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REPORT

December 22, 2023

CITY OF
Stamford
CONNECTICUT

Reporting Period 7/1/2020 – 6/30/2021

CT DEEP National Pollutant Discharge Elimination System Permit for the Discharge of Stormwater from Municipal Separate Storm Sewer Systems (MS4)

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Introduction & Overview

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. Renewal for this permit was submitted to Connecticut Department of Energy and Environmental Protection (CTDEEP) on August 6, 2021. This permit requires many actions to reduce pollution from stormwater runoff.

This Annual Report (Report) covers the period from July 1, 2020 through June 30, 2021 (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 2019–20 MS4 final Annual Report was submitted to CTDEEP on January 21, 2021.

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 CTDEEP 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. The new permit is pending renewal from CTDEEP.

Notice of Sufficiency from the CTDEEP was received on July 9, 2019. The letter indicates the application is in technical review and permit # CT 0030279, which expired on June 3, 2018 will continue to be effective until the commissioner disposes of the renewal application.

1.2 Annual Report Development Team

Table 1.1 SWMP DEVELOPMENT TEAM		
Name	Organization & Title	Address & Phone
Thomas Turk	City of Stamford, Road Maintenance Division Manager	90 Magee Ave, Stamford, CT 06902 (203) 977-5919
Tyler Theder	City of Stamford, Stormwater Management Department Regulatory Compliance and Administrative Officer	90 Magee Ave, Stamford, CT 06902 (203) 977-5281
Matthew Quinones	City of Stamford, Office of Operations Director of Operations	888 Washington Blvd, Stamford, CT 06901 (203) 977-4141
Ralph Blessing	City of Stamford, Land Use Bureau Land Use Bureau Chief	888 Washington Blvd, Stamford, CT 06901 (203) 977-4714
James Lunney	City of Stamford, Land Use Bureau-Zoning Office 888 Zoning Enforcement Officer	888 Washington Blvd, Stamford, CT 06901 (203) 977-5944
Louis Casolo	City of Stamford, Engineering City Engineer	888 Washington Blvd, Stamford, CT 06901 (203) 977-5796
Robert Clausi	City of Stamford, Environmental Protection Board Executive Director	888 Washington Blvd 5th floor, Stamford, CT 06901 (203) 977-1541
Cindy Barber	City of Stamford, Land Use Bureau-Information Technology	888 Washington Blvd, Stamford, CT 06901 (203) 977-5360
Raju Vasamsetti	Weston & Sampson Project Manager	712 Brook Street, Suite 103, Rocky Hill, CT 06067 (860) 513-1473

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. This permit was renewed in February 2018. The new modified permit renewal is pending approval from CTDEEP. 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 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 2021-22 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.

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. During the 2019-20 Reporting Period, the City received a draft revised SMP from Fuss & O'Neill and will be reviewing and finalizing the SMP. The SMP is complete, and the document as updated as necessary.

3.0 SUMMARY TABLE OF SMP COMPONENTS

A summary table of SMP components was not completed for this reporting period. *Appendix B* is intentionally left blank.

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. Responsibility for Traffic functions within this department has since been shifted to the newly created Traffic, Transportation, and Planning Department, as of approximately 2017.

Much of the first year of the new permit was utilized by the 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* 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 Road Maintenance Division Manager. 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.

As of 2014, the City created and filled five positions under the direction of the Regulatory Compliance and Administrative Officer; the positions currently include five (5) Heavy Equipment Operators (HEO's) to operate equipment related to the required stormwater control measures contained in the Permit. In July 2020, due to budget cuts related to the COVID pandemic, the City's elected boards and the Administration eliminated five (5) HEO positions from the Road Maintenance Department and one (1) HEO from the Stormwater Management Department. The elimination of these positions created a direct impact of service reduction to residents and will impact the quantity of stormwater control measures implemented during the 20-21 reporting year. Additional information regarding this will be provided during the next reporting period.

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, and the coastal boundary.

The City continues to update and reuse mapping for 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, 2021, the City has mapped 964 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 4.5* and *Section 4.4.2* 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 form 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.
  - Best management plans for pesticides
  - Information on preventing stormwater pollution in English and Spanish
  - 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 4,284 hits on the website. There was an 128% increase in web traffic compared to 2019-2020, which totaled 3,360 hits to the City's 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 not held via Zoom on 8/25/2020. The notice of meeting was published in the Stamford Advocate and filed with the Town Clerk. There were no attendees from the public at the meeting and no comments were submitted.

- The City maintains 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) and the City is installing new signs in hot spot locations, based on field observations. The City's Parks Department has taken over ordering responsibilities for pet waste bags with the exception of Mill River Park. The budget for pet waste bags was increased from $7,700 dollars to $10,740 dollars during the Reporting Period as these stations have been popular with park visitors. City staff have observed the used bags disposed of in the trash containers throughout the areas with dispensers. No new pet waste stations were installed during this Reporting Period.

- The Mill River Collaborative performs annual clean ups, improvements, and provides educational programming within the City. Approximately 114 volunteer hours were provided from over 42 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 riverbanks using organic biologs
    - invasive species removal by hand (mugwort, Queen Anne's lace, loosestrife, wild lettuce, white clover, ailanthus, burdock, bindweed)
    - planting native perennials
    - 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 to strengthen the relationship with the community.

- The Mianus Chapter of Trout Unlimited continued work to educate, rebuild, restore and protect the area of the Mianus River.

- The Nature Conservancy (TNC), a non-profit organization which promotes environmental conservation, gifted the City's first bioswale which was approved by the Board of Representatives on May 22, 2019. The bioswale removes contaminants from stormwater surface runoff and complies with the MS4 permit. Installation was completed in Rippowam Park on September 16, 2019. This bioswale was honored with a Changemakers Resiliency Award by the Business Council of Fairfield County in partnership with the Stamford 2030 District. The City has received a proposal for construct additional bioswales throughout the City. Based on the success of the Rippowam Place bioswale installation, the City looks to work in the future with the Downtown Special Services District (DSSD) and other City agencies to plan, install, and maintain additional bio-swale structures.

- 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 are primarily installed on curb-backed catch basins. Currently, the City estimates it has installed medallions on approximately 60-65% of the City- maintained catch basins during the 2019-2020 reporting period. The City was unable to significantly add to the medallion program in 2020-2021 due to staffing shortages related to COVID. 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 collaborated with a marketing and public relations firm to develop stormwater management outreach materials in English and Spanish. These are available online and at the government center.

- The City celebrated Earth Day on 4/22/2021, during this reporting period no Earth Day event was held due to COVID.

- The City's Recycling and Sanitation Department conducted one Household Hazardous Waste Collection event on Saturday, July 17, 2021. An event was not conducted in 2020 due to the Covid-19 pandemic.

- On October 24, 2020, the Stamford Police Department hosted a National Rx Drug Take-Back event. The event collected a record 699 pounds of unused and unwanted medicines from residents. As part of the event, the police department provided services for residents to drop off their unused or

expired medications. The event was publicized through informative links for the event posted on the City's website, under Public Safety, Health and Welfare Administration. The event was staffed from 10am to 2pm at a drive through setup at police headquarters. Clearly some portion of this material could have been flushed by residents, and ultimately make its way to the WPCA treatment plant, which does not have the ability to remove certain chemicals from treated waste, prior to discharging to Long Island Sound.

- City staff continued to engage with Downtown Special Services District (DSSD) regarding the condition of their dumpster storage and grease area. The area was professionally cleaned with the reclamation of any wash water used in the process. An emergency spill kit was purchased and provided to DSSD by the City.

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.

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. Due to the COVID-19 pandemic, on July 15, 2020 staff hours at the Recycling Center were reduced from six (6) days a week to one (1) day a week. In the fall of 2020, and due to numerous complaints from residents, the Recycling Center hours of operation were increased to two (2) days per week. As of August 3, 2021, the Recycling Center hours of operation were increased to five (5) days per week. During the Reporting Period, approximately 4,320-gallons of used motor oil and 2,611-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 2020 and 2021, the City hosted an HHW collection day on July 17, 2021, at the Rippowan Middle School on High Ridge Road. A collection was not hosted in 2020 due to the Covid-19 pandemic. During this Reporting Period 565 households and 0 half-households participated. In addition, Stamford residents can 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 7.05 tons of universal wastes and 105 tons of consumer electronics 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 one (1) spill 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 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 2023–24 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 2018-19 Reporting Period. See *Appendix E* for a table of the total nitrogen used at the City-owned ball parks.

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

No PHFs are used on city park green spaces.

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

With respect to the City-owned golf courses, the NPDES Permit requires that the City implement practices which achieve a ten percent (10%) reduction in total nitrogen by June 3, 2018. The reduction will be determined by the average annual usage, by weight, of the three years preceding the current NPDES Permit. The current SMP has established the application rates of fertilizers used at the golf courses, which can be found in *Appendix B* of the SMP.

During the Reporting Period, the Sterling Farms Golf Course used a total of 400 pounds of nitrogen and the E. Gaynor Brennan Municipal Golf Course used a total of 1,759 pounds of nitrogen. The total 2,159 pounds of nitrogen used in the Reporting Period represents a 51.5 percent reduction from the total nitrogen that was used in 2019-20 (4,187 pounds). 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 10,177.5 tons of salt during 12 storms for a combined total of 39.3 inches of snow during the winter of 2020-21. Salt usage quantities will continue to be tracked and the City's goal is to reduce the amount of salt 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 winter of 2020-2021 brought significant icing events, which the City continued to address with a Special Hazard Area program for ice control. These areas were especially vulnerable to roadway icing conditions due to a variety of factors including high groundwater table, improper road design, inadequate roadway drainage, residential sump pumps draining to the street, blocked catch basins, and other factors. Salt trucks were deployed to these Special Hazard Areas when nighttime temperatures fell below freezing levels in an effort to maintain safe roadway conditions at all times. In an effort to reduce salt usage, the stormwater management department has worked to correct the factors and field conditions which contribute to water and ice on city roadways.

The City's brine system was operational during the 2020-2021 reporting period with the 5,000-gallon brine tank located at the Town Yard Facility (105 Haig Ave.). This tank was filled twice during the winter season. 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 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. As part of this review and approval process, the Engineering Department reviews stormwater and drainage for proposed developments and site plan revisions.

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 include provisions to encourage

low impact development (LID) practices to maximize infiltration and minimize stormwater runoff. The regulations 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 applicants with information on the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. Applicants are being informed about stormwater management issues at the time Environmental Planning Board (EPB) and Planning & Zoning signoffs 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 continues to explore alternative ways for providing information 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 near 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 SMP makes referrals as necessary to EPB where ESC's and construction site stabilization issues are observed.

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, driveways, 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 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.

