

**DRAFT**  
**2015 - 2016**  
**MS4 ANNUAL REPORT**  
**NPDES PERMIT #CT0030279**

FOR

**CONNECTICUT DEPARTMENT OF  
ENERGY & ENVIRONMENTAL PROTECTION**

PREPARED FOR

**CITY OF STAMFORD**  
**888 WASHINGTON BOULEVARD**  
**STAMFORD, CONNECTICUT 06901**



**July 2016**

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## INTRODUCTION

The City of Stamford (the City) was issued its current NPDES Permit (No. CT0030279) for discharge of stormwater from its municipal separate storm sewer system (MS4) on June 4, 2013. This permit requires many actions in order to reduce pollution from stormwater runoff.

This Annual Report (Report) covers the period from July 1, 2015 through June 30, 2016 (Reporting Period). It summarizes the activities conducted and measures taken to comply with the previous and current NPDES Permit during this Reporting Period. This Annual Report was prepared in accordance with the terms and conditions of the NPDES Permit, as well as the *Stormwater Management Plan, City of Stamford, Stamford, Connecticut, September 2, 2014* (the SMP).

The 2014 – 2015 MS4 final Annual Report was submitted to the Connecticut Department of Energy and Environmental Protection (CTDEEP) on September 30, 2015.

The City submitted an application for modification of the current NPDES Permit. The application was submitted on January 4, 2016 and included the following modification requests:

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## 1.0 CONTACTS LIST

The following individuals are members of the City's Stormwater Pollution Prevention Team and have a role in the implementation of the City's stormwater management program and are in positions that have the potential to impact and improve stormwater quality. All of these individuals are involved in the development of the Stormwater Management Plan (SMP) and/or this Annual Report.

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## 2.0 PROGRAM EVALUATION

### 2.1 Stormwater Management Plan (SMP) Objectives

The City of Stamford (the City) was issued a NPDES Permit for discharge of stormwater from its municipal separate storm sewer system (MS4) on June 4, 2013. The City developed and is implementing a Stormwater Management Plan (SMP) based on the requirements of the NPDES Permit.

The SMP provides the framework for compliance with the terms and conditions of the NPDES Permit with the overall objective of improving the quality of stormwater runoff and protecting the surface waters of the State. The SMP seeks to achieve this objective through:

- Establishment of a Pollution Prevention Team
- Development of Stormwater Mapping
- Establishment and Implementation of Control Measures, including:
  - Public Education and Involvement
  - Source Controls for Pollution Prevention
  - Future Land Disturbance and Development Management
  - Infrastructure Operations and Maintenance
- Establishment and Implementation of an Illicit Discharge Detection and Elimination (IDDE) Program
- Establishment and Implementation of a Water Quality Monitoring Program
- Establishment and Implementation of Legal Authority to Control Discharges
- Establishment and Implementation of Procedures to Coordinate Stormwater Activities between various Departments and Agencies
- Maintaining Consistency with Other Plans and Permits

Additional details on each of these of these methods to achieve the objectives of the SMP are presented in the Summary Table of SMP Components (*Section 3.0*) and the Narrative Report (*Section 4.0*).

### 2.2 Major Findings

The objective of the SMP is to improve stormwater runoff quality and protect the surface waters of the State. This discussion of major findings should provide an overall evaluation as to whether stormwater and surface water quality in the City and from the City's MS4 is improving or degrading in the City.

Stormwater sampling conducted in the 2014-15 annual monitoring report year is being used to establish baseline conditions against which future data will be evaluated. See *Section 4.5* for additional information on monitoring events.

The major findings during this Reporting Period of the new NPDES Permit are the steps that the City has taken to implement the permit requirements, including but not limited to:

- Continued development of an understanding of the permit requirements and the resources necessary to achieve compliance
- Continued allocation of additional resources (personnel, equipment, and budget) to/within the Traffic and Road Maintenance Division to specifically address stormwater management and stormwater runoff quality improvement issues
- Continued coordination of the Stormwater Pollution Prevention Team with City Departments for stormwater-related issues
- Implementation of the SMP and associated public outreach activities
- Continuation of city-wide geographic information system (GIS) mapping related to stormwater infrastructure and management
- Continued development of legal authority and zoning regulations to address stormwater discharges and quality
- Continued coordination of public outreach with local environmental and business groups
- Continued coordination with consultants to assist in the implementation of the SMP and to perform surface water, stormwater, and outfall monitoring

## 2.3 SMP Strengths and Weaknesses

### 2.3.1 EPA Review of the Status of the NPDES Permit

Representatives from the US Environmental Protection Agency (EPA) and the CTDEEP visited with members of the City's Stormwater Pollution Prevention Team on June 15 and 16, 2015 to conduct a compliance audit of the City's NPDES Permit. The compliance audit included a "five-year look-back" period.

After the compliance audit, the EPA indicated the following areas of the permit needed improvement:

- **Mapping and GIS Work** – The EPA indicated that this area was on the top of their list, noting that determining the exact number of stormwater outfalls is critical to implementation of monitoring and illicit discharge detection. The City needs to finalize this information. The EPA also mentioned that the outfall mapping work should have been completed under the terms of the previous NPDES Permit [administered by the Stamford Water Pollution Control Authority (SWPCA)]. The EPA stated that they were looking at five years of compliance data (back to 2010), and as such, all outfalls 15 inches or greater should have been located and mapped by June 30, 2012. This work is still underway by Technology Management and GIS staff, and has generated over 900 outfalls as of June 2015. See **Section 4.2** for more details on the status of the stormwater management mapping.
- **Zoning Regulations** – The EPA reviewed a draft of the proposed modifications to Sections 3 & 15 of the Zoning Regulations, which will require builders and developers to comply with the 2002 CT Soil Erosion and Sediment Control Manual, along with other revisions and additions as required by the NPDES Permit. To comply with the NPDES Permit, the City is required to have these revisions approved by the Zoning Board and formally incorporated into the Zoning Regulations. This work is underway and the modifications have been sent out to

referral to various agencies. See *Section 4.3.4* and *Section 4.6* for more details on the Stormwater Ordinance and Zoning Regulations.

- **Staffing Levels** – The EPA indicated that there are inadequate staffing levels in the following departments:
  - **Land Use Bureau and Engineering Department** – Additional staff is required to perform technical review of land use permits due to volume and complexity of work. Performing site inspections before permit issuance, during construction, and prior to administering a Certificate of Occupancy are a critical component for compliance.
  - **Stormwater Management Department** – Additional staff is required (Heavy Equipment Operators) to operate vacuum trucks, the camera truck, and equipment to maintain storm drainage piping. The EPA also indicated that the addition of an Office Support Specialist (OSS) is required in the Stormwater Management Department to assist with data collection, record keeping, and correspondence requirements.
- **Drainage Basin Inspections** – The EPA reiterated that annual inspections and maintenance is required for all public and private detention and retention ponds in the City. See *Section 4.3.5.8* for more details on drainage basin inspections.
- **Industrial Dischargers.** – The EPA indicated that the City is required to educate owners and operators of commercial, industrial, and institutional facilities as to their responsibility to control pollutants in stormwater discharges from their properties into the City’s MS4. See *Section 4.3.2* for more details on the education provided to the City’s industrial dischargers.
- **Dry Weather Outfall Screening** – The EPA noted that the City did not complete any dry weather outfall screening in year one of the permit (July 1, 2013 – June 30, 2014). The City is required to be 50% complete with the dry weather outfall screening by July 1, 2015. Screening to comply with this requirement is currently underway. See *Section 0* for more information on the IDDE program and dry weather outfall screening.
- **Wet Weather Outfall Monitoring** – The EPA noted that the City did not complete the required number of samples (92), by June 30, 2015. This work is currently underway. See *Section 4.5.3* for additional information on the wet weather outfall monitoring.
- **Illicit Discharge Detection and Elimination** – The EPA indicated that the City needs to make progress in achieving results, eliminate illicit piping connections, and documenting and submitting the results of this requirement. See *Section 0* for additional information on the IDDE program.

The EPA stated that a summary of the compliance audit and any enforcement actions would be transmitted to the City within 60 – 90 days from the date of the compliance audit (by mid-September).

The SMP will continue to be evaluated in greater detail as part of the 2016 – 2017 Reporting Period. A component of that evaluation will be a review of goals, schedules, and procedures referenced in the SMP as “to be established” and a detailed analysis of the status of these items.

## 2.4 Future Direction of the SMP

The City considers the SMP to be a dynamic document and will continue to work towards updating and revising it as conditions and regulations change in an effort to maximize its ability to be utilized as a tool to manage and improve stormwater runoff quality. Because this SMP was recently established, the City's focus will be on implementing it to the best of their ability over the course of the next several years. For this reason, no significant changes to the SMP are anticipated at this time.

Now that the Traffic and Road Maintenance Division has had time to become acclimated to the permit requirements and develop and begin implementing the SMP, the City will continue to focus more of its resources in the coming years to achieving compliance with the SMP, particularly in the areas of:

- Public education and involvement
- Stormwater mapping
- Illicit discharge detection and elimination
- Control measures
- Infrastructure operations and maintenance
- Legal authority and regulatory changes
- Water quality monitoring

Specific goals or requirements are discussed in the Narrative Report, *Section 4.0*, of this Annual Report.

The Team Coordinator and Regulatory Compliance and Administrative Officer will continue to be responsible for closely tracking individual activities and events in each of these areas.

### 3.0 SUMMARY TABLE OF SMP COMPONENTS

The summary table of SMP components is presented in *Appendix B*. This table concisely presents the stormwater management activities completed within the time period for this Annual Report and documents the City's compliance with key permit and SMP requirements.

Administrative issues, such as planning activities, program development, and pilot studies, are not discussed in the summary table of SMP components.

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## 4.0 NARRATIVE REPORT

### 4.1 Pollution Prevention Team

The Pollution Prevention Team (Team), **Section 1.0**, was established to implement the SMP, to keep it up-to-date as conditions and/or regulations change, to maintain the control measures to improve stormwater quality, and to take corrective actions, as necessary. With the issuance of the new NPDES Permit in 2013, the City decided to transfer the majority of the responsibility for compliance with the permit from the SWPCA to the Traffic and Road Maintenance Division.

Much of the first year of the new permit was utilized by the Traffic and Road Maintenance Division becoming familiar with the permit requirements and establishing the necessary schedules, procedures, personnel, equipment, financing, and other resources necessary to successfully implement the permit requirements and the SMP.

This third permit year was utilized to get the in-stream sampling up-to-date, commence discharge sampling, get the infrastructure and IDDE evaluations up-to-speed with the new tracking software and CCTV capabilities, jump-start the outfall identification and mapping process, establish the MS4 stormwater ordinance, and drafting modifications to the Zoning Regulations.

The Team that has been established under the current SMP (see Appendix B of the SMP and **Section 1.0** of this report) consists of personnel from many City departments whose operations may affect the current and future stormwater quality. Team members supply the City with a wide-range of experience and expertise in managing and controlling stormwater runoff quality.

Since 2013, the Team has continued improving their understanding of the new NPDES Permit requirements, communicating these requirements amongst themselves, establishing areas of responsibility and cooperation, brainstorming on public education and control measure ideas, and working with the appropriate legal counsel to establish legal authority and new regulations.

The Team's activities are coordinated by the Traffic and Road Maintenance Supervisor. Many of the day-to-day stormwater permit compliance activities are managed by the Regulatory Compliance and Administrative Officer; this position was created in early 2014 specifically as a result of the issuance of the current NPDES Permit.

The City has also created and filled seven positions under the direction of the Regulatory Compliance and Administrative Officer; the positions include equipment operators and laborers to help operate the vacuum trucks and camera truck for IDDE screening and catch basin and manhole inspections and cleaning.

It is anticipated that the Team will continue these activities during the next year of the discharge permit as well as develop and coordinate additional specific goals with the objective of improving the overall quality of stormwater runoff in the City of Stamford.

## 4.2 Mapping

The City maintains a strong GIS department that can coordinate city-specific, as well as environmental data, available from the DEEP and other sources. Information that has been mapped includes: city roadways, city properties, aerial photography, topography, zoning map, surface water bodies, watershed areas, surface water quality classifications, impaired waters, mapped inland wetlands, mapped tidal wetlands, the coastal boundary, and the ten approved in-stream sampling locations.

The City has hired a consultant that is in the process of mapping sanitary sewer lines, stormwater lines, and stormwater outfalls. Mapping efforts have focused on the more developed sections of the City, closest to Long Island Sound, with the most stormwater outfalls mapped south of Interstate 95 and many more mapped between I-95 and the Merritt Parkway (Connecticut Route 15). Initially, 154 stormwater outfalls were mapped. Several of the initially mapped outfall locations were determined to be inaccurate and 90 MS4 outfalls have been confirmed/identified/mapped. Two of the previous 92 MS4 outfalls were eliminated from the list, outfalls number SON-0021 and SON-0060. These outfalls were removed from the monitoring list because one was identified as the SWPCA's Facility discharge location and the other was a structure inlet.

The City continued to identify and map new MS4 outfalls in the City throughout the Reporting Period. To date, the City is approximately 80% complete with their stormwater mapping. The City is currently in the process of confirming the accuracy of the outfall locations and if they are part of the City's MS4 stormwater system or another entity's responsibility. Several of the potential new outfalls have been identified as duplicates and others have been noted as inlets or discharges under state DOT control. The City continues communication with the DEEP to identify more specific criteria for the outfalls that will be required for monitoring as part of the IDDE program and the wet weather monitoring program. See *Section 4.4* and *Section 4.5.3* for additional details on the IDDE program and the wet weather monitoring program. A new Interconnected MS4 plan was prepared in June 2016 and is further discussed in *Section 4.3.5.9*.

This component of the SMP is to be expanded to include the following GIS mapping:

- Storm line material and size data
- Responsibility, if part of another MS4 stormwater system (such as DOT's)
- Completed and proposed cleaning and repair activities
- Outfall discharge monitoring data
- IDDE screening and investigation results
- Proposed IDDE investigations
- Completed and proposed capital projects
- Connections to any other public or private storm drainage systems
- Drainage areas for each MS4 outfall
- Areas served by on-site subsurface disposal areas
- Storm drains that do or may receive discharges from underdrain systems

For an update on the impervious cover and directly impervious cover area (DCIA) see *Section 4.3.4.1*.

