent, City of Florence; Katie Giacalone, Coordinator of Carolina Clear, Clemson University



www.clemson.edu/public/carolinaclear

Carolina Clear is a program of Clemson University's Public Service Activities. Information is provided by Faculty and Cooperative Extension Agents. Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, sex, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.

Examples of illicit discharges

The following should never go into storm drains or ditches, or onto the ground.

- Connections from washing machines, dishwashers or sinks
- Paint, cleaners or chemicals
- Overflowing sanitary sewers
- Leaking septic tanks and failing septic fields
- Oil, gas and car fluids
- Cooking oil and grease
- Litter and illegal dumping

What is NOT considered an illicit discharge?

Most cities and counties allow these exceptions to illicit discharge laws:

- Landscape irrigation
- Individual residential car washing
- Air conditioning condensation
- Water from crawl space pumps
- Water from fire-fighting activities
- De-chlorinated pool water
- Rising ground waters or springs
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation and footing drain water

How do you identify an illicit discharge?

Several signs indicate when an illegal discharge has occurred.

First, is there a change in the appearance of the stream, river or pond? The water might be cloudy, discolored, or have an oily or soapy sheen. There may be a foul odor, excessive algae growth or even dead fish.

Second, look for suspicious pipes emptying onto the ground or directly into storm sewers or streams. These pipes may be coming from floor drains, sinks, dishwashers, washing machines, or other sources of wastewater in buildings. This is surprisingly common in older homes, and sometimes the homeowner is not even aware of these connections.

One way to identify illicit discharge pipes is size. A storm sewer pipe is generally larger than 6 inches in diameter (although roof drains and sump pump pipes, both of which are legal, may be smaller).

Third, take note of pipes to a stream or pond that have running water when there has been no rain in the past 3 to 5 days. Remember, storm sewers should only carry rainwater. "Dry weather discharges" could be carrying pollution.



Illicit discharges may be easily identified by the public when the water from a pipe or within a ditch has an unusual color or odor, or a cloudy, soapy or oily appearance. This stream has been polluted by paint, which is an illegal discharge, affecting water quality, habitat, and aquatic life.

SC WaterWays

answering today's water resource challenges for future generations

Illicit Discharges and Water Pollution

Mary Caffisch, Water Resources Agent, Clemson Extension

October 2012

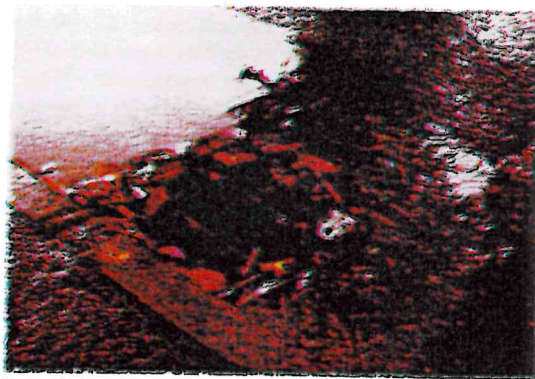
What is an illicit discharge?

Having enough clean water is important to everyone. However, sometimes chemicals, waste, and other pollution end up in streams and rivers, making the water no longer safe for families. When this happens, on purpose or by accident, it is called an illicit discharge. The Environmental Protection Agency (EPA) defines an illicit (or illegal) discharge as any discharge into a storm sewer system that is not composed entirely of rainwater.

The storm sewer system is the collection of storm drains, pipes, and ditches that carry water from roads, parking lots, and homes to natural bodies of water. This infrastructure is different from the sanitary sewers that take wastewater from your home or business (for instance, from a sink, toilet or floor drain) to a wastewater plant where it is treated. Storm sewers take untreated water directly to streams and lakes. The purpose of storm sewer infrastructure is to move rainwater away from streets and buildings as efficiently as possible to prevent flooding. As rainwater enters storm drains, it can easily carry pollution from parking lots, streets, and lawns, such as litter, oil or fertilizer. Such pollution is linked to negative health and environmental impacts on waterways that we use for drinking water, fishing, swimming, shellfish harvesting, and so on.

How does an illicit discharge happen?

Illicit discharges can happen when pollutants are poured directly into a storm drain, ditch, or stream, as well as when pollutants are left out on the ground and



Storm drains carry rainwater directly to rivers and streams.

picked up by runoff. Illicit discharges can also happen when a physical connection (like a pipe) is installed to carry pollutants from a source into a storm sewer system without a permit. An example might be a pipe connecting a house's dishwasher to a storm drain. This is unlawful: the only allowable discharge to a storm drain is rainwater along with a few specific non-stormwater discharges identified below.

It is essential that we all recognize the difference between sanitary and stormwater pipes, know how to identify suspected illicit discharges and contact the appropriate authority, and do our part in minimizing the likelihood of illegal discharges to our shared water resources.

An informational series from Clemson University's Water Resources Program Team

BELIEVE IT OR NOT,

ONE OF THE BIGGEST THREATS TO

OUR WATER QUALITY IS PLAIN OLD

DIRT WASHING INTO OUR RIVERS,

LAKEs AND STREAMS FROM LAWNS,

ROADS, DRIVEWAYS AND

CONSTRUCTION SITES.