The City has continued efforts to reducing DCIA coverage through LID developments throughout the City. In 2019, the City was gifted its first bioswale by The Nature Conservancy, a nonprofit which promotes environmental conservation. The bioswale was constructed in the City right- of-way, near the intersection of Rippowam Place and Washington Blvd. The purpose of the bioswale is to remove pollution from surface runoff water. This installation was conducted in accordance with the DEEP MS4 permit requirements. The Stormwater Management Department was instrumental in coordinating efforts from numerous entities to see the project to completion.

4.3.5 Infrastructure Operations and Maintenance

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

4.3.5.1 Employee Training

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

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

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

Training was conducted on June 27 and 28, 2019 for Universal Waste Management, Spill Prevention Control and Countermeasures Plan, and Stormwater Pollution Prevention Plan training. Approximately 23 employees were in attendance from City-owned facilities at this training event. Due to the COVID-19 pandemic, annual training was postponed during the Reporting Period 2020 to 2021. Training will resume once the public health status allows for it.

The City is dedicated to ensuring that its employees continue to gain the necessary knowledge needed for understanding and implementing the SMP 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 are 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 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 is established.

The SWCPA performs routine maintenance and any necessary repairs on the four (4) stormwater pump stations on an annual basis. Funding for WPCA Maintenance is allocated to the Stormwater Management Operating Budget and back charged by the WPCA, annually.

During the Reporting Period, the City received a total of approximately 41.46-inches of liquid equivalent water (LEW). LEW is a measure of liquid precipitation, which has fallen to the ground in any precipitation type (rain, sleet, hail, snow, etc.). This data was retrieved from the National Climate Data Center (NCDC) for the Westchester County Airport weather station in New York located immediately west of the City. The precipitation amount received is 7.89-inches less than the 1981-2010 climatological average of 49.35-inches for the Westchester Airport. This information is important due to the impact heavy rainfall has on MS4 Permit compliance regarding maintaining City stormwater infrastructure and responding to emergencies that arise after heavy precipitation events.

As of January 1, 2016, the Road Maintenance Department/Stormwater Management Department are responsible for tracking the catch basins and stormwater manholes that require repairs. Previous lists of required repairs were maintained by the Engineering Department. Drainage structures that require repair will be prioritized and assigned for repair by private contractors, accordingly.

The City hired Grasso Companies to conduct infrastructure maintenance and repairs on the MS4 system during this Reporting Period. This work was part of the city-wide street patch and resurfacing Capital Work. In total, 3,384 linear feet of piping was replaced, 566 catch basin frame grates were replaced, 79 bell traps were installed, 323 manhole covers and frames were replaced, and 12,042 tons of new bituminous concrete (asphalt) were installed.

The City hired Arnow Construction to conduct drainage work on the MS4 system during this Reporting Period. This work was part of city-wide catch basin and manhole repair capital work. In total, 47 pipes were repaired, 353 linear feet of piping was replaced, 46 catch basin sumps were replaced, 19 catch basin frame and grate was reset, and 11 manhole frames were replaced. See *Section 4.3.5.7* for additional details on catch basin cleaning. A list of 2020-21 catch basin/manhole repairs is presented in *Appendix H*.

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 2015 after employees completed the necessary one-week training on the truck and equipment. Employees were re-certified in 2018. The City is working on arranging new training session for all SMD employees at this time. 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.

During the 2020 - 2021 reporting period, the City hired a private contractor, OneVac, LLC, to clean catch basins, high pressure jet storm piping, and conduct CCTV inspections on all stormwater infrastructure for roads to be paved during the upcoming paving season. It is the City's intent to ensure that stormwater infrastructure is in good condition, and repaired, if necessary, to protect the investment in paving. The total linear footage of piping videoed during the reporting period is estimated to be many thousands of feet, and the City maintains paper and electronic records of all piping inspected and televised, which can be made available upon request. A review of invoices for work performed by the contractor during the 2020-2021 period reveals an expenditure of $189,455.64 for this work. The contractor also generates sketches of piping configurations, which are maintained with these records. The Stormwater Management Department communicates data generated from this important fieldwork to the GIS department in an effort to maintain the GIS data base with the latest and most current information. The contract for OneVac has been extended and will also cover the same types of work for the 2021-2022 reporting period.

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 4.5* 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 continues to install bells on additional catch basins in parts of its MS4 where trash and floatables are a problem.

The city currently maintains a fleet of three (3) vacuum trucks.

The 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.

A total of 35 miles of roadways were paved during the Reporting Period. The City purchased approximately $95,000 worth of asphalt from three different vendors for use in roadway patching of potholes.

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, 2021, collected 1,955 tons of street material during the Reporting Period.

Sidewalk and curbside sweeping are 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.

The NPDES Permit requires the City to implement a street sweeping program to remove snow, sediment, and debris from all city owned streets and parking lots. 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. The City understands the importance of sweeping completely to the curb line or edge of pavement.

4.3.5.5 Leaf Collection

In 2020, the City’s leaf pickup program was substantially completed on November 12th. Every street in the City is swept clean as a part of this program. A total of 16,934 tons of leaves were collected that is 33,868,000 lbs of leaves and is 3,429 tons more than the 2019 to 2020 period.

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 the first business day after Veterans Day in November. The exact completion date depends on weather conditions and competing demands (snow removal and road salting for staff and equipment). The first snowfall occurred on December 16th, which resulted in the City converting trucks from leaf duty to snow duty. 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. Approximately 20-30 additional seasonal workers are hired to assist with the leaf program.

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, 500 doubled sided color flyers were printed and distributed to municipal buildings throughout the city. 22,388 postcard mailers were sent to single family homes, a half-page ad was placed in the Stamford Advocate and on the City's website, flyers were placed throughout the City to remind the citizens that leaves collected were not to be placed in the roadways. The initial program was to collect bagged leaves only which the outreach campaign advertised. Information was posted to the City's website at www.stamfordct.gov/leaves. 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 as an enforcement mechanism for any violators of the City's ordinances. Yellow door hangers were used as NOVs for properties with leaves in the street far in advance of the program. Red door hangers were used as NOVs for properties with leaves placed in the street after the city completed leaf pick in that area.

The Tropical Storm Isais brought destruction to the City of Stamford on 8/4/2020. This resulted in staff from Highways/Stormwater Operating Heavy Equipment (loaders and heavy trucks) to collect and haul this storm and tree debris, city-wide. Other city services (catch basin cleaning, pothole patching, sweeping, etc.) were impacted due to staff being reassigned to storm cleanup. CTDEEP issued Emergency Authorization 20202077-EA, in conjunction with this event.

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 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 generally applied only twice for each storm – once at the beginning to prevent ice from binding and once at the end of prevent re-freezing. The regulatory compliance and administrative officer have been enforcing illegal discharges of private basement sump pumps into the right-of-way, rather than simply treating these areas with removal of additional de-icing materials.

During this Reporting Period, the City compiled a list of Special Hazard Areas which were more prone to icing conditions due to a variety of factors including: high groundwater table, improper roadway design, blocked catch basins, sump pumps from residential properties, and other factors. These areas were checked and treated by City staff whenever temperatures dropped below freezing levels.

During this Reporting Period, the West Beach parking lot was prepared from November through April with haybales, catch basin filter fabric, 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 2020-21 Reporting Period, at least 1,350 catch basins throughout the city were inspected and cleaned. Approximately 1,669-tons of materials were removed from the basins during the Reporting Period. This equates to 3,338,000 pounds of waste that was captured and processed and did not enter the City's waterways, streams, rivers, or Long Island Sound. These numbers do not include drainage structures pumped and cleaned by the City's supplementary drainage contractor (One Vac., LLC), for roads to be paved.

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
- (4) Elgin Pelican sweepers purchased between 2008 and 2015
- 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 with Stetco hydraulic cranes – purchased in 2016
- Caterpillar mini-excavator – purchased in 2014 and used for culvert cleaning work.
- 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.
- Utility truck with a crane and lift gate to assist with catch basin replacement, manhole replacement, stormwater drain medallion installation, curb back bolts, water barrier installation, and spill response.

In 2014, the City hired five heavy equipment operators to support this program for stormwater management and compliance activities (see *Section 6.0*).

Additionally, the City continues to use a software tracking program and iPads to track catch basin inspections, cleaning, and repair progress. The MS4 Front software was brought on-line in October 2014 and has proven to be a valuable assessment tool.

4.3.5.8 Culvert Cleaning

During the Reporting Period, the City performed maintenance activities at 4 culverts over approximately 5 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. During the Reporting

Period, over 40 cubic yards of sediment was removed from the culverts and drainage channels. A list of 2020-21 culverts cleaned is attached 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. The City is considering utilizing outside contractors to assist with inspections and any follow-up work that may be needed.

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 (CTDOT)
- Town of New Canaan, CT
- Town of Darien, CT
- Town of Greenwich, CT
- Town of Pound Ridge, NY

The Connecticut Department of Transportation (CTDOT) 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 CTDOT's MS4 in some locations and CTDOT's MS4 flows into the City's MS4 at other locations. The City communicates with CTDOT, as needed, primarily when the City receives complaints of clogged CTDOT storm drains.

The City has mapped out most of the interconnected MS4 areas during the development of the new SMP. 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 correspond with neighboring municipalities to refer maintenance items on an as-needed basis.

4.3.5.11 Referrals

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

City of Stamford Highway Department

- Approximately 10 referrals were provided to the City's Highway Department for items including: potholes, utility work, contractor trenches, aprons to control stormwater flow, curbing to direct flow and limit erosion, sidewalk trip hazards and sinkholes in the roadway.

City of Stamford Engineering Bureau

- 6 referrals were provided to the City's Engineering Bureau for items regarding: management and oversight of utility contractors as related to street opening permits issued by the Engineering Bureau, poor trench compaction or failing subbase prior to pavement activities, poor trench compaction at newly installed manholes in city right of way for private development, compromised or failing corrugated metal culvert piping, water and icing over road with no piping installed with the need for easements and piping and drainage design, installation of new catch basins and curbing, sink holes related to storm pipe issues, roadway ponding after storms, requesting capital projects to design and install and control roadway damage, failing headwall and eroding roadway at storm culvert.
- 3 referrals were completed by the City's Engineering Bureau for items including: 36" pipe replacement on Frank Street, Stamwick Circle excavation and stabilization and Cascade road drainage improvements.

Sweeping Referrals Provided to Various Entities

- Approximately 20 referrals were provided to Road Maintenance/Highway Department regarding dirt/rock/gravel/debris spilled on roadway, sweeping targeted areas (e.g. roadside swale excavation), General Permit compliance purposes, as related to milling and road paving, leaves, tree debris, heavy trash areas.
- Conducted at least three (3) post and tow operations.
- Conducted targeted sweeping on dozens of streets where Highway Department Supervisors observed trash, debris, sand, gravel, etc.

