

**2017 - 2018
MS4 ANNUAL REPORT
NPDES PERMIT #CT0030279**

FOR

**CONNECTICUT DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION**

PREPARED FOR

**CITY OF STAMFORD
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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, 2017 through June 30, 2018 (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 2016–17 MS4 final Annual Report was submitted to the Connecticut Department of Energy and Environmental Protection (CTDEEP) on October 6, 2017.

On January 2, 2016, the City submitted an application for modification of its NPDES Permit. The City, in conjunction with the CTDEEP, completed many efforts to work through the requested permit modification items during the 2016-17 fiscal year. Many meetings, phone calls, emails, and letters related to the process were conducted over a period of two (2) years to complete the permit modification process which took a considerable amount effort. CTDEEP worked with the City and the Environmental Protection Agency (EPA) in efforts to complete the process. A NPDES Permit Modification for the City of Stamford was issued by the EPA on August 14, 2017.

On February 6, 2018, the City submitted a permit renewal application for the newly modified NPDES Permit, which was set to expire on June 3, 2018. The City received minimal comments from the CTDEEP's review of the application and has since submitted all of the requested information.

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.

The major findings during this Reporting Period of the modified 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 that several areas of the permit needed improvement which are outlined in Section 2.3.1 of the 2014 & 2015 Annual Report.

The EPA issued an Administrative Order and Request for Information, regarding the compliance audit, to the City of Stamford on October 1, 2015. The City of Stamford has been working with the EPA of this Reporting Period to address items identified during the compliance audit.

Per the request of the CTDEEP, on September 17, 2018, the City of Stamford provided the CTDEEP with a 52-page document discussing the current status of the findings of the EPA's Violation and Order for Compliance – Docket No. CWA-01-AO-15-012, September 30, 2015.

2.4 Future Direction of the SMP

The SMP will continue to be evaluated in greater detail as part of the 2018–19 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.

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.

2.5 NPDES Permit Modification SMP Updates

On August 14, 2017, a permit modification was issued for the City's NPDES Permit. During the 2017-18 Reporting Period, the City reviewed the permit modification for any new requirements and will be updating the SMP accordingly during the 2018-19 Reporting Period. The City hopes to have a draft version of the new SMP for review by the end of October 2018. It is anticipated that it will take two months to review and modify as necessary. It is anticipated that an executed SMP will be submitted to the CTDEEP by the end of December 2018. The updated SMP will be based on the modified permit and will reflect the current levels of resources available to support the permit goals.

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.

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.

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 positions under the direction of the Regulatory Compliance and Administrative Officer; the positions include five heavy equipment operators 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. As of June 30, 2018, the City has mapped 949 outfalls. Efforts were completed to canvas the entire City for identifying outfalls and approximately 95% of the City has been mapped. The City understands that there is continual maintenance being conducted on the stormwater system throughout the city and that the outfall mapping will require constant updating. Current updated outfall mapping is provided in *Appendix C*.

The City is currently in the process of confirming the accuracy of the outfall locations and whether 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. See *Section 4.4* and *Section 4.5.2* 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 4.3.5.10*.

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 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 maintains a Frequently Asked Questions section that includes 25 questions and answers that city residents may view. To date, there have been approximately 1,420 hits on the website.

- The Regulatory Compliance and Administrative Officer for the City of Stamford, in an effort to aid in the public participation of stormwater management added a link to Stormwater Management Website for the RiverSmart CT project at: <https://www.stamfordct.gov/stormwater-management>.

- 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 inquiries regarding snow storage, sweeping, catch basin cleaning, and IDDE program during the Reporting Period.
- A public meeting was held on September 4, 2018 at 6:00pm for the review of the SMP and the draft 2017-2018 Annual Report. The Notice of Meeting was published in the Stamford Advocate on August 25, 2018 and September 2, 2018 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. There were two (2) attendees at the meeting. No formal questions or comments were submitted by citizens and the meeting lasted nearly two hours. All questions were answered during the course of the meeting and subsequent discussions.
- An informational pamphlet on dog waste management was provided to all dog owners at license renewal time. 3,000 pamphlets were provided to the Town Clerk for distribution in the Spring of 2018. During FY 2018-19, there is budget for a graphic redesign of the pamphlet. If the budget allows, another 3,000 pamphlets will be provided to the Town Clerk in the Spring of 2019.
- 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). Secured a bid waiver in 2017 to purchase more than \$10,000 of goods and services because the dispensers only work with bags provided by manufacturer. Approximately \$15,000 was spent on dog waste disposal bags (203,424 bags) during the Reporting Period and City staff have observed used bags disposed of in the trash containers throughout the areas with dispensers. Parks Department will take over budget item to purchase bags in FY 2019-20. They will budget \$20,000 to cover their anticipated use. Current price of bags has increased, but at current pricing, they could purchase 250,000 bags in FY 2019-20.
- The SWPCA provides tours of the City's wastewater treatment facilities to school children and adults. During the Reporting Period, 251 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 2,438 volunteer hours were provided from over 807 individual volunteers during this Reporting Period. These hours included everything from stuffing envelopes, to removing invasive plant species from the meadows, to creating erosion barriers in the river. A specific list of volunteer activities includes:
 - + reinforcing river banks using organic biologs
 - + invasive species removal by hand (mugwort, queen anne's lace, loosestrife, wild lettuce, white clover, ailanthus, burdock, bindweed)
 - + planting pollinator-attracting flowers
 - + cleaning up litter in and near the river
 - + building rock veins to funnel water away from banks to reduce undercutting
 - + mulching

- harvesting native seeds
 - removing silt around drainage areas
 - cutting overgrown shrubs and trees
 - weeding paths, lawns, flower beds, gardens
 - spreading organic fertilizers (sparingly)
- 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 and SoundWaters are in the process of coordinating a vacuum truck demonstration for kids in order to strengthen the relationship with the community.
 - The Mianus Chapter of Trout Unlimited continued their restoration of the Mianus Riverbank by pinning more Christmas trees and adding a hardened access. The effort, spearheaded by the Mianus Chapter, took place of July 13-14, 2018. The Friends of Mianus River Park and the City of Stamford were also contributors.
 - The Friends of Mianus River Park, a volunteer group and non-profit corporation, conducted 2 riverbank stabilization projects in the 2017-18 Reporting Period.
 - The Friends of Mianus River Park coordinated efforts with Trout Unlimited to plant over 550 plants along the Meander Trail riverbank on September 30 and October 1, 2017.
 - The Friends of Mianus River Park installed leaning split rail fence north of the Meander Trails south entrance.
 - During this Reporting Period, the City continued to install catch basin medallions throughout the City. These medallions were installed both English and Spanish to help raise public awareness for stormwater quality issues. These medallions are being installed by City staff members or by seasonal employees and volunteers and are primarily installed on curb-backed catch basins throughout three areas targeted in the southern part of the City, and in parks, and downtown areas with the most pedestrian traffic. Currently, the City has installed medallions on approximately 20-25% of the City-maintained catch basins. The City has recognized that the medallions are a useful and effective tool and has been great for assisting in educating the public. The City has noted that some of the medallions are missing, so periodic recheck work will be taking place as well. Additionally, some of the catch basins have been located on roads that have repaved and the catch basins have been changed out or rebuilt; the City will need to install medallions on those as well and have made note of the locations, particularly downtown.
 - The Regulatory Compliance and Administrative Officer for the City has made strides in developing and implementing a program for the future that will allow residents to have access to limited GIS data and be allowed to adopt a catch basin and begin to understand how it is connected to the rivers and streams in the area.
 - The City has collaborated with a marketing and public relations firm (Catalyst) to develop a new stormwater management mailer/pamphlet to be sent out. The inventory is running low, will need to reprint additional stock during the next Reporting Period. The City will continue to hand out at events such as earth day, annual public meetings, etc. The City will evaluate the budget and consider another mailer to businesses in the coming years.
 - The City celebrated Earth Day on April 20, 2018 in the lobby of the Government Center. Tyler Theder set up an enviroscape demo model to display catch basin medallions, tracing dye, photos of catch basins full of trash, and handed out stormwater pamphlets in English and Spanish.

- On October 28, 2017, the Stamford Police Department hosted a National Rx Drug Take-Back event. The event collected approximately 220lbs of unused medicines from residents. As part of the event, the police department provided services for residents to drop off their unused or expired medications.
- The City spent approximately \$1,600 on 38,000 Stormwater Management fliers that were distributed throughout the City with the December 2017 tax bills. The fliers were provided to each resident receiving a tax bill, which includes all registered automobile owners in the City.
- During the Reporting period, one-thousand doubled sided color flyers were printed and distributed. 19,500 postcard mailers were sent to single family homes, a full-page ad was placed in the Stamford Advocate and on the City's website, flyers were placed throughout the City and 30 lawn signs were installed to remind the citizens that leaves collected were not to be placed in the roadways. The Stamford Advocate ran 400,000 impressions online at on their website, www.thestamfordadvocate.com, which ran from October 13, 2017 through November 12, 2017. One (1) ½ page ad was placed in the print version of the Stamford Advocate and presented same info as the bi-lingual flyer. The ad ran on 10/13/2017 in black and white in the sports section and ran again in full color on 10/20/2017. The Communications Director provided updates regarding progress of the city crews as they moved through the City using the Stamford Government Center Facebook page. Additionally, door hangers were used for reminders for any violators of the City's policies.

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 has prepare informational outreach materials to target these businesses. The City intends to distribute the materials during the 2018-19 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. During the Reporting Period, approximately 3,120 gallons of used motor oil and 2,260 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 2017 and 2018, the City hosted an HHW collection day on July 14, 2018, at the Rippowan School on High Ridge Road. During this Reporting Period 526 households and, 153 half-households participated. 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. During the Reporting Period, approximately 202 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 2016, 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.

The department responded to six (6) 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 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 during the 2018–19 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 1,530 pounds of nitrogen to the ball parks during the 2017-18 Reporting Period. See *Appendix E* for a table of the total nitrogen used at the City-owned ballparks.

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 should be determined by the average annual usage, by weight, of the three years preceding the NPDES Permit (2010-2012). The City has not been able to obtain the records for the three years preceding the permit; however, based on the records from 2013-2015, the City has met its reduction goal by reducing the application rate of total nitrogen by 22.4%. 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.

During the Reporting Period, the Sterling Farms Golf Course used a total of 2,953 pounds of nitrogen and the E. Gaynor Brennan Municipal Golf Course used a total of 3,637 pounds of nitrogen. The total 6,403 pounds of nitrogen, used in 2017 represents a 2.9 percent increase from the total nitrogen that was used in 2016 (6,403 pounds). Even with this slight increase, the golf courses have significantly reduced the use of total nitrogen since the beginning of the permit term. 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 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 17,177 tons of salt during 15 storms for a combined total of 66 inches of snow during the winter of 2017-18. 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's brine system was not working last year and they did not have any trucks pretreating with brine. Capital budget season kicks off in October 2018, and the City is hoping to submit a capital project to reconfigure the brine system to bring it into working condition. The City has a tank at the Town Yard Facility (105 Haig Ave.) and the capital project may bring the tank and equipment down to the City Garage. 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 continues 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*. Applicants are being told about stormwater management issues at the time building permits Environmental Planning Board and Planning & Zoning sign-offs are being obtained. Applicants have been made aware of their responsibility to obtain DEEP Construction Stormwater General Permits. This notification of responsibility has been met with some resistance from the builder / developer community. Therefore, the City is currently exploring alternative ways for providing notification to the builder / developer community.

The City's building permit process is facilitated electronically through a software package called "View Permit". The plan is to attach standard text to all applications notifying the applicants of their responsibility, if applicable, to obtain DEEP permits.

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 F*.

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.

During the Reporting Period, the City continued to work with Fuss & O'Neill for compiling a Stormwater Drainage Manual. This manual will address the LID and other pertinent requirements provided in the modified NPDES Permit.

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 continued the process of estimating the DCIA throughout the City. Sub-meter aerial photogrammetry of the City is being 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. WestCOG and the City of Stamford maintains an ongoing its partnership and continues to develop an innovative demonstration project to create a new semi-automated GIS workflow to determine DCIA within suburban and urban watersheds within Stamford, and understand better the effort and technologies involved. This work is in support of the mapping requirements of the NPDES Permit. Five outfalls and corresponding watersheds were selected with different land use mixtures. Impervious cover and DCIA were estimated utilizing previously acquired and very high-resolution planimetric GIS. In addition, an automated watershed delineation method was tested for urban areas. Results show the importance of very detailed field confirmation of the proposed methods and the importance of selecting the proper input data set with accompanying attribute information.

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 September 18 and 19, 2018 for Universal Waste Management, Spill Prevention Control and Countermeasures Plan, and Stormwater Pollution Prevention Plan training. Approximately 35 employees were in attendance from City-owned facilities at this training event.

Members, or departmental designees, of the Pollution Prevention Team attended additional MS4 SMP training on September 18 and 19, 2018. 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 G*

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 three stormwater pump stations on an annual basis. In excess of \$445,000 was back charged to SWCPA from the Stormwater Management Department for this maintenance during the Reporting Period.

As of January 1, 2016, the Traffic and Road Maintenance Division is now responsible for tracking the catch basins and stormwater 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 basins and stormwater manholes that require repair and will assign that work internally or to independent contractors, as needed. During the Reporting Period, at least 1,366 of 10,566 catch basins were inspected and pumped/cleaned out, as necessary. Additional inspection work is ongoing. 90 catch basins and/or manholes were repaired during the Reporting Period. In addition, a significant amount of storm piping was repaired or replaced, including several hundreds of lineal feet of storm piping which was broken, collapsed, pipe was sagging, or not previously connected. Additionally, 16 stormwater manholes were repaired/replaced/raised to finish grade, totaling \$44,263.10 in work. See *Section 4.3.5.7* for additional details on catch basin cleaning. A list of 2017-18 catch basin/manhole repairs is presented in *Appendix H*.

During this Reporting Period, the Engineering Bureau repaired eight stormwater pipes during the reporting year. One headwall was constructed and two outfalls were stabilized with rip-rap by the Engineering Bureau. The City's paving contractor repaired several dozens of stormwater pipes and drainage structures in advance of paving operations, which occurred on approximately 43 centerline miles of roads during the Reporting Period. Pipe inspections are performed by the Traffic and Road Maintenance Division using the camera truck.

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 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 proved to be a valuable asset for mapping/GIS work required by the permit.

The City has hired a private contractor (OneVac) to conduct CCTV work on storm mains and lateral pipes prior to paving operations during the Reporting Period. During this Reporting Period, the City conducted 136 CCTV reports, which totaled approximately 5,185 linear feet of piping that was videoed, including storm mains and lateral 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 continues to install bells on additional catch basins in parts of its MS4 where trash and floatables are a problem. The City procured two (2) hydraulic cranes for the installation of bells and maintenance to the catch basins. During this Reporting Period, the City installed 171 bell taps. The City also installed nine (9) bell traps in existing catch basins which had stable hooks. Going forward, the City plans to put a bell in every catch basin. The City is anticipating on installing several more catch basin bells during the 2018–19 Reporting Period.

The Traffic and Road Maintenance Division has acquired funding in an Environmental Compliance Capital account to make improvements to MS4 piping when property owners cannot, or will not, make repairs in the timeframe provided in the permit.

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 8 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, 2018 the City swept 8,770 miles of roadway and collected 1,642 tons of street material during the Reporting Period. On average, the City

swept each curb mile of roadway 14 times. 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 during this Reporting Period. This work is coordinated and paid for by the DSSD. An estimated 23 tons of materials was removed during this Reporting Period as a part of the sidewalk and curbside sweeping activities. The DSSD also maintains four cigarette butt disposal stations on lamp poles around the Columbus Park area, which yield approximately one pound of butts per year. The DSSD was provided with a full spill response kit in June of 2018, including gloves, sorbent pads, speedy dry, sorbent pillows, disposal bags, etc. This spill kit is kept proximate to trash compactors and grease storage area at the Bedford Street parking garage.

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 has requested relief from the sweeping requirements as per the permit modification. The permit modification language is modeled after the DEEP MS4 general permit, which allows cities the ability to focus sweeping efforts on targeted areas. One goal is to compress the spring sweeping schedule between March 1st and June 30th to maximize the quantity of material collected at the end of the winter season.

The City has been 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 helps 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 2017, the City’s leaf pickup program was completed by December 6th. Every street in the City is swept clean as a part of this program. A total of 9,881 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 15th. The City has established a procedure that breaks the City of Stamford down into three areas (see Appendix L 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 15th. 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 current leaf disposal policy is that the leaves will be piled at the curb prior to pick-up and off the streets. During the Reporting period, one-thousand doubled sided color flyers were printed and distributed. 19,500 postcard mailers were sent to single family homes, a full-page ad was placed in the Stamford Advocate and on the City's website, flyers were placed throughout the City and 30 lawn signs were installed to remind the citizens that leaves collected were not to be placed in the roadways. The Stamford Advocate ran 400,000 impressions online at on their website, www.thestamfordadvocate.com, which ran from October 13, 2017 through November 12, 2017. One (1) ½ page ad was placed in the print version of the Stamford Advocate and presented same info as the bi-lingual flyer. The ad ran on 10/13/2017 in black and white in the sports section and ran again in full color on 10/20/2017. The Communications Director provided updates regarding progress of the city crews as they moved through the City using the Stamford Government Center Facebook page. Additionally, door hangers were used for reminders for any violators of the City's policies.

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 perform 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 de-icing materials.

During this Reporting Period, the West Beach parking lot was prepared from November through April with haybales, double catch basin filters, and etc. in the event that additional snow stockpiling was necessary. This space was not utilized during this Reporting Period.

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.

For the 2017-18 Reporting Period, at least 1,366 catch basins throughout the city were inspected, and cleaned on an as needed basis. Approximately 2,673-tons of materials were removed from the basins during the Reporting Period. This equates to 5,346,000 pounds of waste that was captured and processed and did not enter the City's waterways, streams, rivers, or Long Island Sound.