Top soil is an important resource for your yard. However when the soil is lost through erosion it becomes a pollutant called "sediment".

Water flowing from your yard during rain or snow melt carries sediments (and the pollutants that attach to sediments) to our local streams and ultimately Lake Superior.



WHAT'S WRONG WITH SEDIMENT?

Sediment clouds water and reduces sunlight for the stream plants that provide habitat and oxygen for fish. Sediments fill in the spaces between rocks in stream bottoms and take away fish spawning habitat and habitat for critters that live on the bottom.

Sediments also carry other pollutants such as nutrients, oil and grease. Excess nutrients in water lead to nuisance algae growth.

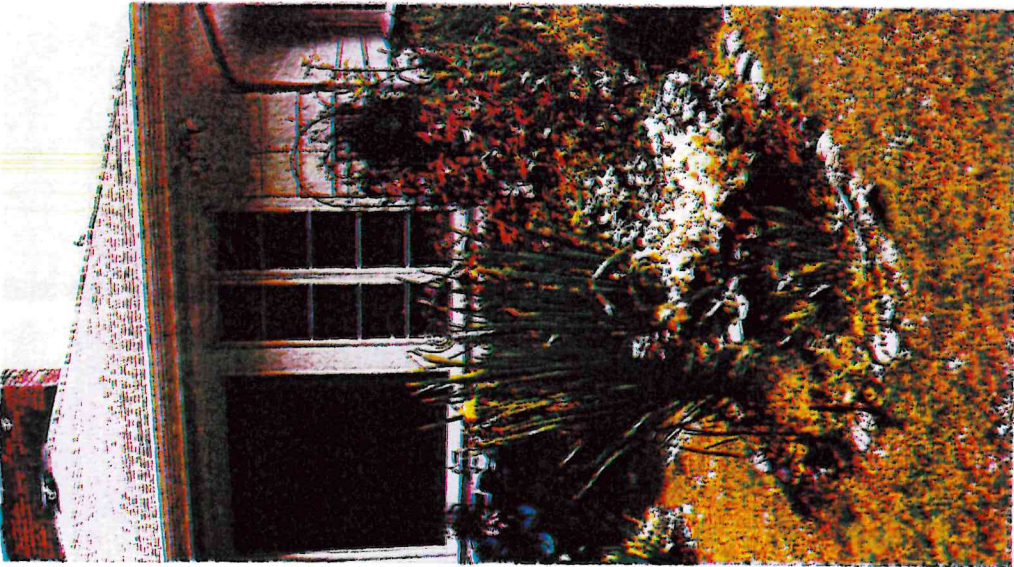
SIGNS OF EROSION INCLUDE:

- Exposed tree roots, stones and rocks
- Formation of small gullies.
- Buildup of soil in low areas
- Widening or deepening stream channels.

WHAT CAN YOU DO TO PREVENT EROSION?

1. Seed or mulch any bare soil on your land. Plant roots guard soil from rain drops and prevent erosion.
2. Choose perennials, shrubs and trees that thrive in your soil or climate. Native plants have deeper root systems that protect soil from erosion. Check with a local nursery for information.
3. Direct downspouts onto grass or gardens.
4. Stabilize hills with trees or other plants.
5. Only garden on level areas of your property.
6. Cover gardens with mulch or leaves over winter to protect plants and reduce erosion when snow melts.
7. Plant shrubs or trees to create a buffer between your property and any lake or stream. Buffers filter out pollutants.
8. Set up erosion controls when doing small construction projects. For more information contact the Stormwater Utility or City Engineering.
9. For larger construction projects contact City Engineering at 730-5200 and the MPCA for erosion control and permit requirements.

If you observe erosion at construction sites or on stream banks, contact the Stormwater Utility at 730-4130. A utility staff member will visit the site and evaluate needed actions.





PICK-UP AFTER YOUR DOG

Dog waste carries high levels of harmful E. coli bacteria and other pathogens, and is a major contributor to local water pollution.

- Pick up the poop! Always carry a plastic bag when you walk your dog, and dispose of pet waste in a trash can.

LAWN & GARDEN

Choose organic lawn chemicals whenever possible.

Use lawn chemicals sparingly and never use more than the directions call for.

Sweep up dry chemical spills and dispose in trash.

Don't pile yard waste near streams, wetlands, or stormdrains.

Start a compost pile.

Don't allow irrigation to spray onto pavement. Water that ends up on the pavement contributes to polluted runoff, and is wasted.

Make sure that your landscaper / irrigation contractor follows rules for preventing stormwater runoff.

Redirect downspouts toward grassy areas, trees and shrubs, so that runoff from your roof can soak into the ground.

Use pervious materials in landscape designs. Bricks, pavers and stones allow water to slowly filter into the ground.

Set a rain barrel under your downspout to capture water for another use.

Plant rain gardens to help filter and soak up water before it runs onto the street.