Stormwater Referrals Provided to the Environmental Planning Board (EPB)

- 3 referrals were provided from the EPB for items regarding: building permit work, failed erosion and sediment controls on active construction site, asphalt patching work in roadway, wetlands and watercourses notification.
- 5 referrals were provided to the EPB for items regarding: grading and filling with no erosion controls, river and bridge obstructions, tree removals proximate to wetlands.

Referrals Provided to the CTDOT

- 10 referrals were provided to CTDOT for items regarding: performance of CTDOT MS4 drainage infrastructure where interconnected to the City's MS4, citizen requests to pump and clean catch basins, potholes or failing pavement at CTDOT storm manholes, water on road (State Highway Long Ridge Road), open or damaged CTDOT manhole covers.

Curbing Referrals

The Road maintenance department handles curbing requests and estimates at least 200 were received during the 2020-21 Reporting Period. The average curbing request is about 40 linear feet based on the average repair length. The city estimates about 8,000 linear feet of asphalt curbing repair during the reporting period.

Other Referrals

- Referrals made to Eversource: three (3) referrals made regarding utility trenches which were failing, electrical manholes, vaults, and other structures in need of repair.
- Referrals made to WPCA: 25 referrals made regarding issues with sanitary infrastructure (damage or paved over manholes), sanitary lateral repair work, pavement sinking, plan review item, and sinkholes.
- Referrals from WPCA: 13 referrals were received regarding wastewater treatment plant permit exceedances (13 exceedances during monitoring period), reporting issues with stormwater infrastructure (damaged manholes and catch basins), correspondence from the public about regulatory procedure and wastewater/stormwater discharge.
- Referrals made to Parks Department: 6 referrals made regarding requests to prune trees, shrubs, vegetation to gain access to catch basins, requests to cut or remove trees for culvert cleaning and swale construction, requests to remove logs and debris at bridges stuck on the upstream side, requests to prune or remove low hanging trees.
- Referrals made to City of Stamford Health Department: one (1) referral was made regarding leaking sanitary treatment facilities at city owned care facility.

4.4 Monitoring Program

In addition to the screening and monitoring activities associated with the IDDE Program (see *Section 4.5*), 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.

4.4.1 Dry Weather Outfall Screening for Illicit Discharges

Dry weather outfall screening was conducted during this period as part of the IDDE follow up. Summary tables of the analytical data for the dry weather outfall monitoring are presented in *Appendix J*.

4.4.2 Wet Weather Outfall Monitoring

To date, 108 of the 191 known wet weather outfalls were sampled.

West weather screening was not conducted during this period due to COVID protocols.

4.5 Illicit Discharge Detection and Elimination (IDDE) Program

IDDE will lessen the number 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 Road Maintenance Division or reported via the City's stormwater management website.

4.5.1 Dry Weather Outfall Screening for Illicit Discharges

Due to COVID protocols, dry weather outfall screening was not conducted.

4.5.2 Illicit Discharge Investigations

Additionally, during the Reporting Period, the City continued to utilize Harbor Watch / Earthplace to assist efforts related to illicit discharge detection and source identification. Harbor Watch was directed to go into the field to gather and analyze samples during wet and dry weather conditions, in an effort to quickly ascertain and isolate suspected illicit discharges, in the interest of public health, safety, and welfare. When there is a discharge of suspected contamination or pollutants in stormwater, efforts to inspect and identify are very time sensitive. In the interest of promptness, these efforts are sometimes directed regardless of precipitation events. In some cases, multiple samples are collected at the same location over an extended time period in an effort to build a more comprehensive data set and gain a better understanding of how precipitation events can impact a discharge. A good example of this occurred in early 2019 when a failing septic field was found to be leaking onto the roadway and ultimately into down gradient catch basins. During the 2018-2019 Reporting Period, Harbor Watch was awarded a Five Star and Urban Waters Restoration Grant from the EPA for their efforts to reduce pollutants to numerous watersheds.

Harbor Watch screened 69 locations during this Reporting Period. A flow was observed, and samples were collected at 54 of the locations. Harbor Watch submitted a total of 42 samples for analysis. Harbor Watch also produced a Fairfield County River Report which also provided valuable information about the water quality data for the Mianus and Noroton Rivers during both wet and dry sampling events which occurred between September 2020 and June 2021. Summary tables of the analytical data for the dry weather outfall screening and sampling efforts are presented in *Appendix L*.

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 2019-20 Reporting Period. Results are listed below:

- Outfalls DIS-70 and DIS-71, which discharge the Toilsome Brook to the Rippowam River, just north of the Fire Station on Washington Blvd., received significant efforts, which built upon work from the previous reporting period of 2019-2020. There was a reported petroleum sheet in the Rippowam River, which was tracked back to DIS-70 and DIS-71, which are located next to each other. The outfalls were boomed, and product collected was tested and recovered by CT DEEP contractor ACV Environmental. On 12/12/2020, the origin of the pollutants was discovered to be a leaky hydraulic elevator in the parking garage of a hotel. Hydraulic fluid leaked from the elevator piston and flowed down into the sump of the elevator shaft, where a small pump collected and conveyed any liquids at the base of the elevator to a catch basin in the garage, just a few feet away. Numerous 55 gal. drums of hydraulic oil observed in garage next to elevator. NOV sent by SMD to owner 12/15/23. Point at which pollutants entered the river was nearly 3,000 feet away.

- Outfalls DIS-70 and DIS-71 also confirmed to have evidence of sanitary contamination as per EPA Administrative Order from 2015. On 5/13/21, cast in place concrete stormwater culvert, vicinity of 1900 Summer St. was inspected by contractor as directed by SMD. Contractor indicated open hole at top of concrete culvert and flow coming into top of the chamber. Sample collected and confirmed sanitary discharge infiltrating into the chamber. Subsequent dye testing in existing 18"tile WPCA sanitary main, which is located above the cast in place concrete stormwater culvert, confirmed the leak from sanitary to storm occurring at this location. Estimated sanitary flow was 1-2 GPM. On 3/10/2022, contractor working on behalf of WPCA lined this leaking segment of 18" tile piping. Subsequent confined space entry confirmed no leaks into ceiling after sanitary pipe successfully lined.

- Noroton River in vicinity of Camp Ave and Woodway Rd. investigated by Harborwatch on 4/8/21 due to instream elevated bacteria. Investigation did not reveal any confirmed pollutant source as of this writing.

- Blachley Road vicinity. Samples collected in catch basin 6/8/21 and 6/10/21. CCTV work also conducted. Does not appear to be any piped connection conveying pollutants. Suspected restaurant possibly washing / cleaning service items outside and flow entering private catch basin on the premises. SMD continuing to monitor.

- Outfall screening at WPCA plant DIS-1467, DIS-1466, DIS-6, MH-22 in response to sewage spill. Upgradient drainage structures pumped and cleaned.

- Hycliff Terrace at Halliwell Drive. Observed live WPCA sanitary main pipe running through existing storm manhole. Reported to SMD 8/3/20 that WPCA pipe needed repairs. Minor leak occurring. Sampling conducted. WPCA sanitary pipe repaired and encased in concrete to prevent any additional leakage.

4.5.3 Illegal Connections

As a result of the IDDE program the City has identified multiple areas of concern, which will receive further investigation. The City continues to track, identify, and eliminate illegal connections.

4.6 Legal Authority

In 2015, the Board of Representatives approved Section 201 (Regulation of MS4), to the City code of ordinances as related to the NPDES Permit. The legal authorities established the following:

- 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. Section 15 of the Zoning Regulations became effective June 2, 2020, and the City's first ever Drainage Manual became effective 6/10/20. The SMP will be updated accordingly to reflect the newly established authorities.

Several written and verbal warnings were issued during this Reporting Period as part of the implementation of the City's new stormwater ordinance. The warnings issued are listed below:

4.6.1 Written Warnings

Written Warnings Issued: 11
Violation: Discharge of water to roadway, tracking or pushing material on to roadway from contractors yard or residence, contributing pollutants to MS4 system, obstruction of MS4 discharge pipe, and deposit of snow and ice in roadway.

No doorhangers placed during the 2020-2021 reporting period due to conditions related to COVID pandemic.

4.6.2 Verbal Warnings

Verbal Warnings Issued: 1
Notes: Verbal warnings were issued for items including: discharge of water on to roadway.

5.0 SUMMARY OF PROPOSED SMP MODIFICATIONS

The SMP was updated and submitted to the DEEP on September 2, 2014. Revisions to the SMP are substantially complete and will be submitted to CTDEEP during the 2023-2024 Reporting Period.

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 new modified permit renewal is pending approval from CTDEEP.

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 State 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 geographic 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 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 no 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 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 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 waters, 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; an (iv) which is not part of a POTW.

"NOV" or "Notice of Violation" means a noticed 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 discernable, 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, 2020, through June 30, 2021.

"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.

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 in an effort to achieve compliance with the NPDES Permit.

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 Road Maintenance Division has an overall total operating budget of $6,377,988 for Fiscal Year 2020-2021 ($43,541 increase from the FY 2019-2020 Adopted Budget).

The FY 2019-20 operating budget for MS4 stormwater management is $1,163,534 (a decrease of $36,195 from the FY 2019-20 Adopted Budget).

The operating budget for snow removal is $1,299,351 (an increase of $318,292 from FY 2019-20 Adopted Budget).

The operating budget for leaf collection is $387,890 (an increase of $59,085 from FY 2019-20 Adopted Budget). Originally, the City planned on eliminating loose leaf collection from their leaf pick-up program which reduced the cost of the program. The City's legislative body was able to secure funding to expand the leaf pick-up program to include loose leaf pick up.

The operating budget for road maintenance, including: street sweeping, pothole repairs, debris removal and infrastructure improvements is $3,484,153 for Fiscal Year 2020-21 (an increase of $9,846 from the FY 2019-20 Adopted Budget).

The capital budget covers long term projects to provide improvements to the City. These capital projects have the potential to impact the quality of stormwater discharged to waterbodies.

Capital project C56119, Citywide Roadway Correction managed by the Engineering Bureau, requested $450,000 in construction related costs for FY 2021-22. The requested funds are for design work and construction activities associated with the project. The requested funds and current balance will be used to fund road failure at June Road, June Road/ Guinea Road Intersection, and other various locations based on citizen reports.

Capital project C16012, Citywide Storm Drains managed by the Engineering Bureau, required $3,250,000 in construction related costs for FY 2021-22. The requested funds are to fund drainage improvements in order of the project's severity and readiness. The projects are Westhill Road/Drum Hill Lane, Bird Song Lane, Newfield court, Tod lane, and Wire Mill Road. The current balance will be used to fund drainage improvements at Leory Place, Stanwick Circle, Pheasant Lane, and city-wide drainage improvement.

Capital project CP2703, Bouton Street Culvert Replacement, requested $200,000 for FY 2021-22. The requested funds are to be used towards the replacement of the concrete box culvert under Bouton Street West which is significantly deteriorated.