## 4.3 Control Measures

### 4.3.1 Public Education and Involvement

City residents can contribute to the pollution transported via stormwater by misapplying lawn pesticides, herbicides and fertilizers, littering, dumping pollutants into storm drains, failing to dispose of pet waste properly, and other actions which can be detrimental to the quality of stormwater discharging into water bodies. Many people are unaware that they are polluting when engaged in these activities. Therefore, public education and outreach and public involvement and participation will help minimize the amount of pollution contributed to the City's water bodies by local residents. Also, public education and outreach coupled with public involvement and participation allows city residents to have a voice with regard to stormwater.

During this Reporting Period, the following public education and involvement activities have been completed:

- The City has continued to maintain and update the stormwater section that was previously added to the City of Stamford's website at <http://www.stamfordct.gov/stormwater-management>. The website provides basic information about stormwater as well as key contacts within the City of Stamford. Additionally, it provides links to:
  - The NPDES Permit
  - The SMP
  - The MS4 Stormwater Ordinance
  - The 2012, 2013-2014 and 2014-2015 Annual Reports
  - The household hazardous waste collection events schedule and information on the materials managed
  - Dog waste management practices
  - Best management plans for pesticides
  - Information on preventing stormwater pollution honored
  - Fall leaf pick up schedule
  - Christmas tree pick up schedule
  - How to report a stormwater issue, violation, or complaint

The City has also added a Frequently Asked Questions section that includes 25 questions and answers that city residents may view. To date, there have been approximately X hits on the website.

- In 2014, the department adjusted internal operations to receive and respond to citizen questions and complaints regarding stormwater related issues. The City's stormwater management department responded to numerous citizen inquires regarding snow storage, sweeping, catch basin cleaning, and IDDE program during the Reporting Period.
- A public meeting was held on August 3, 2015 for the review of the SMP and the draft 2014-2015 Annual Report. A public meeting is scheduled to be held on July 26, 2016 for the review of the SMP and the draft 2015-2016 Annual Report. The Notice of Meeting was published in the Stamford Advocate on July 18 and 22, 2016 and was posted on the City's stormwater management website. The Notice of Meeting was filed with the Town Clerk, forwarded to the Board of Representatives, and posted throughout Government Center. The

leadership/directors of two local environmental groups, SoundWaters and the Mill River Collaborative, were provided with notice of the meeting. The meeting sign-in sheet and the questions and answers provided during the meeting can be found in *Appendix C*.

- An informational pamphlet on dog waste management was / will be provided to all dog owners at license renewal time. 3,000 pamphlets were provided to the Town Clerk for distribution on June 24, 2016 and an additional 3,000 copies are in stock at the Traffic and Road Maintenance office for future distribution.
- Since 2013, the City has installed 60 dog waste dispensers and signs informing park patrons of the need to pick up after their dogs in key parks. These signs refer to the existing municipal dog waste ordinance in the City Charter (Section 111). Thirty (30) additional dispensers were purchased and will be installed by the City Parks and Recreation Department, once the locations are identified. Approximately \$7,850 was spent on dog waste disposal bags during the Reporting Period and City staff have observed used bags disposed of in the trash containers throughout the areas with dispensers.
- The SWPCA provides tours of the City's wastewater treatment facilities to school children and adults. During the Reporting Period, approximately X people attended these tours. As part of the presentation, they discuss stormwater impacts and typically distribute a brochure entitled "What is Your Storm Drain IQ?"
- The Mill River Collaborative performs annual clean ups, improvements, and provides educational programming within the City. Approximately X volunteer hours were provided during this Reporting Period.
- SoundWaters is the leading environmental education organization on Long Island Sound. Over 25,000 students learn and explore with SoundWaters, through education and action, every year.
- The City conducted an educational outreach program event at the Dolan Middle School on May 20, 2016. Four classes, including 156 students, of sixth graders were introduced to the concepts of stormwater quality management using a PowerPoint presentation, a newly acquired Enviroscape interactive model of a typical stormwater management system and were given the opportunity to see the vacuum trucks used to clean out catch basins and manholes. The City is in the process of collaborating with other middle schools throughout the City to expand this outreach program.
- During this Reporting Period, the City ordered and received 7,000 catch basin medallions for placement on catch basins throughout the city. These medallions were ordered in both English and Spanish to help raise public awareness for stormwater quality issues. These medallions are being installed in by City staff members or by seasonal employees and volunteers. Currently, approximately X medallions have been installed on curb-backed catch basins throughout three areas targeted by the City.
- Harbor Watch, a division of Earthplace, a not-for-profit organization, was retained by the City, using grant funding, to conduct the dry weather outfall sampling as part of the IDDE program (see *Section 4.4*). During this Reporting Period, Harbor Watch conducted dry weather outfall screening at 45 of the known outfalls on public property and additional sampling at other outfalls (pre-permit, unknown outfalls). The 2016-17 City budget contains funds for an additional 47 dry weather outfall screenings of the known outfalls.

- The City has collaborated with a marketing and public relations firm to develop a new stormwater management mailer/pamphlet to be sent out during the 2016 – 2017 reporting period to provide a guide for regulatory compliance. 7,700 pamphlets were ordered in English and Spanish. 2,250 pamphlets will be distributed to commercial and industrial town business, including CTDEEP Industrial Stormwater General Permit permittees and other.
- The City conducted an Earth Day training and outreach program on April 22, 2016. In attendance was the mayor of the City, along with 45 residences, who were provided with a presentation on the concepts of stormwater quality management using the Enviroscape interactive model and were given the opportunity to see a vacuum truck demonstration. A sample Earth Day flier is provided in *Appendix D*.
- The Friends of Mianus River Park, a volunteer group and non-profit corporation, conduct two riverbank stabilization projects in the 2015-2016 reporting period. One of the projects was held on September 12, 2015 at the West River Trail off from Merriebrooke Lane, the project included efforts to close some unofficial trails to the river and break up heavily compacted areas close to the river to help natural recovery. On September 26 and 27, 2016, the Mianus Chapter of Trout Unlimited, in collaboration with the City of Stamford, the Friends of Mianus River Park and other organizations provided support for the construction of a hardened access and conifer revetments along the Meander Trail, which was severely eroded. The hardened access was provided to stop further erosion of the riverbank, while providing a secure way to enter the river.
- The efforts conducted by the Stormwater Management Department were recognized in the City of Stamford Annual Report – Fiscal Year 2014-15. This report is distributed annually by the office of the mayor and is available on the City’s website. The report summarized the efforts that are presented in this annual report.
- On April 30, 2016, the Stamford Police Department hosted a National Rx Drug Take-Back event. Fliers for the event were handed out during the Earth Day event previously discussed. As part of the event, the police department provided services for residents to drop off their unused or expired medications. A sample flier is provided in *Appendix E*.
- Approximately 38,000 Stormwater Management fliers were distributed to the throughout the City with the December 2015 tax bills. The fliers were provided to each parcel owner. A copy of the flier is provided in *Appendix F*.
- On January 22, 2016, the City hosted a meeting with the Main Street Trash Coop regarding the impacts to the storm drains and sanitary sewer drains in the vicinity of restaurants; 20 people were in attendance. Currently, there are 11 restaurants that utilize one (1) grease disposal container. The catch basin in the area was cleaned out several times, but impacts to the basin were still noted. The WPCA has issued a fine for non-compliance. The Traffic and Road Maintenance Division is in the process of investigating a secondary containment system design to help prevent grease from entering the stormwater and sewer collection systems.
- On January 26, 2016, Governor Malloy visited the Traffic and Road Maintenance facility to talk about his drive to operate a lean state government using the backdrop of a pair of city vehicles purchased with state grants and to highlight his commitment to lean government and clean water. “The state continues to be a leader in water quality”, he said, referring to the new vehicles (vacuum truck and camera truck) the City has courtesy of state grants as part of the

effort to ensure that clean water is a priority. Governor Malloy stated that having the City own and operate the vehicle is more efficient instead of going to vendors.

- A neighborhood clean-up was conducted on April 23, 2016 at the East Side. A beach clean-up, titled “King Care Days” was conducted on April, 18, 2016 in conjunction with the Department of Public Works at Cummings Park where 550 pounds of debris were removed from a tidal pond. On June 30, 2016, the Department of Public Works coordinated a neighborhood clean-up project at the Harbor Drive area, along the boardwalk and estuary, at Czeck Marina Park. On January 19, 2016, the Regulatory Compliance and Administrative Officer provided a status report to the Harbor Management Commission on where the City stands in its program to identify (first phase) and correct (second phase) pollution entering city waterways via its storm drain system.

#### 4.3.2 Industrial Dischargers

During the 2015 NDPES Permit compliance audit, the EPA indicated that the City is required to educate owners and operators of commercial, industrial, and institutional facilities as to their responsibility to control pollutants in stormwater discharges from their properties into the City’s MS4.

The City’s Stormwater Management Department has obtained a CTDEEP list of stormwater discharge General Permit sites for commercial or industrial activity and will prepare informational outreach materials to target these businesses. The City intends to distribute the materials during the 2015-2016 Reporting Period.

#### 4.3.3 Source Controls and Pollution Prevention

##### 4.3.3.1 Motor Oil Collection

The City collects used motor oil and cooking oil at the Katrina Mygatt Recycling Center so that residents will have a place to properly dispose of these materials and to limit the potential for them to be improperly disposed and adversely affect stormwater quality. From July 2015 through June 2016, approximately X gallons of used motor oil and X gallons of used cooking oil were collected. The City intends to continue its used motor oil collection activities.

##### 4.3.3.2 Household Hazardous Waste (HHW) and Electronic Waste Collection Programs

The City holds at least one HHW collection day within the City limits each year so that residents will have a place to properly dispose of these materials and to limit the potential for them to be improperly disposed of and potentially affecting stormwater quality. In 2015 and 2016, the City hosted an HHW collection day on July 19<sup>th</sup> and July 16<sup>th</sup>, respectively. In addition, Stamford residents are able to utilize HHW collection days in Darien, Greenwich, New Canaan, Norwalk, Westport, Weston, or Wilton approximately seven other days per year (throughout the spring and fall). The City intends to continue its involvement in these collection events.

The City collects used consumer electronics at the Katrina Mygatt Recycling Center during normal operating hours. Acceptable materials include computers, monitors, televisions, VCRs, DVDs, cell

phones, copiers, fax machines, printers, radios, stereos, and small electronics. In addition, inks and toners, rechargeable batteries, lithium ion batteries, vehicle batteries, compact fluorescent light bulbs, and linear lamps are also accepted at the Recycling Center. From July 2015 through June 2016, approximately 285 tons of consumer electronics and universal wastes were collected. The City intends to continue its waste electronics collection activities.

#### 4.3.3.3 Spills and Leak

In June 2015, a city-wide Spill Prevention and Response Plan (SPRP) was completed to prevent, contain and clean up spills of oils, petroleum products, and other potentially hazardous materials to minimize stormwater impacts and protect surface waters. A copy of the new SPRP being implemented is provided in *Appendix G*.

The department responded to five (5) spills in excess of five gallons of petroleum products on the City's roadways and coordinated with first responders (Police, Fire, DEEP) to limit impacts to the City's MS4. A list of recent spills during the Reporting Period, of five gallons or more, is presented in *Appendix H*.

On **Date**, the Traffic and Road Maintenance Division removed 75 gallons of oil from a catch basin in Cove Island Park.

For additional information on training for spill prevention and response see *Section 4.3.5.1*.

#### 4.3.3.4 Pesticide, Herbicide and Fertilizer Use Limitations

The City is required to limit the use of pesticides, herbicides and fertilizers (PHF) in city-owned or operated areas. The City has developed the Best Management Practices (BMPs), found in Appendix G of the SMP, for PHF application in city-owned or operated areas. Further development of standard operating procedures (SOPs) for the use of PHFs is ongoing. It is anticipated that they will be modeled based on the CTDEEP Integrated Pest Management (IPM) Plans. Completion of the PHF SOPs is anticipated during the 2016 – 2017 Reporting Period.

Fertilizers and herbicides are used on the municipal athletic fields, as described in the SMP. Every year, in April, Dimension (18-0-40) is applied to the fields and contains both fertilizer and herbicides. In May, ProPendi (13-0-4) is applied to the fields and contains both herbicides and fertilizer. In September, just fertilizer (25-0-5) is applied to the fields. The City applied a total of X pounds of nitrogen to the ball parks in 2015-2016. See *Appendix I* for a table of the total nitrogen used at the City-owned ball parks.

As required by the NPDES Permit, the City is in the process of establishing reduction goals, including consideration of alternatives, for PHFs being used at city-owned or operated areas, specifically at the municipal athletic fields.

No PHFs are used on city park green spaces.

The Mill River Park/Mill River Collaborative completely avoids the use of synthetic fertilizers. They employ a “feed the soil ecology” program where the soil is infused with sixteen or more species of bacteria and fed with a fish emulsion/kelp/yucca blend as a substitute for traditional fertilizers. Additionally, the Mill River Collaborative maintains its lawns at four inches to build deeper, more drought tolerant root systems. All grass clippings are returned to the lawns and they use organic products, such as soy bean meal, to add nitrogen to the soil. The Mill River Collaborative uses minimal herbicides on invasive plant species per DEEP guidelines. They have found that as they continue this program, they require less herbicide use each year.

With respect to the city-owned golf courses, the NPDES Permit requires that the City implement practices which achieve a ten percent (10%) reduction in total nitrogen by June 3, 2018. The reduction will be determined by the average annual usage, by weight, of the three years preceding the current NPDES Permit. The current SMP has established the application rates of fertilizers used at the golf courses, which can be found in Appendix G of the SMP. The City’s Regulatory Compliance and Administrative Officer is currently in the process of obtaining background documentation from the city-owned golf courses in order to establish the total amount of nitrogen applied during the three years preceding the current NPDES Permit (2010-2012). This data will serve as the basis for establishing the amount of total nitrogen reduction.