HOMES / BUSINESSES

Use the least toxic products available for cleaning, etc.

Avoid liquid chemical spills such as oil, gasoline, antifreeze, paint, etc. on paved areas.

If a liquid chemical spill occurs, clean with rags or absorbent material such as sand or kitty litter. Sweep up absorbents and dispose of in the trash.

Never use a hose to wash down the driveway or sidewalk. This washes pollutants into storm drains, and is a waste of water.

Dispose of household hazardous waste through your local DPW / Household Hazardous Waste Program.

Never pour washwater or chemicals down stormdrains.

- Store chemicals in leak-proof containers inside a building or shed, or under cover, away from rainwater.

- Avoid oversalting walkways and driveways in the winter, and use non-toxic products whenever possible.

- Sweep up all construction areas on a regular basis and dispose of debris in the trash.

WASHING CARS AND BOATS

- Park your vehicle in a spot where the soap will run off onto grass, rather than into the street and down the stormdrain. If practical, park your vehicle on your lawn when washing it.

- Use organic or mild soaps and detergents.

- Never clean or pressure wash the undercarriage of a car at home. The oil, grease and other pollutants from this activity can contaminate shallow groundwater.

- Always use a hose nozzle with a trigger, and shut it off when you're not using it to conserve water.

- Skip the home treatment and wash your car professionally, but use a car wash that recycles its water!

AUTOMOTIVE REPAIR

- Store automotive parts, such as batteries, engines, transmissions, and parts that may have oily or greasy residue on them, under cover and off the ground, to minimize rainwater contact. Rainwater can wash pollutants off these parts and into stormdrains.

- Collect all used oil, antifreeze, and other vehicle fluids in containers with tight fitting lids and recycle at a local service station.

SWIMMING POOLS AND HOT TUBS

- Never discharge pool water directly into a storm drain.

- Dechlorinate pool, hot tub or spa water with neutralizing chemicals, if water is to be discharged into the ground. If water cannot be dechlorinated, it must be collected by a pool maintenance company.

For more information on hazardous waste disposal, call your local Department of Public Works.

For more information on reducing stormwater pollution, visit www.neponsetstormwater.org



Stormwater Pollution Prevention Guide FOR HOMEOWNERS

The U.S. Environmental Protection Agency estimates that contaminants in stormwater runoff cause over half of the pollution in our nation's waterways.

Stormwater pollution begins when rain or snowmelt washes over pavement and other impervious surfaces, picks up contaminants, and flows down stormdrains to the waterways we rely on for drinking and recreation.

Common pollutants include antifreeze, detergents, fertilizers, gasoline, household chemicals, motor oil, paints, pesticides, pet waste, road salt, solvents, and yard waste

HELP KEEP OUR WATERWAYS CLEAN!

Please check the back of this page for tips on preventing stormwater pollution.
It's easier than you think!

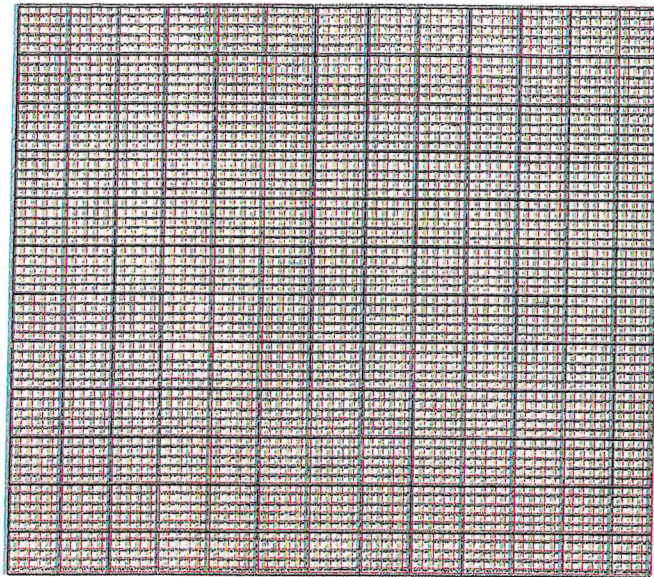


Stormwater pollution is the toxic mix of bacteria, chemicals, metals, nutrients and other contaminants that washes over pavement and other impervious surfaces and flows down stormdrains to the waterways we rely on for drinking and recreation.

Let's work together to keep our waterways clean.

Learn more at www.neponsetstormwater.org





Record Sheet

Septic System Layout

If you do not have a sketch of your septic system to place in this file, you should fill in the space provided, showing the relative location of your septic system components in relation to your house.

Date	Work Done	Firm	Cost

Preventive Maintenance Record

Keeping a record of your septic system maintenance experience will help you anticipate when the next cleaning may be needed.

If you should move, leaving a copy of this record will help the new homeowner.

Your Septic System Pumper

Name _____

Address _____

Date Installed _____

Phone _____

Your Septic System Installer

Name _____

Address _____

Date Installed _____

Phone _____

water or soggy areas on the ground above or near the septic system, or excessive growth of lush, green plants over the leach field even during dry weather, your septic system is probably failing.