Capital project 000594, Pakenmer Road Reconstruction, requested $300,000 for FY 2021-22. The funds will be used to reconstruct Pakenmer Road to the City's standards. Pakenmer is approximately 350 linear feet of road.

Capital project CP0123, West Beach Boat Ramp Replacement, requested $820,000 for FY 2021-22. The requested funds are to replace the existing boat ramp, add another row of floating docks, parking lot improvements, timber jetty repairs and dredging.

Capital project CP1074, Pine Hill Drainage, requested $2,500,000 for FY 2021-22. The requested funds are to upgrade the existing undersized drainage system. The current budget managed by Engineering Bureau will be used to perform the final design upon approval of the construction budget request. The drainage system design will increase water intake into the stormwater system and requires the acquisition of 2 property easements and street closure. The project will upgrade the system from a 2-year storm to a 25-year storm event.

Capital project, C16020 Toilsome Brook, requested $50,000 for FY 2021-22. The requested funds managed by the Engineering Bureau will be used to prepare hydrologic and hydraulic analysis of Toilsome Brook Culvert and flooding in the vicinity of Dannell Drive.

Capital project, CP0093 Scofieldtown Park Design and Remediation, requested 210,000 for FY 2021-22. The current balance will be used to fund asphalt parking lot, entry way plaza & connect pathway, 2 compost toilets, picnic shelter and benches, and paving pathway/drainage to the tennis courts. The requested funds will be used towards completing the playground.

Capital project, CP7908 Mill River Greenway North, requested $100,000 for FY 2021-22. The requested funds are a provisional figure to help ensure the lighting conduits can be used in the project. This project includes new paths, lighting, green infrastructure that will protect water quality,

new plantings and an environmental education landscape, managed by the Land Use Bureau. The project will be funded from repurposed Federal funds originally for a ferry terminal project totaling $1, 949,920 of Federal funds with $487,480 local (20%) match.

Capital project, C5619 Paving & Drainage, requested $100,000 for FY 2021-22, managed by the Parks Department. The requested funds will be used for grading and filling of park property access/parking lot upgrades. Cove Island and K Park walking paths to be upgraded, Stamford Driveway and Parking Lot, Kosciuszko Park Driveway and Parking Lot. Remaining balance will towards the Barrett Park Playground area with installation of a curtain drain to prevent flooding.

Capital project, CP0232 Athletic Fields Renovation, requested $100,000 for FY 2021-22, managed by the Parks Department. The requested fund will be used on the Cummings Field #1 Softball Turf Infield to create new drainage/ infield.

Capital project, CP8701 John Bocuzzi Park at Southfield, requested $500,000 for FY 2021-22, managed by the Parks Department. The requested funds are for Phase 2 of the project. Phase 2 includes relocating the park lot out of the flood plain, Interim dun escape where current parking lot is located with interim walkways, and entrance relocation to Congress street.

Capital project CP0211, Environmental Compliance, requested $50,000 for FY 2021-22, managed by Road Maintenance and Stormwater Departments. The requested fund is to ensure compliance with MS4 related issues. It is used to investigate and access and correct as necessary of drainage systems discharging into water body rivers, ponds, etc. and to evaluate Public Service facilities and modify practices in compliance with state and federal regulations.

Capital project C56182, Street Patch and Resurfacing, requested $10,000,000 for FY 2021-22, managed by the Road Maintenance and Stormwater Departments. The requested funds are to patch and resurface Stamford's roadway infrastructure using accepted engineering standards. Including milling, overlay, reconstruction, associated fixes to public streets and associated subsurface replacements for drainage systems.

Capital project C56129, Citywide Manhole and Basin, requested $1,000,000 for FY 2021-22, managed by Stormwater Department. The funds will be used to maintain and make repairs when needed to over 12,000 catch basins manholes which are located in the City's road network.

Capital project CP8711, Traffic/Road Paving and Drainage, requested $400,000 for FY 2021-22. The funds will be used to repair or replace any drainage structure which are located in roads which are scheduled to be repaved.

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 2021-22 are available on the City's website at http://www.stamfordct.gov/, under the Office of Policy and Management Link.

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 Road Maintenance Department with the issuance of the NPDES Permit in June 2013. While evaluating the permit requirements, the Road Maintenance Supervisor and Pollution Prevention Team Coordinator, Thomas Turk, began to assess the staff and resources necessary to achieve and maintain compliance. Since Road Maintenance Department took over responsibilities for implementing the MS4 permit.

Five 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 heavy equipment operator retired in July 2020, but a new operator was hired during the 2020-2021 period.

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 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. An Environmental Enforcement Officer, working under the direction of the Regulatory Compliance Officer in the Stormwater Management Department, is also needed to assist with inspections and field work.

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 B

STORMWATER MANAGEMEN PLAN SUMMARY TABLE

Appendix B is intentionally left blank.

APPENDIX C

UPDATED CITY OUTFALL LOCATION MAPS

City of Stamford Outfalls as of June 30, 2021

Map Key

- Outfalls (964 points)
- Hydrology
- Parks
- I-95 & Merritt Pkwy
- Major Arterials
- All Other Roads
- Railroads

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 2/2022.

APPENDIX D

2020-2021 SPILLS

Fire Department

Hazmat List by Incident

Alarm Date Between {07/01/2020} And {06/30/2021}

Chemical Name	Container	Qty Released	Released Into
20-0004913 07/09/2020 13:22:53			
N/A		3 Gallons	Water
20-0005258 07/20/2020 08:24:42			
Methane(compressed gas)	Pipe or pipeline	1000 Parts per	Air
20-0006278 08/09/2020 14:33:19			
Diesel fuel UN#:1202		100 Gallons	
20-0006469 08/14/2020 19:53:00			
Natural gas		850 Parts per	Air
20-0007066 09/04/2020 17:27:21			
Natural gas UN#:1971		5000 Parts per	Air
20-0008977 11/08/2020 13:19:38			
Carbon Monoxide		35 Parts per	Air
20-0009319 11/20/2020 23:50:49			
Carbon monoxide UN#:1016		12 Parts per	Air
20-0009779 12/08/2020 12:32:46			
unknown		2 Ounces (liquid)	
20-0009865 12/12/2020 00:03:34			
Ethyl methacrylate UN#:2277	Can or bottle	1 Ounces (liquid)	Air
20-0009879 12/12/2020 14:05:55			
Natural gas		1000 Parts per	Air

Fire Department

Hazmat List by Incident

Alarm Date Between {07/01/2020} And {06/30/2021}

Chemical Name	Container	Qty Released	Released Into
20-0010151 12/22/2020 10:44:06			
Ammonia UN#:1002 CAS#:7664417	Pipe or pipeline	50 Parts per	Air
21-0000261 01/11/2021 18:16:06			
Natural Gas		1 Parts per	Confined, no
21-0000916 02/08/2021 11:35:03			
Methane - Natural Gas UN#:1971	Pipe or pipeline	1450 Parts per	Air
21-0003506 05/20/2021 09:31:07			
Petroleum UN#:1738		10 Ounces (liquid)	Ground
21-0004382 06/16/2021 10:18:51			
diesel		1 Gallons	
21-0004421 06/17/2021 17:49:16			
motor oil		4 Liters	
21-0004432 06/18/2021 10:14:41			
Methane - Natural Gas UN#:1971		2700 Parts per	
21-0004817 06/30/2021 08:05:54			
LPG UN#:1075 CAS#:68476-85-7		4000 Parts per	Air

APPENDIX E

2020-2021 PESTICIDE, FERTILIZER, AND HERBICIDE USE

Nitrogen Totals up to June 30, 2021

	Greens (4 Acres)	Total	Tees (3.5 Acres)	Total	Fairways (23 Acres)	Total	Rough (10 Acres)	Total
Granular	None	None	.5 LB/N/m	75 LBS N	None	None	1 LB/N/m	400 LBS N
Liquid	3.0 LBS/N/m		1.35 LB/ N/m		1.8 LBS N/m		n/a	

APPENDIX F

2020-2021 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 2020-21, EPB staff reviewed 1,372 applications for building/septic permit, and evaluated 204 formal applications from the various Land Use Boards and standalone applications. The movement towards electronic services due to the pandemic resulted in more than 26,966 email responses to public inquiries. In addition, EPB staff participated in the review of numerous projects of value and interest to the City including the proposed Soundwaters building in Boccuzzi Park, City Bridge projects as well as large private developments.

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

Environmental Protection Board	FY 2016-17	FY 2017-18	FY 2018-19	FY2019-20	FY 2020-21
Walk-ins	4,568	4,146	4,400	2,955	n/a[1)]
Building & Septic Permits	1,355	1,318	1,438	1,210	1,372
Customer emails	n/a	n/a	3,830	14,030	26,996
Referrals from other Depts	231	244	266	225	204
Enforcement (inspections & complaints)	442	586	370	278	244

[1)] EPB was working remotely during the pandemic. Staff returned to the office full-time in September, 2021

03/02/2022

APPENDIX G

CITY STAFF TRAINING EVENTS SIGN-IN SHEETS

FUSS & O'NEILL

Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Arthur Springer Jr.		Hwy
2	Chris Rivera		Hwy
3	Rob Bucco		Hwy
4	Phil Markey		Hwy
5	Giancarlo Raimondi Jr		Hwy
6	Hanhet Castillo		Hwy
7	Michael Estremera		Hwy
8	Derek Alma		Hwy
9	John Cornelio Jr		Hwy
10	Robert Ashland		Hwy

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 Statures (CGS) Section 22a-430-3b:
Site's Stormwater Pollution Prevention Plan (SWPPP)
SWPPP Training Power Point Presentation (by F&O)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

_____, _____, Fuss & O'Neill, Inc
Printed Name Signature

FUSS & O'NEILL

Employee Training
Stormwater Pollution Prevention Plan (SWPPP)
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Joseph Coplon	Joseph Coplon	HWY
2	Liam Kenny	Liam Kenny	HWY
3	Dylan Pellini	Dylan Pellini	HWY
4	Aaron Moses	Aaron Moses	HWY
5	JEAN PROSPER	[illegible]	Hwy
6	[illegible]	[illegible]	" "
7	TYLER THEDER	[illegible]	Stormwater
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 Statures (CGS) Section 22a-430-3b:
Site's Stormwater Pollution Prevention Plan (SWPPP)
SWPPP Training Power Point Presentation (by F&O)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

____________________, ____________________, Fuss & O'Neill, Inc

Printed Name Signature

FUSS & O'NEILL

Employee Training
Universal Waste, Used Oil and CT Regulated Wastes
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	ROB Buzzeo		Hwy
2	Arthur Springer Jr		Hwy
3	John Cornelio Jr.		HWY
4	Giancarlo Raimondi Jr		Hw
5	HANLet Castillo		Hy
6	Derek Aime		HWy
7	Phil Markey		Hwy
8	Michael Estremera		Hwy
9	Robert Ashlund		Hwy
10	Aaron Moses	Aaron Moser	Hwy