During the Reporting Period, the Sterling Farms Golf Course used a total of X pounds of nitrogen and the E. Gaynor Brennan Municipal Golf Course used a total of X pounds of nitrogen. The total, X pounds of nitrogen, used in 2015 represents a X percent reduction from the total nitrogen that was used in 2013 (9,082 pounds). See *Appendix I* for a table of the total nitrogen used at the City-owned golf courses.

The Pollution Prevention Team will work with the golf course staff to help reduce the total amount of nitrogen used at these facilities. It is the City’s intention to establish goals for reducing the amount of PHFs used at all city-owned or operated areas.

#### 4.3.3.5 Salt Storage and Usage

The City stores road salt (and/or salt mixtures) at the Highway Department (90 Magee Avenue), the Town Yard (106 Haig Avenue), and the Scofieldtown Transfer Station (612 Scofieldtown Road). At each facility, salt is stored on an impervious pad and under a salt shed in accordance with the requirements of the DEEP’s *General Permit for the Discharge of Stormwater Associated with Industrial Activities*.

The City used approximately X tons of salt during X storms with a combined total of X inches of snow during the winter of 2015-2016. Salt usage quantities will continue to be tracked and the City’s goal is to reduce the amount of salt and salt-sand mixture utilized on its roadways by increasing efficiencies and investigating alternate methods. However, salt usage will continue to vary based on storm frequency and intensity.

The City continues to expand its use of brine trucks for pre-treatment, which helps reduce road salt usage. More trucks are being equipped with brine and the truck drivers are now receiving tanker endorsements on their licenses in order to be able to use the brine trucks. See *Section 4.3.5.6*, Snow Removal, for additional discussion on salt usage.

#### 4.3.4 Land Disturbance and Development

Construction site runoff and post-construction site runoff should be reduced so that water bodies are not receiving additional pollutants or sediment. Sediment causes water bodies to become physically and biologically altered. Decreases in habitat quality can result from significant amounts of sediment covering these habitat areas.

Under the terms of the NPDES Permit, the City of Stamford is required to implement and enforce a program to address construction and post-construction stormwater discharges from land disturbing activities and after site stabilization has been achieved. This program needs to be based on the *Connecticut Guidelines for Soil Erosion and Sediment Control* (latest edition) and the *Connecticut Stormwater Quality Manual* (as amended). The City is currently working towards developing this program; both of these documents will be incorporated into the draft changes to the Zoning Regulations.

The City has a well developed process for ensuring that applicants for building permits have received all appropriate City approvals prior to issuance of a building permit. A copy of the checklist utilized by the Building Official is presented in Appendix J of the SMP. As part of this review and approval process, the Engineering Department reviews stormwater and drainage for proposed developments and site plan revisions.

The site plan review process will continue in the future, but the site-specific stormwater requirements will be better defined once the draft Zoning Regulation changes have been approved and implemented. The NPDES Permit requires the City of Stamford to develop and enforce a program to control stormwater discharges from development and redevelopment activities with one-half acre (21,780 sf) or more of soil disturbance. The one-half acre threshold applies both individually and collectively as part of a larger common plan. Modifications to the Zoning Regulations will include provisions to encourage low impact development (LID) practices to maximize infiltration and minimize stormwater runoff. The regulations will also limit barriers to LID design and construction.

The NPDES Permit requires the City to conduct site-plan review and pre-construction review meetings that incorporate consideration of stormwater controls or management practices to prevent or minimize impacts to water quality. The City currently conducts such meetings internally as part of staff review of many projects. Meetings with developers occur when the project has significant potential for environmental impact.

As part of the application review process, the City is now providing applicant's with information on the DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities*.

The NPDES Permit also requires site inspection and enforcement to assess the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures. The City's staff performs site visits when the project is in close proximity to a wetland or other water body. Current staffing levels limit the opportunities for site inspections to only those projects with the greatest potential for impact to stormwater quality. Site visits frequently occur prior to the issuance of a Certificate of Occupancy.

The City of Stamford's Environmental Protection Board conducted permit and technical reviews, enforcement and inspections and other land development services. A summary table of the services that they provided during the Reporting Period is included in *Appendix J*.

The City has requested an extension for addressing the change in zoning regulations. The proposed changes will require more staff from the Engineering Department and the Environmental Protection Board and additional time is required to implement the changes.

Additional information on the proposed stormwater ordinance and changes to the Zoning Regulations are presented in *Section 4.6*, Legal Authority.

#### 4.3.4.1 Impervious Cover

The NPDES Permit calls for completion of DCIA (directly connected impervious area) mapping associated with each MS4 outfall within four years. The City is in the process of estimating the DCIA throughout the City. During this Reporting Period, sub-meter aerial photogrammetry of the City was generated that will be used in determining the DCIA. The initial estimate will be based on the total area of impervious cover, including roadways, drive ways, sidewalks, parking lots, and building footprints, that discharge to the MS4. Allocating the amount of the DCIA to each MS4 outfall and evaluating each drainage area to determine if the roof tops are connected to the DCIA will be performed in the next couple of years. Estimates will be revised in the future as development, re-development, or retrofit projects or new information effectively add or remove DCIA to or from the MS4.

The Mayor of the City of Stamford has requested that the Western Connecticut Council of Governments (WestCOG) complete the DCIA mapping. The City's GIS Department has conducted a pilot study for the Shippan Area, which is currently being evaluated by the WestCog.

#### 4.3.5 Infrastructure Operations and Maintenance

Pollution prevention and good housekeeping are critical minimum control measures because they concentrate on municipal operations including the maintenance of other control measures. These activities can make an immediate difference with local water body pollutant levels. Street sweeping and other maintenance activities reduce the amount of sediment, salt and pollutants entering the drainage system thereby minimizing pollutant loads to local water bodies.

#### 4.3.5.1 Employee Training

Employee training is essential for maintaining and increasing the awareness of water quality related issues in the management of any MS4. Training also enables facility staff to have an improved understanding of the stormwater system and how to minimize the impact the facility has on the MS4.

All employees working at city-owned facilities participate in annual training to meet the requirements of the DEEP's *General Permit for the Discharge of Stormwater Associated with Industrial Activity*. This annual training includes:

- Overview of the NPDES MS4 Permit
- Review of the goals and objectives of the SMP
- Review of facility Stormwater Pollution Prevention Plan
- Review of good housekeeping
- Identifying and reporting illicit discharges
- Review of spill prevention and response procedures

Training was conducted on June 22 and 23, 2016 for Stormwater Pollution Prevention Plan and Spill Prevention and Response training. Approximately 40 employees were in attendance from City-owned facilities at this training event. Additionally, Universal Waste Management and Spill Prevention, Control and Countermeasures Plan training is scheduled to be conducted on **Date**.

**X** members, or departmental designees, of the Pollution Prevention Team attended additional MS4 SMP training on **Date** titled "*Stamford's MS4s and You: Your Role in Stamford's Stormwater Management Program*". This MS4 training highlighted the importance of stormwater quality, what impacts stormwater quality and how stormwater quality can be controlled.

The City is dedicated to ensuring that its employees continue to gain the necessary knowledge needed for understanding and implementing the SMP in order to increase the quality of the stormwater in the City's MS4. The City will continue to update and implement its training programs for all employees working at city-owned facilities. A copy of the sign-in sheets for each of the training events is provided in *Appendix K*.

The Regulatory Compliance and Administrative Officer attended the annual Nonpoint Source Pollution (NPS) Conference, sponsored by the New England Interstate Water Pollution Control Commission (NEIWPCC), on April 20, 2016. The conference is the premier forum in the region for sharing information and improving communication on NPS pollution issues and projects. The conference brings together all those in New England and New York State involved in NPS pollution management, including participants from state, federal, and municipal governments, private sector, academia, and watershed organizations.

#### 4.3.5.2 Infrastructure Repair and Rehabilitation

It is important that the City make timely repairs to the infrastructure of its MS4 in order to help reduce the discharge of pollutants from the MS4 to the receiving waters. The City is dedicated to giving

priority to those projects discharging pollutants to impaired waters or that have other concerns related to the mapping and IDDE process. A schedule for implementation of repairs is developed and updated once the need for the repairs are established.

The SWCPA performs routine maintenance and any necessary repairs on the stormwater pumps on an annual basis.

As of January 1, 2016, the Traffic and Road Maintenance Division is now responsible for tracking the catch basins and manholes that require repairs. Previous lists of required repairs were maintained by the Engineering Department. The Traffic and Road Maintenance Division will maintain the list of catch basin and manhole that require repair and will assign that work to either internally or to independent contractors, as needed. During the Reporting Period, X catch basins and/or manholes were repaired. See *Section 4.3.5.7* for additional details on catch basin cleaning. A list of 2015 – 2016 catch basin / manhole repairs is presented in *Appendix L*.

During this Reporting Period, the Engineering Department conducted repairs on six (6) stormwater pipes and headwalls and repaired one (1) sanitary pipe that was leaking into the MS4. Pipe inspections are performed by the Traffic and Road Maintenance Division using the camera truck. A sample pipe inspection form is provided in *Appendix M*.

The City also understands that the refinement of the standard operating procedures and good housekeeping practices for the management of the MS4 is essential to improving stormwater quality.

In 2014, the City purchased a camera truck which is used for implementing the IDDE program and for inspecting catch basins, manholes and stormwater piping. The truck was deployed in October 2014 and again in May 2015 after employees completed the necessary one-week training on the truck and equipment. Initially, the camera truck is being used to inspect areas identified as needing maintenance within the MS4 and has preliminarily identified several previously unknown connections to the MS4 system.

The City conducts inspections with the camera truck two days a week, covering approximately 200 feet of piping per day. During this Reporting Period, the City videoed approximately X feet of piping. The City has prioritized the areas that it inspects with the camera truck based on flooding issues, complaints about collapsing areas and complaints about illicit discharges. See *Section 4.4* for further discussion on the progress of identifying illegal connections in the IDDE program.

Catch basin inspections also include inspecting the condition of catch basin “bells.” Some City catch basins have bells (metal 90 degree bends covering catch basin outlets) to control floatables. Bells are hung on pins set in the side of catch basins. The City has purchased \$25,000 worth of bells, most are for 12”-pipes. The City is planning to install bells on additional catch basins in parts of its MS4 where trash and floatables are a problem. The City has also procured two (2) hydraulic cranes for the installation of bells and maintenance to the catch basins. The City is anticipating on installing several of the catch basin bells during the 2016 – 2017 Reporting Period.

The Traffic and Road Maintenance Division has acquired some funding in an Environmental Compliance Capital account to make improvements to stormwater system components on private property where the owners cannot make the necessary repairs.

#### 4.3.5.3 Roadway Maintenance

Roadway maintenance activities can directly affect water quality. An important task of roadway maintenance is keeping the highway drainage system functioning. The City is dedicated to ensuring that routine road maintenance is conducted frequently and that roadside ditches are cleaned and inspected periodically to verify that flow is not being restricted.

During the Reporting Period, the City repaved approximately X miles of roadway as part of its road maintenance program.

#### 4.3.5.4 Sweeping

Properly swept streets are a key element to limiting stormwater impacts as sediment and debris can transport other pollutants into the stormwater system and because copious quantities of these materials can inhibit the proper function of MS4 components. By June 30, 2016 the City swept X miles of roadway and collected X tons of street material during the Reporting Period. Supporting documentation regarding the street sweeping activities for the Reporting Period can be provided upon request.

Sidewalk and curbside sweeping is performed weekly in the Downtown Special Services District (DSSD), along 9.5 miles of sidewalk and curbside. This work is coordinated and paid for by the DSSD. An estimated 23 tons of materials are removed on an annual basis as a part of these sidewalk and curbside sweeping activities. The DSSD also installed six cigarette butt disposal stations on lamp poles around the Columbus Park area and have since collected X pounds of cigarette butts.

The NPDES Permit prescribes very specific sweeping schedules for main lines, arteries, main roads and sidewalks in business and commercial districts, residential streets, other streets, and municipal parking lots between March and November of each year. The City is currently categorizing their roadway system and developing schedules to meet these requirements. One goal is to compress the spring sweeping schedule between March 1<sup>st</sup> and June 30<sup>th</sup> to maximize the quantity of material collected at the end of the winter season.

The City is currently in the process of implementing a "Post & Tow" policy where they will be posting sweeping dates and times and subsequently towing away any cars that are parked in the areas posted for sweeping events. This system will help the City to effectively sweep in the areas posted instead of having to sweep around parked cars, missing large areas of the road.

During this Reporting Period, the City also conducted post-event sweeping activities after several Wednesday and Thursday concert series. The amount of materials collected during these events is included in the total tons of street material noted above.

#### 4.3.5.5 Leaf Collection

In 2015, the City conducted its leaf pickup program from November 12<sup>th</sup> - December 11<sup>th</sup>. A total of X tons of leaves were collected.

According to the NPDES Permit, the City shall conduct city-wide leaf pickup program annually to be completed by December 15<sup>th</sup>. The City has established a procedure that breaks the City of Stamford down into three areas (see Appendix K of the SMP for a map of the leaf collection areas):

- Area #1 - north of the Merritt Parkway
- Area #2 - between Merritt Parkway and I-95
- Area #3 - south of I-95

Leaf pick-up typically begins in mid-November and completed by December 15<sup>th</sup>. The exact completion date depends on weather conditions and competing demands (snow removal and road salting for staff and equipment). It is important to note that the City finishes leaf pick-up even after snow fall. This process takes approximately four weeks of full time work for all available road maintenance crews.

The City is in the process of compiling a letter notification that will be distributed to residence that put their leaves in the street. The current leaf disposal policy is that the leaves will be piled at the curb prior to pick-up. Several residences were noted with piles of leaves in the street during the 2015 leaf collection period.

#### 4.3.5.6 Snow Removal

Timely snow removal and the appropriate application of de-icing materials is another key element to a successful SMP. The City follows the DEEP's *Best Management Practices (BMPs) for Disposal of Snow Accumulation from Roadways and Parking Lot*. A copy of this BMP is presented in Appendix L of the SMP. The purpose of the BMPs are to prevent accumulation of sand, other solids, and pollutants in the MS4 and in sensitive areas, such as streams and wetlands.

