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**2014 & 2015  
MS4 ANNUAL REPORT  
NPDES PERMIT #CT0030279**

FOR

**CONNECTICUT DEPARTMENT OF  
ENERGY & ENVIRONMENTAL PROTECTION**

PREPARED FOR

**CITY OF STAMFORD  
888 WASHINGTON BOULEVARD  
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**JULY 2015**

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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, 2014 through June 30, 2015 (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 2013 & 2014 MS4 final Annual Report was submitted to the Connecticut Department of Energy and Environmental Protection (CTDEEP) on September 30, 2014.

## 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
- 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.

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. This requirement is currently underway. See *Section 4.4* 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 4.4* 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 2015-2016 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
- Control measures
- Infrastructure operations and maintenance
- Illicit discharge detection and elimination
- 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*, has been 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.

As such, 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.

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 five new positions under the direction of the Regulatory Compliance and Administrative Officer; four equipment operators and one laborer 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. To date, 90 MS4 outfalls have been confirmed/identified/mapped. Two of the previous 92 MS4 outfalls were eliminated from the list, outfall number SON-0021 and SON-0060. These outfalls were removed from the monitoring list because one was the SWPCA's Facility discharge location and the other was identified as a structure inlet.

The City has continued to identify and map new MS4 outfalls in the City during this Reporting Period and is expected to complete the MS4 mapping by \_\_\_\_\_. To date, the City has identified approximately 900 potential new outfalls. 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. The City continues communication with the DEEP to identify a more specific criteria for the outfalls that will be required for monitoring as part of the IDDE program and the wet weather monitor. See **Section 4.4** and **Section 4.5.3** for additional details on the IDDE program and the wet weather monitoring.

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**.

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## 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 and 2013-2014 Annual Report
  - 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
  - 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 350 hits on the website.

- Public notice and a public meeting is scheduled to be held on August 3, 2015 for the review of the SMP and the draft 2014-2015 Annual Report. The Notice of Meeting was published in the Stamford Advocate on July 22 and 29, 2015. The Notice of Meeting will be filed with the Town Clerk, forwarded to the Board of Representatives, and posted on the City's website, and posted throughout Government Center. The leadership/directors of two local environmental groups, SoundWaters and the Mill River Collaborative, will be provided notice of the meeting.

- An informational pamphlet entitled “Preventing Stormwater Pollution & You”, which focused on steps that residents can take to reduce stormwater pollution, was distributed with all tax bills (approximately June 15, 2015).
- An informational pamphlet on dog waste management was / will be provided to all dog owners at license renewal time. 3,550 pamphlets were provided to the Town Clerk for distribution and an additional 6,000 copies were ordered.
- In 2013-2014, the City installed ten 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). Fifty (50) additional dispensers were purchased and are being installed by the City Parks and Recreation Department. A list of existing and proposed dog waste dispenser locations is presented in Appendix C of the SMP. A map was generated for the proposed locations and the Parks and Recreation Department will be installing the dispensers and signs during the summer of 2015. See *Appendix C* for a copy of the proposed dispensers and signs locations map.
- The SWPCA provides tours of the City’s wastewater treatment facilities to school children and adults. During the Reporting Period, approximately 888 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 5,350 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 is in the process of teaming with this group to collaborate on educational programming.
- The City conducted an educational outreach program event at Dolan Middle School. Four classes, including 168 students, of sixth graders were introduced to the concepts of stormwater quality management using a PowerPoint presentation and were given the opportunity to see the vacuum trucks used to clean out the catch basins and manholes. The City is in the process of collaborating with other middle schools throughout the City to expand this outreach program.
- The City ordered and has 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 expected to be installed during the summer of 2015 by city staff members or by seasonal employees and volunteers.
- 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*). Over 5,300 hours of services were provided by Harbor Watch during this Reporting Period.
- Sent targeted stormwater informational mailings to neighborhoods where illicit discharges were discovered.