The City continues to maintain a catch basin inspection, cleaning, and repair program. This program helps to 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, the City has obtained or purchased the following equipment:

- (3) Vactor vacuum trucks purchased between 2014 and 2015
- (2) Vac-Con vacuum trucks – purchased in 2008 – not currently in service but could be used in emergency
- (4) Elgin Pelican sweepers purchased between 2008 and 2015
- (1) Rapid View CCTV truck w/ Pipe Logix software – purchased in 2015. CCTV truck has three cameras and a manhole/ stick camera
- (2) One-ton dump trucks on with Stetco hydraulic cranes – purchased in 2016
- (1) Caterpillar mini-excavator – purchased in 2014 and used for culvert cleaning work
- (1) Caterpillar loader / backhoe – purchased around 2010 and used for culvert cleaning work
- (~10) One-ton dump trucks used for typical highway department work
- (~25) Large dump trucks – used as necessary for haul away of sediment per culvert cleaning work
- (1) Utility truck with a hydraulic lift will be used for carrying grates, covers, catch basins – purchased in 2017

The City also hired five new heavy equipment operators for this program, as well, to generally support its stormwater management and compliance activities (see **Section 6.0**).

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 continues 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 Culvert Cleaning

During the Reporting Period, the City performed maintenance activities at 11 culverts over approximately 12 days. Various maintenance activities were conducted at the culverts including, but not limited to: stabilizing inlet and outlet areas, cleaning out culvert, removing debris and vegetation from around the culvert, CCTV inspections, excavating culvert discharge area, and wetlands delineation. During the Reporting Period, over 267 cubic yards of soil was removed from the culverts and discharge areas. A list of 2017-18 culverts cleaned is presented in *Appendix I*.

4.3.5.9 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. To date, 77 basins were identified and the City continues its efforts to inspect the basins identified. The detention and retention basins were added to the GIS mapping. Stormwater Management began inspections and maintenance work on these basins during this Reporting Period and is anticipating conducting the remainder of the inspections at each pond during the next Reporting Period.

4.3.5.10 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 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 most of the interconnected MS4 areas during the development of the new SPRP. A map of the interconnected MS4 areas is provided in Appendix C of the Spill Prevention Response Plan. 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.

4.3.5.11 Referrals

During the Reporting Period, the Stormwater Management Department provided referrals to other departments throughout the City for maintenance and repairs. These referrals are outlined below:

Sweeping Referrals Provided to Various Entities

- The City completed a city-wide "clean sweep" in 2017 between August and September. The City chose the most heavily parked streets within a given area, posted, towed, conducted debris removal, sweepers hit both sides, and pumped and cleaned catch basins.
- Conducted three (3) other post and tow operations on streets with heavy debris. Work occurred before and after program per the "clean sweep".
- Conducted targeted sweeping on many of the streets where trash, debris, sand, gravel, etc. was observed. This work is generally communicated via field observation by supervisors directly to sweeper operators via hand held radio, text message, or verbal communication.

Stormwater Referrals Provided to and from the Environmental Planning Board (EPB)

- 17 referrals sent to EPB during the Reporting Period, mostly related to improper maintenance of erosion controls. EPB requires builders/developers to submit erosion control plans. Therefore, EPB can refer to non-compliance related to submitted plans.
- Five (5) referrals were provided from EPB to Stormwater Management Dept. Enforcement actions by EPB regarding maintenance of erosion controls.

Referrals Provided to the CTDOT

- 14 referrals to CDOT, related to missing or damaged storm manhole covers and grates, sweeping requests, catch basin cleaning requests, failing pavement, flooding, culvert cleaning, etc.

Curbing Referrals

- During the Reporting Period, the Stormwater Management Department made 7 referral requests to add or rebuild curbing to appropriately direct stormflows on city roadways. The Road maintenance department handles curbing requests, and estimates at least 400 were received during the 2017-18 Reporting Period. The average curbing request is about 40 linear feet of asphalt curbing. There were 200 requests completed at 40 feet each, the City installed about 8,000 linear feet of new asphalt curbing during the Reporting Period.

Other Referrals

- Nine (9) referrals were made during Reporting Period for Eversource. Referral items included: open holes in roadway / missing caps for gas valves, low power wires limiting vehicular access (winter maintenance, vac truck, sweeper, etc.), failing grates for utility vaults in roadways, improper patching of roadway leading to ponding, reports of natural gas odors, and telephone pole installation and expectations related to proper removal of excavated soil for direct bury pole installation.
- 24 referrals from Stormwater Management Dept. to Engineering Bureau. Referrals included major pipe defects, storm piping which was never properly connected, improper erosion controls on City projects, pavement settling and ponding on roadways, swale reconstruction in and around wetlands, major culvert replacement and restoration, sinkholes in roadways, major root obstructions in large diameter (24") pipes, flooding and requests to install check valves on tidally influenced stormwater outfall pipes, catch basin(s) improperly connected to WPCA sanitary infrastructure.
- 13 referrals were provided to the Parks Department regarding pruning above the catch basins to facilitate access and maintenance by vacuum trucks.
- 27 referrals were provided to WPCA, regarding broken, damaged, loose, missing, or low WPCA manhole covers. Referrals also for sanitary system overflow observed by T. Theder. Sink holes adjacent to WPCA structures.
- Three (3) referrals were provided to the Building Department. Referrals included observations of Styrofoam particles in catch basins around new hi-rise building under construction, commercial business owner who disconnected sanitary lateral from MS4 storm pipe and continued to operate commercial business, and blight issues related to unmaintained and overgrown property.
- 14 referrals from WPCA, including foul odors, WPCA permit exceedances and sanitary system overflows, sanitary spills, violation notices as related to the fats, oils, and grease (FOG) abatement program.
- Three (3) referrals sent to Greenwich. Issues related to: leaking manholes, improper erosion controls on residential property in Greenwich which abuts Stamford Roadway, and blocked or damaged storm pipe in Greenwich which drains Stamford roadway.
- One(1) referral sent to New Canaan. Issues related to: improper erosion controls on residential property.

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.

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 retained the services of Anchor Engineering Services, Inc. for the collection of dry weather outfall samples as part of the IDDE screening requirements. Anchor Engineering screened 102 of the

outfalls during this Reporting Period for dry weather events. A flow was observed and samples were collected at 42 of the locations. A summary table of the analytical data for the dry weather outfall screening and sampling efforts is presented in *Appendix J*.

The City will continue to screen and sample as many outfalls as the budget allows during the next Reporting Period. The City understands the importance of screening all of its outfalls for illicit discharges and is committed to continuing these services until all outfalls have been screened.

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. IDDE investigations will be focused in the same areas as previously identified during the 2016-17 Reporting Period.

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 multiple areas of concern, which will receive further investigation. 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 any confirmed illegal connections removed from its MS4.

Additionally, the City is in the process of reviewing the data gathered from the dry weather outfall sampling and has started to identify outfalls with possible illicit discharges that will require further sampling and investigation. The City anticipates ranking these outfalls and performing additional sampling and investigation in the upcoming Reporting Periods.

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 stormwater outfall monitoring throughout the life of the permit.

As prescribed in the modified NPDES Permit, the City is no longer required to conduct in-stream samples.

4.5.1 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. To date, 86 of the wet weather outfalls that were known at the time of the NPDES permit issuance have been sampled. There are six of the original 92 outfalls that remain to be sampled. Four of the remaining six locations are tidally influenced and have been underwater during every sampling event. One of the locations has historically been dry and one location cannot be accessed. The City is in the process of locating upstream structures from the outfalls that may be sampled. It is anticipated that the remaining four known outfall locations will be sampled during the next Reporting Period.

The City began the process of monitoring new outfalls during wet weather conditions. Many new outfalls discharging to impaired waters have been identified and the City is in the process of having those outfalls sampled during the next Reporting Period.

Analytical data is submitted to the DEEP via the NetDMR system as the laboratory data is received. A copy of the SMRs for these samples will be provided upon request.

No wet weather outfall monitoring was conducting during this Reporting Period. Instead, efforts were concentrated on dry weather outfall screening and sampling. The City anticipates on continuing its wet weather outfall monitoring on the new outfalls located during the 2018-19 Reporting Period.

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 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. 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.

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.

Several citations and written and verbal warnings were issued during this Reporting Period as part of the implementation of the City's new stormwater ordinance.

4.6.1 Citations / Enforcement Actions / Abatement Costs

At least eight (8) enforcement actions occurred during the Reporting Period. Total cost, estimated between \$80,000 and \$100,000, was paid by property owners to abate or correct stormwater compliance issues.

Five (5) verbal warnings were issued during the Reporting Period related to stormwater issues.

The City has started submitting notifications of intent to conduct stormwater monitoring and sampling at privately-owned outfalls throughout the City.

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.

On August 14, 2017, a permit modification was issued for the City's NPDES Permit. During the 2017-18 Reporting Period, the City reviewed the permit modification for any new requirements and is in the process of updating the SMP accordingly. The City hopes to have a draft version of the new SMP for review by the end of October 2018. It is anticipated that it will take two months to review and modify as necessary. It is anticipated that an executed SMP will be submitted to the CTDEEP by the end of December 2018. The updated SMP will be based on the modified permit and will reflect the current levels of resources available to support the permit goals.

6.0 PROGRAM RESOURCES ANALYSIS

6.1 Fiscal Analysis

During this Reporting Period, 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 an overall total operating budget of \$7,759,991 for Fiscal Year 2018-2019 (\$124,008 decrease from FY 2017-18). The 2018-19 revised budget is \$8,333,999, which includes an upward adjustment to cover overtime costs incurred during snow removal.

The FY 2018-19 operating budget for MS4 stormwater management is \$1,378,293 (a decrease of \$6,836). The budget for snow removal is \$1,585,655 (an increase of \$19,013).

The budget for leaf collection is \$47,483.00 (a decrease of \$198,922). This is roughly an 80% cut. This dramatic change occurred because the City's legislative body (the 40-member Board of Representatives), chose to cut \$1.4 million from the operating budget. The City's leaf pick-up program is being modified and moving toward eliminating loose leaf pick up. This fall, the City will be only be picking up leaves placed in paper bags. The cost savings will be seen from the overtime associated with the loose-leaf pick-up program. The Regulatory Compliance and Administrative Officer developed all new marketing and outreach materials related to this program change.

The operating budget for traffic and road maintenance, including: street sweeping, pothole repairs, debris removal and infrastructure improvements is \$4,705,501 for Fiscal Year 2018-19. This represents an increase of \$68,508 from the FY 2017-18 Adopted Budget.

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 2018-2019 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

An increase in 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.

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

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, 2015 through June 30, 2016.

“*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.

“*SPRP*”, “*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.

APPENDIX B

STORMWATER MANAGEMENT PLAN SUMMARY TABLE

Annual SMP Summary Table
July 1, 2017 - June 30, 2018

Activity Description	# Actions Scheduled	Status Complete / Incomplete as of June 30th	# Actions Completed	Comments on Activities
1. Education				
1.1 City and Government				
1.1.1 Training	As needed	Complete	2	Training was conducted on 9/18/18 and 9/19/18 for Universal Waste Management, Spill Prevention Control and Countermeasures Plan, and Stormwater Pollution Prevention Plan training.
1.2 Public				
1.2.1 Annual Information Meeting	Annually	Complete	1	2018 meeting was held on 9/4/2018.
1.2.2 Annual SMP Review and Comments	Annually	On-Going	As needed	A permit modification was issued on 8/14/17 for the City's NPDES Permit. During the 2018-19 Reporting Period, the City will be reviewing the permit modification for any new requirements and will be updating the SMP accordingly. The City hopes to have a draft version of the new SMP for review by the end of October 2018
1.2.3 HHW Collection	At least Annually	Complete	1	HHW Collection held on 7/15/17 & 7/14/18 at the Rippowam Middle School. Stamford citizens may also use HHW collection days in seven neighboring towns each year.
1.2.4 Pet Waste Control	As needed	On-Going	As needed	3,000 pamphlets were provided to the Town Clerk for distribution Spring 2018. Since 2013, the City has installed 60 dog waste dispensers and signs. Approximately \$15,000 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. Parks Department will take over budget item to purchase bags in FY 2019-20. They will budget \$20,000 to cover their anticipated use. Current price of bags has increased, but at current pricing, they could purchase 250,000 bags in FY 2019-20.
1.2.5 Distribution of Educational Information	As needed	Complete	On-going	Approximately 38,000 Stormwater Management fliers were distributed throughout the City with the December 2017 tax bills. The fliers were provided to each resident receiving a tax bill, which includes all registered automobile owners in the City. The City has continued to maintain and update the stormwater section of the City's website.

Annual SMP Summary Table
July 1, 2017 - June 30, 2018

Activity Description	# Actions Scheduled	Status Complete / Incomplete as of June 30th	# Actions Completed	Comments on Activities
1.2.6 Catch Basin Medallions	As needed	In-Progress	-	Medallions are being installed by City staff members or by seasonal employees and volunteers and are primarily installed on curb-backed catch basins throughout three areas targeted in the southern part of the City, and in parks, and downtown areas with the most pedestrian traffic. Currently, the City has installed medallions on approximately 20-25% of the City-maintained catch basins.
2. Public Involvement				
2.1 Mill River Collaborative (MRC)	On-going	Complete	2,438 volunteer hours	Making improvements to the Mill River Park through joint efforts the MRC.
2.2 SoundWaters in Cove Park	On-going	On-Going	-	Over 25,000 students learn and explore with SoundWaters, through education and action, every year.
2.3 Educational Outreach	On-going	On-Going	-	The City is in the process of collaborating with other middle schools throughout the City to expand this outreach program.
2.4 Harbor Watch	On-Going	On-Going	-	Harbor Watch, a division of Earthplace, a not-for-profit organization, was retained by the City, to conduct the dry weather outfall sampling as part of the IDDE program.
3. Mapping				
3.1 Initial Outfall, Sampling, Roadway, Receiving Waters, Watersheds	On-going until all are identified	On-Going	-	As of June 30, 2018, the City has mapped 949 outfalls. Stormwater mapping is approximately 95% complete. The City is currently in the process of confirming the accuracy of the outfall locations. Several of the potential new outfalls were identified as duplicates and others were noted as inlets or discharges under state DOT control. The city will continue to update mapping as needed to reflect current field conditions.
3.2 IDDE Mapping - Infrastructure, Findings, Data, Activities, Projects	On-going until all are identified	On-Going	-	The City continues to try 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.
3.3 Establish DC IA	25% of total area per year	On-Going	-	
4. Infrastructure Operations & Maintenance				
4.1 Infrastructure Repair & Rehab	On-going	On-going	As needed	A schedule for implementation of repairs is maintained by the Engineering Dept. and updated as needed / as items are completed.
4.2 Roadway Maintenance	On-going	On-going	As needed	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 8 miles of roadway as part of its road maintenance program.

Annual SMP Summary Table
July 1, 2017 - June 30, 2018

Activity Description	# Actions Scheduled	Status Complete / Incomplete as of June 30th	# Actions Completed	Comments on Activities
4.3 Street Sweeping	On-going	On-going	8,770	During 2017-2018, the City swept over 8,770 miles of streets and collected over 1,642 tons of non-leaf materials.
4.4 Sidewalk Sweeping	See Appendix K of the SMP	On-going	-	Sidewalk sweeping occurs in the downtown area, as described in the SMP and is coordinated and paid for by the DSSD (downtown special services district). An estimated 23 tons of materials are removed on an annual basis.
4.5 Leaf Collection	At least Annually	Complete	1	Leaf collection was completed for 2017 by December 6 and approximately 9,881 tons of leaves and debris were collected.
4.6 Snow Removal	As needed	Complete	-	Snow removal completed as necessary for 2017 and 2018.
4.7 Catch Basin Cleaning	On-going	On-going	1,366	In 2017-2018, the City cleaned at least 1,366 of it's ~11,000 catch basins and removed approximately 2,673 tons of material.
4.8 City Owned Detention & Retention Pond Inspections	Annually	On-going	-	The City continues its efforts to inspect the basins identified.
4.9 Interconnected MS4s	On-going	On-going	-	The City has mapped out most of the interconnected MS4 areas during the development of the new SPRP. A map of the interconnected MS4 areas is provided in Appendix C of the Spill Prevention Response Plan.
4.10 Piping	On-going	On-going	136	During this Reporting Period, the City conducted 136 CCTV reports, which totaled approximately 5,185 linear feet of piping that was videoed, including storm mains and lateral piping.
4.11 Culverts	On-going	On-going	11	The City performed maintenance activities at eleven culverts over approximately 12 days.
5. Stormwater Monitoring				
5.1 Wet Weather Outfall Old/Known Outfalls	All outfalls within first two years	On-going	93% Completed	To date, approx. 6 outfalls of the previously known wet weather outfalls were not sampled; 86 of the 92 identified outfall locations were sampled. It is anticipated that the remaining known outfall locations will be sampled during the next Reporting Period.
5.1 Wet Weather Outfall Old/Known Outfalls	-	On-going	-	Many new outfalls discharging to impaired waters have been identified and the City is in the process of having those outfalls sampled during the next Reporting Period.
6. IDDE				
6.1 Dry Weather Outfall Screening Old/Known Outfalls	25% of known MS4 outfalls per year	On-going	50% Completed	IDDE conducted at 46 of the original 92 known outfalls. Samples were collected and analyzed at 28 of the 46 locations.