The NPDES Permit requires that the City implement and refine its SOPs, regarding its snow and ice control operations, to minimize the discharge of pollutants. Goals must be established for the optimization of chemical application rates through the use of automated equipment including zero velocity spreaders, anti-icing and pre-wetting techniques, implementation of pavement management systems and alternate chemicals.

The City is already well on its way to meeting these goals. The Highway Crew continues to use a truck for performing anti-icing using liquid calcium chloride (brine) to pre-treat bridges and elevated roadways, the most susceptible for freezing, as well as city streets with the highest traffic volume. Once the storm begins, patrols are sent throughout the City to monitor road conditions. Hills and intersections are spot-treated to minimize chemical usage. The City tracks chemical usage; however, given the variability in the amount of snow and ice that needs to be treated each year, it is difficult to set

goals for chemical optimization. As noted in *Section 4.3.3.5*, the City intends to expand its use of brine trucks for pre-treatment in the future, which will help reduce the road salt usage.

The City continues to minimize its use of de-icing materials. This goal is being pursued in part to respond to shortages of de-icing materials in recent years. Salt is applied only twice for each storm – once at the beginning to prevent ice from binding and once at the end of prevent re-freezing. City representatives have proactively been pursuing discharges of private basement sump pumps into the right-of-way, rather than simply treating these areas with additional deicing materials.

Previously, snow was typically stockpiled on the gravel parking lot at the West Beach, where there are no catch basins in order to follow the DEEP's BMPs. The City is now considering relocating the snow piles to the paved areas at the West Beach parking lot and installing hay bales around and filters inside the catch basins to minimize the amount of silt and sand from entering the MS4. This proposed change in procedure will also allow for the City to more effectively dispose of the debris remaining as a result of the melted snow that is removed from the streets. The DEEP's BMPs will continue to be followed after the change in snow removal procedure is implemented.

#### 4.3.5.7 Catch Basin Cleaning

Clogged or overloaded catch basins can lead to unwanted stormwater quality impacts. Catch basin sumps provide a first line of defense in improving stormwater quality. Maintenance and cleaning activities are important to the proper operation of each catch basin.

From July 1, 2015 through June 30, 2016, the City cleaned 2,048 of its approximately 11,000 catch basins. Approximately **X** tons of materials were removed from the basins during the Reporting Period. The standard catch basin inspection and cleaning procedures and a sample catch basin inspection form is presented in *Appendix N*.

The City continues to finalize an updated catch basin inspection, cleaning, and repair program. This program will identify and map each MS4 catch basin and determine flow direction, inspect its condition, determine the amount of sediment in each, clean catch basins with less than 50% of their sump capacity available, gather information over time on sediment accumulation rates, and develop a routine maintenance and cleaning schedule as prescribed by the NPDES Permit. To support this program, in 2014 the City purchased two new vac-trucks and a camera truck and hired four new equipment operators and a laborer for this program as well as to generally support its stormwater management and compliance activities (see *Section 6.0*). The City is currently in the process of procuring an additional new vac-truck.

The City's Engineering Department has also retained the services of a contractor that cleans and videos all associated catch basins and storm drains prior to completing roadway paving projects.

Additionally, the City recently started implementing a software tracking program using field tablets for tracking catch basin inspection, cleaning and repair progress. The MS4 Front software was brought on-line in October 2014.

The approximate depth of sediment is measured before each catch basin cleaning. The City does not have records of previous catch basin cleanings, but in the future will use the depth of sediment observed and the time between catch basin cleanings to optimize the cleaning schedule.

#### 4.3.5.8 Detention and Retention Ponds

Detention and retention ponds that become overloaded with sediment deposition can negatively impact stormwater quality in the City's MS4. MS4 Ponds are required to be cleaned out when solids levels reach 50% of design capacity.

A list of detention and retention basins was developed and the City is maintaining an inspection schedule for them. To date, 77 basins were identified. During the 2015-2016 reporting period, approximately 20 of the 77 basins identified were inspected. A copy of the inspection reports are provided in *Appendix O*. The basins are currently being added to the GIS mapping. Stormwater Management intends to begin inspections and maintenance work these basins during the next Reporting Period and is anticipating conducting an inspection at each pond prior to July 1, 2016.

#### 4.3.5.9 Interconnected MS4s

Connections of other MS4s to the City's MS4 can affect the performance of the City's stormwater system and the quality of its discharges. There are no known interagency agreements between any other municipalities, institutions, or agencies and the City of Stamford. However, it appears that the following municipalities and agencies may be contributing stormwater to the City of Stamford's MS4:

- State of Connecticut (ConnDOT)
- Town of New Canaan, CT
- Town of Darien, CT
- Town of Greenwich, CT
- Town of Pound Ridge, NY

The City currently has a meeting scheduled with the Town of Greenwich, CT to coordinate on MS4 issues.

The Connecticut Department of Transportation ("ConnDOT") operates several roadways within the City, including: Interstate 95; the Merritt Parkway (Route 15); Long Ridge Road (Route 137); High Ridge Road (Route 104); and Route 1. The City's MS4 flows into ConnDOT's MS4 in some locations and ConnDOT's MS4 flows into the City's MS4 at other locations. The City communicates with ConnDOT, as needed, primarily when the City receives complaints of clogged ConnDOT storm drains. ConnDOT does not perform sweeping as frequently as the City does.

The City has mapped out all of the interconnected MS4 areas during the development of the new SPRP. Currently, there are no interagency agreements established. The City of Stamford will be working with each of the interconnected MS4 municipalities to develop detailed responsibilities for the City of Stamford and for each of the interconnected MS4 municipalities.

#### 4.4 Illicit Discharge Detection and Elimination (IDDE) Program

IDDE will lessen the amount of pollutants discharging to local water bodies. Some people unknowingly dump pollutants into the storm drain or have illegal connections to the drainage system. The permit requires inspection of outfalls during dry weather conditions to determine whether illicit discharges are suspected and then to conduct extensive evaluation and follow-up to eliminate the illicit discharges that are found.

During the Reporting Period, the City continued to develop the legal authority to implement and enforce an illicit discharge detection and elimination (IDDE) program with the implementation of the MS4 Ordinance, No. 1153. See *Appendix P* for a copy of the ordinance, which can also be found on the City's website at <http://www.stamfordct.gov/stormwater-management>.

Additionally, City personnel continue to follow-up on known or suspected illicit discharges as well as any complaints associated with potential illicit discharges through calls to Traffic and Road Maintenance Division or reported via the City's stormwater management website.

The City has retained the services of Harbor Watch, a division of Earthplace, a not-for-profit organization, with the use of grant funding, for the collection of dry weather outfall samples as part of the IDDE screening requirements. During the Reporting Period, Harbor Watch collected 25 dry weather outfall samples. Analytical data is being submitted to the DEEP via the NetDMR system as the laboratory data is received. A summary table of the analytical data for the IDDE dry weather outfall screening events is presented in *Appendix Q*. A copy of the stormwater monitoring reports (SMRs) for these samples will be provided upon request.

Now that better information has been developed on the number and locations of MS4 outfalls, it is the City's intention to get back on schedule by screening the remaining 30 of 46 outfalls (first 50%) along with beginning the second set of 50% of the known outfalls (44 remaining after two of the original 92 known were eliminated, see *Section 4.2*) of dry weather outfall monitoring during the next Reporting Period. To achieve this goal, 53 known MS4 outfalls will need to be screened by the end of June 2016.

The City intends to complete IDDE investigations on 10% of the MS4 outfalls during the upcoming year in order to remain in compliance with the NPDES Permit and SMP requirements.

During the Reporting Period, the City enlisted the services of sewage sniffing dogs. The dogs were provided for four (4) days for a fee of \$10,000 and were utilized to help identify stormwater drains that contained sewage. A copy of the report is provided in *Appendix R*. The results of this program aided in setting the priorities for IDDE investigations.

In June 2016, the City conducted a smoke test at 22 properties. Notifications were distributed in advance to the property owners; a letter was provided two weeks in advance and a door hanger was left at the properties two days in advance. The City Emergency Responders were also notified of the smoke test to be conducted and five (5) manholes were covered during the test. Four (4) properties were identified as requiring additional investigation.

Through the City's efforts using the camera truck completed during the Reporting Period, they have identified multiple areas of concern that will receive priority for further IDDE investigations. An updated map identifying the areas of concern is presented in *Appendix S*.

#### 4.4.1 Illegal Connections

As a result of the inspections conducted by the camera truck crews, discussed in *Section 4.3.5.2*, the City has identified several illegal connections to its MS4. The City continues to track and identify illegal connections and is currently working with its Legal Department to identify the best course of action for having the illegal connections removed from its MS4.

### 4.5 Monitoring Program

In addition to the screening and monitoring activities associated with the IDDE Program (see *Section 4.4*), the NPDES Permit calls for in-stream and stormwater outfall monitoring throughout the life of the permit.

#### 4.5.1 In-Stream Surface Water Quality Monitoring

Under the terms of the NPDES Permit, ten (10) in-stream surface water monitoring locations have been established. Each in-stream monitoring location is to be sampled three times per year during rain events in the spring, summer, and fall, and once during a dry weather event in the summer, in accordance with the permit requirements. During the past plan year, the following in-stream surface water samples were collected:

- Summer 2015 Wet Weather Event – August 11, 2015
- Summer 2015 Dry Weather Event – August 14, 2015
- Fall 2015 Wet Weather Event – November 11, 2015

The Spring 2016 Wet Weather Event has not been collected due to a lack of sampleable rain events that meet the NPDES permit requirements.

In-stream samples are to be collected during a rain event more than 0.25-inch of rain is predicted, when there has not been more than 0.1-inch of rain during the preceding 48 hours. The samples are to be collected as composites with even aliquots obtained at 15-minute intervals over a one hour period each. A predicted storm duration of at least three to four hours is necessary to collect as sample, so several of the short, intense rain storms that have occurred in the past five months have not been sampleable. In addition, the in-stream samples need to be tested for bacteria, which has a short (6 hour) hold time. In order to collect the samples and have the laboratory be able to prepare them for analysis, there are certain times of the day when the samples cannot be collected. Samples cannot be collected between 7:00 PM and 3:00 AM or on Saturdays, Sundays, or Monday holidays.

Analytical data is submitted to the DEEP via the NetDMR system as the laboratory data is received. Summary tables of the analytical data for the in-stream sampling events are presented in *Appendix T*. A copy of the SMRs for these samples will be provided upon request.

#### 4.5.2 Wet Weather Outfall Monitoring

The NPDES Permit requires the City to sample all known MS4 outfalls within the first two years and again during the second two years of the permit term. Sixteen (16) wet weather outfalls were sampled on December 2, 2015. To date, 63 of the wet weather outfalls that were known at the time of the NPDES permit issuance have been sampled.

Sampling did not occur at all of the known outfall locations prior to the end of the second year of the NPDES Permit because of a lack of representative sampleable rain events in 2016 and a lack of legal authority to collect outfall samples on private property until June 2016.

It is anticipated that the remaining 29 known outfall locations will be sampled during the next Reporting Period.

Analytical data is submitted to the DEEP via the NetDMR system as the laboratory data is received. Summary tables of the analytical data for the wet weather outfall monitoring are presented in *Appendix U*. A copy of the SMRs for these samples will be provided upon request.

#### 4.6 Legal Authority

The City has finalized an MS4 Ordinance addressing stormwater management issues that affect NPDES Permit compliance and Zoning Regulations regarding stormwater management. The modification to the Zoning Regulations is in progress and is anticipated on being completed, approved and implemented by July 2016. The legal authorities that were established include:

- The authority to administer the stormwater management program and all elements of the SMP.
- The authority to control the contribution of pollutants to the MS4 by permittees registered under the DEEP's *General Permit for the Discharge of Stormwater Associated with Industrial Activity*; by other commercial, industrial, municipal, institutional, or other facilities; and from any site that may affect water quality to the MS4.
- The authority to establish ordinances, bylaws, regulations, or other mechanisms to require developers and construction site operators to maintain consistency with the *Guidelines for Soil Erosion and Sedimentation Control*, the *Connecticut Stormwater Quality Manual*, and all DEEP stormwater discharge permits issued with the City of Stamford.
- The authority to identify existing regulations that may represent barriers to low impact development (LID) practices to minimize the quantity of impervious cover.
- The authority to perform inspections, surveillance, and monitoring related to the MS4.
- The authority to establish ordinances, bylaws, regulations, or other mechanisms to ensure a developer's or construction site operator's proposed use of LID practices by right or exception.

- The authority to revise regulations to eliminate or reduce potential barriers to LID.
- The authority to perform adequate inspection and maintenance activities to optimize the performance and pollutant removal efficiency of privately-owned retention or detention ponds that discharge to or receive discharge from the City's MS4.
- The authority to control through interagency or inter-jurisdictional agreement, the contribution of pollutants between the City's MS4 and MS4 owned or operated by others.
- The authority to prohibit by statute, ordinance, rules and regulations, permit, easement, contract, or any other means, illicit discharges to its MS4; to require the removal of these discharges; and to assess fines, penalties or cost recoupment for violations.
- The authority to control by statute, ordinance, rules and regulations, permit, easement, contract, or any other means, the discharge of spills into its MS4; to prohibit the dumping and disposal of materials into its MS4; and to assess fines, penalties or cost recoupment for violations.

The schedule for establishment of these legal authorities is documented in the NPDES Permit. On March 20, 2015, a final MS4 Ordinance, Ordinance 1153, adding Chapter 201 to the City Charter, became effective and is included in *Appendix P*. Draft changes to the Zoning Regulations have been prepared and are included in Appendix I of the SMP. These documents have been developed to establish the necessary legal authorities. The public must be provided adequate notice and an appropriate amount of time to participate in the establishment in this legal authority. It is the City's intention to establish these legal authorities as soon as possible.

To comply with the NPDES Permit, the City is required to have these revisions approved by the Zoning Board and formally incorporated into the Zoning Regulations. The Modifications to Sections 3 and 15 of the Zoning Regulations of the City of Stamford is underway and the modifications were sent out to referral to various agencies for comment in the spring of 2015. It is anticipated that the Zoning Regulations will be completed, approved and implemented by July 2016.