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)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

_____, _____, Fuss & O'Neill, Inc
Printed Name Signature

FUSS & O'NEILL

Employee Training
Universal Waste, Used Oil and CT Regulated Wastes
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Liam Kenny	Liam Kenny	HWY
2	Dylan Pellini	Dylan Pellini	HWY
3	Joseph Coplon	Joseph Coplon	Highway's
4	Ronnie Caporale		" "
5	JEAN PROSPER		Hwy
6	Chris Rivera		Hwy
7	TYLER THEDOR		Stormwater
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)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

_____, _____, Fuss & O'Neill, Inc
Printed Name Signature

FUSS & O'NEILL

Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Chris Rivera		Hwy
2	Arthur Springer Jr		Hwy
3	Rob Buzzeo		Hwy
4	Phil Markey		Hwy
5	Giancarlo Raimondi Jr		Hwy
6	Hanlet Castillo		Hwy
7	Michael Estremera		Hwy
8	Derek Almo		Hwy
9	John Cornelio Jr		Hwy
10	Robert Ashlund		Hwy

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)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

_____, _____, Fuss & O'Neill, Inc
Printed Name Signature

FUSS & O'NEILL

Employee Training
Spill Prevention Control and Countermeasure (SPCC) Plan
City of Stamford – Highway Department
Date of Training: June 16, 2022

Attendees Sign-In:

	Name Printed	Name Signed	Company / Work Function
1	Joseph Coplon	Joseph Coplon	HWY
2	Liam Kenny	Liam Kenny	HWY
3	Dylan Pellini	Dylan Pellini	HWY
4	Aaron Moses	Aaron Moses	HWY
5	JEAN PROSPER	JP	Hwy
6	Ronnie Capocelli	RC	" "
7	TYLER THEECK	TT	Stormwater
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)

Training Facilitator: Justin Penfield, P.E., Fuss & O'Neill

_____, _____, Fuss & O'Neill, Inc
Printed Name Signature

APPENDIX H

2020-2021 CATCH BASIN / MANHOLE REPAIRS LIST

Annual Report - Completed MS4 Repairs - Based on Service Requests and Field Inspections 7/1/2020 - 6/30/2021 Period

Service Request # GovQA	Date	Location/Address	Reported or Observed Issue	Status	Date	Repair Date	Status	Repair Completion Date	Contractor	Comments
	03/22/16	70 New England Dr.	Basin repair - **PRIORITY**	Sent to Arnow	1/20/2021	4/1/2021	Basin is repaired	03/09/16	Reliable	
W479742-082316	09/07/16	16 Dzamba Grove	Basin repair	Sent to Arnow	1/20/2021	4/7/2021				
W479740-082316	09/07/16	48 New England Drive	Basin repair	Sent to Arnow	1/20/2021	4/1/2021				
W532285-090220 W516067-041619	02/27/17	Rocky Rapids Rd at Riverbank -S./&North Side of rd.	Basin repair (TT) Masonry work required - reported by J. Hart / B. Denison	Sent to Arnow	1/20/2021	4/1/2021				
W521928-091719 W533811-101620 W526128-022820 W532847-091720	03/02/17	40 Eljays Lane	Basin repair (TT) Masonry work req'd - hole next to CB. **PRIORITY**	Sent to Arnow	11/20/2020	12/15/2020				
W517346-052119 W524590-122419	05/11/17	91 Rolling Wood	Basin repair (TT) masonry work req'd - hole next to CB - reported by J. Hoyt. Barrel 5/21/19. **PRIORITY**	Sent to Arnow	7/28/2020	9/28/2020				
W516623-050119 W517380-052219 W516483-042819	05/22/17	65 Arden Lane	Basin Repair (TT) masonry work req'd - reported by B. Denison	Sent to Arnow	7/28/2020	9/23/2020				
	06/08/17	880 East Main (E.Main & Crystal)	Basin Repair (TT) masory work req'd - reported by j. hoyt - barrel placed 6/8/17. **PLATED PRIORITY**	Sent to Arnow	7/22/2020	8/6/2020				
	07/13/17	139 Ursula Place	Basin Repair - hole next to basin; barrel. Sweeper hit 1/7/20. Water barrier 1/7/20	Sent to grasso	4/20/2021	6/15/2021				
W491948-072517 W508392-082018	07/25/17	71 Campbell Dr	Basin Repair (TT) basin collapsing. **PRIORITY**	Sent to Arnow	11/19/2020	1/27/2021				
W521736-091019 W530212-072120 W510930-110618 W493868-090617	09/07/17	60 Fox Hill on Fox Ridge Rd.	Basin Repair (TT) Masonry work req'd - hole next to CB. Barrel placed.	Sent to Arnow	3/9/2021	4/1/2021				
W497045-120317 W493847-090617	09/07/17	54 West Hill Circle	Basin Repair (TT) masonry work req'd - hole next to CB **PRIORITY.** Water barrier placed 3/19/19	Sent to Arnow	7/28/2020	9/1/2020				
W512987-011819	09/18/17	35 Plymouth	Basin Repair - CB sinking - Flat top in driveway	Sent to Arnow	4/7/2021	5/14/2021				
	10/17/17	Daskam Crystal Lafayette Intersection	MH Repair - sinking MH per B. Denison - **PRIORITY**	Sent to Arnow	7/8/2020	8/6/2020				
W493049-081617 W513888-022119 W515644-040719	08/16/17	87 Fishing Trail	CB Repair - 2 holes next to CB - cones placed over holes. Water barrier placed 2/22/19	Sent to Arnow	7/28/2020	9/15/2020				
W515537-040419 W515536-040419	02/06/18	96 Summit Ridge	CB Repair - hole next to cb. Barrel placed 4/5/19.	Sent to Arnow	2/5/2021	4/7/2021				
	02/06/18	1648 Shippan Ave.	Broken Curb back - give to Arnow. TT inspected - complete 11/18/20			11/18/2020				
W500381-022018	02/22/18	25 Chesterfield Road	CB Repair - sinking CB. Barrel replaced 2/4/20	Sent to Arnow	2/5/2021	3/29/2021				
	02/26/18	429 Eden Road	CB Repair - hole next to CB - placed cone - reported by B. Denison	Sent to Grasso	1/7/2021	1/27/2021				
W530565-073020	04/21/18	535 Newfield Ave. on Fairland St.	CB Repair - Structure is compromised 4/18 Hole at CB 7/31/20. T. Theder	Sent to Arnow	4/7/2021	5/6/2021				
W506702-071118	04/25/18	28 Blue Ridge Drive	CB Repair - hole in conc.Frame.needs repairs.B.Denison inspected 4/25. BD barrel 7/12/18. **PRIORITY**	Sent to Arnow	9/24/2020	11/13/2020				
W517708-053119 W531997-082620	05/04/18	25 Highline Trail South	CB Repair - reported by B. Dension. Cone in place as of 5/31/19. email to mayor office9/28/20 **PRIORITY**	Sent to Arnow	11/19/2020	12/10/2020				
	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	Sent to Arnow	11/19/2020	12/16/2020				
W509262-091518 W520037-072519 W517261-051719	05/14/18	5 Leona Drive at Mary Violet Rd.	CB Repair - hole @ CB, dbl sump.JC placed barrel5/14/18. Barrel gone1/29/20. Water Bar. replaced1/30/20.	Sent to Arnow	5/12/2020	7/27/2020				
W528431-060220	05/17/18	2 Owen St. on McMullen St	CB Repair - hole next to CB. B. Denison placed barrel 5/17. **PLATED**	Sent to Arnow	4/7/2021	5/13/2021				
W504794-052518 W529030-062020	05/25/18	45 Rockledge on Ocean Drive East	CB Repair - hole next to CB - B. Denison inspected. Water Barrier 6/22/20	Sent to Arnow	4/7/2021	5/10/2021				
W504977-053018 W515785-040919	05/31/18	20 Florence Court	CB Repair - hole next to CB - B. Denison inspected. Barrel placed 4/10/19.	Sent to Arnow	3/9/2021	3/30/2021				
	05/31/18	74 Colonial Road	CB Repair - hole next to CB - B. Denison inspected. Upgraded from cone to tall cone 11/2/18.	Sent to Grasso	5/6/2020	8/12/2020				
	06/06/18	379 Shippan Ave	CB Repair - hole next to CB. Reported by WPCA - cone placed. Barrel 7/26/18	Sent to Colona	8/20/2020	9/24/2020				
W529635-070820	06/26/18	59 Barmore Drive West	CB Repair - Hole next to CB. Water Barrier placed 6/26/18	Sent to Arnow	4/7/2021	4/27/2021				
	07/16/18	Springdale Train Station	CB Repair - hole next to CB reported by Orazio. Barrel placed 7/25	Sent to Arnow	6/8/2021	6/25/2021				
	07/23/18	11 Cypress Drive	MH Repair - needs to be cut out and raised to fin. Grade	Sent to Arnow	1/20/2021	4/1/2021				
	08/24/18	Across from 1665 Hope Street	CB Repair - Conc. Frame loose and fused to grate. Fieldstone sump. Needs precast. Barrel 8/24/18	Sent to Grasso	1/27/2021	2/4/2021				
W527754-050820 W527750-050820	09/06/18	60 Lanark Road	CB Repair - basin collapsing. Placed barrel 9/6/18	Sent to Arnow	2/5/2021	3/29/2021				
W527754-050820 W527750-050820	09/06/18	59 Lanark Road on ODN	CB Repair - Hole next to CB. Placed barrel 9/6/18	Sent to Arnow	2/5/2021	3/29/2021				
	09/11/18	759 Atlantic Street	CB Repair - Hole next to CB. Has a barrel as of 9/13/18 PRIORTIY. Needs new MH, CB, and pipe	Sent to Arnow	12/31/2020	4/12/2021				
W509203-091318 W527163-041920	09/14/18	197 Stamford Ave	CB Repair - Hole next to CB. Double CB. Barrel placed 9/13/18	Sent to Arnow	2/5/2021	3/29/2021				
W474164-032116	09/21/18	9 Howes Ave.	CB Repair - Hole next to CB. B. Denison - Barrel placed 9/19/18	Sent to Arnow	6/8/2021	6/25/2021				
W509255-091518 W519818-072119 W526169-030120	09/21/18	21 Bradley Place	CB Repair - Hole next to CB. B. Denison - Barrel placed 9/19/18. **PRIORITY**	Sent to Arnow	7/28/2020	9/25/2020				
	12/10/18	282 Eden Road	CB Repair - Basin sinking / collapsing - needs repair. B.Denison placed barrel 12/10/18. **PLATED**	Sent to Grasso	1/7/2021	1/20/2021				
	12/19/18	91 Hope at Howes Ave.	CB Repair - hole next to CB. Denison placed barrel 12/19/18	Sent to Arnow	12/31/2020	2/24/2021				
W519585-071619 W521073-082019 W526567-031920	12/26/18	43 Myano Lane	CB Repair - Holes next to CB - B. Denison placed barrel 12/26/18. **PLATED** 7/2/20	Sent to Arnow	9/24/2020	1/8/2021				
	01/08/19	345 Stamford Ave.	MH Repair - MH Paved over - TT located and painted -Raise to fin. Grade	Sent to Arnow	2/5/2021	3/29/2021				
W521433-090219 W516392-042519 W522199-092619 W518288-061719 W512952-011719 W512450-123018	01/18/19	88 Malvern Rd.	CB Repair - Hole next to CB - B. Denison to place barrel 1/18/19	Sent to Arnow	7/28/2020	9/23/2020				
W513497-020619	02/18/19	204 Joffre Ave.	CB Repair - basin collapsing - hole next to CB. Barrel placed 2/18/19. **PRIORITY**	Sent to Arnow	12/31/2020	1/27/2021				
W530188-072120	03/25/19	Rock Rimmon Road at Scofieldtown	CB Repair - basin collapsed 3/25/19. Barrel placed 3/25/19. **PLATED** 7/21/20	Sent to Arnow	9/24/2020	11/17/2020				
W514908-031919	03/27/19	308 High Ridge Rd. at Colony Court	CB Repair - hole next to basin. BD placed cone 3/25/19. Barrel placed 2/26/21	Sent to Arnow	5/6/2021	6/2/2021				
W515547-040519 W519692-071719	04/05/19	21 Myano Court	CB Repair - hole in lawn behind CB. Barrel placed 4/2/19.	Sent to Arnow	5/6/2021	6/15/2021				
	04/10/19	Opposite 69/63 Fenway St.	CB Repair - hole @ cb.Barrel 4/10/19. Hole @ walk AND road 1/24/20. **PLATE 9/16/20 - PRIORITY**	Sent to Arnow	9/24/2020	12/1/2020				
W517348-052119 W521873-091519 W532618-091120	04/25/19	157 Sweet Briar Road	CB Repair - hole next to CB.	Sent to Arnow	9/24/2020	10/27/2020				
	04/25/19	59 Parry Court	CB Repair - hole next to CB - low priority small hole.	Sent to Grasso	1/27/2021	2/23/2021				
W516378-042519	04/26/19	37 Brownley Drive	CB Repair - hole next to CB. Barrel in place 11/6/19.	Sent to Arnow	5/6/2021	6/2/2021				
	04/26/19	40 / 28 Brownley Drive	CB Repair - hole next to CB. Cone	Sent to Arnow	5/6/2021	6/2/2021				
	04/30/19	637 Shippan Ave	CB Repair - old style CB - no curb back. Minimum needs new cast iron grate and frame	Sent to Grasso	10/1/2020	12/1/2020				
W516595-043019	05/01/19	91 West Hill Circle	CB Repair - hole next to CB. Tall cone 5/1/19. Theder inspected 5/18/20-sump OK- needs top and frame rese	Sent to Arnow	7/28/2020	9/1/2020				
W516260-042319 W516343-042419 W522961-102319 W531225-081120	05/01/19	112 / 114 Pine Hill Ave.	CB Repair - conc. Curb back - frame separated from conc. Reported Lotz. Barrel placed 5/1/19	Sent to Arnow	12/31/2020	1/27/2021				
W516623-050119 W516483-042819 W527647-050520	05/01/19	70 Arden Lane	CB Repair - hole next to CB.	Sent to Arnow	7/28/2020	9/23/2020				
W518237-061619	06/19/19	130 Henry St. on Garden St.	CB Repair - hole next to CB. Cone placed 6/10/19. Barrel placed 12/18/19. Email S. Halpern 5/11/20	Sent to Arnow	11/19/2020	1/8/2021				
	07/01/19	306 Hope St. on Colonial Rd.	CB Repair - hole next to CB. Reported highways. BD left cone/barrel 7/1/19.	Sent to Grasso	5/6/2020	7/1/2020				
W518989-070519 W520888-081519 W519058-070819 W524659-122919 W529090-062220 W529082-062220 W533097-092420 W534359-110520 W536263-010421	07/08/19	47 / 53 Sleepy Hollow Lane	CB Repair - Barrel placed 7/8/19. **Repair by fall 2020**	Sent to Arnow	9/24/2020	6/7/2021				
W518800-070219	07/11/19	53 Deep Spring Lane	CB Repair - Cone placed 7/11/19. ttheder.	Sent to Grasso	1/27/2021	2/5/2021				
W520086-072619	07/26/19	145 Prudence Drive	CB Repair - hole next to CB. TT cone 7/26/19. Barrel 8/5/19. **PRIORITY END OF 2020**	Sent to Arnow	12/31/2020	1/27/2021				
W533975-102220	08/02/19	74 Wedgemere Rd.	CB Repair - sinking / tilted / small hole. Cone in place 8/2/19	Sent to Arnow	6/8/2021	6/25/2021				
W520127-072819 W520123-072819	08/01/19	405 Old Long Ridge Rd.	CB Repair - hole next to CB. TT cone 8/1/19	Sent to Grasso	8/15/2020	9/25/2020				
W493049-081617 W513888-022119 W515644-040719 W516248-042219 W519209-071119 W520007-072519 W520477-080519	08/19/19	12 Fishing Trail at West Trail	CB Repair - hole next to CB. Barrel 8/16/19	Sent to Arnow	7/28/2020	9/15/2020				
W520167-072919	08/23/19	21 Tyler Drive on Fox Ridge Rd.	CB Repair - hole next to CB. TT cone 8/23/19	Sent to Arnow	3/9/2021	4/5/2021				
W521589-090619 W509981-100518	09/09/19	105/109 Fourth St.	CB Repair - hole next to CB. Barrel placed 9/9/19. **PRIORITY SPRING 2021**	Sent to Arnow	3/9/2021	4/13/2021				
W524319-121319 W530539-072920	09/13/19	417 Ocean Drive West at Stamford Ave.	CB Repair - hole next to CB. Barrel placed 9/13/19	Sent to Arnow	2/5/2021	3/29/2021				