Annual SMP Summary Table

July 1, 2017 - June 30, 2018

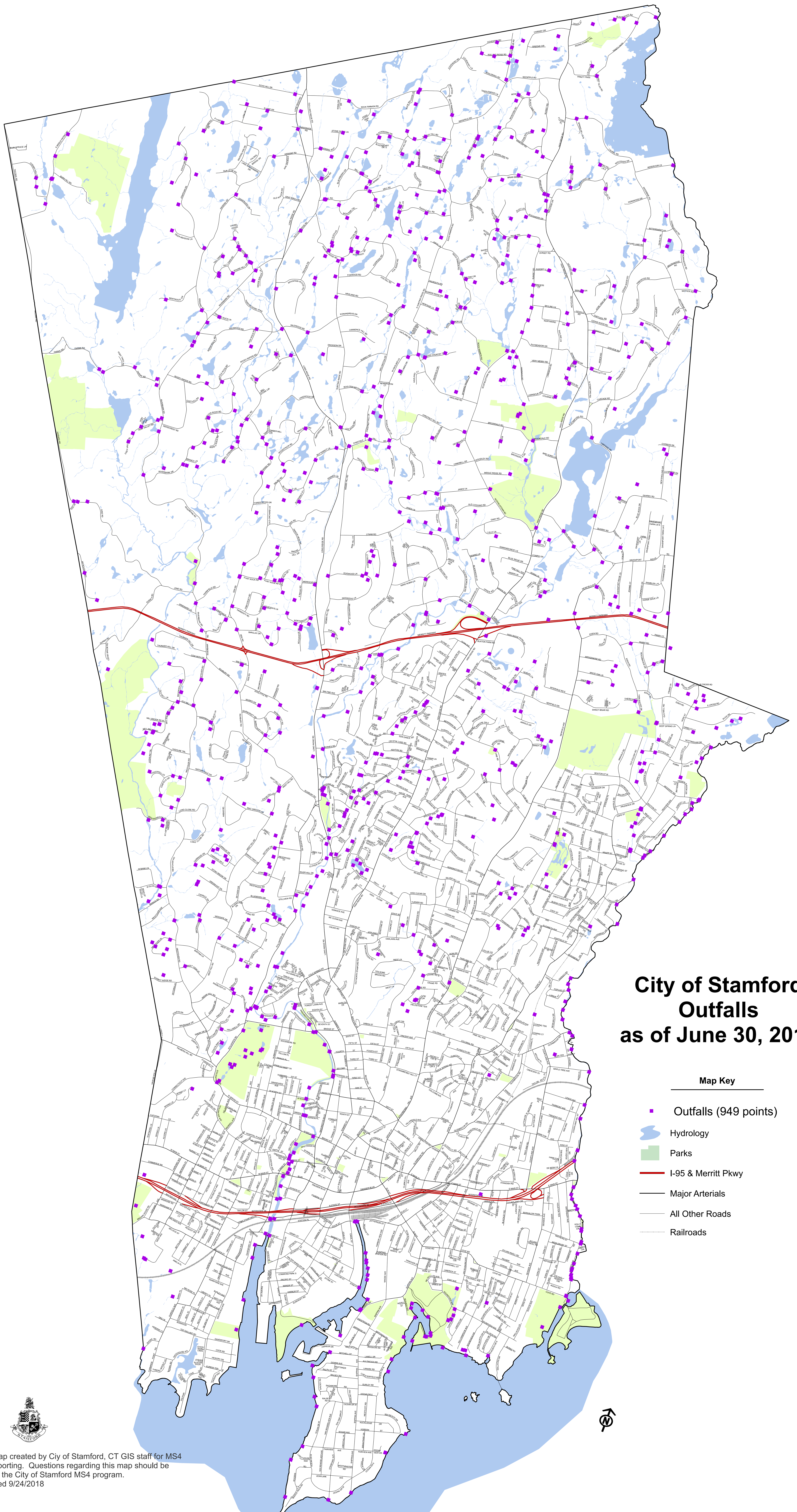
Activity Description	# Actions Scheduled	Status Complete / Incomplete as of June 30th	# Actions Completed	Comments on Activities
6.2 Dry Weather Outfall Screening New/Unknown Outfalls	As needed	On-going	-	The City continued conducting screening of newly identified outfalls. 102 new outfalls were screened, of which 42 were noted with discharge at the time of the screening and were sampled.
6.3 Outfall Verification (Post-IDDP)	As needed	-	-	No post-IDDP efforts completed at this time.
7. Legal Authority				
7.1 Permits	As needed	On-Going	As needed	All permits to be signed off by each individual City department, including: Coastal Management, Environmental Protection, Flood Plain, Traffic Dept., Engineering Dept., DOT, and Zoning.
7.1.1 Zoning Department	As needed	On-Going	As needed	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.
7.2 Ordinances				
7.2.1 Stormwater Management	As needed	On-going	As needed	On March 20, 2015, a final MS4 Ordinance, Ordinance 1153, adding Chapter 201 to the City Charter, became effective.
7.2.2 LID	As needed	On-going	As needed	The proposed changes to the zoning regulations will ensure that LID practices are allowable. There are no known zoning, site planning or street design regulations that would be an impediment to using LID practices.
7.3 Site Review, Inspection and Monitoring Activities	As needed	On-going	As needed	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 (CO). Appendix G provides a table of the services provided by the EPB, including permitting reviews and site inspections.
7.4 Eliminate Barriers	On-going	On-going	-	The City has well-established procedures for coordinating municipal departments review and approval of land disturbances and development projects.
7.5 Private Retention/Detention Ponds	On-going	On-going	-	Access to privately-owned detention and retention ponds is addressed in the Stormwater Ordinance.
7.6 Interconnections	On-going	On-going	-	Research by City staff has revealed that no formal interagency stormwater agreements exist at this time. If agreements are deemed necessary, they will be discussed in the next annual report. Historically, ConnDOT maintains all State roads.
8. Monitor PHFs				

Annual SMP Summary Table
July 1, 2017 - June 30, 2018

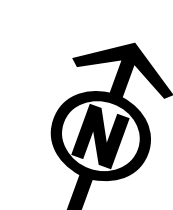
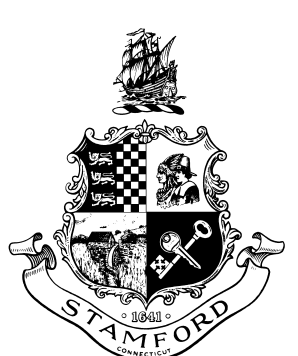
Activity Description	# Actions Scheduled	Status Complete / Incomplete as of June 30th	# Actions Completed	Comments on Activities
8.1 City Parks	On-going	On-Going	-	In 2016-17, the City did not fertilize park green space.
8.2 PHF Use in Ball Fields	On-going	On-Going	-	In 2016-17, the City applied a total of 1,530 pounds of nitrogen to the ball parks.
8.3 Sterling Farms Golf Course Nitrogen Monitoring	On-going	On-Going	-	Total Nitrogen applied in 2017-18: 2,953 tons
8.4 E. Gaynor Brennan Municipal Golf Course Nitrogen Monitoring	On-going	On-Going	-	Total Nitrogen applied in 2017-17: 3,637 tons
9. Other Program Items				
9.1 Establish SPRPs	As needed	On-Going	-	In June 2016, a city-wide SPRP was completed.
9.2 Review & Modify Current SMP	Annually	-	-	It is anticipated that an executed SMP will submitted to the CTDEEP by the end of December 2018. The updated SMP will be based on the modified permit and will reflect the current levels of resources available to support the permit goals.

HHW - Household Hazardous Waste
SMP - Stormwater Management Plan
DCIA - Directly Connected Impervious Area
BMP - Best Management Practices
LID - Low Impact Development
PHF - Pesticides, Herbicides and Fertilizers
SPRP - Spill Prevention and Response Plan

APPENDIX C
UPDATED CITY OUTFALL LOCATIONS MAP



Notes: Map created by Ciy of Stamford, CT GIS staff for MS4 annual reporting. Questions regarding this map should be directed to the City of Stamford MS4 program.
map created 9/24/2018



APPENDIX D

2017–18 SPILLS OF FIVE GALLONS OR MORE

City of Stamford - No. CT0030279
Spills and Leaks 7/1/17 - 6/30/2018



Date	Address / Location	Material Spilled	Quantity Released	Receiving Stream	
9/5/2017	285 West Main St.	Cooking oil / grease	unknown	Rippowam River	Cooking oil / grease spill occurred at trash enclosure behind restaurant. CT DEEP contacted Case No:2017-4524. Restaurant owner satisfactorily abated spill. Limited impact to receiving waters.
12/13/2017	Southfield Ave.	Petroleum product	unknown	West Branch / Stamford Harbor / Long Island Sound	Report of oil sheen / spill in water reported. T. Theder inspected 12/17/18. Observed contractor placing and resetting containment boom in water. Very, very, small amount of sheen observed along western side of west branch. Inspected for possible origin. Unable to locate source.
2/22/2018	Across from 16 Milton St.	Used motor oil / petroleum products	unknown	West Branch / Stamford Harbor / Long Island Sound	Leaking drum(s) of petroleum products - running off site, down curb line and into CB. T. Theder contacted Fire Dept. Haz Mat and CT DEEP. Booms and sorbent materials placed.
2/27/2018	95 Brown House Road	Used motor oil	30 gal.	Long Island Sound	30 gal. plastic container of used motor oil illegally dumped in wetland in city park. T. Theder contacted Fire Dept. and CT DEEP. Spill was contained to area adjacent to parking lot. Tradebe removed contaminated soil and oily liquids. Soil tested twice, results sent to CT DEEP. Area backfilled after final soil test showing less than 500 ETPH mg/kg.
3/16/2018	50 Sunnyside Ave.	Used motor oil	Appx. 5 gal. - no spill	West Branch / Stamford Harbor / Long Island Sound	T. Theder observed what appeared to be jugs of used motor oil left along side of roadway. Dispatched debris crew to remove and take jugs to recycling center for proper disposal. No spill, no impact.

3/17/18 - 3/21/18	Cummings Park North	Unknown petroleum product (Fuel oil or diesel fuel). Removed 3,390 gal. of mixed water & fuel 3/20/18. Removed 3,157 gal. of mixed water and fuel 3/27/18.	Unknown	Long Island Sound / Westcott Cove	Petroleum product being discharged from stormwater outfall DIS-50. T. Theder contacted Fire Dept. Haz Mat team and CT DEEP. Inlet pipe under Soundview Ave. and stream at Tupper protected with sorbent booms. Unable to determine origin of the discharge. Suspect overflow of heating oil in basement, sump pump tied directly to storm system resulting in discharge. Tradebe utilized vacuum truck to skim off oily residuals trapped behind boom on 3/20/18 and again on 3/27/18.
4/2/2018	107 Saddle Rock Rd.	petroleum products	unknown	West Branch / Stamford Harbor / Long Island Sound	Resident reported yellow spillage along beach. T. Theder inspected 4/2/18. Did not observe an residuals or evidence. Spoke with homeowner.
4/16/2018	22 Gatehouse Road	Hydraulic Oil	Unknown	Stamford Harbor / Long Island Sound	Commercial hose failure - private property. CT DEEP case No:2018-01795. Reported to T. Theder on 4/20/18. T. Theder inspected week of 4/23/18. No impacts observed.
4/30/2018	375 Fairfield Ave.	Methyl methacrylate monomer	34,000 lbs., no spill	West Branch / Stamford Harbor / Long Island Sound	Commercial tractor trailer overturned while attempting to make a turn in parking lot. Fire Dept. and CT DEEP on scene. Resulted in evacuation of surrounding buildings and dwelling units. Fire Dept. protected private CB's in parking lot. Tractor trailer was able to be righted. No material spilled. No impacts.

Stamford Fire Rescue

Hazmat List by Incident

**Alarm Date Between {07/01/2017} And
{06/30/2018}**

Chemical Name	Container	Qty Released	Released Into
17-0006615 08/25/2017 16:35:47			
413 Oil or other combustible liquid spill			
139 Lockwood AVE /Basement/REAR			
#2 Fuel Oil		80 Gallons	Ground
17-0006671 08/27/2017 22:36:39			
412 Gas leak (natural gas or LPG)			
139 Seaton RD /4			
Methane - Natural Gas CAS#:74-82-8	UN#:1971 Hose	1590 Parts per million	Air
17-0006674 08/28/2017 00:23:20			
412 Gas leak (natural gas or LPG)			
121 Towne ST /532			
Methane - Natural Gas CAS#:74-82-8	UN#:1971	2727 Parts per million	Air
17-0007076 09/12/2017 16:50:41			
412 Gas leak (natural gas or LPG)			
900 Washington BLVD /521			
Natural gas CAS#:74-82-8	UN#:1971 Machinery or process equipment	2475 Parts per million	Air
17-0007087 09/13/2017 05:58:55			
422 Chemical spill or leak			
1300 Newfield AVE			
SSE Carpet Cleaner	Can or bottle	90 Parts per million	
17-0007852 10/06/2017 19:00:59			
412 Gas leak (natural gas or LPG)			
301 Commons PARK S/218			
Natural Gas	Pipe or pipeline	1000 Parts per million	

Stamford Fire Rescue

Hazmat List by Incident

**Alarm Date Between {07/01/2017} And
{06/30/2018}**

Chemical Name	Container	Qty Released	Released Into
17-0009831 12/09/2017 22:06:20			
422 Chemical spill or leak			
100 GREYROCK PL			
Homemade Chloroform (bleach and acetone mixture)	Portable container, Other	1 Parts per million	Confined, no environmental impact
18-0001300 02/11/2018 16:37:02			
411 Gasoline or other flammable liquid spill			
234 STILLWATER AVE			
gasoline		5 Gallons	
18-0001572 02/20/2018 23:11:07			
322 Motor vehicle accident with injuries			
9 I 95 NORTH ENTR 9			
Mobile Property Involved: 23 Trailer - semi, designed for freight			
Motor Oil	Vehicle fuel tank and associated piping	20 Gallons	Water and ground
18-0003480 04/13/2018 20:36:14			
422 Chemical spill or leak			
18 Pulaski ST			
Mobile Property Involved: 11 Automobile, passenger car, ambulance, race car			
Gasoline UN#:1203 CAS#:8006-61-9	Vehicle fuel tank and associated piping	1 Gallons	Ground
18-0004618 05/20/2018 05:48:35			
412 Gas leak (natural gas or LPG)			
990 Hope ST /3F			
LPG UN#:1075 CAS#:68476-85-7		1 Parts per million	Confined, no environmental impact
18-0005029 06/02/2018 19:08:15			
424 Carbon monoxide incident			
191 Sylvan Knoll RD			

Stamford Fire Rescue

Hazmat List by Incident

Alarm Date Between {07/01/2017} And
{06/30/2018}

Chemical Name	Container	Qty Released	Released Into
Carbon monoxide UN#:1016 CAS#:630-08-0		275 Parts per million	Confined, no environmental impact

18-0005064 06/03/2018 22:53:15

322 Motor vehicle accident with injuries

140 E SEASIDE AVE

Mobile Property Involved: 11 Automobile, passenger car, ambulance, race car

Gasoline UN#:1203 12 Gallons

CAS#:8006-61-9

18-0005239 06/09/2018 21:17:07

421 Chemical hazard (no spill or leak)

120 Rock Spring RD

Cypermethrin UN#:3352 Container type, 1 Ounces (weight). Air
CAS#:52315-07-8 other

18-0005305 06/12/2018 13:30:58

424 Carbon monoxide incident

44 Arden LA

Carbon monoxide UN#:1016 Pipe or pipeline 29 Parts per Air
CAS#:630-08-0 million

18-0005768 06/28/2018 09:51:03

413 Oil or other combustible liquid spill

390 Hamilton AVE

Mobile Property Involved: 21 General use truck, dump truck, fire apparatus

Diesel fuel UN#:1202 Vehicle fuel tank 20 Gallons Ground
and associated
piping

APPENDIX E

2017–18 PESTICIDE, FERTILIZER, AND HERBICIDE USE

Athletic Field Fertilizer use only, we do not use any Fertilizers on park Green space

1st application April 2nd Dimension application 18-0-40- 60 bags total used, each bag is 50lbs

2nd application May 2nd Propendi- 60 bags total used, each bag is 50lbs

3rd application Sept Fertilizer- 60 Bags total used, each bag 40lbs

Little League/Softball/Baseball

Troy #1 Field and Troy # Field 2- Cove

Federal #1 Field and Federal #2 Field

Kane Ave Field

Vine Road Field

Scalzi Little League Field/Scalzi #1, #2 and #3

Cubeta Stadium

Springdale Little League Field

Kosciusko LL and Softball Field

Cummings #1 Field #2 Field #4 field and #5

Chestnut Field

Dorthey Heroy Field

Northrop (Stark school) Field

Dimension (18-0-40) - 50lbs/bag x (18/100) = 9lbs/bag x 60 bags = 540lbs N
ProPendi (13-0-4) - 50lbs/bag x (13/100) = 6.5lbs/bag x 60 bags = 390lbs N
Fertilizer (25-0-5) - 40lbs/bag x (25/100) = 10lbs/bag x 60 bags = 600lbs N
Total N Used = 1,530lbs

2017-18 Nitrogen Application from Fertilizer

Sterling Farms Golf Course

Location	Fertilizer Type	lbs N (avg) / 1,000 SF	acres	lbs N
Greens	Granular	0	4	0.0
	Liquid	3.5	4	609.8
Tees	Granular	1	3.5	152.5
	Liquid	1	3.5	152.5
Fairways	Granular	0	23	0.0
	Liquid	1.6	23	1,603.0
Rough	Granular	1	10	435.6
Total			40.5	2,953.4

E. Gaynor Brennan Municipal Golf Course

Location	Fertilizer Type	lbs N / 1,000 SF	acres	lbs N
Greens	Granular	1	3	130.7
	Liquid	1.5	3	196.0
Tees	Granular	2.5	2	217.8
	Liquid	0.5	2	43.6
Fairways	Granular	2	20	1,742.4
	Liquid	0.5	20	435.6
Rough	-	2	10	871.2
Total			35	3,637.3

TOTAL 2017-18	6,590.6
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Total 2016-17	6,403.3
Percent Change	2.9%

Average 2013-15	8,494.2
Percent Change	-22.4%

APPENDIX F

2017-18 ENVIRONMENTAL PROTECTION BOARD SUMMARY TABLE

ENVIRONMENTAL PROTECTION BOARD

The Environmental Protection Board (EPB) is organized by ordinance as a multi-purpose City agency combining the duties and responsibilities of: 1) a local Inland Wetlands and Watercourses Agency, 2) a local Conservation Commission, and 3) a local Flood and Erosion Control Board. The EPB has regulatory responsibilities, including issuing special permits for development activities on properties having inland wetlands and watercourses, buffer/setback areas, and designated flood hazard areas. The EPB also has advisory responsibilities, providing review, technical assistance and comment on the potential impact of subdivisions, coastal site plan reviews, site plan reviews, variances, special exceptions, drainage/erosion control plans, utility installations, and other related matters. Information/comments are disseminated to City Boards, Commissions, Departments, professional consultants and members of the public. Finally, the EPB has stewardship responsibilities, including recommendations for the creation and subsequent monitoring of open space areas and public points of access to Stamford's waterfront and shoreline areas. EPB Staff (Executive Director/Environmental Planner – 1 and Environmental Analyst – 2) in cooperation with other City departments, inspects development projects to ensure conformance with issued permits/approvals and City standards, acts as the designated liaison with State and Federal officials on matters of wetland/floodplain/coastal management, and administers the City's participation in the Federal Emergency Management Agency's Community Rating System (CRS).