The City has requested an extension for addressing the change in zoning regulations. The proposed changes will require more staff from the Engineering Department and the Environmental Protection Board and additional time is required to implement the changes.

Additionally, during the Reporting Period, the City finalized and began implementing a new ordinance, amending Section 214-9 of the City Charter, for addressing discharges associated with private sump pumps and roof leaders onto the City's streets. During the winter these discharges caused ice build-up, created hazards, and required additional salt treatment. This ordinance categorizes these discharges as an illegal activity and it was put into effect on April 26, 2015. The ordinance now states that: "*No person shall construct or cause to be constructed or allow to remain any spout or drain from any building or any drainage in such a manner that water, soil, gravel or other debris therefrom will discharge upon and over any sidewalk or roadway within the city*". The Traffic and Road Maintenance Division worked with and sent letters to five residential property owners, who have taken action to install on-site retention for their sump pumps to be in compliance with the ordinance. The Traffic and Road Maintenance Division will continue to evaluate these areas for icing during the winter seasons.

To date, the City has not had to issue any stormwater citations. However, several verbal warnings and written warnings issued as part of the educational program for implementing the City's new stormwater ordinance.

The City has started submitted notifications of intent to conduct stormwater monitoring and sampling at privately-owned outfalls throughout the City. A sample letter is provided in *Appendix V*.

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## 5.0 SUMMARY OF PROPOSED SMP MODIFICATIONS

The SMP was updated and submitted to the DEEP on September 2, 2014. No modifications to the submitted SMP are proposed at this time.

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## 6.0 PROGRAM RESOURCES ANALYSIS

### 6.1 Fiscal Analysis

During this Reporting Period of the current NPDES Permit, the City continued to make efforts to secure budget, staffing, and resources necessary to develop and implement the SMP, to comply with the NPDES Permit requirements, and to improve the overall quality of stormwater discharging from its MS4. The City is committed to identifying these details and adequately funding them to achieve compliance with the NPDES Permit as soon as possible.

Some line items in the City's Capital and Operating Budgets are obviously related to MS4 stormwater compliance, such as the "Environmental Compliance" and "Stormwater Management". However, there are other line items for infrastructure and other public improvement projects (drainage, catch basin, storm lines, etc.), special projects, and operating expenses that will result in direct improvements to stormwater runoff quality and the quality of discharge from the City's MS4. For example, the closure of the old Scofieldtown Road Landfill is being performed for specific reasons, but should have the added benefit of improving stormwater quality in these areas of the City.

There are also budget line items for vehicle, equipment, and information technology upgrades throughout the City which include Departments with responsibility for stormwater quality improvements and implementation of the SMP.

The Traffic and Road Maintenance Division has a total operating budget of \$X for 2016-2017, including \$X specifically for MS4 stormwater management, \$X for leaf collection, \$X for storm management, and \$X for traffic and road maintenance, including street sweeping, pothole repairs, debris removal and infrastructure improvements. This Traffic and Road Maintenance Division budget represents a X% decrease compared to the budget for 2015 - 2016.

In addition, other Departments, such as Engineering (catch basin and manhole improvements and replacement program), Land Use (environmental reviews), Solid Waste (motor oil recycling and HHW events), SWPCA (stormwater pump operation), and Administration provide services through their capital and operating budgets.

The City's Annual Capital and Operating Budgets for 2016-2017 are available on the City's website at <http://www.stamfordct.gov/>.

It is anticipated that additional funding will be required for the following monitoring activities:

- Wet weather sampling of each identified MS4 outfall
- IDDE screening and investigations

Additional funding, associated with additional staffing discussed in the next section of this Annual Report, will also be required in coming fiscal years.

## 6.2 Staff and Resources

The City transferred responsibility for many of the stormwater management tasks and MS4 permit compliance from the SWPCA to the Traffic and Road Maintenance Department with the issuance of the NPDES Permit in June 2013. While evaluating the permit requirements, the Traffic and Road Maintenance Supervisor and Pollution Prevention Team Coordinator, Thomas Turk, began to assess the staff and resources necessary to achieve and maintain compliance. Since Traffic and Road Maintenance Department took over responsibilities for implementing the MS4 permit, several new staff members have been hired, including:

- Four heavy equipment operators to complete field work including catch basin identification, investigation, cleaning, and maintenance. These operators are also responsible for assisting with sweeping, snow removal, leaf pickup and other activities designed to improve the quality of stormwater runoff.
- One laborer to assist the equipment operators, as needed.

Over the course of the Reporting Period, the Stormwater Department assessed these new staffing levels as the SMP was being implemented and additional schedules and goals are continuously being generated to meet the demands of the City's MS4.

In addition to these individuals, the Traffic and Road Maintenance Division maintains a work force of skilled operators, laborers, administrative, support, and management personnel that provide many of the direct services outlined in this report, such as: catch basin maintenance, roadway sweeping, leaf pickup, snow removal, and infrastructure improvements and maintenance. They are also available to assist on other stormwater management projects, as directed.

Several other City Departments provide personnel to support compliance with the NPDES Permit and implementation of the SMP, including Engineering, Land Use, Planning, Zoning, Environmental Protection, Information Technology (GIS), SWPCA, Solid Waste, Recreation and Leisure Services, Parks, Parking & Transportation, Fleet Maintenance, Legal, and the Fire Department.

During the next year of implementation of the SMP and the new municipal stormwater ordinance and the changes to the Zoning Regulations, City Departments will be better able to assess the adequacies of their staffing levels with the added MS4 permit compliance requirements. As discussed during the compliance audit conducted by the EPA (see *Section 2.3.1*) and the City's own assessments, it is anticipated that additional staffing may be necessary in the following areas:

- Information Technology – There is a substantial amount of stormwater mapping and information management to be set up and managed, particularly during the first several years of the permit. The City needs to finalize the outfall identification mapping, and confirmation process and begin the DCIA analysis.
- Engineering and Land Use Offices – Additional staff is required to perform technical review of land use permits due to volume and complexity of work. Performing site inspections before permit issuance, during construction, and prior to Certificate of Occupancy are a critical component for compliance.

- Stormwater Management Department – Additional staff is required (Heavy Equipment Operators) to operate vacuum trucks, the camera truck, and equipment to maintain storm drainage piping. The addition of an Office Support Specialist (OSS) is required in the Stormwater Management Department to assist with data collection, record keeping, and correspondence requirements. New types of data are being generated in the field and it must be properly managed so that it can be put into effective use.

Once the revised Zoning Regulations have been enacted, there will be a need for additional construction site inspections, retention and detention basin inspections and maintenance, stormwater infrastructure (swales, ditches, storm drain lines, etc.) inspections and maintenance, post-construction inspections and maintenance, and illicit discharge detection and elimination program implementation. Additional staffing will be necessary to complete these tasks; the City's ability to complete these activities in the past has been hampered due to limited staff resources.

The City has procured new equipment to assist in the implementation of the MS4 Permit and its SMP. Two hydraulic cranes and one new street sweeper were procured by the Traffic and Road Maintenance Division during the Reporting Period to facilitate catch basin inspection, maintenance and cleaning operations and roadway maintenance operations.

As mentioned in *Section 4.3.5.7*, the City recently started implementing a software tracking program using field tablets for tracking catch basin inspection, cleaning and repair progress. The MS4 Front software was brought on-line in October 2014.

Additional software and equipment needs will be assessed during the coming year and requested in the City's next fiscal year budget.

APPENDIX A  
DEFINITIONS

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## DEFINITIONS

"BMPs" or "Best Management Practices" means either structural or engineered control devices and systems (e.g. retention ponds) to treat polluted stormwater, as well as operational or procedural practices (e.g. minimizing use of chemical fertilizers and pesticides).

"Commissioner" means the commissioner as defined by section 22a-2(b) of the Connecticut General Statutes.

"CTDEEP" or "DEEP" means the Connecticut Department of Energy and Environmental Protection, whose mission is to conserve, improve and protect the air, water and other natural resources and environment of the State of Connecticut while fostering sustainable development.

"DCIA" or "Directly Connected Impervious Area" means that part of the total impervious area that is hydraulically connected to the City of Stamford's MS4. DCIA typically includes streets, sidewalks, driveways, parking lots, and roof tops. DCIA typically does not include isolated impervious areas that are not hydraulically connected to the MS4 or otherwise drain to a pervious area.

"EPA" means the United States Environmental Protection Agency, whose mission is to protect human health and the environment.

"EPB" means the City of Stamford's Environmental Protection Board.

"GIS" or "Geographic Information System" is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

"HHW" or "Household Hazardous Waste" means post-consumer waste which qualifies as hazardous waste when discarded. It includes household chemicals and other substances for which the owner no longer has a use, such as consumer products sold for home care, personal care, automotive care, pest control and other purposes.

"IDDE" or "Illicit Discharge Detection and Elimination" means a program to detect and eliminate existing illicit discharges and to prevent future illicit discharges.

"IDDP" or "Illicit Discharge Detection Protocol" means a protocol established to identify, prioritize and investigate separate storm sewer catchments for suspected illicit discharges of pollutants.

"Illicit Discharge" means any discharge to the MS4 that is not composed entirely of stormwater, with the exception of discharges authorized by another NPDES Permit, or discharges described in the "Non-Stormwater Discharges" section (Section 4(A)(3)) of the permit.

"Impaired Waters" means those surface waters of the state designated by the Commissioner as impaired pursuant to Section 303(d) of the Clean Water Act and as identified in the most recent State of Connecticut Integrated Water Quality Report.

“LID” or “Low Impact Development” means land planning and engineering design approach to manage stormwater runoff. LID emphasizes conservation and use of on-site natural features to protect water quality.

“MS4” or “Municipal Separate Storm Sewer System” means a conveyance, or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains, which is or are (i) owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as sewer districts, flood control districts or drainage districts, or similar districts, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the state; (ii) designed or used for collecting or conveying stormwater; (iii) which is not a combined sewer; and (iv) which is not part of a POTW.

“NOV” or “Notice of Violation” means a notice provided by the CTDEEP informing the permittee that a violation of law has occurred.

“NPDES Permit” or “National Pollutant Discharge Elimination System Permit” means the program authorized by the Clean Water Act which controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

“Outfall” means the discharge point of a waste stream into a body of water.

“PHFs” means pesticides, herbicides and fertilizers.

“Point Source” means any discernible, confined and discrete conveyance (including, but not limited to any pipe, ditch, channel, tunnel, conduit, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft) from which pollutants are or may be discharged.

“POTW” or “Publicly Owned Treatment Works” means sewage treatment plants.

“Reporting Period” refers to the period of time that the Annual Report is based on. In this report it pertains to July 1, 2014 through June 30, 2015.

“SMP” or “Stormwater Management Plan” sets forth a program to provide for the implementation of specific control measures, stormwater monitoring, illicit discharge detection and elimination, and other appropriate means to control the quality of the authorized discharge.

“SP&R Plan” or “Spill Prevention and Response Plan” means a plan to prevent, contain and respond to spills entering the MS4.

"*Stormwater*" means waters consisting of rainfall runoff, including snow or ice melt during a rain event, and drainage of such runoff.

"*SWPCA*" or "*Stamford Water Pollution Control Authority*" controls the City of Stamford Water Pollution Control Facility, which processes wastewater from the City and the neighboring Town of Darien, and discharges clean water into the East Branch of Stamford Harbor.

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**APPENDIX B**  
**STORMWATER MANAGEMENT PLAN**  
**SUMMARY TABLE**

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APPENDIX C  
2015-2016 ANNUAL REPORT MEETING

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**APPENDIX D**  
**EARTH DAY EVENT FLIER**

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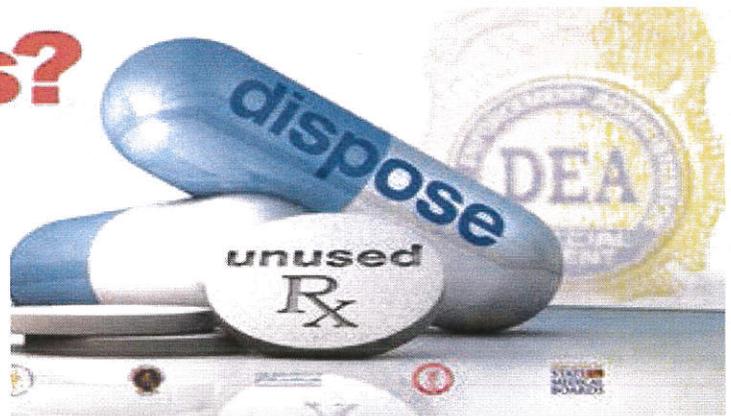
APPENDIX E  
NATIONAL Rx DRUG TAKE BACK FLIER

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# National Rx Drug Take-Back

## Got Drugs?

Turn in your  
unused or expired  
medication for safe disposal



Hosted by:  
Stamford Police Department

**Drop off your unused or expired medications for safe disposal!**

**Saturday April 30th  
10am-2pm**

**Convenient Drive Thru Location:**

**STAMFORD Police Department  
805 Bedford Street**

Supporting Partners:



Stamford  
Youth Services Bureau



City of Stamford  
Health Department



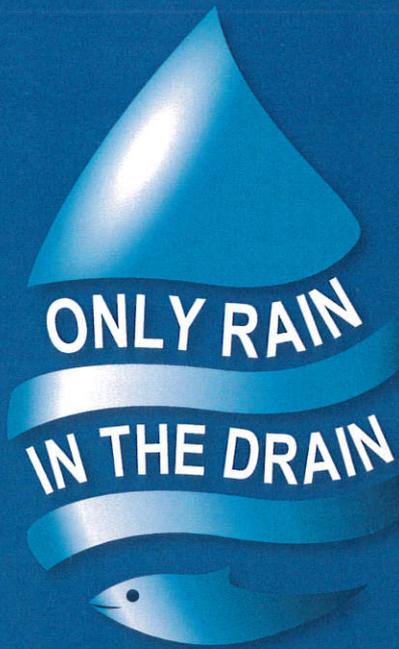
THE KEY TO AN ACTIVE LIFE AFTER 50



This is a free anonymous service and environmentally safe way to dispose of unwanted and unused medications. No liquids or needles please. For more info. go to [www.dea.gov](http://www.dea.gov) or Ph: 203-588-0457

**APPENDIX F**  
**STORMWATER MANAGEMENT FLIER**

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## Help Prevent Stormwater Pollution

- Don't dump anything into catch basins.
- Keep property clear of trash and debris.
- Keep dumpster areas clean.
- Provide trash receptacles for customers.
- Dispose of wash water properly.
- Don't wash vehicles outside on paved surfaces.