W521873-091519 W523459-111219	09/18/19	149 Sweet Briar Rd.	CB Repair - hole next to CB at driveway. BD left tall cone. Rechecked 1/31/20	Sent to Arnow	9/24/2020	10/27/2020					
W517988-060619	10/10/19	24 Club Circle	CB Repair - hole next to CB. J.Hoyt placed barrel. Double CB. Sump OK - reset exist. Frame	Sent to Arnow	4/7/2021	4/28/2021					
W521742-091019	10/18/19	49 Autumn Lane	CB Repair - hole next to CB. TT left cone 10/18/19	Sent to Arnow	4/7/2021	5/5/2021					
	10/22/19	65 Haviland Rd.	CB Repair - A. Turner reported collapsing. BD left tall cone 10/22/19	Sent to Arnow	11/19/2020	1/8/2021					
W531997-082620	11/30/19	107 Highline Trail	CB Repair - leaf pick up ripped frame off of sump.BD Barrel 11/25/19 **PRIORITY**	Sent to Arnow	12/3/2020	12/10/2020					
	12/04/19	162 Colonial Road	Pipe Repair - replace lateral from CB to MH 1095. Reported 8" clay - broken. Needs replacment.	Sent to Grasso	4/30/2020	8/12/2020					
W492477-080317	12/04/19	25 Buckingham Court	CB Repair - hole next to CB in driveway. Barrel 12/4/19	Sent to Arnow	3/9/2021	4/13/2021					
W529785-071320	12/09/19	310 Hycliff Terrace	CB Repair - Needs new frame and curb back. Damaged by loader during leaf pick up	Sent to Arnow	12/31/2020	3/31/2021					
	12/09/19	Opposite 61 Seaview Ave. Halloween YC - North side	CB Repair - hole next to CB. Barrel TLT 12/9/19. Water Barrier 8/4/20.	Sent to Grasso	8/31/2020	9/15/2020					
	12/09/19	Opposite 61 Seaview Ave. Halloween YC - South Side	CB Repair - hole next to CB. Barrel TLT 12/10/19	Sent to Grasso	8/31/2020	9/15/2020					
	12/17/19	Behind 24 Culloden Road on Crystal St.	CB Repair - Grate / frame sinking and needs to be reset. Barrel 12/17/19	Sent to Arnow	7/8/2020	7/24/2020					
	01/15/20	31 Rugby St. at Elmcroft Rd.	CB Repair - Hole next to CB. Barrel BD 1/13/20	Sent to Arnow	9/24/2020	11/13/2020					
W526022-022320	02/25/20	166 Cove Rd. on Lockwood Ave.	CB Repair - Hole next to CB. Barrel placed 2/25/20	Sent to Arnow	12/31/2020	3/30/2021					
W526087-022620 W526069-022520 W536999-013021	02/27/20	21 Kane Ave.	CB Repair - Hole next to CB. Barrel placed 2/27/20. **PRIORITY**	Sent to Arnow	3/9/2021	4/13/2021					
W526090-022620	02/27/20	91 Colonial Road	CB Repair - Hole next to CB. Barrel placed 2/26/20	Sent to Grasso	5/6/2020	8/12/2020					
	03/27/20	6 Brandywine Rd.	CB Repair - Grate/frame collapse. **PLATED** 3/27/20	Sent to Arnow	9/24/2020	12/3/2020					
	04/17/20	88 Hamilton Ave.@bottom of hill	CB Repair - Barrel placed 4/14/20. **PRIORITY**	Sent to Arnow	4/7/2021	5/19/2021					
W526751-032920	04/20/20	101/97 West North St.	CB Repair - Barrel placed 3/29/20.Hole next to CB. Barrel 12/12/19	Sent to Arnow	3/9/2021	4/16/2021					
W527398-042520	04/27/20	84 West Hill Circle	CB Repair - Barrel placed 4/27/20	Sent to Arnow	7/28/2020	9/1/2020					
	05/21/20	Bangall Road at Riverbank Rd.	CB Adjustment - Relocate CB to new roadside swale.Asphalt complete 9/28. Needs curb.	Sent to Arnow	5/15/2020	10/1/2020					
W528900-061720 W528459-060320 W536839-012221	06/17/20	25 Sutton Drive West	CB Repair - Hole at CB.broken asphalt,sump wall bowed.Needs new sump. Barrel 6/17/20 **Fall2021M.Pollard**	Sent to Arnow	3/9/2021	4/8/2021					
	07/01/20		CB Repair - Hole next to CB. Double CB. BD left barrel - 7/1/20	Sent to Arnow	9/24/2020	10/27/2020					
W529795-071320	07/13/20	73 Parry Court	CB Repair - Hole next to CB. Barrel - 7/13/20	Sent to Grasso	1/27/2021	2/23/2021					
	07/20/20	158 Skyview Dr.	MH Repair - sinkhole in road at MH. **PLATED** 7/20/20. Arnows road plate	Sent to Arnow	7/18/2020	10/19/2020					
	07/21/20	79 Liberty St.	CB Repair - CB frame loose. Needs to be reset. **PLATED**	Sent to Arnow	9/24/2020	12/3/2020					
W530591-073120	08/03/20	26 Strawberry Hill ave. on Hoyt St.	CB & MH Repair - CB sinking, MH frame unsupported. Left cone on CB	Sent to Arnow	3/9/2021	4/27/2021					
	08/05/20	225 Halliwell Dr. on Emery Drive East	CB Repair - Broken 4"ht. curb back. Change out frame and provide new curb back	Sent to Arnow	12/31/2020	1/27/2021					
	08/10/20	46 Valley Rd.	MH Repair - Broken ring - remove ring, reset frame. **PRIORITY BEFORE WINTER 2020**	Sent to Arnow	9/24/2020	11/18/2020					
	08/12/20	441 Cove Rd.	CB Repair - Failing conc. Curb back frame. Water barrier placed	Sent to Arnow	1/20/2021	3/30/2021					
W531590-081820	08/19/20	110 Maple Tree Ave.	Sinkhole - **PLATED** Grasso to repair - 8/19/20	Sent to Grasso	8/21/2020	8/25/2020					
	08/20/20	355 Atlantic St	MH Repair - MH ring cracked - hit by car - needs to be reset **PLATED** 8/20/20	Sent to Grasso	8/26/2020	9/1/2020					
W531751-082220 W531704-082020	08/24/20	71 Bartina Lane	CB Repair - hole at CB. Reset top and frame. Barrel placed 8/24/20	Sent to Arnow	2/5/2021	4/6/2021					
	08/26/20	6 Victoria Lane at Summit Ridge	Pipe Repair - Sinkhole in road. CCTV work on 8/25/20. Replace 35'LF w/12" SDR-35. Cone on 8/12/20	Sent to Arnow	2/5/2021	3/31/2021					
	09/01/20	92 West Hill Circle	CB Repair - Small depression in asphalt near frame. Frame to be reset. Barrel 9/1/20	Sent to Arnow	9/28/2020	10/19/2020					
	09/08/20	50 Dorset Lane	MH Repair - MH damaged - needs new frame	Sent to Grasso	9/28/2020	10/5/2020					
W532922-092020	09/21/20	77 Deleo Dr.	CB Repair - Hole at CB. Barrel placed 9/21/20	Sent to Arnow	5/6/2021	5/27/2021					
	10/14/20	477 Cove Rd.	CB Repair - Hole at CB. Cone placed 10/14/20	Sent to Arnow	1/20/2021	3/30/2021					
	11/17/20	70 Boulder Brook Dr.	MH Repair - covert to 6"ht. frame, mortar to base, 10yds topsoil and seed. Pushed off during leaf.	Sent to Arnow	11/19/2020	11/20/2020					
	11/18/20	129 West Haviland Ln. on Bennington Ct.	MH Repair - hit by loader during leaf. Reset frame	Sent to Arnow	11/18/2020	11/19/2020					
	11/18/20	11 Main St.	Pipe Repair - Excavate and repair/replace. CB not draining - adjacent to purple bridge. CBYD 11/24/20	Sent to Arnow	12/15/2020	1/8/2021					
	11/25/20	911 Largo Dr.	CB Repair - hole at back of CB. TT left cone 11/25/20	Sent to Grasso	12/2/2020	1/8/2021					
	12/16/20	Dale St. at Lillian St.	CB Repair - Hole at CB. Water barrier in place placed 12/11/20. **PLATED** 4/5/21	Sent to Grasso	5/10/2021	5/24/2021					
W532720-091420 W527471-042820	12/31/20	67 Bartlett Ln.	MH Repair - MH low. Frame needs to be cut out and reset.	Sent to Arnow	3/18/2021	4/5/2021					
	01/08/21	Across from 453 Cove Rd. - Chelsea Piers side of Rd.	CB Repair - Frame broken by plow - condition of sump unknown. Barrel placed 1/8/21	Sent to Arnow	1/20/2021	3/30/2021					
W536492-011121	01/11/21	60 Lewelyn Rd.	CB Repair - hole at CB. **PLATED**	Sent to Arnow	2/5/2021	3/30/2021					
	01/15/21	9 Baker Pl.	CB Repair - hole next to basin - reported by one vac	Sent to Grasso	2/17/2021	4/6/2021					
	01/20/21	447 Cove Rd.	MH Repair - cover fused to frame. Asphalt sinking. Arnow replaced cover. Highways asphalted complete.	Sent to Arnow	1/20/2021	3/31/2021					
	01/20/21	368 Hope St.	MH Repair - **2MH's** this loction.Cut out,raise Newframes& cover. **PRIORITY**	Sent to Arnow	4/7/2021	6/14/2021					
	01/27/21	100 Ralsey Rd.	MH Repair - MH frame broken. Small hole. Cover secure. Needs replacement	Sent to Arnow	5/6/2021	5/10/2021					
via email	02/25/21	256 Washington Blvd.	Demo portion of trench drain in driveway apron. Land purchase by TTP and endorsed by legal.	City	4/25/2021	4/25/2021					
	04/12/21	307 Atlantic St.	MH Repair - Missing cover dislodged from ring. Emergency replacement.	sent to arnow	4/12/2021	4/12/2021					
	04/12/21	7 Gaxton at Intervale	MH Repair - sinkhole in road at MH. **PLATED** 4/11/21	Sent to arnow	4/12/2021	4/27/2021					
	04/14/21	600 Westover Rd.	Wall Repair - remove stones from stream and re-mortar in place. **Summer 2021**	Sent to Arnow	5/6/2021	6/14/2021					
	04/22/21	78 Rippowam Rd.	CB Repair - Sinkhole next to CB. Tall cone placed. **PRIORITY**	Sent to Arnow	5/6/2021	6/14/2021					
			Note: As of 3/1/2022, there are 97 Remaining / Outstanding Repair items which do not appear on this list								
			Note: Work on this list performed by various contractors as noted and supplimented by City Staff.								
			Note: Additional detail available as per invoices from contractors and city documentatation.								
			Note: Additional repairs to MS4 Drainage completed by Grasso Construction as part of paving work do not appear on this list.								