#### 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 CDEEP list of stormwater discharge General Permit sites for commercial or industrial activity and will prepare informational outreach materials to target these businesses and will 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 2014 – June 2015, approximately 2,675 gallons of used motor oil and 2,200 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 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, adversely affecting stormwater quality. In 2014 and 2015, the City hosted an HHW collection day on July 19<sup>th</sup>. 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 2014 – June 2015, 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

The City maintains Spill Prevention and Response Plans (SPRPs) to prevent, contain and clean up spills of oils, petroleum products, and other potentially hazardous materials. Site-specific SPRPs have been developed for Town facilities on Magee Avenue, the Town Yard, the Police Department, and the SWPCA Facility. Other City facilities and private properties in the City are covered by the Fire Department's Standard Operating Guidelines. The City reviewed these plans during the Reporting Period to ensure that they were properly designed to prevent spills or leaks from entering the MS4 and provided for appropriate response procedures and countermeasures to minimize stormwater impacts and protect surface waters. Currently, the City is in the process of coordinating between all of the City's departments for the development and implementation of a city-wide SPRP.

A list of recent spills during the Reporting Period, of five gallons or more, is presented in *Appendix D*.

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 by July 1, 2016.

Fertilizers and herbicides are used on the municipal athletic fields, as described in the SMP. Every year, in April, Dimension is applied to the fields and contains both fertilizer and herbicides. In May, Propendi is applied to the fields and contains both herbicides and fertilizer. In September, just fertilizer is applied to the fields.

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 4,617 tons of nitrogen and the E. Gaynor Brennan Municipal Golf Course used a total of 3,637 tons of nitrogen. The total of 8,254 tons of nitrogen used in 2014 represents a 9 percent reduction from the total tons of nitrogen that was used in 2013 (9,082 tons). See **Appendix E** 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 \_\_\_\_ tons of salt during \_\_\_\_ storms during the winter of 2014-15. 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 intends to expand its use of brine trucks for pre-treatment in the future, which will help reduce road salt usage. 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.

Additional information on the proposed stormwater ordinance and changes to the Zoning Regulations is 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 year, 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.

#### 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 July 11, 2014 for Stormwater Pollution Prevention and Universal Waste Management for ten Maintenance Garage, Highway Facility and Recycling

Center employees working at City-owned facilities. Additionally, Universal Waste Management, Spill Prevention Control and Countermeasures Plan, and Stormwater Pollution Prevention Plan training was conducted on June 16 and 17, 2015 with approximately 20 employees in attendance from City-owned facilities.

Twelve members, or departmental designees, of the Pollution Prevention Team attended additional MS4 SMP training on October 23, 2014 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.

#### 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.

The Engineering Department maintains a list of catch basins and manholes that require repair and assigns that work to either the Traffic and Road Maintenance Division or to independent contractors, as needed. During the Reporting Period, 93 catch basins and/or manholes were repaired. See **Section 4.3.5.7** for additional details on catch basin cleaning.

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 were properly trained on the equipment. Initially, the camera truck is being used to inspect areas identified as needing maintenance within the MS4.

The City conducts inspections with the camera truck two days a week, covering approximately 200 feet of piping per day. To date, the City has videoed 312 miles of road.

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.

#### 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.

#### 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, 2015 the City swept 8,604 miles of roadway and collected 1,810 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 sweeping is performed weekly in the Downtown Special Services District (DSSD); this work is coordinated and paid for by the DSSD. Other city streets were only swept as part of snow removal activities.

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.

#### 4.3.5.5 Leaf Collection

In 2014, the City conducted its leaf pickup program from November 12 - December 13, 2015. A total of 1,359 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.

#### 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 performs anti-icing using liquid calcium chloride 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.

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, 2014 through June 30, 2015, the City cleaned 1,946 of its approximately 11,000 catch basins. Approximately 3,124 tons of materials were removed from the basins. A sample catch basin inspection form is presented in *Appendix F*.

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.

#### 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 is being developed and the City will maintain an inspection schedule for them. To date, approximately 70 basins have been identified. 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.

#### 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 continues to investigate whether any of these entities have interconnected MS4s. If interconnected MS4s do exist, then interagency agreements will be developed detailing the responsibilities of the City of Stamford and each the interconnected MS4 municipality.

#### 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 G* 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 was able to collect fifteen (15) dry weather outfall samples at sixteen (16) locations. Only one (1) of the locations was dry at the time of the monitoring event. 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 H*. 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.