For more information, go to:  
[www.stamfordct.gov/stormwater-management](http://www.stamfordct.gov/stormwater-management)

### REGULATION OF MUNICIPAL SEPARATE STORM SEWER SYSTEM

Charter and Code of the City of Stamford:  
Sec 201-2. Definitions: Pollutant:

*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; nonhazardous liquid and solid wastes and yard wastes: refuse, rubbish, garbage, litter or other discarded or abandoned objects. Ordnances 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; noxious or offensive matter of any kind; industrial and commercial wastes, trash, used motor vehicle fluids, food preparation waste, leaf litter and grass clippings.*

**Fines (Sec. 201-12 (B)):**  
**First Violation: \$100**  
**Second Violation: \$200**  
**Third Violation: \$250**

**Note: Each violation shall be a separate and distinct offense.**

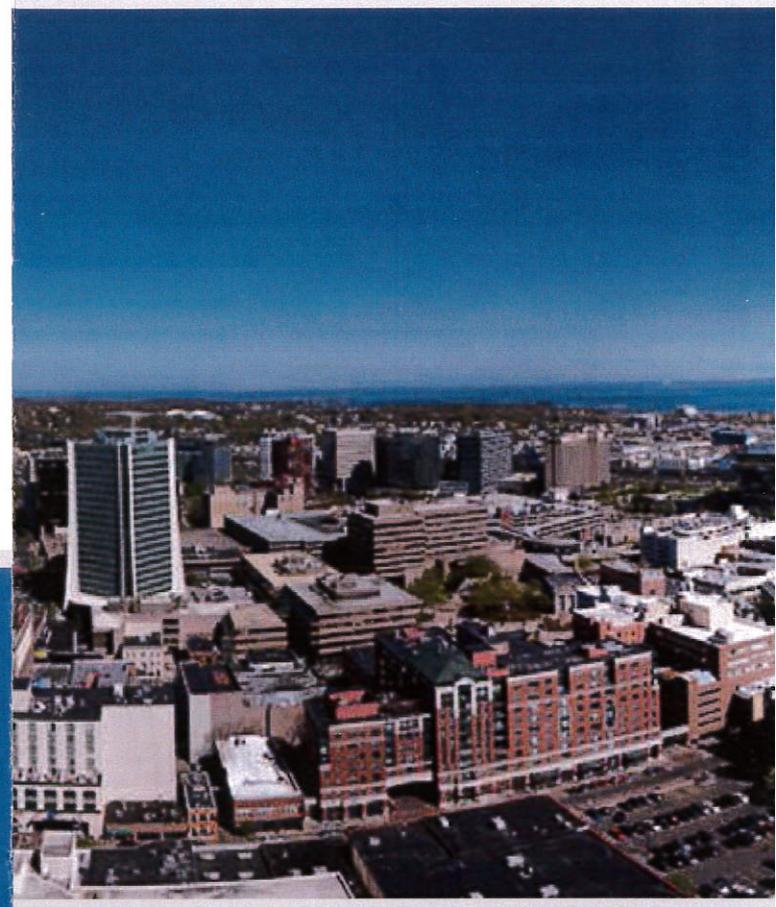


**Stormwater Management**  
90 Magee Avenue  
Stamford, CT 06901  
Phone: 203.977.5281

[www.stamfordct.gov/stormwater-management](http://www.stamfordct.gov/stormwater-management)

# Stormwater Management

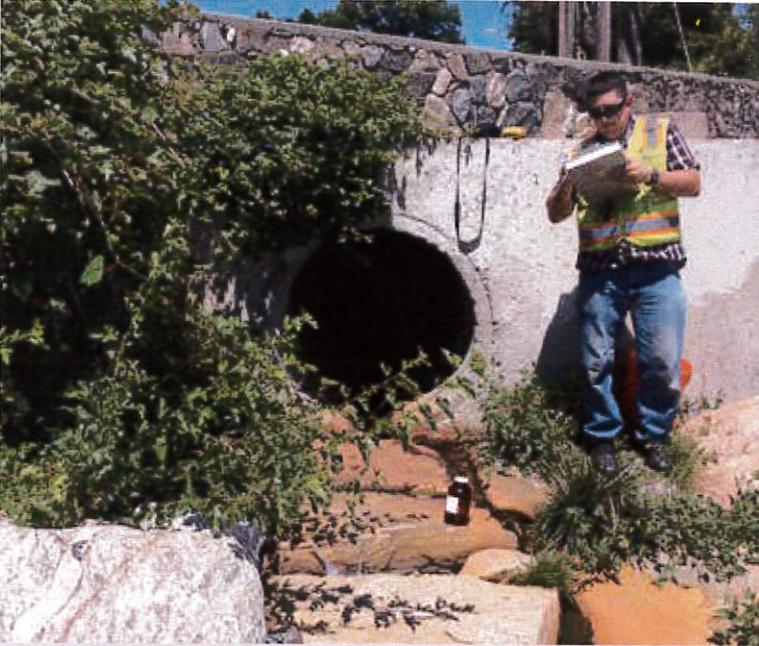
A Practical Guide to Regulatory Compliance for Commercial, Industrial and Institutional Facilities



**City of Stamford  
Connecticut**

# What is Stormwater Pollution?

As stormwater (rain or snowmelt) flows over impervious surfaces such as driveways, roofs, sidewalks and streets, it picks up and carries pollutants such as motor oil, fertilizers, pesticides, trash and other potentially environmentally harmful materials into storm drains. From there, this untreated water flows directly into local rivers and the Long Island Sound.



**Report Illegal Dumping. Dumping any material into a catch basin is illegal. Penalties for dumping include fines and the costs of abatement. If you observe someone dumping, immediately report it to the Citizen Service center at 203-977-4140.**

## Doesn't Stamford treat water before returning it to the environment?

The City of Stamford has two separate drainage systems; sanitary and stormwater. Sanitary water, which typically comes from drains located inside buildings, is thoroughly treated before being returned to the environment. Rainwater, snowmelt, and anything else collected by — or dumped into — a storm drain flows untreated into the Long Island Sound.

## What can property owners do to minimize stormwater pollution?

Property owners are responsible for all pollutants leaving their property. There are a number of simple steps that can be taken to help eliminate stormwater pollution, including:

- Annually clean and maintain all private catch basins (not located on a public street) to remove pollutants, ensure proper performance and reduce the risk of flooding. Local sewer and drain contractors can help you.
- Do not dump mop or wash water onto paved surfaces. Wash waters contain harmful chemicals and solvents that can damage waterways; instead, dispose of this water into a mop sink, floor drain or toilet so it can be treated.
- Wash garbage cans and floor mats in a mop sink, which drains to the sanitary sewer system.
- Sweep outdoor areas daily for trash and litter control and do not dispose of trash into storm drains basins.
- Provide trash and cigarette butt receptacles in highly visible locations, particularly in employee break areas.
- Keep your dumpster areas clean and lids closed. Make sure the clean-out plug is properly secured to prevent leaking.
- Do not wash vehicles outside on paved surfaces; instead use a carwash to clean cars and trucks.

# How to dispose of Hazardous Waste

Hazardous wastes — including chemicals, automotive fluids, paints, and commercial wastes — should never be dumped into catch basins. Visit [www.stamfordct.gov/recycling-sanitation](http://www.stamfordct.gov/recycling-sanitation) to learn how to dispose hazardous wastes properly.



## Reminders for Restaurants & Food Establishments:

- Maintain all grease traps in your establishment in accordance with the City of Stamford Health Department and Water Pollution Control Authority (WPCA) regulations.
- Dispose of cooking oil and grease properly either in a receptacle designed to contain grease or by hiring a waste hauler.
- Do not pour oil and grease into sinks, floor drains, catch basins, on onto the ground.
- Dispose of all waste wash water in a janitorial sink, floor drain or toilet that is properly connected to the sewer system.
- Never pour wash water onto a parking lot, alleyway, sidewalk, or street, as these areas ultimately drain to local waterways.





## Ayude a prevenir la contaminación de las aguas pluviales

- No arroje nada en las bocas de tormenta.
- Mantenga su propiedad limpia de basura y desechos.
- Mantenga limpios los lugares donde se encuentran los contenedores de residuos.
- Provea a los usuarios recipientes para la basura.
- Elimine adecuadamente el agua de lavado.
- No lave vehículos fuera en superficies pavimentadas.

Para mayor información, vaya a:  
[www.stamfordct.gov/stormwater-management](http://www.stamfordct.gov/stormwater-management)

### REGLAMENTACIÓN DEL SISTEMA MUNICIPAL DE ALCANTARILLADO SEPARADO PARA AGUAS PLUVIALES

Carta Orgánica y Código del Municipio de Stamford:  
Sec. 201-2. Definiciones: Contaminante

*Contaminante: Todo aquello que cause o contribuya a la contaminación. Los contaminantes pueden incluir, entre otros elementos: pinturas, barnices y solventes; aceite y otros fluidos de uso en automotores; residuos líquidos y sólidos no peligrosos y residuos de jardinería; desechos, escombros, basura, desperdicios y otros objetos desechados o abandonados, municiones y acumulaciones de suciedad, de manera que puedan causar o contribuir a la contaminación; elementos flotantes, pesticidas, herbicidas y fertilizantes; sustancias y residuos peligrosos; aguas servidas, coliformes fecales y patógenos; metales disueltos y particulados; desechos animales; desechos y residuos provenientes de la construcción de un edificio o estructura; materias nocivas o suciedad de toda clase; residuos industriales y comerciales, basura, fluidos usados de vehículos automotores, residuos de la preparación de alimentos, hojarasca y hierbas cortadas.*

#### Multas (Sec. 201-12(B)):

Primera Infracción: \$100

Segunda Infracción: \$200

Tercera Infracción: \$250

*Nota: Cada infracción deberá constituir una contravención separada y diferente.*



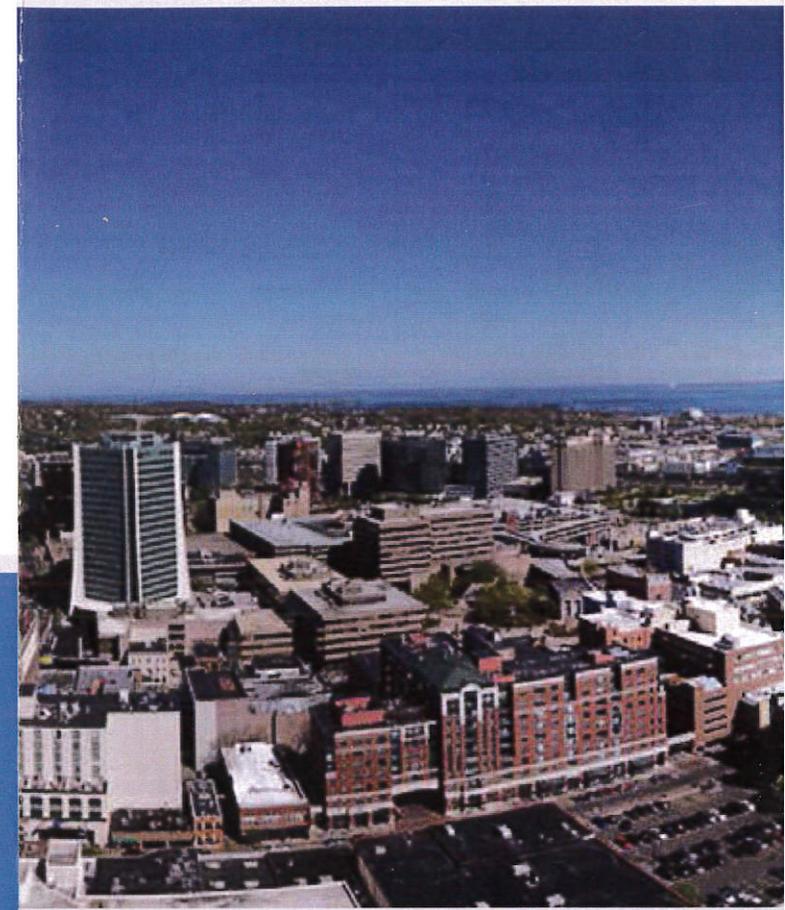
#### Manejo de las Aguas Pluviales

90 Magee Avenue  
Stamford, CT 06901  
Teléfono: 203.977.5281

[www.stamfordct.gov/stormwater-management](http://www.stamfordct.gov/stormwater-management)

# Manejo de las Aguas Pluviales

Una Guía Práctica de Cumplimiento Reglamentario para Establecimientos Comerciales, Industriales e Institucionales



Municipio de Stamford

# ¿Qué es la contaminación de las aguas pluviales?

Dado que las aguas pluviales (lluvia o nieve derretida) escurren sobre superficies impermeables tales como entradas para automóviles, techos, aceras y calles, recogen y transportan hacia los desagües pluviales contaminantes tales como aceite de motor, fertilizantes, pesticidas, basura y otros materiales potencialmente peligrosos para el medio ambiente. Desde allí, esta agua sin tratar se descarga directamente en los ríos cercanos y en el estuario de Long Island Sound.



**Informe de Vertidos Ilegales. El vertido de cualquier material en una boca de tormenta es ilegal. Las sanciones por vertido incluyen multas y los costos de eliminación. Si ve a alguien vertiendo algún elemento, infórmelo inmediatamente al centro de Servicios al Ciudadano llamando al 203-977-4140.**

## ¿En Stamford se trata el agua antes de devolverla al medio ambiente?

El Municipio de Stamford cuenta con dos sistemas de desagüe separados: aguas residuales domésticas y aguas pluviales. Las aguas residuales domésticas, que por lo general provienen de desagües ubicados dentro de los edificios, son cuidadosamente tratadas antes de regresarlas al medio ambiente. El agua de lluvia, la nieve derretida y cualquier otra cosa recogida por un desagüe pluvial o descargada en él escurren sin tratamiento alguno hacia el estuario de Long Island Sound.