APPENDIX I

2020-2021 CULVERT CLEANING LIST

City of Stamford - CT0030279

Open Drainage Channel (Culvert Cleaning and Backhoe Work) 7/1/20 - 6/30/2021

Date	Address / Location	Duration	Manpower	Quan. Of Material Removed	Receiving Stream	Notes
7/6/2020	1074 Sunset Rd. on West Trail	1/2 Day	4 men,mini excavator and small dump trucks	appx. 2 cubic yards - sediment, brush, and debris	Rippowam River	Cleared debris at inlet pipe.
7/14/2020	Opposite #46 Cascade Rd.	1/2 Day	4 men,mini excavator and small dump trucks	appx. 2 cubic yards - sediment, brush, and debris	Noroton River	Cleared debris at end of outfall pipe. Seed and hay to stabalize all soils.
7/20/2020	Opposite #300 Mayapple Rd	1 Day	4 men,mini excavator and small dump trucks	appx. 2 cubic yards - sediment, brush, and debris	Noroton River	Created rip rap leakoff from roadway. Seed and hay all exposed soils.
7/24/2020	479 / 463 / 445 Roxbury Rd.,	3 Days	4 men,mini excavator and small dump trucks	appx. 5 cubic yards - sediment, brush, and debris	Noroton River	Cleared debris & regraded base of open drainage channel - east side of road. Seed and hay to stabalize all soils.
7/31/2020	248 / 253 Thornwood Rd.	1/2 Day	4 men,mini excavator and small dump trucks	appx. 2 cubic yards - sediment, brush, debris, rocks blocking inlet.	Noroton River	Cleared debris and opened up RCP stormwater inlet piping. Seed and hay to stabalize all soils.
8/26/2020	142 Old Long Ridge Rd.	1.5 Days	4 men,mini excavator and small dump trucks	appx. 5 cubic yards removal. Added 2 - 3 yards surge stone and filter fabric to stabalize stream channel.	Rippowam River	Removed debris from strem channel at outlet headwall. Stabalized stream bed. Seed and hay. Work by Grasso Construction.
11/3/2020	8 Stanwick Circle	3 Days	4 men, mini ex, small dump trucks	appx. 20 cubic yards dirt/debris removed. Fill placed in front of MS4 outfall DIS-60.	Rippowam River	Engineering Bureau hired contractor (Arnow Construction) to remove fill placed in front of MS4 stormwater outfall pipe DIS-60. Slopes stabalized, rip rap, seed and hay. RCP pipe jetted. Normal flow restored.
11/6/2020	Opposite #138 Lawton Ave.	1/3 Day	3 men, stetco hydraulic crane	appx. 1 cubic yard	Noroton River	Cleared debris from culvert inlet - sleepy hollow park.
2/7/2020	Opposite #280 Den Rd.	1/3 Day	3 men, stetco hydraulic crane	appx. 1 cubic yard	Rippowam River	Cleared RCP culvert inlets (2) of leaves, roots, and debris.