Use of Additives

There are several types of septic system additives available. Generally, additives are marketed to: digest or "liquify/gasify" the solids in a septic tank; rejuvenate stressed bacterial populations in the tank; and/or increase "settability" of solids in the tank. Though some of the products may do what they suggest, the necessity of such additives is not proven. Others, though harmless to the system, are ineffective. Others still may actually prove damaging, particularly to the leach field and the soils.

In Connecticut, the State Department of Public Health does not recommend the use of additives. The U.S. Environmental Protection Agency also does not recommend the use of these products.

If you have questions about the location of your septic system, contact your local health department. Also, be sure to maintain records of location, pumping, maintenance or repair should you decide to sell your property. A savvy buyer will want to have confidence in the status of your home's septic system.

Use this record sheet on the back page to keep track of your septic system's location and maintenance.

Tank size (gals.)	Household Size (number of people)					
	1	2	3	4	5	6
500	5.8	2.6	1.5	1.0	0.7	0.4
750	9.1	4.2	2.6	1.8	1.3	1.0
900	11.0	5.2	3.3	2.3	1.7	1.3
1000	12.4	5.9	3.7	2.6	2.0	1.5
1250	15.6	7.5	4.8	3.4	2.6	2.0
1500	18.9	9.1	5.9	4.2	3.3	2.6
1750	22.1	10.7	6.9	5.0	3.9	3.1
2000	25.4	12.4	8.0	5.9	4.5	3.7
2250	28.6	14.0	9.1	6.7	5.2	4.2
2500	31.9	15.6	10.2	7.5	5.9	4.8

*Estimated septic tank pumping frequencies in years.
These figures assume there is no garbage disposal unit in use.
(Source: Pennsylvania State University Cooperative Extension Service)*

Sources:

Long Island Sound Study, "The Impact of Septic Systems on the Environment," Fact Sheet #13, September 1991.

The University of Rhode Island Department of Natural Resources Science, "Maintaining Your Septic System", Fact Sheet #8-2, April 1988.

"Small Flows" Newsletter, Spring 1997, Vol. 11, No. 2, "Septic Tank Additives", page 10.

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Cooperative Extension System

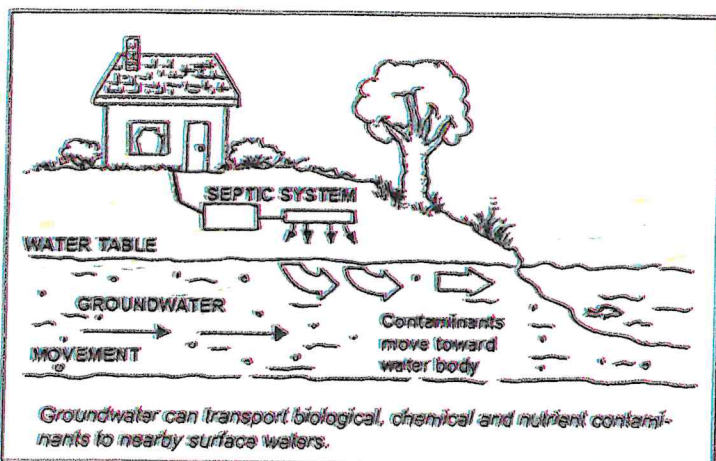


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For more information contact: Connecticut Sea Grant,
1084 Shennecossett Rd. Groton, CT 06340
www.seagrants.uconn.edu

Fact Sheet #3



ed pipes through the gravel and into the soil, which acts as a biological filter. Microorganisms found in the soil, and the soil itself, continue the treatment process begun in the tank by removing harmful organisms, organic matter and some nutrients.

Care and Maintenance of the System

Proper siting, design and installation are all critical to the proper functioning and long life of a septic system. The owner/user of that system plays an equally important role. Using preventive practices, maintaining the system and watching for signs of failure are key.

Preventive practices include (a) improving the quality of wastewater, (b) reducing the amount of wastewater, and (c) protecting the leach field. Simply put, use care in what you put into the system. It was designed for one purpose and one purpose only...to treat wastewater exiting the home.

Do not use the wastewater disposal system as a wastebasket, household chemical disposal site, or use unnecessary additives in your system. Also, the use of a garbage disposal further taxes the system. If you use a garbage disposal, your septic tank should be pumped more frequently.

Conserve water where possible. The less

water entering the system, the less turbulence and better settling that will occur. For example, decrease the amount of water going into the tank by spreading out water-using activities (like laundry) during the course of the week. Install low-flow showerheads, use a "toilet lummy" or a half-gallon milk jug filled with water in the toilet tank and encourage short showers in the household.

Lastly, protect the leach field. Avoid compacting the soil or crushing the pipes. Don't let heavy vehicles or animals cross

the leach field; don't place heavy objects like swimming pools or storage sheds over the field. Also, avoid planting trees within the leach field as the roots can cause damage to the system. Grass is the best thing to grow over the leach field.