## ¿Qué pueden hacer los propietarios para minimizar la contaminación de las aguas pluviales?

Los propietarios son responsables de todos los contaminantes que salen de su propiedad. Existe una serie de medidas muy simples que pueden adoptarse para ayudar a eliminar la contaminación de las aguas pluviales, por ejemplo:

- Una vez al año limpie y proceda al mantenimiento de todas las bocas de tormenta privadas (no ubicadas en una calle pública) de modo de eliminar contaminantes, asegurar su adecuado funcionamiento y reducir el riesgo de inundación. Los prestadores de los servicios de alcantarillado y desagüe de su zona podrán ayudarlo.
- No vierta el agua del trapeador ni de lavado en superficies pavimentadas. Las aguas de lavado contienen sustancias químicas y solventes perjudiciales que pueden dañar los cursos de agua; descargue esta agua en un fregadero para trapeador, en un desagüe de piso o en el inodoro, de manera que pueda ser tratada.
- Lave los botes de basura y tapetes de piso en un fregadero para trapeador que desagüe en el alcantarillado sanitario.
- Barra todos los días los sectores exteriores de manera de controlar la basura y la suciedad, y no descargue la basura en las bocas de tormenta.
- Coloque recipientes para basura y colillas de cigarrillos en lugares bien visibles, en particular en los sectores de descanso de los empleados.
- Mantenga limpios los lugares donde están los contenedores de basura y sus tapas cerradas. Verifique que el tapón de limpieza esté adecuadamente fijado para evitar pérdidas.
- No lave vehículos fuera sobre superficies pavimentadas; para limpiar automóviles y camiones recurra a un servicio de auto lavado

# Cómo eliminar residuos peligrosos

Residuos peligrosos — incluidos los productos químicos, fluidos de uso en automotores, pinturas y residuos comerciales — nunca deberían ser vertidos en las bocas de tormenta. Visite [www.stamfordct.gov/recycling-sanitation](http://www.stamfordct.gov/recycling-sanitation) y aprenderá como eliminar correctamente los residuos peligrosos.



## Recordatorios para Restaurantes y Establecimientos Gastronómicos:

- Mantenga todos los colectores de grasa de su establecimiento de conformidad con las reglamentaciones del Departamento de Salud del Municipio de Stamford y de la Autoridad de Control de Contaminación del Agua (WPCA).
- Deseche adecuadamente el aceite y grasa de cocinas ya sea en un recipiente diseñado para contener grasa o contratando una empresa de transporte de residuos.
- No vierta aceite ni grasa en fregaderos, desagües de piso, bocas de tormenta o sobre el suelo.
- Descargue toda el agua de lavado residual en un fregadero, desagüe de piso o inodoro que esté correctamente conectado a la red de alcantarillado.
- Nunca vierta agua de lavado en un estacionamiento, callejuela, acera o calle, ya que en definitiva estas zonas desaguan en los cursos de agua cercanos.



**APPENDIX G**  
**SPILL PREVENTION RESPONSE PLAN**

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**APPENDIX H**

**2015-2016 SPILLS OF FIVE GALLONS OR MORE**

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**APPENDIX I**  
**2015-2016 PESTICIDE, FERTILIZER**  
**AND HERBICIDE USE**

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**APPENDIX J**

**2015-2016 ENVIRONMENTAL PROTECTION BOARD  
SUMMARY TABLE**

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APPENDIX K  
CITY STAFF TRAINING EVENTS  
SIGN-IN SHEETS

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APPENDIX L  
2015-2016 CATCH BASIN / MANHOLE  
REPAIRS LIST

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**APPENDIX M**  
**SAMPLE PIPE INSPECTION FORM**

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**APPENDIX N**  
**CATCH BASIN INSPECTION AND CLEANING PROCEDURES**  
**AND SAMPLE INSPECTION FORM**

DRAFT

**APPENDIX O**  
**DETENTION/RETENTION BASIN INSPECTION REPORTS**

DRAFT

**APPENDIX P**

**ORDINANCE NO. 1183  
REGULATION OF THE MS4**

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APPENDIX Q  
2015-2016 IDDE SCREENING DATA  
SUMMARY TABLE

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**APPENDIX R**  
**SEWAGE SNIFFING DOG REPORT**

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APPENDIX S  
IDDE PRIORITY AREAS MAP

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**APPENDIX T**  
**2015-2016 IN-STREAM SAMPLING DATA**  
**SUMMARY TABLE**

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CITY OF STAMFORD MS4 INSTREAM SAMPLING RESULTS  
STAMFORD, CONNECTICUT

PARAMETER	UNITS	ISS-001	ISS-002	ISS-003	ISS-004	ISS-005	ISS-006	ISS-007	ISS-008	ISS-009	ISS-010
DSN	-	DSN-001	DSN-002	DSN-003	DSN-004	DSN-005	DSN-006	DSN-007	DSN-008	DSN-009	DSN-010
Description	-	Mianus River (7407)	East Mianus River (7406)	Mill River (7403)	Noroton River (7403)	Rippowam River "A" (7405)	Rippowam River "B" (7405)	Rippowam River "C" (7405)	LIS Coastal Watershed "A" (7000)	LIS Coastal Watershed "B" (7000)	LIS Coastal Watershed "C" (7000)
Latitude	dec. deg	41.10746	41.13363	41.1648	41.06329	41.05458	41.066	41.08963	41.02823	41.04359	41.04414
Longitude	dec. deg	-73.58722	-73.58796	-73.54427	-73.50879	-73.54503	-73.55778	-73.55925	-73.55566	-73.51705	-73.56443
Receiving Stream	-	Long Island Sound	Mianus River	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound
Date of Sample	-	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015
Magnitude of Storm	inches	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
Event Type	-	WET	WET	WET	WET	WET	WET	WET	WET	WET	WET
Date of Last Storm	-	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015	7/30/2015
LAB SAMPLE #	-	BJ72118	BJ72119	BJ72120	BJ72121	BJ72122	BJ72123	BJ72124	BJ72125	BJ72126	BJ72127
pH	S.U.	7.32	7.26	7.21	7.36	7.25	6.92	7.35	7.68	7.07	6.81
Temperature	* C	13.21	12.22	16.37	21.29	20.98	21.97	20.66	22.79	21.19	21.52
Specific Conductivity	µmhos/cm	262	221	264	529	190	457	358	547	370	116
Dissolved Oxygen	mg/L	12.40	12.85	10.64	7.59	8.90	5.12	10.26	7.12	8.65	8.59
B.O.D./5 day	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	8.3	8.5	<4.0
Chloride	mg/L	66.3	66.9	56.3	133	38.1	137	93.1	109	215	7.6
C.O.D.	mg/L	14	34	31	27	66	23	31	66	66	68
Hardness (CaCO3)	mg/L	90.2	60.4	79.6	119	39.2	98.6	77.6	86.6	101	20.6
MBAS	mg/L	<0.05	<0.05	<0.05	0.16	0.10	0.12	0.07	0.09	0.26	<0.05
Phosphorus, as P	mg/L	0.04	0.10	0.04	0.36	0.31	0.15	0.14	0.24	0.24	0.30
Total Suspended Solids	mg/L	<5.0	31	7.0	10	56	19	20	24	39	58
Oil and Grease, Total	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	1.5	1.5
Oil and Grease, TPH	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Copper	mg/L	<0.005	<0.005	0.024	<0.005	0.011	<0.005	0.006	0.016	0.019	0.024
Lead	mg/L	0.004	0.005	0.002	<0.002	0.011	0.004	0.005	<0.002	0.010	0.013
Zinc	mg/L	<0.002	0.008	<0.002	0.012	0.046	0.007	0.013	<0.002	0.071	0.077
Nitrite-N	mg/L	<0.004	<0.004	<0.004	<0.004	0.010	<0.004	0.014	<0.004	<0.004	0.008
Nitrate-N	mg/L	0.11	0.52	0.15	1.01	0.34	0.65	0.39	0.16	0.47	0.12
Ammonia as Nitrogen	mg/L	0.11	0.11	0.10	0.22	0.15	0.14	0.16	0.11	0.32	0.16
Nitrogen Tot Kjeldahl	mg/L	0.35	0.52	0.42	1.38	1.04	0.60	0.67	1.50	1.24	0.88
Escherichia Coli	/100 mls	140	6,870	1,010	9,210	15,530	24,200	4,350	9,800	>24,200	9,800
Enterococci Bacteria	/100 mls	290	15,530	1,940	6,130	19,860	13,000	4,350	9,210	>24,200	6,130
Fecal Coliforms	/100 mls	230	>2,000	950	>2,000	>2,000	>2,000	>2,000	>2,000	>2,000	>2,000
24 hr. LC50	%	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48 hr. LC50	%	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:  
Wet sampling event  
Rainfall data taken from National Weather Service Guaging Station in White Plains, NY



CITY OF STAMFORD MS4 INSTREAM SAMPLING RESULTS  
STAMFORD, CONNECTICUT

PARAMETER	UNITS	ISS-001	ISS-002	ISS-003	ISS-004	ISS-005	ISS-006	ISS-007	ISS-008	ISS-009	ISS-010
DSN	-	DSN-001	DSN-002	DSN-003	DSN-004	DSN-005	DSN-006	DSN-007	DSN-008	DSN-009	DSN-010
Description	-	Mianus River (7407)	East Mianus River (7406)	Mill River (7403)	Noroton River (7403)	Rippowam River "A" (7405)	Rippowam River "B" (7405)	Rippowam River "C" (7405)	LIS Coastal Watershed "A" (7000)	LIS Coastal Watershed "B" (7000)	LIS Coastal Watershed "C" (7000)
Latitude	dec. deg	41.10746	41.13363	41.1648	41.06329	41.05458	41.066	41.08963	41.02823	41.04359	41.04414
Longitude	dec. deg	-73.58722	-73.58796	-73.54427	-73.50879	-73.54503	-73.55778	-73.55925	-73.55566	-73.51705	-73.56443
Receiving Stream	-	Long Island Sound	Mianus River	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound
Date of Sample	-	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015
Magnitude of Storm	inches	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Event Type	-	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
Date of Last Storm	-	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015	8/11/2015
LAB SAMPLE #	-	BJ74795	BJ74796	BJ74797	BJ74798	BJ74799	BJ74800	BJ74801	BJ74802	BJ74803	BJ74804
pH	S.U.	7.61	7.51	7.44	7.68	8.20	7.30	7.77	7.85	7.71	7.52
Temperature	* C	17.58	17.79	21.61	21.54	22.69	19.91	22.47	25.10	21.33	22.02
Specific Conductivity	µmhos/cm	300	342	297	622	710	574	561	2,811	10,424	997
Dissolved Oxygen	mg/L	8.17	7.91	6.55	5.30	7.80	8.66	7.56	7.52	4.87	8.54
B.O.D./5 day	mg/L	<4.0	<4.0	4.7	<4.0	<4.0	<4.0	<4.0	6.2	<4.0	<4.0
Chloride	mg/L	63.6	85.1	49.4	126	173	157	133	772	3,370	264
C.O.D.	mg/L	12	16	40	<10	<10	<10	<10	38	137	<10
Hardness (CaCO3)	mg/L	87.3	60.9	83.3	97.8	133	117	104	349	1,260	249
MBAS	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.14	0.07	0.05
Phosphorus, as P	mg/L	0.05	0.09	0.26	0.07	0.06	0.07	0.06	0.21	0.23	0.07
Total Suspended Solids	mg/L	<5.0	<5.0	170	<5.0	<5.0	<5.0	<5.0	50	5.5	<5.0
Oil and Grease, Total	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Oil and Grease, TPH	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Copper	mg/L	< 0.005	0.037	< 0.005	0.293	< 0.005	< 0.005	0.006	0.012	0.008	< 0.005
Lead	mg/L	< 0.002	< 0.002	< 0.002	0.016	< 0.002	< 0.002	< 0.002	0.004	< 0.002	< 0.002
Zinc	mg/L	< 0.002	0.036	0.004	0.052	< 0.002	< 0.002	< 0.002	0.011	0.015	0.007
Nitrite-N	mg/L	0.10	0.39	0.03	0.80	0.70	0.73	0.60	0.38	1.50	0.93
Nitrate-N	mg/L	0.10	0.42	0.05	0.82	0.72	0.75	0.62	0.41	1.58	0.96
Ammonia as Nitrogen	mg/L	0.06	0.06	0.11	0.09	0.05	<0.05	<0.05	0.14	0.38	0.11
Nitrogen Tot Kjeldahl	mg/L	0.37	0.53	1.37	0.39	0.36	0.36	0.380	1.40	0.82	0.57
Escherichia Coli	/100 mls	50	200	110	790	460	260	110	320	5,480	360
Enterococci Bacteria	/100 mls	170	170	30	320	10	30	30	80	1,150	80
Fecal Coliforms	/100 mls	90	360	580	1,340	980	600	260	>2,000	>2,000	470
24 hr. LC50	%	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
48 hr. LC50	%	NA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:  
 Dry sampling event  
 Rainfall data taken from National Weather Service Guaging Station in White Plains, NY