APPENDIX J

2020-2021 IDDE DRY WEATHER SCREEN DATA SUMMARY TABLE

							0.5	0.01	1.0							0.25	235				
						Field Parameters												Impaired Parameters			
Permit Outfall ID	Condition Level	Date	Time Sampled	Follow Up	Flow (gal/min)	Ammonia (mg/L)	Chlorine (mg/L)	Conductivity (umhos/cm)	Salinity (g/kg)	Potassium (mg/L)	pH	D.O (mg/L)	Turbidity (NTU)	Temp (oC)	MBAs (mg/L)	Escherichia Coli	Total Coliforms	Fecal Coliforms	Enterococcus	Phosphorus
DIS-25	Good	5/27/2020	15:05	No	0																
DIS-32	Good	5/27/2020	10:29	No	2	0.25	0	584.5	0.29	6.2	7.26	9.53	0	10.4	0.25	41	>24200				
DIS-61	Good	5/27/2020	9:30	No	2	0.25	0.01	497.8	0.24	4.4	7.91	9.41	0	11.8	0.25	181	11200				
DIS-66	Good	5/27/2020	10:17	No	0																
DIS-90	Good	5/27/2020	12:04	No	0																
DIS-91	Good	5/27/2020	12:06	No	0																
DIS-92	Good	5/27/2020	11:36	No	0																
DIS-93	Good	5/27/2020	11:40	No	0																
DIS-153	Good	5/27/2020	14:00	No	0																
DIS-156	Good	5/27/2020	13:19	No	0																
DIS-182	Good	5/27/2020	12:44	No	0																
DIS-200	Good	5/27/2020	11:58	No	0																
DIS-278	Good	5/27/2020	9:04	No	0																
DIS-279	Good	5/27/2020	8:53	No	2	0	0.08	423.6	0.2	3.1	7.45	8.64	0	11.6	0.25	86	13000				
DIS-382	Fair	7/30/2020	8:37	No	0																
DIS-425	Good	7/30/2020	10:22	No	0																
DIS-565	Good	7/30/2020	10:02	No	0																
DIS-566	Good	7/30/2020	9:58	No	0																
DIS-568	Good	7/30/2020	9:50	No	0																
DIS-595	Good	7/30/2020	11:40	No	0																
DIS-598	Good	7/30/2020	11:53	No	0																
DIS-606	Good	7/30/2020	8:20	No	0																
DIS-639	Good	7/30/2020	9:00	No	0																
DIS-646	Good	7/30/2020	10:22	No	0																
DIS-649	Poor	7/30/2020	9:59	No	0																
DIS-702	Good	7/30/2020	14:05	No	0.1	0	0.15	1525	0.78	5.3	7.4	4.62	3.11	23.44	0.5	<10	4610				
DIS-703	Good	7/30/2020	9:28	No	0																
DIS-704	Good	7/30/2020	9:11	No	0																
DIS-705	Good	7/30/2020	9:43	No	0																
DIS-1008	Good	7/30/2020	10:31	No	0																
DIS-1009	Good	7/30/2020	10:31	No	0																
DIS-1031	Good	7/30/2020	11:01	No	0																
DIS-1032	Good	7/30/2020	11:09	No	0																
DIS-1033	Good	7/30/2020	11:19	No	0																
DIS-1033A	Good	7/30/2020	11:19	No	0																
DIS-1035	Good	7/30/2020	11:21	No	0																
DIS-1036	Good	7/30/2020	11:28	No	0																
DIS-1249	Good	7/30/2020	10:45	No	0																
DIS-1333	Good	7/30/2020	9:18	No	0																
DIS-1370	Good	7/30/2020	10:10	No	0																
DIS-1473	Good	7/30/2020	10:10	No	0																
DIS-1008A	Good	7/30/2020	10:31	No	0																
DIS-1009A	Good	7/30/2020	10:31	No	0																
DIS-617	Good	8/27/2020	12:13	Yes	0																
DIS-624	Good	8/27/2020	12:21	No	0																
DIS-658	Good	8/27/2020	10:40	No	0																
DIS-886	Good	8/27/2020	10:46	No	0																
DIS-887	Good	8/27/2020	10:54	No	0																
DIS-905	Good	8/27/2020	11:12	No	0																
DIS-909	Good	8/27/2020	11:31	No	1	0	0.06	135	0.078		6.89	3.8	1.76	22.9	0.25						
DIS-972	Good	8/27/2020	12:34	No	0																
DIS-973	Good	8/27/2020	12:40	No	0																
DIS-1011	Good	8/27/2020	10:20	No	0																
DIS-1020	Good	8/27/2020	9:37	No	3	0.25	0.02	247	0.114		7.68	4.13	3.62	20.6	0.25						
DIS-1038	Good	8/27/2020	11:49	No	0																
DIS-1237	Good	8/27/2020	9:46	No	0																
DIS-1468	Good	8/27/2020	8:57	No	0																
DIS-134	Faire	9/23/2020	9:22	No	2	0.25	0.21	1844	1.12	16.1	9.39	7	2.63	17.09	0.5	6130	>24200				
DIS-784	Good	9/23/2020	12:20	No	5	0	0	4523	2.42	20.6	8.79	8.97	0.74	21.83	0.5	31	7270		63		
DIS-1293	UNK	9/23/2020	9:50	No	0																
DIS-1439	Fair	9/23/2020	11:20	No	0	0	0.06	44113	28.45	299	8	6.46	3	21.73	3	1190	>24200	857	8660		
DIS-294	Fair	10/8/2020	14:30	No	0																
DIS-295	Poor	10/8/2020	14:37	No	0																
DIS-296	Good	10/8/2020	14:25	No	0																
DIS-304	Good	10/8/2020	12:00	No																	
DIS-307	Good	10/8/2020	11:30	No	1	1	0.06	633	0.31	9.8	8.23	7.68	0	17.3	1.5	20					
DIS-315	Good	10/8/2020	10:10	No	0																
DIS-325	Good	10/8/2020	13:50	No	0																
DIS-356	Good	10/8/2020	11:53	No	0																
DIS-357	Good	10/8/2020	12:05	No	0																
DIS-359	Fair	10/8/2020	11:15	No	0																
DIS-360	Poor	10/8/2020	11:00	Yes	0																
DIS-361	Fair	10/8/2020	14:43	Yes	0																
DIS-366	Good	10/8/2020	15:00	No	0																
DIS-375	Good	10/8/2020	10:44	No	0																
DIS-386	Good	10/8/2020	11:01	No	0																
DIS-390	Good	10/8/2020	10:45	No	0																
DIS-393	Fair	10/8/2020	13:00	No																	
DIS-395	Good	10/8/2020	12:54	No	0																
DIS-396	Good	10/8/2020	12:38	No	0																
DIS-398	Good	10/8/2020	12:30	No																	
DIS-404	Poor	10/8/2020	12:17	No																	
DIS-409	Good	10/8/2020	10:10	No	0																
DIS-413	Good	10/8/2020	11:07	No	0																

DIS-427	Good	10/8/2020	13:10	No	0														
DIS-429	Good	10/8/2020	11:58	No	0														
DIS-430	Good	10/8/2020	12:18	No	0														
DIS-433	Good	10/8/2020	11:42	No	0														
DIS-444	Fair	10/8/2020	10:23	No	0														
DIS-445	Fair	10/8/2020	9:39	No	0														
DIS-446	Good	10/8/2020	9:06	No	0														
DIS-447	Good	10/8/2020	8:52	No	0														
DIS-542	Good	10/8/2020	10:58	No	0														
DIS-563	Good	10/8/2020	12:08	Yes	0														
DIS-573	Good	10/8/2020	9:57	No	0														
DIS-574	Good	10/8/2020	10:02	No	0														
DIS-575	Good	10/8/2020	11:27	No	0														
DIS-576	Good	10/8/2020	11:32	No	0														
DIS-577	Good	10/8/2020	12:04	No	0														
DIS-578	UKN	10/8/2020	11:50	No	0														
DIS-580	Good	10/8/2020	12:00	No	0														
DIS-586	Good	10/8/2020	13:38	No	0														
DIS-587	Good	10/8/2020	13:26	No	0														
DIS-591	UKN	10/8/2020	14:24	No	0														
DIS-593	UKN	10/8/2020	14:26	No	0														
DIS-594	Poor	10/8/2020	14:35	No	0														
DIS-604	Good	10/8/2020	13:52	No	0														
DIS-605	Good	10/8/2020	13:41	No	0														
DIS-610	Fair	10/8/2020	13:49	No	0														
DIS-611	Fair	10/8/2020	13:56	No	0														
DIS-612	Good	10/8/2020	14:02	No	0														
DIS-613	UKN	10/8/2020	14:33	No	0														
DIS-614	Good	10/8/2020	14:09	No	0														
DIS-627	Good	10/8/2020	12:58	No	0														
DIS-629	Good	10/8/2020	13:22	No	0														
DIS-630	Good	10/8/2020	10:53	No	0														
DIS-293	Good	10/15/2020	9:48	No	0														
DIS-329	Fair	10/15/2020	9:00	No	0														
DIS-348	Good	10/15/2020	13:16	No	0														
DIS-351	Good	10/15/2020	9:53	No	0														
DIS-352	Fair	10/15/2020	9:47	No	0														
DIS-369	Good	10/15/2020	10:48	No	0														
DIS-370	Good	10/15/2020	13:15	No	0														
DIS-372	Good	10/15/2020	11:05	No	0														
DIS-373	Good	10/15/2020	11:00	No	0														
DIS-377	Fair	10/15/2020	11:41	No	0														
DIS-388	Good	10/15/2020	12:05	No	0														
DIS-492	UNK	10/15/2020	11:15	No	0														
DIS-539	Good	10/15/2020	9:16	No	0														
DIS-544	Fair	10/15/2020	11:17	No	0														
DIS-550	UKN	10/15/2020	13:05	No															
DIS-551	Good	10/15/2020	12:39	No	0														
DIS-557	Good	10/15/2020	11:23	No	0														
DIS-592	Good	10/15/2020	12:45	No	0														
DIS-599	Good	10/15/2020	14:10	No	0														
DIS-635	Good	10/15/2020	12:18	No	0														
DIS-637	Good	10/15/2020	13:10	No	0														
DIS-638	Good	10/15/2020	10:00	No	0														
DIS-640	Fair	10/15/2020	12:14	No	0														
DIS-644	Good	10/15/2020	14:10	No	0														
DIS-656	Good	10/15/2020	11:53	No	0														
DIS-666	Fair	10/15/2020	12:37	No	0														
DIS-667	Fair	10/15/2020	12:58	No	0														
DIS-668	Good	10/15/2020	10:48	No	0														
DIS-671	UKN	10/15/2020	13:41	No	0														
DIS-674	UKN	10/15/2020	11:02	No	0														
DIS-680	Good	10/15/2020	10:06	No	0														
DIS-685	Fair	10/15/2020	10:50	No	0														
DIS-693	Good	10/15/2020	11:57	No	0														
DIS-695	Good	10/15/2020	11:24	No	0														
DIS-696	Good	10/15/2020	11:30	No	1	0	0.14	448.7	0.22	6.3	10.54	7.33	0.87	16	0.5	717	10500		
DIS-697	Good	10/15/2020	11:45	No	0														
DIS-698	Good	10/15/2020	11;10	No	0														
DIS-699	Good	10/15/2020	11:00	No	0														
DIS-700	Good	12/30/2020	11:30	Yes															
DIS-701	Good	12/30/2020	9:30	Yes															
DIS-706	Good	12/30/2020	9:06	Yes															
DIS-707	Poor	12/30/2020	9:12	No															
DIS-708	Poor	12/30/2020	9:18	No															
DIS-709	Good	12/30/2020	10:55	Yes															
DIS-710	Good	12/30/2020	10:48	Yes															
DIS-711	Good	12/30/2020	9:46	Yes															
DIS-712	Good	12/30/2020	9:53	Yes															
DIS-713	Good	12/30/2020	9:45	Yes															
DIS-725	Good	12/30/2020	10:24	Yes															
DIS-728	Good	12/30/2020	10:15	Yes															
DIS-730	Poor	12/30/2020	12:30	No															
DIS-735	Good	12/30/2020	8:24	No															
DIS-738	Fair	12/30/2020	8:25	No															

- Indicates levels above GP benchmarks