Maintenance means inspection and pumping of the tank. An inspection should include checking sludge and scum levels as well as checking baffles to be sure that they have not been damaged.

Tank pumping is needed to remove the solids that cannot be broken down by bacteria and which should not enter the leach field. Frequency of pumping will depend upon the number of members in the household as well as the tank size. The state of Connecticut Department of Public Health recommends pumping every 3-5 years. Some towns in Connecticut require routine pumping. Keep maintenance records, using something like the attached record-keeping chart, to avoid the "out of sight, out of mind" problem.

A failing system can result in the spread of disease from improperly treated wastewater/sewage. You should be able to recognize the signs of a failed system and be prepared to act to correct problems. If you experience sewage backup in drains or toilets, slowly draining sinks, tubs and toilets, foul odors, repeated intestinal illnesses in household members, standing waste-



Clean Waters

Starting in Your Home and Yard

Caring for Your Septic System

Clean Waters is a collaboration of the Connecticut Sea Grant Extension Program and the University of Connecticut Cooperative Extension System's NEMO Project, educating individuals about the impacts of everyday activities on water quality and simple techniques that help protect water resources from the home well to Long Island Sound.

When you flush your toilet, or pour something down your drain, do you know where it goes? If your home is not on a municipal or community system, your wastewater probably goes into an on-site sewage disposal system, commonly called a septic system. A septic system is designed to collect, treat and dispose of wastewater on site so that it can percolate into the ground without clogging the soil or contaminating ground or surface waters.

In Connecticut, nearly 40% of homes use some form of on-site sewage disposal system to treat and dispose of household wastewater. When properly sited, designed, installed and maintained, a septic system can be a cost-effective method of wastewater treatment. However, since wastewater disposal is something most of us don't spend much time thinking about, many systems are out of date, not functioning properly, or clearly failing.

Domestic wastewater contains several kinds of pollutants. The major pollutant is the pathogens (disease-causing microorganisms) like the bacteria and viruses that cause dysentery, hepatitis, and typhoid fever. Fortunately, soil and soil bacteria can effectively remove most pathogens from wastewater treated by a properly functioning septic system.

When nutrients such as nitrogen and phosphorus are discharged from septic systems into the groundwater, they can contaminate drinking water supplies, and also represent a potentially important nonpoint source of pollution to ponds, streams, and estuaries such as Long Island Sound. In freshwater systems, phosphorus causes excessive aquatic weed growth that can limit the uses of ponds and lakes. In the Sound, excess nitrogen fuels massive algal blooms, which in turn die, using up oxygen as they decompose.

The improper use of septic systems has been

shown to contribute to contamination of groundwater by toxic chemicals. Contaminants that may enter groundwater through septic systems include heavy metals and toxic chemicals from small commercial establishments, toxic household products, and organic chemicals typically found in septic tank cleaning products.

How Does a Septic System Operate?

Most systems have two main components: the septic tank and the leach field. A distribution box is often found between these two components to distribute wastewater to all parts of the leach field.

The septic tank receives the wastewater and provides a site for the solids to separate and settle and for some decomposition of solids and contaminants to occur. Heavy solids settle to the bottom of the tank forming a layer of sludge. Lighter solids, like grease, float to the top forming a layer of scum. The wastewater in the middle is pushed out into the leach field as more wastewater moves into the tank. Solids need time to settle to prevent them from being pushed out into the leach field and they also need to be periodically pumped from the tank. A properly sized tank will hold 2-3 days worth of wastewater to allow for proper settling. A two-chambered tank allows for more complete settling of solids because there is less turbulence in the second chamber, resulting in cleaner water leaving the tank.

The leach field consists of trenches or a bed, often lined with gravel or coarse sand, and is buried one to three feet below the surface of the ground.

Perforated pipes or drain tiles run through the trenches. Wastewater trickles from the perforat-

In your yard (continued)

• **Use fertilizers with zero phosphorus** unless a specific need is determined by a soil test. Phosphorus (the middle number on a fertilizer bag) should be zero. Careless use of phosphorus fertilizers creates runoff which can pollute nearby lakes, streams, and rivers. Phosphorus causes unhealthy levels of weed and algae growth.

• **Control weeds.** September is the best time of year to treat dandelions, plantain, creeping Charlie, and other perennial broadleaf weeds. Remember the best weed control is a healthy, dense lawn. If the weed invasion seems to be getting worse, find out why the grass is not competitive enough to crowd weeds out. Controlling weeds may be as simple as adjusting your other lawn care practices. Where there are only a limited number of weeds present, consider removing them by hand rather than using an herbicide.

• **Seed.** The best time to reseed bare spots is either early spring or around the middle of August. If deicing salt from sidewalks or roads has caused dead areas, consider reseeding with a more salt-tolerant variety. Always plant grass varieties that are adapted to our area and are appropriate for the way you use your lawn.

• **Aerate your lawn** if soil is compacted or there is significant thatch build-up. You can do this by using a lawn aerator available from most rental stores. Use the type that removes small cores of soil from the ground and places them on the lawn surface. Leave the cores to decompose naturally, contributing to a decrease in thatch, while the holes poked into the ground help improve soil aeration for healthier root systems.