In Fiscal Year 2017-18, EPB's full time staff members responded to 4,146 public inquiries during its regular office hours, reviewed 1,318 applications for building/septic permit, and evaluated 120 formal applications from the various Land Use Boards. Note that EPB staff participated in the review of numerous public/private projects of value and interest to the City including:

Mill River Corridor Project
Chestnut Hill Park/Playground Renovations
Riverbank Road Bridge Replacement
Perna Lane/Wedgemere Road Sanitary Sewers
Springdale Brook Channel Wall Stabilization Project
Division Street Pipe Relocation Project
The Home Depot
Davenport/Stamford Landing (the "Boatyard")

Project monitoring and enforcement remained a priority for the department. EPB Staff also performed essential functions in the development of regulations pertinent to Stamford's MS4 Program ("Municipal Separate Storm Sewer System"), participated in the formulation of a uniform "Drainage Manual", improved efforts to update pertinent resource layers in the City's Geographic Information System (GIS), enhanced the EPB website, contributed to the evaluation of the City's on-line building permit system, and maintained/enhanced Stamford's excellent standing in FEMA's CRS (Community Rating System) Program.

Performance Summary Fiscal Years 2009-18

Activity	Service Output by Fiscal Year								
	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>
<u>Customer Service:</u>									
Office Visits:	3354	4483	4783	4798	4900	4832	4912	4568	4146
Building/Septic Permit Reviews:	1222	1342	1642	1584	1505	1462	1540	1355(a)	1318(a)
<u>Administration:</u>									
General Program Administration:	336	364	307	414	373	347	372	416	414
Referrals:	143	150	158	121	171	159	157	194	210
<u>Permitting/Technical Review:</u>									
Coastal Site Plan/Zoning Applications:	13	15	20	19	16	26	23	30	29
Wetland/EPB SPR Applications:	27	38	35	41	28	28	34	28	40
Subdivision Applications:	02	03	03	03	05	09	07	02	03
ZBA Applications:	68	55	63	71	66	51	66	52	48
Site Plan Review Applications:	39	46	55	106	99	117	128	119	124
<u>Enforcement/Inspection:</u>									
Project Monitoring/Compliance:	79	82	87	81	95	93	106	119	135
General Enforcement Activity:	58	56	59	28	25	30	64	43	71
Complaints/Citizen Services:	35	34	39	37	46	220	249	280	380
<u>Special Projects:</u>									
CRS Program Recertification Tasks:	18	18	18	18(b)	18	18	18	18	22(b)
GIS Updates	00	00	00	01	01	01	01	01	01
MS4 Regulations/Drainage Manual/Web	00	00	00	00	01	01	01	01	03
Public Outreach	01	01	01	02	03	04	02	02	02

*The information summarized above is based upon an examination of written correspondence (chronological) files and existing data base entries for the period 7/1/17 to 6/30/18. Omitted from the reporting are telephone entries, electronic mailings, facsimile transmissions, undocumented field inspections, inspections conducted in conjunction with the review of development applications, and other related activities.

(a) Numbers attributed to new/improved **streamlined policies/procedures** that reduced the specific types of building permit applications and follow up reviews conducted by EPB Staff.

(b) Five (5) Year Recertification.

Revised 8/27/18

APPENDIX G
CITY STAFF TRAINING EVENTS SIGN-IN SHEETS



Employee Training
Universal Waste, Used Oil and CT Regulated Wastes
Management Procedures and Emergency Response Procedures
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Dom Viggiano Jr.		Highway's
2	Joseph Coplew		" "
3	Kevin Cuevas		" "
4	Chris Mohamed		Highways
5	Robert Frattaroli		Highways
6	Ronald Parkine		Highways
7	Ken Caporale		" "
8	Ron Vitti		" "
9	Rob Loffredo		" "
10	Timothy Hinton		" "

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) Regulations of 40 CFR 262.34(a)(4) and 265.16
Regulations of Connecticut State Agencies (RCSA) Section 22a-449(c)-102(a)(1)
Universal Waste, Used Oil and CT Regulated Waste Training Power Point Presentation (by F&O)
Waste Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld
Printed Name

, Fuss & O'Neill, Inc
Signature



Employee Training
Universal Waste, Used Oil and CT Regulated Wastes
Management Procedures and Emergency Response Procedures
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Martinez D	Martinez D	" "
2	ERIC ADAMS		" "
3	Roberto Antonucci		" "
4	TYLER THEDER		COS Stamford
5	Todd Johnson	Todd Johnson	STAMF H.W.
6	Jose Ariza		" "
7	Hanlet Castillo		Stamford Hwy
8	David Plunkett	David Plunkett	Highways
9	P. Marchi		Highway
10	R. Gravel		" "

11. Training Location: Taylor Highway

Location: City of Stamford – Highway Department
 100 Magee Avenue
 Stamford, CT

Resources: US Environmental Protection Agency (EPA) Regulations of 40 CFR 262.34(a)(4) and 265.16
 Regulations of Connecticut State Agencies (RCSA) Section 22a-449(c)-102(a)(1)
 Universal Waste, Used Oil and CT Regulated Waste Training Power Point Presentation (by F&O)
 Waste Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Printed Name

Signature

Fuss & O'Neill, Inc



Employee Training
Universal Waste, Used Oil and CT Regulated Wastes
Management Procedures and Emergency Response Procedures
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

19

	Name Printed	Name Signed	Company / Work Function
1	Barry Denison Jr	<i>[Signature]</i>	Highways
2	Paul Kopec	<i>[Signature]</i>	VMF
3	PHIL MARKEY	<i>[Signature]</i>	HIGHWAYS
4	Vito Candito	<i>[Signature]</i>	solid waste
5	John Lawos	<i>[Signature]</i>	operator
6	Jim Hart	<i>[Signature]</i>	Highways
7	AARON TURNER	<i>[Signature]</i>	Highways
8	Mike Scaturchio	<i>[Signature]</i>	Highways
9	Joe Hoyt	<i>[Signature]</i>	Highways
10	Gerald Brzoska	<i>[Signature]</i>	Solid Waste

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) Regulations of 40 CFR 262.34(a)(4) and 265.16
Regulations of Connecticut State Agencies (RCSA) Section 22a-449(c)-102(a)(1)
Universal Waste, Used Oil and CT Regulated Waste Training Power Point Presentation (by F&O)
Waste Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld
Printed Name

[Signature], Fuss & O'Neill, Inc
Signature

**Employee Training
 Universal Waste, Used Oil and CT Regulated Wastes
 Management Procedures and Emergency Response Procedures
 City of Stamford – Highway Department
 Date of Training: September 19, 2018**

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Chris Rivera		Highways
2	Tyler Therox		Stamford
3	Wende H Christian		Highway
4	Krasak		Road Maintenance
5	John Moor		Highways
6			
7			
8			
9			
10			

Training

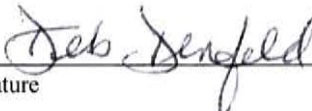
Location: City of Stamford – Highway Department
 100 Magee Avenue
 Stamford, CT

Resources: US Environmental Protection Agency (EPA) Regulations of 40 CFR 262.34(a)(4) and 265.16
 Regulations of Connecticut State Agencies (RCSA) Section 22a-449(c)-102(a)(1)
 Universal Waste, Used Oil and CT Regulated Waste Training Power Point Presentation (by F&O)
 Waste Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld
 Printed Name

, Fuss & O'Neill, Inc
 Signature

2/2



Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Jose Cruz		
2	Robert Frattaroli		
3	Kevin Cuevas		
4	Timothy Hinton		Highway
5	Ron Caporale		Highway
6	Joseph Copley		" "
7	Bob Laffredo		" "
8	James Taylor		" "
9	ERIC ADAM		" "
10	Murko		

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) regulations of 40 CFR 112:
Site's Spill Prevention Control and Countermeasures (SPCC) Plan
SPCC Training Power Point Presentation (by F&O)
SPCC Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E. , CHMM, CET

Deb Denfeld
Printed Name

, Fuss & O'Neill, Inc
Signature



Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Chris Mohamed		Stamford Highway
2	Roberto Antonucci		Stamford Highway
3	Hanlet Castillo		H.W.
4	Bonnie Perkins		Highway
5	Dom Viggiano		Highway
6	Pete mardic		H.W.I
7	ROBERT GARDNER		"
8	TYLER THEDER		Ces stormwater.
9	Todd M. Johnson		Highways
10	Ron Vitale		

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) regulations of 40 CFR 112:
Site's Spill Prevention Control and Countermeasures (SPCC) Plan
SPCC Training Power Point Presentation (by F&O)
SPCC Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld
Printed Name

, Fuss & O'Neill, Inc
Signature



Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: September 19, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	PHIL MARKEY	<i>[Signature]</i>	Highways
2	ARCON TURNER	<i>[Signature]</i>	Highways
3	Chris Rivera	<i>[Signature]</i>	Highways
4	Conrad Brooks	<i>[Signature]</i>	SOLID WASTE
5	James Hart	<i>[Signature]</i>	Highways
6	John Moore	<i>[Signature]</i>	Highways
7	Wendell Christian	<i>[Signature]</i>	Highways
8			
9			
10			

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) regulations of 40 CFR 112:
Site's Spill Prevention Control and Countermeasures (SPCC) Plan
SPCC Training Power Point Presentation (by F&O)
SPCC Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E. , CHMM, CET

Deb Denfeld
Printed Name

Deb Denfeld, Fuss & O'Neill, Inc
Signature



Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: September 19, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Tyler Thoden		storm water
2	Barry Denison Jr		Highways
3	Vito Lando		solid waste
4	Joe Hoyt		Highways operator
5	Juan Ralco		operator
6	Mike Scaturchio		Highway / H ₂ O
7	Paul Kopec		VMEF
8			
9			
10			

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: US Environmental Protection Agency (EPA) regulations of 40 CFR 112:
Site's Spill Prevention Control and Countermeasures (SPCC) Plan
SPCC Training Power Point Presentation (by F&O)
SPCC Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E. , CHMM, CET

Printed Name

Signature

_____, Fuss & O'Neill, Inc

Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Jose @ RR	<i>Jose</i>	Highways Dept
2	Roberto Frattolillo	<i>Roberto Frattolillo</i>	" "
3	Kevin Cuevas	<i>Kevin</i>	" "
4	Timothy Hinken	<i>Timothy Hinken</i>	" "
5	Ron Caporale	<i>Ron</i>	" "
6	Joseph Copley	<i>Joseph C</i>	" "
7	David Plannett	<i>David Plannett</i>	Highway
8	Bob Loffredo	<i>Bob Loffredo</i>	" "
9	Murphy D	<i>Murphy</i>	" "
10	James Taylor	<i>James Taylor</i>	" "

Training

Location: City of Stamford – Highway Department
 100 Magee Avenue
 Stamford, CT

Resources: General Permit for the Discharge of Stormwater

Associated with Industrial Activities

- Connecticut General Statutes (CGS) Section 22a-430-3b:
- Site's Stormwater Pollution Prevention Plan (SWPPP)**
- SWPPP Training Power Point Presentation (by F&O)
- SWPPP Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld

Printed Name

Deb Denfeld

Signature

, Fuss & O'Neill, Inc



Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	ERIC ADAMS		HIGHWAYS
2	Chris Mohamed		Stamford Highway
3	Roberto Antonucci		Stamford Highway
4	Henriet Castillo		H.W.
5	Pete mardi		H. W.
6	Ramon Parkes		H.W.
7	Dom Viggiano Sr		H.W.
8	Robert George		"
9	Tyler Thera		City of Stamford
10	Todd M. Johnson Sr		Highways

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: General Permit for the Discharge of Stormwater

Associated with Industrial Activities

Connecticut General Statutes (CGS) Section 22a-430-3b:
Site's Stormwater Pollution Prevention Plan (SWPPP)
SWPPP Training Power Point Presentation (by F&O)
SWPPP Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Printed Name

Signature

Fuss & O'Neill, Inc



Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: September 18, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Row Vitti		High
2			
3			
4			
5			
6			
7			
8			
9			
10			

Training

Location: City of Stamford – Highway Department
100 Magee Avenue
Stamford, CT

Resources: General Permit for the Discharge of Stormwater

Associated with Industrial Activities

Connecticut General Statutes (CGS) Section 22a-430-3b:
Site's Stormwater Pollution Prevention Plan (SWPPP)
SWPPP Training Power Point Presentation (by F&O)
SWPPP Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E. , CHMM, CET

Printed Name

Signature

Fuss & O'Neill, Inc

Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: September 19, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Phil Markey	<i>[Signature]</i>	Highway
2	<i>[Signature]</i>	<i>[Signature]</i>	Road Maintenance
3	AARON TURNER	<i>[Signature]</i>	Highways
4	Chris Rivera	<i>[Signature]</i>	Highways
5	Gerald Brzoska	<i>[Signature]</i>	Solid Waste
6	James Hart	<i>[Signature]</i>	Highways
7	John Moore	<i>[Signature]</i>	Highways
8	Wendell Christian	<i>[Signature]</i>	Highways
9			
10			

Training

Location: City of Stamford – Highway Department
 100 Magee Avenue
 Stamford, CT

Resources: General Permit for the Discharge of Stormwater

Associated with Industrial Activities

- Connecticut General Statutes (CGS) Section 22a-430-3b:
- Site's Stormwater Pollution Prevention Plan (SWPPP)**
- SWPPP Training Power Point Presentation (by F&O)
- SWPPP Training – Supplementary Handouts (by F&O)

Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld

Printed Name

Deb Denfeld

Signature

, Fuss & O'Neill, Inc

Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: September 19, 2018

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Tyler Thider	<i>[Signature]</i>	Stormwater
2	Barry Denison Jr	<i>[Signature]</i>	Highways
3	Vito Corallo	<i>[Signature]</i>	solid waste
4	Dwan Ramos	<i>[Signature]</i>	operator
5	Joe Hoyt	<i>[Signature]</i>	Highways / operator
6	Mike Scaturro	<i>[Signature]</i>	Highways / HFO
7	Paul Kopeck	<i>[Signature]</i>	VMF
8			
9			
10			

Training

Location: City of Stamford – Highway Department
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Training