#### 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 were to be established. Each in-stream monitoring location was to be sampled three times per year during spring, summer, and fall rain events, and a dry sampling event during the summer, in accordance with the permit requirements. On March 5, 2014, the DEEP issued a Notice of Violation (NOV) to the City of Stamford for:

- Failure to establish the in-stream monitoring locations
- Failure to conduct the 2013 summer dry and wet weather in-stream sampling events
- Failure to conduct the fall wet weather in-stream sampling event

In response to this NOV, the City developed a list of the required ten (10) in-stream surface water sampling locations, which was approved by the DEEP. The City also solicited bids from environmental engineering consultants to provide stormwater monitoring services and to assist with the implementation of the NPDES Permit. Anchor Engineering Services, Inc. was hired in July 2014 to collect the necessary in-stream stormwater samples.

Since the issuance of the NOV, the City worked vigorously to obtain full compliance with the NOV by December 31, 2014. The City is now currently in compliance with the NPDES Permit, with respect to the in-stream monitoring.

To date, the following rounds of in-stream sampling have been completed:

<u>Dry Weather Events</u>	<u>Date(s) Sampled</u>
2013 Summer	7/22/2014
2014 Summer	7/31/2014

<u>Wet Weather Events</u>	<u>Date(s) Sampled</u>
2013 Summer	8/13/2014 & 10/8/2014
2014 Summer	9/25/2014
2013 Fall	10/8/2014 & 10/23/2014
2014 Fall	10/16/2014
2014 Spring	10/23/2014 & 11/6/2014
2015 Spring	4/20/2015

Analytical data is being 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 I*. A copy of the SMRs for these samples will be provided upon request.

The previous NPDES Permit did not require the City to conduct in-stream monitoring therefore, no previous baseline data was collected to establish a trend line. Data collected during these initial rounds of sampling are being used to establish a baseline and will be compared to future monitoring results so as to evaluate the overall impacts of implementation of the SMP on the quality of the receiving streams.

#### 4.5.2 Wet Weather Outfall Monitoring – Previous Permit

The NOV issued in March 2014 also cited the City for failure to collect discharge from outfall locations at six representative locations, as required by the previous NPDES Permit. In response to this item, the City hired Fuss & O’Neill, Inc. to conduct the outfall monitoring for 2012. These outfall samples were collected in August 2014 and have been submitted to the DEEP. Summary tables of the analytical data for the wet weather outfall monitoring are presented in *Appendix J*. A copy of the SMRs for these samples will be provided upon request.

#### 4.5.3 Wet Weather Outfall Monitoring – Current Permit

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. To date, over half of the wet weather outfalls were sampled; 47 of the 90 outfall locations were sampled. Sampling did not occur at all of the 90 known outfall locations prior to the end of the second year of the NPDES Permit because of the following:

- There were only three rain events sampled since December 2014 (the time at which Anchor Engineering was given the notice-to-proceed) due to the timing of the qualified rain events and the lab restrictions for holding times;

- Of the 90 known outfall locations, 13 were identified in tidal areas and will need to be collected during low tide (the three sampled rain events all occurred during high tide, when the outfalls were under tidal influence, and would not have been a representative sample if collected); and,
- Three of the outfalls were identified as dry, or no discharge, during the rain events and will require maintenance prior to collecting samples at these outfalls.

The no-discharge outfall locations were relayed to the City so that they could investigate the problem and rectify the situation.

It is anticipated that the remaining 43 known outfall locations will be sampled during the next Reporting Period, which will move the City back into compliance with the NPDES Permit requirements for wet weather outfall monitoring.

Analytical data is being 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 K*. 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. A final MS4 Ordinance has been completed and is included in **Appendix G**. 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. This work is underway and the modifications have been sent out to referral to various agencies. It is anticipated that the Zoning Regulations will be completed, approved and implemented by July 2016.

Additionally, during the Reporting Period, the City finalized and began implementing a new ordinance 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 date.

## 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 \$\_\_\_\_\_ operating budget for 2015-2016, including \$\_\_\_\_\_ specifically for MS4 stormwater management, \$\_\_\_\_\_ for leaf collection, \$\_\_\_\_\_ for storm management, and \$\_\_\_\_\_ for traffic and road maintenance, including street sweeping and infrastructure improvements. This Traffic and Road Maintenance Division budget represents a \_\_\_% increase over the budget for 2014 - 2015.

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 2015-2016 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.

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## 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. Several new staff members have been hired during this Reporting Period, 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.
- 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.

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. One camera truck and one new vac-truck were procured by the Traffic and Road Maintenance Division during the Reporting Period to facilitate catch basin inspection and cleaning 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.