These lawn care tips will help you keep your lawn healthy and less susceptible to disease and weed invasion, meaning you will have less need for herbicides and maybe even less fertilizer.



Fertilize in the fall. Mid- to late-October is a very good time to fertilize your lawn. At this time of year, fertilizer nutrients, including nitrogen, are taken up and stored in the plant where they help provide for healthy spring growth. Most fertilizers require water after application; follow the instructions on the label to ensure best results.



Muscle-powered weed killers

If you have a smaller lawn, weeds can often be managed with mechanical tools. Weeds such as dandelions can be removed easily by digging them up with a fish-tail weeder (right) when the soil is damp. For those who would rather stay off their knees, there are upright pullers such as the Weed Hound™ (left).

For more information about pest and weed control

The Northwest Coalition for Alternatives to Pesticides has many free resources on non-toxic pest management, including fact sheets on specific chemicals and alternatives for many kinds of pests at www.pesticide.org/factsheets.html.

The *Gardener's Guide to Common Sense Pest Control*, by William Olkowski, Taunton Press, 1996.

U.S. Environmental Protection Agency Pesticide Environmental Stewardship Program for reduction of pesticide use is found at www.epa.gov/pesticides/.

The Washington Toxics Coalition has alternative pest control fact sheets on its web site at www.watoxics.org.

Recent studies on the human health and environmental effects of pesticides

The Center for Disease Control's report provides an ongoing assessment of the exposure of the U.S. population to chemicals (including pesticides): www.cdc.gov/exposurereport/.

Pesticide Action Network North America (PANNA) resource page contains reports, studies (use search words "scientific studies"), and a pesticide database at www.panna.org/resources/resources.html.

The Environmental Protection Agency's Office of Children's Health Protection has information about environmental health threats to children at <http://oehp.epa.gov/foia/foia.htm>.

Visit www.reduce.org for lots of ideas about reducing waste and toxic chemicals in your day-to-day life.

reduce.org



Minnesota Pollution Control Agency

Minnesota Pollution Control Agency helps Minnesotans make informed decisions and take actions that conserve resources and prevent pollution and waste to benefit the environment, economy and society. Visit our web site: www.mn.pca.state.mn.us

April 2008

Reduce Waste If not you, who?

BECOMING LESS CHEMICALLY DEPENDENT

Reduce the need for pesticides and herbicides



Pesticides (which includes insecticides, herbicides, and fungicides) are designed to kill weeds, insects, rodents, and mold. These chemicals can be poisonous and can pose a danger to animals and people, especially children. Keeping pests out of your home and yard in the first place eliminates the need for pesticides—and toxic chemicals.

[✱] *In order to survive, pests (both the animal and plant varieties) need food, water, and a place to live.*

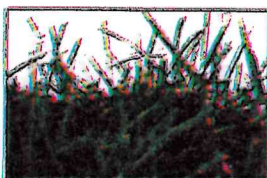
In your yard

Keeping your lawn strong and healthy is the best way to care for your lawn without using a lot of pesticides. A strong and healthy lawn will minimize weeds from taking root or insects from causing serious, permanent injury to the lawn. There are several easy steps you can take to maintain a healthy lawn and reduce the need for herbicides.

- Leave your grass clippings on the lawn. Grass clippings can provide the equivalent of about one application of fertilizer per year.
- Use a sharp mower blade when cutting your lawn to make it less susceptible to disease.
- Water infrequently, but thoroughly during dry periods of more than a week or two. Water only about once a week and thoroughly (about 1 inch of water). Avoid watering during strong sun and heat to minimize losses to evaporation. The best time to water is early in the day, before 10 a.m.



- Test your soil. Find out what kind of fertilizer, if any, your soil needs. Obtaining a reliable soil test every few years can help you monitor the nutrient needs of your lawn. The University of Minnesota Soil Testing Lab (612-625-3101) charges \$15. Some garden centers also offer testing.



Mow your grass to a height of 2 1/2 to 3 inches. This is the single most important thing you can do to improve the health of your lawn. By keeping your grass a little longer, the roots grow deeper and can reach more water during dry periods. Longer grass also helps shade the soil surface, making it harder for weeds to get established.

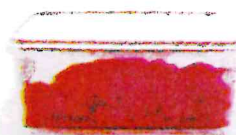
Printed on paper manufactured without the use of chlorine compounds.

In your home

If you're looking for a way to decrease your use of toxic chemicals in your home, take a look at how you handle unwanted pests. The best method to control pests, such as bugs and rodents, inside your home is to keep them out by cleaning up crumbs and spills quickly. Instead of reaching for a can of toxic spray, grab a broom!



Clean up food spills completely.



Store food in tightly sealed containers.



Caulk cracks and weatherstrip windows and doors to eliminate easy paths of entry. Check your foundation for cracks or spaces.