Facilitator: Deb Denfeld, P.E., CHMM, CET

Deb Denfeld
 Printed Name

Deb Denfeld, Fuss & O'Neill, Inc
 Signature

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APPENDIX H

2017-18 CATCH BASIN / MANHOLE REPAIRS LIST

December 2015 - February 2018 Catch Basin & Manhole Repair List

CRS #	Date	Location/Address	Complaint	Status	Date	Repair Date	Status	Repair Completion Date	Contractor	Comments	Costs
	01/04/16	2700 Bedford St	Basin repair	Sent to Reliable	01/05/16	01/05/16	Basin is repaired	01/05/16	Reliable		
	01/04/16	Holcomb and Coe/Dodge Ave	Deteriorated corrugated metal pipe	Sent to Reliable	07/23/15	01/04/16	Pipe repaired	01/04/16	Reliable	Pipe has been replaced/sink hole repaired	
	01/04/16	Parking lot of Bocuzzi/Southfield Park	Manhole interior masonry is falling	Sent to Reliable	08/04/15	01/04/16	Manhole Repaired	01/04/16	Reliable		
	01/05/16	82 Akbar Rd	Basin repair	Sent to Reliable	08/21/15	01/05/16	Basin is repaired	01/05/16	Reliable		
	01/05/16	40 Dann	Basin repair	Sent to Reliable	08/26/15	01/05/16	Basin is repaired	01/05/16	Reliable		
	01/04/16	39 Waterbury Ave	Basin repair	Sent to Reliable	08/27/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/05/16	24 Sawmill	Basin repair	Sent to Reliable	08/30/15	01/05/16	Basin is repaired	01/05/16	Reliable		
	01/04/16	21 Waverly Place (on Wilson St.)	Basin collapse/need repair	Sent to Reliable	08/31/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/04/16	Baxter Ave (Across from I-95)	Basin repair	Sent to Reliable	09/04/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/04/16	135 Brezzyhill	Basin repair	Sent to Reliable	09/28/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/04/16	106 Haig Ave	Basin repair	Sent to Reliable	10/04/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/05/16	155 Johnathan Drive	Basin repair	Sent to Reliable	10/07/15	01/05/16	Basin is repaired	01/05/16	Reliable	Basin needs new frame w/6" ht. curb back	
	01/04/16	Brooklawn Ave	Basin repair	Sent to Reliable	10/15/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/04/16	90 Magee Ave	Dry well collapse	Inhouse	11/06/15	01/04/16	Drywell filled	01/04/16	Highways	asphalted	
W470204-112415	01/06/16	1128 Cove Rd	Basin repair	Sent to Reliable	12/18/15	01/04/16	Basin is repaired	01/04/16	Reliable		
	01/04/16	Camp Ave	Replace basin grate	City Garage	12/29/15	01/04/16	Grate replaced	01/04/16	Highways		
W471257-122915	01/04/16	20 Heather Drive	Replace basin grate	City Garage	12/29/15	01/04/16	Grate replaced	01/04/16	Highways		
W471256-122915	01/06/16	7 Lynnam Court	Replace basin grate	City Garage	12/29/15	01/04/16	Grate replaced	01/04/16	Highways		
	01/06/16	59 Liberty Street	Callpaped stormpipe	Sent to Engineering	01/04/16						
W468846-100915	01/06/16	177 Ocean Drive East	Basin needs repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/22/16	Reliable		
W467766-090715	01/06/16	Intersection of Shippan Ave & Rippowan Rd	Basin needs repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/03/16	Reliable		
	01/06/16	Cummings Park adjacent to Soundview Ave	Manhole need to be raised to match adjacent asphalt walk height	Sent to Reliable	01/07/16	01/25/16	Manhole Repaired	02/22/16	Reliable		
	01/06/16	162 Fairfield Ave	Basin grate need to be reset	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/03/16	Reliable		
W471211-122415	01/06/16	42 Hamilton Ave (Corner of Cullodan & Hamilton Ave)	Basin sunken/flat top of basin repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/03/16	Reliable		
	01/06/16	67 Finney Lane	Basin collapse/need repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/22/16	Reliable		
	01/06/16	87 Richmond Hill Ave	Basin to 2' lined repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/22/16	Reliable		
	01/06/16	61 Crystall St	Basin undermining & collapsing	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/03/16	Reliable		
	01/06/16	12 Owen Street	Basin sunken/needs repair	Sent to Reliable	01/07/16	01/25/16	Basin is repaired	02/23/16	Reliable		
W470773-121115	01/06/16	Hope Street adjacent to Splash Car Wash	Manhole is sinking/Need to be raised	Sent to Reliable	01/07/16	02/29/16	Manhole Repaired	03/01/16	Reliable		
	01/06/16	68 Willow Brook Ave	Manhole ring is cracked/need repair	Sent to Reliable	01/07/16						
	01/06/16	381 High Clear Road	Basin needs repair	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/06/16	Reliable		
	12/29/15	47 Boxwood	Manhole cover & frame repair	Sent to Reliable	02/03/16	as of 10/17/2017 as of 10/17/2017					
W471586-010816	12/29/15	40 Boxwood	Basin grate repair	Sent to Reliable	02/03/16						
	12/29/15	95 Liberty	Basin collapse	Sent to Reliable							
W471556-010716	12/29/15	25 Akbar	Basin grate repair	City Garage							
W471557-010716	12/29/15	98 Brook Run	Basin repair	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/08/16	Reliable		
W471558-010716	01/06/16	Across from 160 High Clear	Basin repair	Sent to Reliable	02/03/16	05/22/18					
W471559-010716	01/06/16	255 Ocean Drive E	Basin grate repair	City Garage							
W471560-010716	01/06/16	19 Hobson	Basin grate repair	City Garage							
W471563-010716	01/06/16	Intersection of Cold Spring & Washington Blvd	Basin grate repair	City Garage							
W471562-010716	01/06/16	124 Cold Spring	Basin grate repair	City Garage							
W471564-010716	01/06/16	12 Severance	Basin grate repair	City Garage							
	01/06/16	33 W. Main	Basin grate repair	City Garage							
W471566-010716	01/06/16	Knock Rd @ Newfield Ave	Basin grate repair	City Garage							
	01/06/16	262 Haig Ave	Basin grate repair	City Garage							
W471567-010716	01/06/16	345 Haig Ave	Basin grate repair	City Garage							
W4715678-010716	01/06/16	72 Spruce Street	Basin grate repair	Sent to Reliable	02/03/16						
W471412-010416	01/04/16	78 White Birch Lane	Basin collapse/need repair	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/06/16	Reliable		
W471528-010716	01/07/16	Weedhill Ave	2 failing grates of Elmer Street	City Garage							
W471529-010716	01/07/16	Elmer Street	Replace basin grate	City Garage							
W471546-010716	01/07/16	Gray Farms	Replace basin grate	City Garage							
W471548-010716	01/07/16	71 Campbell Dr	Replace basin grate	City Garage							
W471550-070716	01/07/16	44 Crestwood Dr	Replace basin grate	City Garage							
W471551-010716	01/07/16	91 Crestwood Dr	Double basin repair	Sent to Reliable	02/03/16	05/22/18					
W471552-010716	01/07/16	140 Crestwood Dr	Replace basin grate	City Garage							
W471554-010716	01/07/16	312 Loveland Rd	Replace basin grate	City Garage							
W471553-010716	01/07/16	140 Crestwood Dr	Replace basin grate	City Garage							
	01/11/15	Across from 56 Manor	Basin collapse/need repair	Sent to Reliable	02/03/16	05/31/18					
	01/12/16	33 Broadwood	Basin collapse/need repair	Sent to Reliable	02/03/16						
	01/14/16	Corner of Riverbank Rd & Riverbank Rd	Double basin repair	Sent to Reliable	02/03/16	02/03/16	Basin is repaired				
	01/15/16	Turn of River Rd & Talmage	Basin repair	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/08/16	Reliable	Before #8	
	01/20/16	55 Laurel Rd	Basin falling	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/21/16	Reliable		
	01/21/16	26 Fahay Street	Double basin falling	Sent to Reliable	02/03/16	02/03/16	Basin is repaired	03/15/16	Reliable		
	02/01/16	37 Soundview Ave	Basin falling	Sent to Reliable	02/03/16						
W472352-020216	02/01/16	26 Sunset off Bouton Street W	Basin repair	Sent to Reliable	02/03/16						
	02/03/16	24 Fairmont Ave	Basin collapse/need repair	Sent to Reliable	02/03/16	05/22/18					
	02/03/16	Across 82 Snow Crystal Ln	Basin repair	Sent to Reliable	02/03/16	as of 10/17/2017					
	02/03/16	114 Woodlark Rd	Basin repair	Sent to Reliable	02/03/16						
	02/09/16	Lattayets & Crest Street	Basin repair	Sent to Roger Arnow	02/09/16	02/09/16	Basin is repaired	02/09/16	Roger Arnow	Must build sump/has not sump	
	03/01/16	75 Selleck Street	Basin repair	Sent to Reliable	04/18/16	05/19/16	Basin is repaired	05/23/16	Reliable		
	03/01/16	Hamilton Ave (under railroad bridge)	Basin repair	Sent to Reliable	04/18/16	05/15/16	Basin is repaired	05/23/16	Reliable		
	03/01/16	Across from 77 Selleck Street	Basin repair	Sent to Reliable	04/18/16	05/19/16	Basin is repaired	05/25/16	Reliable		
W492636-080717	03/01/16	Bangall Road	Basin repair	Sent to Reliable	04/18/16	05/20/16	Basin is repaired	05/20/16	Reliable		
	03/01/16	115 Akbar	Basin repair	Sent to Arnow	10/23/17	11/27/17					
	03/01/16	34 Fahay Street	Basin repair	Sent to Reliable	04/18/16	05/18/16	Basin is repaired	05/20/16	Reliable		
	03/02/16	Vandusenck	Basin repairs	Sent to Reliable	04/18/16	05/16/16	Basin is repaired	05/25/16	Reliable		
	03/02/16	Across from 8 Talmage	Basin repair	Sent to Reliable	04/18/16	05/16/16	Basin is repaired	05/25/16	Reliable		
	03/04/16	42 Three Lakes Drive	Basin repair	Sent to Reliable	03/10/16	03/14/16	Basin is repaired	03/14/16	Reliable		
W469806-111215	03/04/16	57 Jessup Street	Basin repair	Sent to Reliable	03/10/16	03/21/16	Basin is repaired	03/10/16	Reliable		
W467100-081215	03/04/16	25 Cedar Heights Road	Basin repair	Sent to Reliable	03/10/16	03/21/16	Basin is repaired	03/14/16	Reliable		
	03/04/16	36 Cedar Heights Road	Basin repair	Sent to Reliable	03/10/16	03/21/16	Basin is repaired	03/14/16	Reliable		
	03/04/16	26 Cedar Heights Road	Basin repair	Sent to Reliable	03/10/16	03/21/16	Basin is repaired	03/14/16	Reliable		
	03/04/16	83 Three Lakes Drive	Basin repair	Sent to Reliable	03/10/16	03/21/16	Basin is repaired	03/14/16	Reliable		
W473640-030416	03/06/16	Kalydd @ Old Logging	Basin collapse/need repair	Sent to Reliable	04/18/16	05/16/16	Basin is repaired	05/19/16	Reliable		
W470780-121115	03/07/16	28 Dunn Ave	Manhole too high	Sent to Reliable							
W470780-121115	03/07/16	47 & 44 Dunn Ave	Manhole too high	Sent to Reliable							
W473816-031016	03/10/16	1508 High Ridge Road	Manhole repair	Sent to Reliable							
W469245-101615	03/11/16	24 Mary Violet Road	Basin collapse/need repair	Sent to Reliable	3/11/2016	3/21/2016	Basin is repaired	03/21/16	Reliable	Coordinate WPCA's manhole repair #47	

W472480-021616	03/14/16	467 West Main Street	Manhole sinking - STATE ROAD - DOT RESPONSIBILITY							
	03/14/16	61 West Hill Circle	Basin repair	Sent to Reliable	4/18/2016	5/16/2016	Basin is repaired	05/23/16	Reliable	Frame is broken and interior masonry is failing
	03/14/16	41 Severance Drive	Replace basin grates	City Garage	4/14/2016	4/14/2016	Grate replaced	04/14/16	City Garage	
W473969-031516	03/15/16	81 Rollingwood Drive	Manhole repair							
	03/15/16	929 River Bank Road	Basin repair	Sent to Reliable	4/18/2016	5/18/2016	Basin is repaired	05/20/16	Reliable	
W473875-031116	03/22/16	22 Knapp St	Replace curb backing	City Garage	3/16/2016	3/16/2016	Curb back replaced	03/16/16	Highways	
W474033-031616	03/16/16	34 Hazelwood Lane	Replace basin grate	City Garage	3/16/2016	3/16/2016	Grate replaced	03/16/16	Highways	
W474035-031616	03/21/16	9 Saddle Rock Road	Replace basin grate	City Garage	3/21/2016	3/21/2016	Grate replaced	03/21/16	Highways	
	03/21/16	256 Haig Ave	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	03/15/16	Reliable	
	03/22/16	90 New England Ave	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	03/09/16	Reliable	
	03/22/16	70 New England Ave	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	03/09/16	Reliable	
	03/22/16	Shippan Ave	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	03/09/16	Reliable	
	03/22/16	1260 Westover Road	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	03/06/16	Reliable	
	03/22/16	670 Hope St	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	3/6/2016	Reliable	
	03/22/16	43 Three Lakes Drive	Basin repair	Sent to Reliable	2/3/2016	2/3/2016	Basin is repaired	3/6/2016	Reliable	
W474284-032516	03/25/16	Lyman Rd & Lyman Ct	Basin repair							
	04/01/16	Lockwood Bridge	Basin collapse/head repair	Sent to Reliable	4/18/2016	5/17/2016	Basin is repaired	5/20/2016	Reliable	
	04/13/16	10 Lolly Lane	Basin Repair	Repaired by Grasso		Apr-17				
	04/18/16	47 Bridge Street	Basin repair	Sent to Reliable	4/18/2016	4/18/2016	Basin is repaired	5/23/2016	Reliable	It's in the right lane - the travel lane - of bridge st
W475110-042216	04/26/16	70 Chestnut Hill Lane	Basin repair	Sent to Roger Arnow	4/26/2016	5/18/2016	Basin is repaired	5/19/2016	Roger Arnow	
W475106-042216	04/26/16	North State St. & Atlantic by I-95 ramp	Basin need to be raised	Sent to Roger Arnow	4/26/2016	5/18/2016	Basin is repaired	5/19/2016	Roger Arnow	
W475104-042216	04/26/16	78 Fawn Drive	Basin repair							
W474865-041416	04/26/16	47 Bridge Street	Basin repair			10/20/2017				
W47466-040716	04/26/16	72 Palmer Street	Manhole cover & frame repair							
	04/26/16	24 Westminster Rd	Basin repair	Sent to Arnow	10/23/2017					
	04/26/16	83 Redmont Rd	Basin repair							septic is failing
W474284-032516	04/26/16	Lynam Rd	Basin repair							
W474179-032116	04/26/16	321 James Lane	Basin repair	Repaired by Grasso						
	04/26/16	63 Vincent Ave	Manhole repair	Sent to Roger Arnow	6/6/2016	6/20/2016	Basin is repaired	6/20/2016	Roger Arnow	
	04/26/16	806 East Main & Lafayette	Basin repair				Basin is repaired			
W473719-041016	05/24/16	87 PINE HILL AVE	Basin collapse/head repair	repaired as of	2/26/2018					
W473900-031316	05/24/16	Corner of Lancaster and Shadow Ridge Rd	Basin collapse/head repair							
W473352-022216	05/24/16	Intersection of Seaside Ave & Sylvan Knoll Rd	Basin repair							
W473046-022116	05/24/16	191 Shilview Drive	Basin repair							
	06/05/16	71 Ripponway Rd	Basin repair	Sent to Roger Arnow	6/9/2016	6/20/2016	Basin is repaired	6/20/2016	Roger Arnow	
W477075-062116	06/21/16	Third Street	Basin grate repair							
	06/23/16	20 Lafayette/North State Street Side - PRIORITY	Basin repair	Sent to Grasso/Arnow	6/17/12-5/17	5/15/2018				resulted in a hole opening up in the asphalt
	06/30/16	373 Stamford Ave	Basin repair							
W477434-063016	07/01/16	81 West North Street	Basin repair	Sent to Grasso	6/1/2017					
	07/04/16	Corner of Liberty & Stillwater	Basin repair	Sent to Arnow						
	07/05/16	Hope & Fahay	Double basin repair	Sent to Roger Arnow	7/20/2016	7/20/2016	Basin is repaired	7/26/2016	Roger Arnow	
	07/20/16	Qty @ Culloden	Basin repair	Sent to Roger Arnow	7/26/2016	7/26/2016	Basin is repaired	7/26/2016	Roger Arnow	
W476541-060616	09/07/16	58 Bonwood Drive	Basin repair	Sent to Roger Arnow	12/1/2016	12/1/2016	Basin is repaired	12/26/2016	Roger Arnow	
W479161-080916	09/07/16	35 West Broad Street	Basin repair	Sent to Roger Arnow	10/10/2016	10/10/2016	Basin is repaired	10/13/2016	Roger Arnow	
	09/07/16	180 Broad Street	Basin repair	Sent to Roger Arnow	10/10/2016	10/10/2016	Basin is repaired	10/14/2016	Roger Arnow	
W478719-072816	09/07/16	125 Coolidge Ave	Basin repair	Sent to Roger Arnow	12/1/2016	12/1/2016	Basin is repaired	12/28/2016	Roger Arnow	
W478589-072816	09/07/16	87 Pine Hill Ave	Basin repair	Sent to Roger Arnow	12/1/2016	12/1/2016	Basin is repaired	12/28/2016	Roger Arnow	
W479742-082316	09/07/16	16 Dzamba Grove	Basin repair							
W477700-070716	09/07/16	17 - 21 Hidden Brook	Basin repair							
	09/07/16	80 Spruce Street	Basin repair							
	09/07/16	Intersection of Liberty & Lakeside	Basin repair/replace w/ precast pump and replace storm pipe across st.	TT emailed to Arnow	May-18					
	09/07/16	25 Division Street	Basin repair							Deteriorating masonry in the basin sump
W479731-082316	09/07/16	311 James Lane	Basin repair	Repaired by Grasso	Apr-15					
W479740-082316	09/07/16	48 New England Drive	Basin repair							
W479521-081716	09/07/16	90 Van Buskirk Ave at Sachem Place	Basin repair	Sent to Arnow 5/17/18						
W479518-081716	09/07/16	Corner of Westcott	Basin repair							
W479526-081716	09/07/16	100 Feet in on R off Hunting Ridge	Manhole sinking							
W479520-081716	09/07/16	Rochledge 150 Feet in on L	Basin repair							
	09/07/16	Haig Ave across from Nysaia	Basin repair	Sent to Grasso	7/17/2017	8/23/2017	repaired by grasso			
W478640-072716	09/07/16	Clearview Ave @ Knickerbocker Ave	Basin repair	Sent to Arnow	5/12/2017	9/6/2017				
W481036-092616	09/29/16	Osman Drive W & Stamford Avenue	Basin repair	Sent to Roger Arnow	12/29/2016	12/29/2016	Basin is repaired	1/6/2017	Roger Arnow	
W479997-082616	08/26/16	42 Treat Ave @ Corner of Collidge	Basin repair	Sent to Roger Arnow	12/29/2016	12/29/2016	Basin is repaired	12/28/2016	Roger Arnow	
W479743-082316										
W502207-032718	08/23/16	24 Benstone Street	Basin repair. Barrel placed 3/28/18.							
	08/24/16	Corner of Vineyard & Hunting Lane	Basin repair	Sent to Roger Arnow	12/1/2016	12/1/2016	Basin is repaired	12/9/2016	Roger Arnow	
	08/24/16	79 Hunting Lane	Manhole sinking							
	08/25/16	71 Vinyard Lane	Manhole sinking							
W472619-081716	08/31/16	46 Hickory St	Basin repair. road plate installed 2/22/2018 - PRIORITY	Sent to Arnow	3/26/2018	4/7/2018				
W480620-091316	09/13/16	65 Northhill St	Basin repair							
W475081-042216	05/06/16	North State Street & Elm Street	Manhole sinking							
W476239-052716	05/27/16	180 Lockwood Ave	Manhole sinking	referred to WPCA 5/27/18						
W476258-053116	05/31/16	Bell Street	Manhole sinking							
	11/18/16	97 Gary Rd	Manhole sinking	Sent to Roger Arnow	11/18/2016	11/18/2016	Basin is repaired	11/21/2016	Roger Arnow	
W478292-071916	07/21/16	29 Redmont Road	MH Repair - Hole in ring	Sent to Portanova	12/6/2017					
W478452-072216	07/25/16	West Broad Street	Basin repair	Sent to Roger Arnow	10/1/2016	10/1/2016	Basin is Repaired	10/14/2016	Roger Arnow	
	07/25/16	Broad & Harraham	Basin repair							
W478588-072616	07/26/16	Corner of East Main & Blachley Rd	Basin repair	Sent to Roger Arnow	11/2/2017					Basin needs to be raised 2'
W478693-072816	07/28/16	Atlantic Street	Manhole sinking	Sent to Roger Arnow	7/29/2016	7/28/2016	Manholes repaired	8/22/2016	Roger Arnow	3 Manholes need to be repaired
	10/10/16	633 Hope Street	Basin repair	Sent to Roger Arnow	10/10/2016	10/10/2016	Basin is repaired	10/31/2016	Roger Arnow	Raised basin to grade
W502271-032918	12/01/16	60 Quaker Ridge Rd - PRIORITY	Basin repair	Sent to Arnow	4/9/2018	4/18/2018				
	12/01/16	39 Holcomb	Basin repair							
	12/01/16	181 Thom Ridge Rd	Basin repair							
	12/01/16	Hobson 150' in from Street	Basin repair	Sent to Roger Arnow	12/29/2016	2/1/2017	Basin repaired, needs curbing, asph, backfill & seed		Roger Arnow	2 Basins to be repaired across from one another
	12/01/16	Magee Ave (Solid Waste)	Basin repair - Vac truck decant area	Sent to Roger Arnow	10/1/2016	10/1/2016		10/7/2016	Roger Arnow	
	12/01/16	Mill River Street	Basin repair	Sent to Roger Arnow	12/1/2016	12/1/2016	Basin is repaired	12/19/2016	Roger Arnow	
W484281-011717	01/30/17	70 Friar Tuck Lane	Basin repair (TT)	Sent to Arnow						
	01/31/17	100 Magee Ave (Recycling Center)	Basin repair (TT)	Sent to Grasso						
	02/01/17	1 Harbor View Ave (Solid Waste)	Basin repair (TT) Near semi scale/ seawall							
	02/01/17	Davenport St at Greenwich Ave	Basin repair (TT) Near WPCA pump station							
	02/01/17	152 Willowbrook Ave	Basin repair (TT) - high priority	Sent to Grasso	6/1/2017					
	02/08/17	300 Soundview Ave	MH repair (TT) - covered by asphalt - Danella hit	Sent to Arnow		2/10/2017	MH repaired-arrow furnished labor			
	02/08/17	369 Rock Rimmon Rd. @ Mill Rd.	Basin repair (TT) - raise frame and add another top & curb							
	02/13/17	51 Orange St	Basin repair (TT) may need new frame / frame adjustments	Sent to Arnow	7/21/2017					