CITY OF STAMFORD MS4 INSTREAM SAMPLING RESULTS  
STAMFORD, CONNECTICUT

PARAMETER	UNITS	ISS-001	ISS-002	ISS-003	ISS-004	ISS-005	ISS-006	ISS-007	ISS-008	ISS-009	ISS-010
DSN	-	DSN-001	DSN-002	DSN-003	DSN-004	DSN-005	DSN-006	DSN-007	DSN-008	DSN-009	DSN-010
Description	-	Mianus River (7407)	East Mianus River (7406)	Mill River (7403)	Noroton River (7403)	Rippowam River "A" (7405)	Rippowam River "B" (7405)	Rippowam River "C" (7405)	LIS Coastal Watershed "A" (7000)	LIS Coastal Watershed "B" (7000)	LIS Coastal Watershed "C" (7000)
Latitude	dec. deg	41.10746	41.13363	41.1648	41.06329	41.05458	41.066	41.08963	41.02823	41.04359	41.04414
Longitude	dec. deg	-73.58722	-73.58796	-73.54427	-73.50879	-73.54503	-73.55778	-73.55925	-73.55566	-73.51705	-73.56443
Receiving Stream	-	Long Island Sound	Mianus River	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound	Long Island Sound
Date of Sample	-	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015	11/11/2015
Magnitude of Storm	inches	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Event Type	-	WET	WET	WET	WET	WET	WET	WET	WET	WET	WET
Date of Last Storm	-	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015	10/29/2015
LAB SAMPLE #	-	BK21342	BK21343	BK21344	BK21345	BK21346	BK21347	BK21348	BK21349	BK21350	BK21351
pH	S.U.	6.32	6.47	6.29	6.95	6.82	7.29	6.61	6.71	7.18	6.92
Temperature	* C	10.16	9.88	10.54	8.66	9.31	11.83	9.83	11.74	9.89	11.31
Specific Conductivity	µmhos/cm	437	443	435	666	526	703	575	941	1,603	221
Dissolved Oxygen	mg/L	*	*	*	*	*	8.09	*	7.37	8.50	5.59
B.O.D./5 day	mg/L	8.9	<4.0	<4.0	6.8	12	5.5	4.1	13	20	9.5
Chloride	mg/L	62.1	73.1	64.1	125	90.9	136	104	226	420	13.2
C.O.D.	mg/L	17	42	21	36	59	36	29	66	79	57
Hardness (CaCO3)	mg/L	83.2	70.7	85.7	231	78.7	105	84.7	142	170	27.9
MBAS	mg/L	<0.05	<0.05	<0.05	0.07	0.07	0.06	<0.05	0.06	0.10	0.06
Phosphorus, as P	mg/L	0.05	0.07	0.03	0.17	0.31	0.13	0.12	0.52	0.39	0.41
Total Suspended Solids	mg/L	5.0	6.5	<5.0	8.0	76	10	10	15	24	51
Oil and Grease, Total	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Oil and Grease, TPH	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Copper	mg/L	<0.005	<0.005	0.021	0.009	0.008	<0.005	0.010	0.015	0.017	0.022
Lead	mg/L	0.003	0.003	0.002	<0.002	0.007	0.004	0.015	0.006	0.007	0.010
Zinc	mg/L	<0.002	0.010	0.006	0.031	0.032	0.013	0.018	0.011	0.059	0.090
Nitrite-N	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01
Nitrate-N	mg/L	0.10	0.09	0.05	0.30	0.03	0.20	0.27	0.45	0.10	0.09
Ammonia as Nitrogen	mg/L	0.11	0.15	0.09	0.07	0.11	0.05	0.12	0.39	0.14	0.12
Nitrogen Tot Kjeldahl	mg/L	0.49	0.68	0.49	0.69	0.97	0.57	0.63	1.24	0.99	1.24
Escherichia Coli	/100 mls	240	2,610	1,470	8,660	24,200	4,610	2,140	17,330	>24,200	24,200
Enterococci Bacteria	/100 mls	50	1,010	300	4,880	>24,200	980	1,010	8,660	>24,200	8,660
Fecal Coliforms	/100 mls	480	>2000	1,900	>2,000	>2,000	>2,000	>2,000	>2,000	>2,000	>2,000
LC 50	%	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100
NOAEL	%	<6.25	100	<6.25	100	100	100	100	100	100	100

Notes:  
Wet sampling event.  
Rainfall data taken from National Weather Service Gauging Station in White Plains, NY  
\* = dissolved oxygen probe malfunction



APPENDIX U  
2015-2016 WET WEATHER OUTFALL MONITORING  
SUMMARY TABLE

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City of Stamford Stormwater outfalls										
CT0030279										
DSN			sw#_SON-0008L	sw#_SON-0008R	sw#_SON-0010	sw#_SON-0018	sw#_SON-0022	sw#_SON-0025	sw#_SON-0026	sw#_SON-0027N
Description			Smith and Mill River Street-left outfall	Smith and Mill River Street-right outfall	Cummings Park- adjacent to East Avenue.	East side of East Branch- adjacent to facilities Mgt.	Fairview Avenue-end of street	West North Street- adjacent to bridge	Stamford Avenue- end of street	Ocean View Drive- end of street, north outfall
Latitude			41.052498	41.0524305209	41.0457933898	41.043360	41.0245006941	41.0589647940	41.0201639200	41.0270530
Longitude			-73.547511	-73.5460498031	-73.5177810748	-73.529841	-73.5302085932	-73.5467035262	-73.5242269864	-73.5191530
Receiving Stream			Rippowam River	Rippowam River	Westcott Cove/LIS	Stamford Harbor/LIS	Stamford Harbor/LIS	Rippowam River	LIS	LIS
Date of sample			12/2/2015	12/2/2015	12/2/2015	12/2/2015	12/2/2015	12/2/2015	12/2/2015	12/2/2015
Magnitude of storm			0.29 in	0.29 in	0.29 in	0.29 in	0.29 in	0.29 in	0.29 in	0.29 in
Date of last storm			11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015	11/19/2015
PARAMETER	ml	units								
pH		s.u	8.02	8.03	7.74	6.86	7.49	8.13	7.37	7.24
Temperature		C	9.73	11.58	11.52	11.37	10.45	10.41	10.91	12.03
Dissolved Oxygen		mg/l	13.49	9.10	9.76	7.27	7.41	11.63	9.91	6.97
Specific Conductance		umhos/cm	96	464	400	1,728	1,328	644	834	626
B.O.D./5 day		mg/L	11	6.1	5.7	< 4.0	83	41	26	< 4.0
Chloride		mg/L	4.2	101	70.6	5,350	155	9.8	192	134
C.O.D.		mg/L	92	42	72	173	398	156	156	25
Escherichia Coli		MPN/100 mls	12,030	13,000	>24,200	1,220	>24,200	>24,200	>24,200	6,870
Enterococci Bacteria		MPN/100 mls	>24,200	10,460	>24,200	1,990	>24,200	>24,200	>24,200	1,660
Fecal Coliforms		/100 mls	>2000	>2,000	>2,000	1,070	>2,000	>2,000	>2000	>2000
Hardness (CaCO3)		mg/L	31.7	134	86.1	1,710	114	33.1	163	145
MBAS		mg/L	0.18	0.15	0.12	0.09	< 0.20	0.10	0.06	< 0.05
Ammonia as Nitrogen		mg/L	0.68	0.14	0.22	0.17	< 0.50	< 0.25	< 0.50	0.06
Nitrite-N		mg/L	0.07	0.04	0.02	0.02	0.05	0.03	0.02	< 0.01
Nitrate-N		mg/L	0.42	0.79	0.67	0.42	< 0.02	0.10	1.03	3.01
Oil and Grease by EPA 1664		mg/L	5.8	2.0	< 1.4	< 1.4	< 1.5	< 1.4	< 1.5	< 1.4
Total Coliforms		MPN/100 mls	>24,200	>24,200	>24,200	>24,200	>24,200	>24,200	>24,200	>24,200
Nitrogen Tot Kjeldahl		mg/L	1.75	0.96	1.71	0.58	3.90	1.75	1.75	1.18
O&G, Non-polar Material		mg/L	3.1	< 1.4	< 1.4	< 1.4	< 1.5	< 1.4	< 1.5	< 1.4
Phosphorus, as P		mg/L	0.21	0.22	0.70	0.18	4.1	0.68	1.67	0.38
Total Suspended Solids		mg/L	51.0	14	< 5.0	< 5.0	25	26	20	< 5.0
Copper		mg/L	0.030	0.015	0.012	0.008	0.022	0.013	0.031	0.052
Lead		mg/L	0.020	0.010	0.006	< 0.002	0.013	0.007	0.008	0.004
Zinc		mg/L	0.156	0.057	0.057	0.031	0.069	0.045	0.020	0.009
* please include laboratory report for Total Petroleum Hydrocarbons for Each outfall										

City of Stamford Stormwater outfalls										
CT0030279										
DSN										
sw#_SON-0028 sw#_SON-0032 sw#_SON-0035 sw#_SON-0039 sw#_SON-0040 sw#_SON-0049 sw#_SON-0050 sw#_SON-0087										
Description Hobson Street-end of street Tresser Blvd- adjacent to bridge on north side Meadowpark Avenue Vernon Place- end of street Richmond Hill Avenue- adjacent to bridge West Forest Lawn Avenue- end of street Washington Blvd & Second Street Weed Avenue & Matthews Street- south outfall										
Latitude 41.0295241112 41.0509493334 41.0913971642 41.0572911264 41.0482698968 41.0678198517 41.0627046955 41.0549772519										
Longitude -73.5173571751 -73.5454885553 -73.5548821907 -73.5459379569 -73.5452535021 -73.5527015999 -73.5445090060 -73.5038476345										
Receiving Stream LIS Rippowam River										
Date of sample 12/2/2015 12/2/2015 12/2/2015 12/2/2015 12/2/2015 12/2/2015 12/2/2015 12/2/2015										
Magnitude of storm 0.29 in										
Date of last storm 11/19/2015 11/19/2015 11/19/2015 11/19/2015 11/19/2015 11/19/2015 11/19/2015 11/19/2015										
PARAMETER ml units										
pH s.u 7.23 7.99 8.32 7.74 7.80 7.87 7.73 7.38										
Temperature C 11.16 11.58 10.22 8.15 10.60 9.40 9.84 9.98										
Dissolved Oxygen mg/l 8.43 8.54 10.92 11.21 9.60 6.32 11.65 9.37										
Specific Conductance umhos/cm 20,328 273 84 65 125 165 162 435										
B.O.D./5 day mg/L 10 < 4.0 7.6 4.1 < 4.0 6.9 4.8 20										
Chloride mg/L 7,160 22.9 3.7 4.1 5.5 19.5 21.7 97.0										
C.O.D. mg/L 376 17 62 32 23 44 42 115										
Escherichia Coli MPN/100 mls >24,200 910 12,030 2,600 240 >24,200 8,660 >24,200										
Enterococci Bacteria MPN/100 mls >24,200 610 880 7,700 260 >24,200 6,490 24,200										
Fecal Coliforms /100 mls >2,000 1,470 >2,000 >2,000 210 >2,000 >2,000 >2,000										
Hardness (CaCO3) mg/L 2,380 84.9 12.0 12.3 41.4 30.3 36.1 89.0										
MBAS mg/L 0.07 0.09 0.05 0.13 0.07 0.08 0.09 0.25										
Ammonia as Nitrogen mg/L 0.17 0.29 0.16 0.46 0.22 0.18 0.27 0.15										
Nitrite-N mg/L 0.01 0.03 0.02 0.03 0.03 0.02 0.03 0.02										
Nitrate-N mg/L 0.27 1.27 0.06 0.34 0.58 0.29 0.43 1.07										
Oil and Grease by EPA 1664 mg/L < 1.4 < 1.4 1.8 < 1.4 < 1.4 < 1.4 < 1.4 < 1.4										
Total Coliforms MPN/100 mls >24,200 >24,200 >24,200 >24,200 >24,200 >24,200 >24,200 >24,200										
Nitrogen Tot Kjeldahl mg/L 0.91 1.12 1.28 1.09 0.88 0.82 0.66 1.24										
O&G, Non-polar Material mg/L < 1.4 < 1.4 < 1.4 < 1.4 < 1.4 < 1.4 < 1.4 < 1.4										
Phosphorus, as P mg/L 0.53 0.35 0.27 0.08 0.28 0.18 0.14 0.86										
Total Suspended Solids mg/L 18 < 5.0 52 < 5.0 7.0 5.5 16 12										
Copper mg/L 0.009 0.030 0.007 0.007 0.113 0.013 0.014 0.009										
Lead mg/L < 0.002 0.005 0.004 < 0.002 0.002 0.002 0.005 0.003										
Zinc mg/L 0.015 0.308 0.023 0.054 0.137 0.058 0.086 0.026										
* please include laboratory report for Total Petroleum Hydrocarbons for										

APPENDIX V

EXAMPLE PRIVATE PROPERTY SAMPLING NOTIFICATION

DRAFT

MAYOR  
DAVID R. MARTIN  
DIRECTOR OF OPERATIONS  
ERNEST ORGERA



TRAFFIC & ROAD MAINTENANCE SUPERVISOR  
THOMAS TURK  
REGULATORY COMPLIANCE OFFICER  
TYLER THEDER

**CITY OF STAMFORD**  
OFFICE OF OPERATIONS  
STORMWATER MANAGEMENT DEPARTMENT

July 14, 2016

ALC Incorporated  
69 Auldwood Road  
Stamford, CT 06902

**RE: Notification of Intent to Conduct Stormwater Monitoring and Sampling at Parcel Located at 0 Ocean Drive North (Community Beach)**

Dear Sir or Madam,

Please be advised the City of Stamford's records show that there is a stormwater discharge pipe on your property at the above listed address.

The City is required by State law to monitor the stormwater discharges on your property during both dry weather and wet weather. To do so, the City has hired consultants to collect stormwater at the discharge point. It will be necessary for the consultants to enter onto your property to collect stormwater samples. They will carry identification of their company and be wearing yellow safety vests. **Please allow them ready access to your property for the purposes of completing this work.** It will take 15 to 30 minutes for the collection process to be completed.

Please be advised that the City's Stormwater Ordinance requires you, as a property owner, to allow City contractors to come onto your property to collect stormwater samples. This program will begin shortly after your receipt of this letter, but because of the number of properties involved, the sampling on your property may not take place for some time.

The City appreciates your cooperation. Please contact me at 203-977-5281 if you have questions.

Sincerely,

 7/14/2016  
Tyler L. Theder  
Regulatory Compliance and Administrative Officer

cc: Thomas Turk - Traffic & Road Maintenance Supervisor  
Burt Rosenberg -Assistant Corporation Counsel