Plumbing leaks and damp basements can be an essential source of water for insects. Get rid of the moisture, and you could solve your bug problem.



The Connecticut Sea Grant College Program, based at the University of Connecticut, is part of a national network of university-based programs sponsoring coastal and marine-related research, outreach and education.



Fact Sheet #8

combination fertilizer-pesticide products, which force you to treat your entire lawn. You should also avoid applying pesticides according to a calendar **UNLESS** you have had a problem for several years and a pesticide is the **ONLY** means of control. When pesticide use is necessary, **ALWAYS READ THE ENTIRE LABEL!** Products should be chosen and treatments timed to be most effective in dealing with the pest and least likely to damage natural controls or be carried to other parts of the environment.

KNOW YOUR LAWN MOWER

How a lawn is mowed can help or hurt lawn health. Even the choice of lawn mower and its maintenance can make a difference. Gas-powered lawn mowers produce the same amount of air pollution in one hour as driving a car for 350 miles. Consider electric power or reel-type push mowers if you have small lawn areas to manage. Keep the mower blade sharp so grass blades are cut cleanly, reducing moisture loss and limiting disease spread. A mulching blade cuts grass clippings into very small pieces so they can be left on the lawn without clumping.

Always try to mow when the grass is dry to prevent spreading disease problems. Mow the lawn to the recommended height for the grass variety but never less than two inches. Grass plants have a hard time recovering from mowing if they have little blade left with which to photosynthesize. Reduce plant stress by never removing more than one third of the blade at a time. Recommended mowing heights are:

- Tall fescues: 2.5 - 3 inches
- Perennial ryegrass/fine fescues: 2 - 3 inches
- Kentucky bluegrass: 2.5 inches
- Zoysia grass: 1 inch (an exception)

UNDERSTAND THATCH

Thatch is a dense layer of dead grass stems and roots that develops between the soil surface and the green grass blades. Contrary to popular belief, grass clippings do **NOT** contribute to thatch problems. Heavy thatch reduces water infiltration into the soil. Some grasses (fine fescues, Kentucky bluegrass) are prone to thatch problems; others (tall fescues, perennial ryegrass) are not. Serious thatch problems are usually a sign of poor lawn care practices, such as

over-fertilization and improper mowing. De-thatching, best done in the fall, is recommended for lawns with more than one inch of thatch build-up. Top-dressing the lawn with a thin layer of good topsoil will also help control thatch.

ADDITIONAL RESOURCES

There are lots of excellent fact sheets available from The University of Connecticut Cooperative Extension System that cover lawn and pest problems in great detail. Call the University's Home and Garden Education Center, toll-free, at 877-488-6271 or check out the website at <http://www.lib.uconn.edu/cand/HomeGard/> (case-sensitive).

Written by --

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that nutrients will remain in the root zone until the grass can use them. For additional water quality protection, use organic fertilizers if possible. Organic formulas combine the benefits of slow nutrient release with the addition of organic matter to the soil. Organic fertilizers may also help reduce some turf disease problems.

Turf type will determine the annual amount of fertilizer required for a healthy lawn. Never apply more than one pound of nitrogen per 1,000 square feet at one time. To determine what is one pound of nitrogen, divide the first number on the fertilizer bag into 100. The result is the amount (in pounds) of fertilizer that should be applied to 1,000 square feet of lawn. Fine and tall fescue-type lawns require only one (September) or two (May and September) applications per year. Bluegrass lawns generally require three applications. Recommended application times coincide with three holidays: Memorial Day, Labor Day and Columbus Day.

To ensure best plant use of fertilizers and to reduce potential water quality problems, New England lawns should never be fertilized before April 1 or after October 15. Always check the weather and avoid applying fertilizer before heavy rainstorms or during long, dry spells.

KNOW YOUR WATERING SCHEDULE

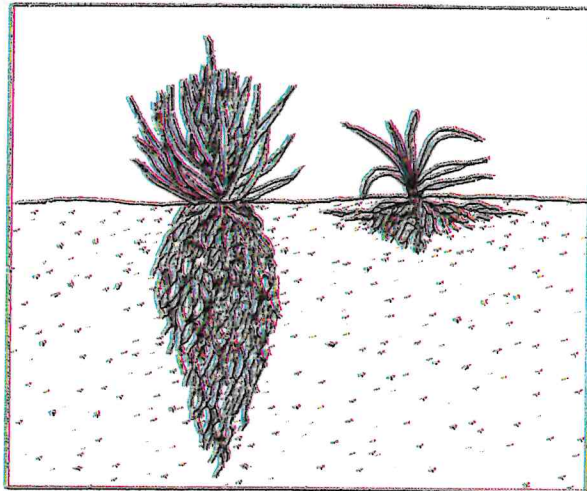
Most lawns require about one inch of water per week, either from natural rainfall or irrigation. Some homeowners like to water their lawn for a few minutes several times a week, but this practice actually weakens the grass by discouraging deep root growth. To promote deep root growth and drought resistance, use a rain gauge to keep track of rainfall. If Mother Nature has not provided an inch of rain in a week, then apply an inch of water. Measure watering levels by placing a tuna fish or other shallow can under the sprinkler system. Don't apply water faster than the ground can soak it up. If water runs off the lawn, slow down the watering.