	02/13/17	100 Magee Ave -behind VM	Basin repair (TT) -masonry and reset frame	Sent to Grasso		
	02/13/17	100 Magee Ave - VM by middle bays	Basin repair (TT) hole next to CB	Sent to Grasso		
	02/15/17	128/129 Fieldstone Road	Basin repair (TT) need to reset cast iron frame & top	Sent to Arnow	9/11/2017	10/20/2017
W485643-022117	02/21/17	11 Trailing Rock Lane	Manhole sinking (TT) MH masonry needs to be rebuilt			Manhole is repaired -TT provided frame
W485598-021717	02/22/17	Hope & Mary Violet Lane	Manhole repair (TT) Cracked ring -verified storm by J.Com			
	02/23/17	706 Bedford St	Basin repair (TT) reported by Todd Johnson	B. Denison Verified complete	4/28/2017	
	02/24/17	Bedford St Annex Surface/Parking Area	Basin repair (TT) Masonry work required -Double CB repair			
	02/27/17	Rocky Rapids Rd at Riverbank -S/8North Side of rd.	Basin repair (TT) Masonry work required - reported by J. Hart / B. Denison	Sent to Arnow	3/15/2017	Arnow to return to use hot asphalt to finish job. Job complete 4/13/17
	02/27/17	1290 Summer St	Basin repair (TT) Masonry work and change out frame top	Repaired by Grasso		
W477785-070918	02/27/17	174/176 Roxbury Rd.	Basin repair (TT) Masonry work req'd - hole next to CB	Sent to Arnow - repaired by grasso	3/29/2017	
	02/27/17	Cummings Park Rd. in P lot by softball field	Basin repair (TT) Masonry work req'd - road plate installed 1yr	Sent to Grasso-repaired by	6/1/2017	rep'd 10/10/17
	02/27/17	86 Crestwood Drive	Buried stormwater MH - needs to be excavated and raised	Sent to Arnow	2/27/2017	3/13/2017 Manhole is repaired (Verified by TT)
W487871-041917	02/27/17	1093 Rocky Rapids Road - Mead School	Basin repair (TT) Masonry work req'd - basin top sinking	Sent to Grasso	6/1/2017	
W485902-022417	02/28/17	32 Dugmar Road	Basin repair (TT) Masonry work req'd - hole next to CB	Sent to Arnow	7/21/2017	12/8/2017
	02/28/17	144 Myrtle Ave on Frederick St.	Basin repair (TT) Masonry work req'd - hole next to CB - change hartford style top	Repaired by Fucoi UTW		2/6/2018
	02/28/17	325 Bedford St @ Latham Park -E. Curb line	Basin repair (TT) Masonry work req'd - hole next to CB -Plated - Priority Repair	Sent to Arnow	3/9/2017	3/22/2017 In progress as of 3/20/17
	03/02/17	40 Elays Lane	Basin repair (TT) Masonry work req'd - hole next to CB			
W505454-060918	03/06/17	131 Davenport Ridge Lane	Basin Repair (TT) Masonry work req'd - hole next to CB - PRIORITY			
	03/06/17	339 Hope St @ Church St.	Basin repair (TT) PRIORITY - Masonry work req'd - basin sinking	Sent to Arnow	3/28/2017	
	03/06/17	356 Riverbank Rd. -West side of road	Change Basin top, raise to finish grade, install minor curbing to direct flow			
W486191	03/06/17	85 Summit Ridge Road	Buried stormwater MH - needs to be excavated and raised	Sent to Arnow	7/21/2017	
	03/10/17	W. North St @ Rachelle Ave.	Buried stormwater MH - needs to be excavated and raised - men painted MH	Sent to Arnow/then portanova	7/21/2017	complete 11/30/17
	03/15/15	Pulaski St. at E. Side of Bridge	Manhole repair (TT) Damaged ring - middle of road	Sent to Arnow	3/15/2017	3/20/2017 Manhole is repaired
	03/20/17	Richmond Hill Ave @ Rose Park Ave	Basin repair (TT) reported by D. Hoyt - plated - HIGH PRIORITY	Sent to Grasso	6/1/2017	
	03/21/17	130 Gary Road	MH Repair (TT) - cracked ring - dislodged by plow - reported by WPCA	Sent to Grasso (paving)		
	03/29/17	54 Munko Drive	Basin repair (TT) masonry work req'd - hole next to CB	Sent to Arnow	7/21/2017	10/4/2017
	03/29/17	88 Catoona Lane	Basin repair (TT) masonry work req'd - hole next to CB			
	04/05/17	19 Wild Horse Rd	Basin repair (TT) masonry work req'd - hole next to CB - HIGH PRIORITY	Sent to Grasso	6/1/2017	7/27/2017
	04/03/17	638 Duffy St at Cove Road	Basin repair (TT) masonry work req'd - cb frame sinking	Sent to Arnow	5/17/2018	
	04/03/17	348 Hope St @ Elm Park rd. Corner	Basin repair (TT) masonry work req'd - hole next to CB	TT phone call to Arnow	4/7/2017	4/18/2017
W505562-061218	04/07/17	190 Quary Road	Basin repair (TT) masonry work req'd - hole next to CB 11/30/2016. PRIORITY			
	04/07/17	64 Blue Rock Drive	Basin repair (TT) masonry work req'd - hole next to cb			
	04/11/17	179 Palmers Hill Rd - N. side of Street	Basin repair (TT) masonry work req'd - sinking - referral from L. Casolo & Ernie - HIGH PRIORITY	Sent to Grasso	6/1/2017	7/27/2017
W487700-041217;	04/13/17	227 Cedar Heights Road	Basin repair (TT) masonry work req'd - reported by B. Denison	Sent to Arnow	4/9/2018	5/10/2017
W503509-04218	04/13/17	16 Albert Place	Basin repair (TT) masonry work req'd - cone placed by J. Cornelio. PRIORITY	Sent to Arnow	5/17/2018	
W487854-041917	04/19/17	In Alley behind 41 Banks St.	Basin repair (TT) masonry work req'd - barrel placed by B. Denison	TT emailed to Arnow	4/28/2017	
	04/19/17	1420 Newfield Ave. at Eden Rd	Basin repair (TT) masonry work req'd - cone placed by B. Denison	Sent to Grasso. Sent Arnow	6/12/2017 / 10/5/17	
	04/26/17	Cold Spring at Washington Blvd.	Basin repair (TT) frame loose - reported by R. Fratantoni	TT emailed to Arnow	5/15/2017	
W487873-041917	04/26/17	25 Gurley Rd.	Basin repair (TT) masonry work req'd - as per CSR and per J. Cornelio			
	05/03/17	37 Interlaken Rd.	Basin repair (TT) masonry work req'd - hole next to CB - reported by J. Hoyt	sent to Arnow	10/5/2017	11/14/2017
	05/03/17	44 River Hill Drive	Basin repair (TT) masonry work req'd - hole next to CB - reported by J. Hart			
	05/06/17	90 Richmond Hill Ave.	Storm MH Repair (TT) cracked ring - requested locking MH -reported by B. Denison	TT emailed to Arnow		
	05/11/17	91 Rolling Wood	Basin repair (TT) masonry work req'd - hole next to CB - reported by J. Hoyt			
	05/16/17	206 Lyman Road	Basin repair (TT) masonry work req'd - barrel placed by B. Denison	Sent to Arnow/ referred to In	10/23/2017	11/29/2017
	05/17/17	556 Glenbrook Road @Coving Place	Basin repair (TT) masonry work req'd - cb frame sinking	sent to arnow	12/5/2017	
W489891-011618	05/17/17	20 Gregory Street	Basin repair (TT) replace CB top - frame is loose - reported by B. Denison. Plated 2/16/18	Referred to Eng. 3/21/18	4/27/2018	
	05/17/16	3 St. Charles Ave.	Basin repair (TT) masonry work req'd - cb frame sinking			
	05/17/16	86 St. Charles Ave.	Storm Pipe Repair (TT) Jet nozzle became stuck - terminated and abandoned	Sent to Arnow - pipe repaired and recovered		6/1/2017
	05/18/17	31 Sweet Briar Ct.	Basin Repair (TT) masonry work req'd - reported by B. Denison - E. Orgera - HIGH PRIORITY	Sent to Grasso	6/1/2017	7/27/2017
	05/22/17	65 Arden Lane	Basin Repair (TT) masonry work req'd - reported by B. Denison			
W496305-111217	05/25/17	24 Mill Spring Lane	Basin Repair (TT) masonry work req'd - reported by B. Denison			
	05/30/17	14 Chick Lane (2 cb's - corner lot)	Basin Repair (TT) masonry work req'd - reported by J. Cornelio	sent to Arnow	10/5/2017	
	05/30/17	60 Acra View Drive	Basin Repair (TT) masonry work req'd - reported by J. Cornelio	sent to Arnow	10/5/2017	
	05/30/17	60 Acra View Drive	MH Repair - (TT) needs new "standard size" ring and cover - reported by J. Cornelio	sent to Arnow	10/5/2017	
	05/30/17	44 Fenway St. @ H.S. Parking Lot	Basin Repair (TT) masonry work req'd - reported by B. Denison	sent to Arnow	3/26/2018	4/7/2018
	05/30/17	401 Shippan Ave.	Basin Repair (TT) curb back missing - change top to cast iron - reported by B. denison			
	05/30/17	13 Fenway St.	Basin Repair (TT) needs new CB top & masonry failing			
	05/30/17	295 Haig Ave. at Nystelus Ave.	Basin Repair (TT) Masonry Failing - CB at E. curb line @steep hollow park	sent to grasso	5/28/2017	
	05/30/17	39 Waterbury Ave.	Remove and replace CB sump - TT to CCTV pipe, add MH at "T" intersection - see photos			
	05/31/17	6 Donata Lane	Basin Repair (TT) masonry work req'd - reported by B. Denison			
	06/02/17	17 Forest St.	Basin Repair (TT) 11' @ R/W curb and double (2) cb's near entry to garage	sent to grasso	8/1/2017	9/1/2017
W489963-060617	06/07/17	97 Ocean Drive West	Basin Repair (TT) needs new CB top			
W478951-081716	06/07/17	25 Carnvali Ave.	Basin Repair (TT) masonry work req'd.W489827-060417			
	06/08/17	880 East Main (E. Main & Crystal)	Basin Repair (TT) masonry work req'd - reported by J. Hoyt - barrel placed 6/8/17			
	06/08/17	12 Bennett St.	Basin Repair (TT) masonry work req'd - reported by J. Hoyt - Barrel placed 6/8/17. Water barrier placed	Sent to Arnow	4/9/2018	4/27/2018
	06/08/17	115 Ocean Drive East	Basin Repair (TT) masonry work req'd - reported by B. Denison			
	06/08/17	740 Atlantic St.	Basin Repair (TT) masonry work req'd - low priority - eng. Dept to realign intersection	Grasso Repair		5/8/2018
	06/09/17	11 West North St - in front of Cloonan School	Basin Repair (TT) masonry work req'd - reported by J. Hart - barrel place			
	06/09/17	73 Southfield Ave.	Basin Repair (TT) masonry work req'd - change out to flat top - remove sidewalk and signs to drain	Repaired by Grasso	11/29/2017	12/6/2017
W501750-031918;	06/12/17	893 Long Ridge Road	Basin Repair (TT) masonry work req'd - hole next to basin - barrel placed. TT verified barrel 2/21/18			
W502357-040218;	06/12/17	67 Hastings Lane	Basin Repair (TT) masonry work req'd - hole next to basin - cone placed. Double CB. Getting BAD	sent to Arnow	4/27/2018	5/17/2018
	06/12/17	100 Research Drive	Basin Repair (TT) masonry work req'd - hole next to basin - cone placed - reported by J. Hoyt			
	06/21/17	502 Fairfield Ave	Basin Repair (TT) masonry work req'd - masonry collapsing - reported by J. Hoyt			
	06/22/17	52 Skyview Drive	Basin Repair (TT) masonry work req'd -masonry work req'd. TT to refer to eng. - need 320 ft of pipe + 3 MH's			
	06/29/17	24 Arthur Place	Basin Repair (TT) masonry work req'd - reported by B. Denison	Sent to Arnow	10/23/2017	11/29/2017
	07/13/17	139 Unsula Place	Basin Repair (TT) - masonry work req'd - hole next to basin - barrel placed			
	07/18/17	Ardmore Rd. - Access from Fed Ex	Basin Repair (TT) masonry work req'd - hole next to basin - reported by J. Cornelio. Water barrier placed			
	07/21/17	868 E. Main St. on Quantard Terr.	Basin Repair (TT) basin top stuck under curb back. Needs new grate/frame			
	07/24/17	177 Wire Mill Rd	Basin Repair (TT) basin collapsing. J. Moore placed water barrier 2/16/18.	Sent to Arnow	4/9/2018	4/21/2018
	07/25/17	71 Campbell Dr	Basin Repair (TT) basin collapsing - reported by B. Denison			
	07/26/17	355 Atlantic St	MH Repair (TT) per PD dispatch, MH keeps flipping - J. Com & D.Hoyt tried to secure	Emergency - sent to Arnow	8/28/2017	
	07/27/17	3001 Summer St. on Bedford St	Basin Repair (TT) exposed rebar @ cb. in left turn lane from bedford to summer st.	Repaired by Grasso	10/1/2017	
	07/27/17	150 Atlantic St. - Vets Park	Raise MH to finish grade to facilitate CCTV and jet work - PRIORITY	Arnow Work	8/10/2017	9/10/2017
	07/27/17	299 Main St.	Basin Repair (TT) small hole next to CB	Sent to Grasso	3/20/2018	4/2/2018
	08/02/17	86 Clay Hill Rd.	Basin repair (TT) hole next to CB			
	08/03/17	76 Woodridge Drive	Basin Repair (TT) small hole next to CB - PRIORITY	sent to Arnow	10/5/2017	11/10/2017
	08/03/17	116 Woodridge Drive	Basin repair (TT) double CB - BIG hole next to CB - PRIORITY	sent to Arnow	10/5/2017	11/10/2017
W500343-022018	08/03/17	10 Horseshoe Lane on Thornridge Drive	Basin repair (TT) masonry work req'd - cb frame sinking			
W504657-052218	08/03/17	52 Wessgate	Basin Repair (TT) basin collapsing. Reported again 5/22/18. PRIORITY			
	08/09/17	25 Perna Lane	Basin Repair (TT) Masonry work req'd - basin failing. Reported again WPCA 5/17/18.			
	08/10/17	73 Lincoln Ave.	Basin Repair (TT) basin collapsing - reported by J. Hoyt			
	08/11/17	73 First Rock Road	Basin Repair (TT)			
	08/11/17	11 Iron Gate Road	Basin Repair (TT)			

	08/10/17	6 Sheridan St.	Basin Repair (TT) top is no good - needs repair asap - reported by J. Hoyt						
	08/14/17	26 Tupper Drive	Basin Repair (TT)						
	08/21/17	Shippan Ave and Elm St.	MH Repair (TT) - MH asphalted 8/21/17 - needs new riser / ring and to be reset	Sent to Portanova	11/15/2017	12/4/2017			
	08/21/17	923 Newfield Ave.	MH Repair (TT) Storm MH sinking	Sent to Portanova	12/6/2017	12/20/2017			
	08/29/17	770 Pacific St. @ Baldwin St. - School Entrance	Basin Repair (TT) Masonry work req'd - hole next to CB	Sent to Arnow	3/25/2018	4/27/2018			
	08/28/17	27 Wells Ave	Basin Repair (TT) Masonry work req'd - hole next to CB						
	08/30/17	Ursula Place at Dale St.	Basin Repair (TT) Masonry work req'd - hole next to CB						
	08/31/17	296 Sundance Road	Basin Repair (TT) Masonry work req'd - hole next to CB - PRIORITY	Sent to Arnow	12/5/2017				
	09/01/17	443 Glenbrook Road	Basin Repair (TT) Masonry work req'd - hole next to CB	Sent to Grasso	10/25/2017	2/6/2018			
	09/07/17	Intersection of Fox Hill and Fox Ridge Rd.	Basin Repair (TT) masonry work req'd - hole next to CB						
W497045-120317	09/07/17	54 West Hill Circle	Basin Repair (TT) masonry work req'd - hole next to CB						
	09/07/17	90 Sutton Dr.	Basin Repair (TT) small square basin - should be changed out						
	09/07/17	5 Judy Lane	Basin Repair (TT) masonry work req'd - hole next to CB						
	09/07/17	North State Street at Train Station	Manhole Repair - trip hazard - cut back concrete and install new MH	Sent to Portanova	12/6/2017				
	09/12/17	103 West Broad	Basin Repair - masonry falling - reported by J. Hart						
	09/12/17	Rocky Rapids Rd at Riverbank -South side of rd.	Basin Repair - masonry falling - reported by B. Denison						
W500350-022018	09/18/17	30 Plave Street	Basin Repair - CB sinking - Barrel placed 2/22/2018 - PRIORITY	sent to arnow	3/26/2018	4/9/2018			
	09/18/17	35 Plymouth	Basin Repair - CB sinking - Flat top in driveway - PRIORITY						
	09/27/17	46 Bartlett Ln	Basin Repair - (tt) masonry work req'd						
	09/27/17	Opposite 20 Aspen Lane	Basin Repair - (tt) masonry work req'd - and CCTV lateral pipe						
	09/29/17	31 Joan Road	Basin Repair - (TT) masonry work req'd						
W504773-052418	09/29/17	84 Middle Ridge Road	Basin Repair - (TT) Double CB repair - masonry work req'd - PRIORITY						
	10/03/17	47 Bartlett Ave.	Basin Repair (TT) masonry work req'd	Sent to Grasso/Arnaw	10/25/17-12/5/17	12/20/2017			
	10/04/17	29 Bartlett Lane	Basin repair (TT) hole next to CB						
	10/10/17	167 Old North Stamford Road	Basin repair (TT) basin collapsing						
	10/11/17	80 Winding Brook Lane	Basin repair - hole next to CB - barrel placed - Resident called TT and left VM 10/3/17. It returned call	Sent to Arnow	10/23/2017	11/13/2017			
	10/13/17	10 Howard Rd at Intersection of Tod Ln	Basin repair - hole next to CB - needs repairs	sent to arnow	12/5/2017				
	10/17/17	Daskam Crystal Lafayette Intersection	MH Repair - sinking MH per B. Denison - PRIORITY						
	10/20/17	4 Division St	Basin Repair - hole next to basin						
	10/23/17	261 Main St. - McFadden	Basin Repair - hole next to basin - reported by A. Turner	Sent to Grasso	4/2/2018	4/16/2018			
	10/23/17	624 Glenbrook Road - Nicia Pizz	Basin Repair - hole next to basin - reported by B. Denison	Sent to Grasso	10/26/2017	11/20/2017			
W504792-052518	10/23/17	307 Weed Ave	Basin Repair - hole next to basin - hartford style CB						
	10/25/17	102 Acns View	Basin Repair - hole next to basin - reported by B. Denison	Sent to Arnow	10/26/2017	11/20/2017			
W495875-103117	11/01/17	59 Euclid Ave.	Basin Repair - hole next to basin - barrel placed 11/1/17 J. Hoyt - needs Post and Tow for access	Sent to Arnow	12/5/2017	12/20/2017			
	11/03/17	1544 Bedford St. - at intersection of third	Basin Repair - hole next to basin - barrel placed 11/3/17 B. Denison	Sent to Arnow	5/17/2018	6/8/2018			
	11/03/17	201 Broad St. at Grove - in median on Broad	Basin Repair - basin sinking. Both basins need repair.	Sent to Grasso	5/4/2018				
	11/03/17	187 Main St. on Washington Blvd. - Tiemans	Basin Repair on Washington Blvd. - Granite Curb Back has tipped - trip hazard - it - sent to CDOT completed by DOT		3/24/2018				
	11/15/17	865 Sunset Road at Intersection of Princess Ct.	Basin Repair - hit durning leaf pick up - reported by J. Hart.						
	11/28/17	97 Ocean Drive West - East side of st. Near parking lot	Basin Repair - hole next to basin - reported by B. Denison						
	11/29/17	124 Clowry Rd.	Basin Repair - basin sinking	Sent to Grasso	5/16/2018				
	11/16/17	219 Glenbrook Road	MH Repair - buried storm MH	Sent to Portanova	11/30/2017	12/5/2017			
	11/30/17	10 Evergreen Court at Clover Hill	MH Repair - sinking MH per J. Hoyt						
	11/30/17	91 Bentwood Drive	CB Repair - Sinking CB - reported T. Theder 3/1/16						
W503789-050318	11/30/17	43 Settlers Trail	CB Repair - Sinking CB - reported T. Theder 3/17/16. PRIORITY						
	11/30/17	100 Woodway Road	MH Repair - buried storm MH						
w497018-120117	12/01/17	9 West Main St.	CB Repair - sinking CB. Check and repair frame - asphalt to meet top of frame						
w493049-081617	08/16/17	87 Fishing Trail	CB Repair - 2 holes next to CB - cones placed over holes						
	12/04/17	13 Davenport Drive	MH Repair - broken frame - needs replacement - barrel in road	Sent to Portanova	2/1/2018	3/8/2018			
	12/06/17	223 Glenbrook Rd.	Buried MH - TT crew to CCTV and locate	Sent to Portanova	11/30/2017	12/5/2017			
	12/07/17	46 Oxford Court	CB Repair - conc. flat top frame broken - reported by B. Denison - barrel placed PRIORITY						
	12/08/17	51 Kenilworth Drive E.	CB Repair - Replace hartford style frame and grate - may need new precast sump. Hole in grate						
	12/08/17	Across Street from 83 Kenilworth Drive E.	CB Repair - Falling Sump - needs new precast box						
	12/08/17	29 Beach View Drive	CB Repair - Hartford Style frame frozen in place - needs new frame and grate						
	12/09/17	153 thunderhill Drive	CB Repair - grate and frame frozen in place. Replace frame & grate.						
	12/09/17	168 Thunderhill Drive	CB Repair - replace hartford style frame and grate.						
	12/11/17	11 Quaker View Drive	MH Repair - needs new frame - frame cracked and broken by plow	Sent to Arnow	12/11/17	12/13/17			
	12/11/17	213 Fairview Ave. at O.D.W.	MH Repair - needs new frame - cover does not stay on	Sent to Arnow	12/11/17	12/13/17			
	12/11/17	228 West Lane	MH Repair - needs new frame - cover does not stay on	Sent to Arnow	12/11/17	12/13/17			
	12/14/17	50 Kensington Road	MH Repair - needs new frame - cracked and broken by plow.	Sent to Portanova	2/5/2018	3/9/2018			
	12/26/17	46 Laurel Road	CB Repair - Basin sinking						
	12/28/17	198 East Middle Patent Road	CB Repair - Broken grate. Old style square grate and frame. Replace w/ new precast.						
	01/05/18	131 Davenport Ridge Lane	MH Repair - needs new framing. Cone placed 1/8/17	Sent to Portanova	2/1/2018	3/8/2018			
	01/11/18	64 Palmers Hill Road - CLC	Trench Drain Repair / Removal - need to meet on site with Arnow to review - PRIORITY						
	01/17/18	31 Sussex Place	CB Repair - Hole located behind CB - double sump. falling block. needs rebuild. Barrel placed 1/17/18	F. Vonalt	1/19/2018	2/6/2018			
W502271-032918	01/19/18	59 Quaker Ridge Road	CB Repair - Hole located behind CB - double sump. falling block. needs rebuild. Barrel placed 1/17/18	Sent to Arnow	4/9/2018	4/18/2018			
	01/24/18	986 Bedford Street	CB Repair - Hole located in front of CB. left lane, northbound. 2 water barriers placed 1/24/18	Sent to Arnow	1/24/2017	2/2/2018			
	01/25/18	31 Sutton Place	MH Repair - buried storm MH. Danella contacted MH. Painted in field - needs to be raised						
	01/25/18	58 Sutton Drive West	MH Repair - buried storm MH. Danella contacted MH. Painted in field - needs to be raised						
	01/25/18	46 Rapids Road	CB Repair - Hole located in front of CB	Sent to Arnow/Sent to Arnow	1/24/17&2/5/18	5/10/2018			
	01/31/18	85 Riverside Ave.	CB Repair - Hole located in front of CB. Double CB. barrel placed 1/31/18-PRIORITY						
	02/02/18	Bartlett Arboretum - entry drive	CB Repair - Actually 2 cbs in need of repair - Hole located next to CB. Cone placed. TT inspected 2/2/18.						
	02/02/18	89 Upham St. on Ravenskill Ave.	MH Repair - sinking MH	Sent to Portanova	2/5/2018	4/8/2018			
	02/06/18	96 Summit Ridge	CB Repair - hole next to cb						
	02/06/18	Across from 1318 Bedford St.	CB Repair - hole next to cb - reported by B. Denison						
	02/06/18	1648 Shippan Ave.	Broken Curb back - give to Arnow						
W500331-022018	02/16/18	76 Bennett (on Lawton Ave.)	CB Repair - concrete curb back - grate dropped in - open hole. Road plate installed 2/16/18. PRIORITY	Sent to Arnow	3/26/2018	4/20/2018			
	02/16/18	21 Broad St. by Target Crosswalk	MH Repair - sinking MH - from P. Montanaro. D. Portanova to verify it is storm - then repair	Sent to Portanova	4/11/2018				
	02/16/18	4 Pulaski St.	MH Repair - damaged frame / ring.	Sent to Portanova	2/16/2018	3/6/2018			
	02/20/18	907 Long Ridge Rd at Malibu Ave.	MH Repair - damaged frame / ring. - Road plate placed 2/22/18	Sent to Portanova	2/20/2018	3/6/2018			
W500408-022118	02/21/18	106 Redmont Road	CB Repair - hole next to CB will need new precast sump box	Sent to Arnow	4/27/2018	5/17/2018			
	02/21/18	105 Crow Road	CB Repair - sinking CB right side of road - at driveway	Sent to Arnow	4/27/2018	5/21/2018			
W500381-022018	02/22/18	25 Chesterfield Road	CB Repair - sinking CB						
	02/22/18	776 Cove Road	CB Repair - sinking flat top	Sent to Arnow	4/27/2018	5/25/2018			
	02/26/18	429 Eden Road	CB Repair - hole next to CB - placed cone - reported by B. Denison						
W500846-030118	03/02/18	2 Dunn Ave. at Cedar Heights Rd.	CB Repair - hole next to CB. Double CB. Barrel in place.	Sent to Arnow	4/9/2018	5/4/2018			
	03/07/18	404 Vine Road	CB Repair - Needs new top and frame - existing frame is broken						
	03/07/18	Transfer Station - north side near canal	MH Repair - needs new heavy duty ring - 32" cover - PRIORITY	Sent to Portanova	3/21/2018	4/18/2017			
	03/07/18	Dundee Rd. at Timber Mill Road	CB Repair - basin collapsed - reported by M. Scaturchio - PRIORITY						
	03/07/18	327 Dundee Rd.	CB Repair - hole next to CB / basin collapsing - reported by M. Scaturchio - PRIORITY						
03/08/18	03/08/18	61 Strawberry Hill Court - in front of Tully Center	MH Repair - hit by plow - needs new frame	Sent to Portanova	3/8/2018	3/9/2018			
03/08/18	03/08/18	389 Ocean Drive West	MH Repair - hit by plow - needs new frame	Sent to Portanova	3/21/2018	4/17/2018			
	03/12/18	274 Quarry Road	CB Repair - grate dropped in - check to see if we can repair w/ new grate						
	03/12/18	21 Bridge St.	CB Repair - hole reported next to CB - barrel placed 3/12/18. PRIORITY						
	03/12/18	36 Sunset Court	CB Repair - hole reported next to CB - front of frame caved in - barrel placed 3/12/18						
	03/12/18	125 Waterbury Ave.	CB Repair - conc. Frame and sump crumbled block - barrel placed 3/12/18						

	03/12/18	109 Waterbury Ave.	CB Repair - basin collapsing - barrel placed 3/12/18							
	03/13/18	6 Judy Lane @ Hamilton	MH Repair - buried MH - CCTV confirmed 3/1/18 and painted							
	03/19/18	Clark St. - East curb line	CB Repair - hole next to cb. Cone placed. Road plate placed 3/19/18	Sent to Grasso	3/21/2018	3/26/2018				
W503423-042618	03/21/18	205 Greenwich Ave.	CB Repair - hole next to cb. PRIORITY as per T. Turk email 4/3/18	Sent to Arnow	4/27/2018	5/4/2018				
	03/21/18	15 Hunting Ridge Rd. @ Long Ridge Rd. in island	CB Repair - barrel placed 3/21/18. Reported by J. Hoyt							
	03/22/18	94 Smith Street	MH Repair - MH by pipe - needs new frame	Sent to Portanova	3/22/2018	3/26/2018				
	04/02/18	102 Mountain Wood Road	MH Repair - Ring/frame hit by J. Hoyt w/ plow. Frame sinking by 3" - needs to be reset and raised.	Sent to Portanova	4/2/2018	4/19/2018				
	04/02/18	147 Mountain Wood Road	MH Repair - Ring/frame hit by J. Hoyt w/ plow. OPEN HOLE. MH Cover in bottom of MH.	Sent to Portanova	4/2/2018	4/19/2018				
	04/02/18	30/26 Wallace Street	MH Repair - Ring/frame damaged. 1/2 of ring is missing. Needs replacement							
	04/09/18	6 Applebee Rd. on Benstone St.	CB Repair required. Email from F. Patise engineering re. Oaklawn work. Double CB. Barrel placed 4/9/18							
	04/10/18	155 Jonathan Drive	MH Repair - sinking MH - frame needs to be reset - K. Cuevas							
	04/11/18	Across from 42 Cove Road - S. side of street	CB Repair reqd. Hole next to cb reported Turner. Theder inspected 4/11 unable to protect. PRIORITY	Sent to Arnow	4/27/2018	5/23/2018				
W503105-041818	04/18/18	54 Research Drive	CB Repair reqd. Hole next to cb reported PD. BC placed barrel. TT plated 6/29/18 - PRIORITY							
	04/18/18	4 Wampianaw Ave.	CB Repair reqd. Hole next to cb. Reported by Denison - barrel placed.							
	04/20/18	135 Downs Ave.	Sandbags in storm MH on beach. Need confined space entry and remove.							
	04/20/18	59 West Road St.	CB Repair - hole next to CB. Barrel Placed 4/20/18. PRIORITY	Sent to Arnow	5/17/2018	6/8/2018				
	04/20/18	45 Valley Road	CB Repair. ROAD PLATE INSTALLED							
	04/21/18	535 Newfield Ave.	MH Repair - paved over. Raise to finish grade.	Sent to Prova/Sent to Arnow	4/21/18-5/22/18	5/25/2018				
	04/21/18	555 Newfield Ave.	MH Repair - paved over. Raise to finish grade.	Sent to Prova/Sent to Arnow	4/21/18-5/22/18	5/25/2018				
	04/21/18	535 Newfield Ave. on Fairland St.	CB Repair - not collapsing, but many brick and block in sump. Structure is compromised. T. Theder inspected							
	04/21/18	90 Magee Ave	MH Repair - Cracked ring / frame at OWS - needs repair - T. Theder - check both MH's.							
	04/25/18	28 Blue Ridge Drive	CB Repair - hole in conc. Frame - needs repairs. B. Denison inspected 4/25							
	05/03/18	15 Flint Rock on Dan Road	CB Repair - hole next to basin - b. denison left barrel							
	05/04/18	25 Highline Trail South	CB Repair - reported by B. Denison							
	05/04/18	1093 Shippan Ave.	MH Repair - 4' riser on top of frame is loose and rattling - remove riser and frame, add brick, reset.	Sent to Portanova	5/7/2018	6/20/2018				
	05/08/18	10 Rushmore Circle	CB Repair - hole next to CB reported by B. Denison							
	05/08/18	86 Pine Hill Ave.	MH Repair - buried MH - CCTV confirmed 5/7/18 and painted. Also remove 2 cmu's in MH at 60 Pine Hill							
	05/09/18	31 Brodwood	CB Repair - hole next to CB reported by B. Denison - see also 33 brodwood							
	05/09/18	1607 Bedford St. on Third Street	CB Repair - hole next to CB. masonry falling - reported by E. Orgera - PRIORITY	Sent to Arnow	5/17/2018					
	05/14/18	5 Leonia Drive	CB Repair - hole next to cb. double sump. JC placed barrel 5/14							
W504214-051318	05/15/18	24 Wright Street	CB Repair - hole next to CB. B. Denison placed barrel 5/15							
	05/16/18	233 Shelter Rock Road	MH Repair - needs new frame and cover. TT to CCTV lateral to CB at 222 shelter rock for pipe condition.							
	05/17/18	2 Owen St. on McMullen St	CB Repair - hole next to CB. B. Denison placed barrel 5/17							
	05/21/18	22 Knapp St	Convert double curb back CB's to flat tops. Curb back replaced 2016, 2018.							
	05/14/18	2586 Summer St on Eighth Street	CB Repair - hole next to CB. TT left cones 5/10/18. Road plate installed 5/18/18. P Dispatch.							
W504425-051718	05/21/18	178 North State Street	MH Repair - left side/ south side of roadway. Frame/Cover not flush with roadway. Reset							
	05/21/18	West Beach Parking Lot - south side of lot	CB Repair - hole next to CB - TT observed. Water barrier placed 5/22/18. PRIORITY							
W504062-050918	05/22/18	45 Pleasant St	CB Repair - hole next to CB - B. Denison inspected.							
W504794-052518	05/25/18	45 Rockledge on Ocean Drive East	CB Repair - hole next to CB - B. Denison inspected.							
	05/30/18	1 Harbor View Ave (Solid Waste)	MH Repair - reset/repair MH at bottom of transfer station ramp - oer request of D. Colleluoni/T. Turk							
W504977-053018	05/31/18	20 Florence Court	CB Repair - hole next to CB - B. Denison inspected.							
W505271-060518	05/31/18	6 Sanford Lane	CB Repair - hole next to CB - B. Denison inspected.							
	05/31/18	286 West Broad at Delaware Ave.	CB Repair - hole next to CB - B. Denison inspected. Reported by big Mo.							
	05/31/18	74 Colonial Road	CB Repair - hole next to CB - B. Denison inspected							
	06/06/18	379 Shippan Ave	CB Repair - hole next to CB. Reported by WPCA - cone placed							
W506236-060518	06/07/18	164 Richmond Hill Ave	CB Repair - loose frame and damaged masonry. Reset existing frame.		6/7/2018	6/8/2017				
	06/11/18	707 Shippan Ave.	CB Repair - hole next to cb - reported by A. Turner. Hartford Style CB							
	06/11/18	37 Clifford Ave. at Rome Place	CB Repair - hole next to cb - reported by A. Trichillo							
W505721-061518	06/19/18	39 Laurel Road at Spring Hill Lane	CB Repair - hole next to cb - PRIORITY							
	06/20/18	Knapp St. and Carroll St. Intersection	MH Repair - frame cracked / broken - reported by J. Hoyt							
W505897-062018	06/20/18	44 Soundview Ave.	CB Repair - basin sinking - asphalt for now - low priority							
	06/21/18	Across from 25 Second St.	CB Repair - Hole next to CB. Barrel placed 6/21/18. Water barrier placed 6/29/18							
	06/26/18	59 Barmore Drive West	CB Repair - Hole next to CB. Water Barrier placed 6/26/18							