During prolonged dry spells, it is better to let the lawn go dormant than to stress the grass by watering and forcing it to grow. Stressed grass is susceptible to pest and disease problems. Fine fescues and turf-type tall fescues are the more drought-tolerant of the common lawn grasses. Bluegrasses,

ryegrasses and bentgrasses may require supplemental water to survive drought conditions.

KNOW YOUR PESTS

The best tool for pest management is to plant grass varieties suitable for the site's growing conditions, and then to avoid stressing them with poor lawn care practices. Weeds have a hard time invading a dense, healthy lawn. When establishing a new lawn or overseeding an old one, take advantage of a natural pest control by looking for "endophyte-enhanced" seed varieties.



Lawn Mowers World

and ryegrasses contain a fungus that produces compounds that reduce certain insect and disease problems. As these varieties also tend to be more drought-tolerant, water and pesticide use can be reduced at the same time.

Scout your lawn for pest problems frequently; catching a problem early makes it easier to correct. If you find a problem, take time to determine:

- What is causing the problem?
- What is the potential for damage?
- What is the best approach to solve the problem?

Correct identification of pest problems is CRITICAL. It does no good to spray grub control pesticides on brown spots in your lawn if they were actually caused by a fungus or dog urine.

Reduce your use of, and exposure to, pesticides by only treating the problem area. Avoid the use of

APPENDIX G

ILLICIT DISCHARGE



City of Shelton
Office of the City Engineer
54 Hill Street
Shelton, Connecticut 06484-3207

203-924-1555 ext 1509
Fax: 203-924-1136
Email: shelton.eng@cityofshelton.org

Rimas J. Balsys
City Engineer

STORMWATER MANAGEMENT

Stormwater is water that originates during rain events or snow/ice melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. It can also come from hard grassy surfaces like lawns, play fields, and from graveled roads and parking lots.

What is Stormwater Pollution?

When stormwater runoff flows over surfaces it picks up and carries with it many different pollutants such as:

- Garbage
- Oil, grease & gasoline
- Sediment from construction sites and urban runoff
- Metal flakes from rusting vehicles and brakes
- Road salt
- Pesticides & herbicides
- Heavy metals from roof shingles
- Pet waste
- Leaves & grass clippings
- Bacteria
- Nutrients such as phosphorus and nitrogen
- Other chemicals
- Illicit discharges such as paints, cleaning solution products and used motor oil

These pollutants cause stormwater runoff to be the number one cause of stream impairment in urban areas.

What is Stormwater Management?

Stormwater management is the intentional capture, placement, or movement, and treatment of stormwater runoff in order to minimize pollution and/or flooding. The City of Shelton manages and maintains the stormwater system as required under the Connecticut Department of Energy and Environmental Protection's (CT DEEP) General Permit for the Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4). The purpose of the MS4 general permit is to protect waters of the state from urban stormwater runoff through municipal stormwater sewer systems.

How to Report Illegal Discharge:

To report a possible illegal discharge to our stormwater collection system, or if you have any questions, please email us at shelton.eng@cityofshelton.org or call us at 203-924-1555 x1509. Please include your name and contact information, a description of what you observed, and the location of the suspected activity. Photographs are helpful. Thank you.

Sanitary Sewer Overflow (SSO) Inventory

<u>Date</u>	<u>Location</u>
9/25/12	Shelton Heights Pump Station 550 River Road
2/18/13	25 Kneen Street Extension
5/22/13	71 Rocky Rest Road
3/25/14	75 River Road
8/30/14	30 Little Fawn Drive
11/22/14	14 Regent Drive
1/29/15	1 Trap Falls Road
4/28/15	19 Forest Parkway
6/21/16	19 Yutaka Trail
2/24/18	78 William Street
5/30/18	11 Cribbins Avenue
3/05/19	239/265 Riverview Avenue
3/20/19	20 Plaskon Drive Ext
4/27/19	502 Bridgeport Avenue
12/11/19	20 Plaskon Drive Ext

This information came from the DEEP Bypass Report Forms that were provided by the Sewer Administrator.

2019 ANNUAL REPORT

STORMWATER MANAGEMENT PLAN

The City of Shelton has completed its annual report to the Department of Energy and Environmental Protection, which is a requirement of our General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). The 2019 Annual Report is now available for public review and comment on the City of Shelton website (cityofshelton.org/publicworks). It is also available for public inspection at the Office of the City Engineer, City Hall Room 305, Tuesday through Friday, between the hours of 8:00 a.m. and 5:30 p.m.

Please send your comments to Rimas J. Balsys, City Engineer, by any of the following:

- ☐ By mail at 54 Hill Street, Shelton, CT 06484-3207
- ☐ By email at shelton.eng@cityofshelton.org
- ☐ By telephone at 203-924-1555, extension 1509
- ☐ By fax at 203-924-1136

January 14, 2020