APPENDIX I

2017-18 CULVERT CLEANING LIST

City of Stamford - No. CT0030279

Open Drainage Channel (Culvert Cleaning and Backhoe Work) 7/1/16 - 6/30/2017



Date	Address / Location	Duration	Manpower	Quan. Of Material Removed	Receiving Stream	Notes
7/7/2017	6 Nyselius	1 Day	3 men, backhoe and two (2) dump trucks.	appx. 6 cubic yards	Noroton River	cleaned out inlet adjacent to Haig Ave. Backhoe extended reach to clean channel inlet upgradient from inlet.
7/25/2017	1709 Newfield Ave.	1 Day	3 men, excavator / trach hoe, and two (2) dump trucks.	appx. 8 cubic yards	Noroton River	cleaned accumulated sediments and solids at outfall DIS-1402. Stabilized w/ rip-rap.
8/17/2017	257 Silver Hill Lane	1 Day	3 men, vac truck, stetco	appx. 3 cubic yards	Rippowam River	cleared logs and debris from bar screen drainage inlet.
10/5/2017	8 Webbs Hill Rd. on Pheasant Lane	1 day	3 men, Stetco hydraulic crane and Vac truck	appx. 4 cubic yards	Rippowam River	Complaint received by Stormwater Management Department regarding clogged culvert causing flooding on roadway. Drainage inlet cleared with Stetco, drainage pipe jetted with Vac truck. Proper flow restored.
11/1/2017	123 Lawton Ave	1 Day	3 men, stetco hydraulic crane	appx. 3 cubic yards	Noroton River	cleared logs and debris from bar screen drainage inlet at sleepy hollow park.
3/10/2018	44 East Cross Road	1 Day	4 men, Stetco hydraulic crane and Vac truck	appx. 3 cubic yards	Norton River	Stormwater bar screen inlet cleared from leaves, logs, and accumulated debris. Proper flow restored.
4/12/2017	14 Constance Lane	1 Day	4 men, Stetco hydraulic crane and Vac truck	appx. 3 cubic yards	Mianus River	dug out roadside swale, cleaned culvert inlet/outlet.
4/23/2018	198 E. Middle Patent Road	1 Day	3 men, vac truck, stetco	appx. 3 cubic yards	Mianus River	Cleared culvert inlet from logs and debris.
4/24/2017	Buxton Farms Road	2 days	5 men, loader, rolloff container, vac truck	appx. 40 cubic yards	Rippowam River	Uncovered previously unknown CB at entrance to Merritt Parkway northbound at High Ridge Rd. Cleaned discharge pipe leaving CB, removed sediment blocking stream channel, jetted upstream storm piping in response to flooding service requests.
5/23/2018	446 Wire Mill Rd.	1 Day	3 men, vac truck, stetco	appx. 3 cubic yards	Rippowam River	Used vac truck to jet culvert pipe under driveway. Normal flow restored.
6/29/2018	Howard Road	1 Day	3 men, vac truck, stetco	appx. 6 cubic yards	Mianus River	stormwater inlet pipe on west side of road buried and not draining properly. Excavated with stetco and vac truck. Restored proper

APPENDIX J

2017-18 IDDE SCREENING DATA SUMMARY TABLE

Site	Date	Time	Physical Condition	Flow (Yes / (No))	Evidence Illicit Discharges	Date of Follow-up	Flow Est (gallon/min)	Conductivity (µS)	Turbidity (NTU)	DO (mg/L)	pH (pH Units)	Temp (°C)	Ammonia (mg/L)	Chlorine (mg/L)	Surfactants as (MBAS) (ppm)	Potassium (mg/L)	E. coli (CFU/100ml)	Ammonia/Potassium Ratio	Evaluation	Notes
DIS-1013	3/6/2018	13:24	Good	Yes	Yes	N/A	7.00	2123.00	0.01	0.50	7.71	8.47	0.00	0.04	0.50	16.00	<10	0.00	Possible washwater	
DIS-1179	3/1/2018	10:53	Good	Yes	Yes	N/A	0.01	1089	0.95	7.86	7.2	10.3	0.10	0.00	0.25	7.00	74.00	0.01	Likely natural water source	Left Outfall
DIS-1180	3/1/2018	10:56	Good	Yes	Yes	N/A	0.0083	1,042	1.16	7.84	7.12	10.49	0.1	0	0.25	6.9	63	0.01	Likely natural water source	Right outfall
DIS-1204	5/30/2018	12:55	Good	No	No	N/A	-	-	-	-	-	-	-	0	0	-	-	-		
DIS-1205	5/30/2018	1:05	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1206	5/30/2018	12:20	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1207	5/30/2018	10:35	Good	Yes	Yes	N/A	8	1283	0.21	0.13	7.55	19.31	0.25	0.05	0.5	7.3	1350	0.03	Possible washwater	
DIS-1208	3/1/2018	-	Good	No Flow	Standing water in pipe	6/20/2018	N/A	-	-	-	-	-	-	-	-	-	-	-		standing water/ no flow
DIS-1266	3/1/2018	13:02	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1267	3/1/2018	13:00	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1268	2/28/2018	1:30	Good	Yes	Yes	N/A	0.07	1259.00	0.41	40.00	7.20	12.40	0.00	0.05	0.25	7.8	110	0.00	Likely natural water source	Flowing from wide culvert
DIS-1294	3/1/2018	10:09	Good	Yes	Yes	N/A	0.27	446.00	1.11	9.12	7.63	8.53	0.25	0.02	0.50	5.60	20.0	0.04	Possible washwater	standing water/ no flow
DIS-1295	3/1/2018	10:12	Good	Yes	Yes	N/A	0.27	437.00	0.51	7.69	437.00	9.64	0.25	0.02	0.00	5.70	52.0	0.04	Likely natural water source	Left Outfall
DIS-1312	5/30/2018	11:40	Good	Yes	Yes	N/A	1	2875	0.56	7.06	4.17	17.56	0.25	0.05	0.5	16.7	10	0.01	Possible washwater	
DIS-1338	3/1/2018	13:15	Good	Yes	Yes	N/A	0.22	1311.00	0.23	0.02	7.29	13.90	0.15	0.02	0.25	7.30	121	0.02	Likely natural water source	
DIS-1399	6/1/2018	11:45	Good	Yes	Yes	N/A	<1	807	0.54	6.1	7.24	21.72	0.5	0	1.5	3.7	631	0.14	Possible washwater	
DIS-1404	5/30/2018	10:00	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1405	5/25/2018	12:10	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1408	5/25/2018	12:20	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1411	5/30/2018	10:15	Good	Yes	Yes	N/A	1	674	1.47	9.45	7.34	18.84	0	0.56	0.25	8	480	0.00	Likely natural water source	
DIS-1418	5/25/2018	10:45	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1419	3/1/2018	12:45	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1423	5/25/2018	10:55	Good	No	Yes	6/20/2018	0.00	-	-	-	-	-	-	-	-	-	-	-		
DIS-1429	3/1/2018	10:55	Good	Yes	Yes	N/A	1.50	3853.00	1.32	0.10	7.69	11.87	0.25	0.08	0.50	36.50	<10	0.01	Possible washwater	
DIS-1432	3/1/2018	-	Good	No	No	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		no flow
DIS-1440	Can't Find																			
DIS-1443	3/1/2018	-	Good	No	Standing water in pipe	6/20/2018	0.00	-	-	-	-	-	-	-	-	-	-	-		18" concrete pipe in headwall, no flow/standing water in pupe which flows into pond
DIS-1445	5/30/2018	12:15	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1447	3/1/2018	11:00	Good	No Flow	None	N/A	-	-	-	-	-	-	-	-	-	-	-	-		Could not access location
DIS-1447	3/6/2018	9:40	Good	Yes	Yes	N/A	3.00	3525.00	0.47	0.10	7.41	9.92	0.00	0.07	0.25	29.50	2910	0.00	Likely natural water source	
DIS-1447N	3/6/2018	9:39	Good	No	Yes		-	-	-	-	-	-	-	-	-	-	-	-		Moss and Staining
DIS-1447S	3/6/2018	9:41	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1451	5/30/2018	12:00	Good	Yes	Yes	N/A	3	1315	0.68	8.1	6.98	19.55	0.25	0.09	0.25	8.2	<10	0.03	Likely natural water source	
DIS-1454	6/1/2018	11:50	Good	Yes	Yes	N/A	<1	810	0.52	6.16	7.26	21.65	0.5	0	1.5	5.3	63	0.09	Possible washwater	
DIS-1455	5/25/2018	12:45	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1456	3/6/2018	14:15	Good	Yes	Yes	N/A	3.00	439.00	0.92	1.10	7.88	8.19	0.00	0.00	0.00	3.60	161.0	0.00	Likely natural water source	
DIS-1464	5/25/2018	9:13	Good	No	Yes		-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1472	6/1/2018	12:25	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-1482	5/25/2018	11:15	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-158	2/28/2018	11:42	Good	Yes	Yes	N/A	--	2937.00	0.13	11.98	7.75	9.70	0.00	0.00	0.50	29.00	218	0.00		Medium Flow
DIS-159	5/25/2018	12:55	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-160	5/25/2018	12:00	Good	Yes	Yes	N/A	<1	808	1.43	7.72	7.08	21.86	0	0.07	0.25	3.1	10	0.00	Likely natural water source	

Site	Date	Time	Physical Condition	Flow (Yes / (No))	Evidence Illicit Discharges	Date of Follow-up	Flow Est (gallon/min)	Conductivity (µS)	Turbidity (NTU)	DO (mg/L)	pH (pH Units)	Temp (°C)	Ammonia (mg/L)	Chlorine (mg/L)	Surfactants as (MBAS) (ppm)	Potassium (mg/L)	E. coli (CFU/100mL)	Ammonia/Potassium Ratio	Evaluation	Notes
DIS-161	5/25/2018	11:20	Good	Yes	Yes	N/A	3	690	3.52	9.01	7.38	22.54	0.25	0.13	0	3.7	<10	0.07	Likely natural water source	
DIS-167	3/1/2018	-	Good	No Flow	None	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		
DIS-168	5/30/2018	10:05	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-169	5/25/2018	12:35	Good	Yes	Yes	N/A	10.00	1156.00	0.12	0.13	9.85	22.95	0.25	0.02	0.25	7.20	839.00	0.03	Likely natural water source	
DIS-170	5/30/2018	9:49	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-172	3/1/2018	-	Good	No Flow	None	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		
DIS-173	3/1/2018	-	Good	No Flow	Standing water in pipe	6/20/2018	0.00	-	-	-	-	-	-	-	-	-	-	-		
DIS-174	5/30/2018	11:30	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-176	5/30/2018	11:36	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-178	5/30/2018	1:30	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-180	5/30/2018		Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-181	5/30/2018	12:20	Godo	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-195	5/25/2018	9:30	Good	Yes	Yes	N/A	3.00	299.00	2.62	4.87	7.43	19.44	0.25	1.53	0.00	2.00	<10	0.13	Likely tap or irrigation source	
DIS-204	2/28/2018	10:41	Good	No	No Evidence	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		No Flow
DIS-205	2/28/2018	11:10	Good	Yes	Yes	N/A	0.02	2205	0.93	157	8.93	11.66	0	0	0	6.9	495	0.00	Likely natural water source	Slight irridescense
DIS-211	3/1/2018	-	Good	No Flow	No Evidence	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		
DIS-213	3/1/2018	12:20	Good	No flow	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		Tidal Zone, high tide, no apparent discharge
DIS-236	5/25/2018	10:05	Good	Yes	Yes	N/A	3	440	1.39	5.57	7.56	23.26	0	0.2	0	3.8	2910	0.00	Likely natural water source	
DIS-243	5/22/2018	12:40	Good	No	Yes	6/20/2018	0	-	-	-	-	-	-	-	-	-	-	-		
DIS-244	5/22/2018	12:50	Good	No	None	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-275	5/22/2018	10:15	Good	Yes	Yes	N/A	0.05	347.00	1.56	7.36	7.39	18.85	0.00	0.10	0.25	9.20	177.00	0.00	Likely natural water source	
DIS-276	5/22/2018	10:40	Good	No	Yes	6/20/2018	0	-	-	-	-	-	-	-	-	-	-	-		
DIS-277	3/6/2018	12:44	Good	Yes	Yes	N/A	3.00	945.00	0.01	0.80	7.24	8.08	0.00	0.01	0.25	6.20	10.0	0.00	Likely natural water source	
DIS-298	3/1/2018	-	Broken	No Flow	No Evidence	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-		
DIS-299	3/1/2018	-	Good	No Flow	Standing water in pipe	6/20/2018	N/A	-	-	-	-	-	-	-	-	-	-	-		standing water/ no flow
DIS-300	3/1/2018	-	Good	No Flow	Yes	6/20/2018	0	-	-	-	-	-	-	-	-	-	-	-		standing water/ no flow
DIS-303	5/22/2018	11:55	Good	Yes	Yes	N/A	0.02	484.00	0.04	7.85	7.73	17.66	0.25	0.01	0.25	8.80	266.00	0.03	Likely natural water source	
DIS-306	5/22/2018	11:15	Good	Yes	Yes	N/A	0.05	762.00	0.19	9.33	7.66	19.18	0.25	0.04	0.25	10.40	<10	0.02	Likely natural water source	
DIS-324	5/25/2018	11:00	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		Possible washwater
DIS-407	3/1/2018	11:25	Good	Yes	Yes	N/A	0.03	2628.00	0.45	0.46	7.45	12.35	0.35	0.05	0.25	18.60	4110	0.02	Likely natural water source	
DIS-535	Aquarium																			
DIS-669	5/22/2018	12:07	Good	No	Yes	6/20/2018	0.00	-	-	-	-	-	-	-	-	-	-	-		
DIS-67	6/1/2018	9:45	Good	Yes	Yes	N/A	<1	682	0.01	6.5	6.78	18.01	0	0.06	0.25	12.9	2010	0.00	Likely natural water source	
DIS-670	5/22/2018	11:55	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-677	2/28/2018	10:42	Good	No	Yes		-	1188.00	0.01	11.75	8.51	10.60	0.25	0.24	0.25	11.5	<10	0.02	Likely natural water source	Slight Oily Sheen
DIS-759	5/30/2018	11:00	Good	Yes	Yes	N/A	2	1120	0.57	7.08	7.85	18.83	0.25	0.04	0.25	9.3	30	0.03	Likely natural water source	
DIS-760	5/30/2018	11:25	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-761	5/30/2018	12:30	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-766	5/22/2018	13:30	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-767	5/22/2018	13:00	Good	Yes	Yes	N/A	0.05	615.00	0.23	9.46	7.28	15.24	0.25	0.05	0.00	3.40	31.00	0.07	Likely natural water source	
DIS-769	5/22/2018	10:30	Good	Yes	Yes	N/A	0.02	1708.00	0.87	0.15	7.26	16.51	0.25	0.04	0.25	5.50	63.00	0.05	Likely natural water source	
DIS-770	5/22/2018	10:39	Good	Yes	Yes	N/A	0.01	1419.00	0.01	0.23	7.2	15.3	0.00	0.05	0.50	5.4	41	0.00	Possible washwater	

Site	Date	Time	Physical Condition	Flow (Yes / (No)	Evidence Illicit Discharges	Date of Follow-up	Flow Est (gallon/min)	Conductivity (µS)	Turbidity (NTU)	DO (mg/L)	pH (pH Units)	Temp (°C)	Ammonia (mg/L)	Chlorine (mg/L)	Surfactants as (MBAS) (ppm)	Potassium (mg/L)	E. coli (CFU/100mL)	Ammonia/Potassium Ratio	Evaluation	Notes
DIS-812	6/1/2018	10:40	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-	Possible washwater	
DIS-830	5/30/2018	11:50	Good	Yes	Yes	N/A	1	844	1.64	11	7.41	18.68	0	0	1	7.3	20	0.00	Possible washwater	
DIS-851	5/25/2018	11:35	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-852	Can't Find																			
DIS-853	5/25/2018	11:50	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-892	3/1/2018	13:45	Good	Yes	Yes	N/A	0.08	1006.00	0.37	0.03	7.14	12.76	0.25	0.05	0.25	7.10	243	0.04	Likely natural water source	
DIS-893	3/1/2018	14:00	Good	Yes	Yes	N/A	0.05	1007.00	0.01	0.05	7.19	11.44	0.25	1.00	0.25	6.60	75.0	0.04	Likely natural water source	
DIS-903	2/28/2018	12:35	Good	Yes	Yes	N/A	0.02	995	0.54	110.8	7.95	11.17	0.03	0.03	0	6.7	288	0.00	Likely natural water source	Some sediment, low flow
DIS-964	5/30/2018	10:30	Good	Yes	Yes	N/A	10	1054	0.84	7.23	7.16	18.75	0.25	0.05	3	6.8	465	0.04	Possible washwater	
DIS-914	6/1/2018	11:00	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-936	5/22/2018	12:25	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-937	5/22/2018	12:40	Good	No	Yes	6/20/2018	0.00	-	-	-	-	-	-	-	-	-	-	-		
DIS-938	5/25/2018	10:13	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-953	6/1/2018	10:20	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-963	5/30/2018	11:20	Good	No	No	N/A	-	-	-	-	-	-	-	-	-	-	-	-		
DIS-968	2/28/2018	12:28	Good	Yes	Yes	N/A	-	2380	1.1	10.13	7.79	11.46	0.00	0.12	0.25	23.5	75	0.00	Likely natural water source	Medium Flow
DIS-983	5/22/2018	1:15	Good	Yes	Yes	N/A	0.02	693.00	0.59	6.44	7.58	19.60	0.25	0.03	0.25	7.10	31.00	0.04	Likely natural water source	
DIS-1440	6/20/2018	12:50	Good	Yes	Yes	N/A	<1	507	3.73	4.64	7.88	22.84	1	0.14	0.25					