



City of Northampton

Department of Public Works

Stormwater and Flood Control Utility

FY 2017 Annual Report

PURPOSE

Under City Ordinance § 280-13, Annual Reports, the Department of Public Works is required to make an annual presentation to the City Council providing information relating to the work and projects financed by the Stormwater and Flood Control Utility in the previous year, including, to the extent practicable, an account of expenditures from the stormwater management and flood control account and projected future expenditures. The Department will also present this information in a written report accessible on the City website.

STORMWATER AND FLOOD CONTROL UTILITY BUDGET AND RATES

The FY 2017 Stormwater and Flood Control Utility Budget was set at \$1,957,558. The calculation of bills for all properties resulted in a total hydraulic area or usage number of 75,132,319 square feet. Based on the budget and the total hydraulic area, the billing rate was determined to be \$0.026055 per square foot of hydraulic area.

Quarterly bills were calculated for 11,074 properties during the year.

As of the end of June 2017, active credits were approved for 1,019 properties for a total annual value of \$76,503.

STORMWATER CAPITAL PROJECTS

Drain Repair Contract

Emergency repair contract with Geeleher Construction for repair and/or replacement of stormwater structures including the following projects: Florence Rd reconstruction of two drain lines and outfalls near Scanlon Ave; Riverside Drive repair of a drain outfall near the Mill River; Federal St/Nutting Ave drain manhole and drain line repair; Bridge Street Drain repair of a failed drain line in the tree belt; Wilson Ave drain pipe repair.

Drainage Improvements for Annual Pavement Projects

As part of the annual roadway paving projects, Palmer Paving reset and replaced frames and grates or covers for some catch basins and manholes, partially rebuilt some manhole structures, reconstructed a drainage swale and installed drainage improvements, designed by the DPW Engineering, on Park Hill Road, Burt's Pit Road and Park Street.

Audubon Rd Drainage and Culvert Reconstruction

Tighe & Bond completed design and permitting of drain system reconstruction and culvert replacement and construction was started by Borges Construction, Inc.

Hinckley St Drain System Reconstruction

Project bid in the spring of 2017. Construction of new drainage outfall and drain system in Hinckley St started in 2017 by Ludlow Construction Company, Inc.

Pulaski Park – Phase II

MassWest Construction completed construction and finalization of Phase II. Park opening occurred on July 21st, 2017.

King Street Brook Flood Mitigation

- Continuing work to secure additional funds through the FEMA Hazard Mitigation Grant Program to construct a flood control berm to protect the neighborhood at State St., Stoddard St. and Church St.
- Annual cleaning of the King Street Brook Sediment Basin and culvert under the bike path by J.W. Cotton and DPW staff in August of 2017 to maintain flow during storm events and reduce sedimentation of Barrett Street Marsh.

Catch Basin Material Dewatering Facility

Completed design for a catch basin material dewatering facility at the DPW.

STORMWATER OPERATION AND MAINTENANCE

Catch Basin Cleaning

- Cleaned over 1,075 catch basins throughout the City from April to October
- Of those catch basins, 1,075 were inspected and measured for depth of sump and depth of sediment to collect baseline data for the new EPA MS4 permit.
- Catch basin cleaning truck (clam) underwent repairs and replacement of the body.

Catch Basin and Drain Manhole Cover Repairs/Replacement

- Over 53 catch basin covers and grates were repaired, reset or replaced throughout the City

Drain Pipe Repairs

- Completed 4 drain pipe repairs throughout the City

Storm Event Flood Mitigation

- Ongoing removal of leaves, snow and debris from catch basin grates throughout the City before and during storm events to mitigate road drainage backups and flooding.
- Clean debris from culverts throughout the City to mitigate backups and flooding.

Street Sweeping

- All City streets swept one time—2 sweepers and 1 truck, April to September
- Central Business District swept two times per month
- Central Business District swept for special events such as First Night and Holiday Stroll

- Florence Center, Baystate Village, Leeds Village, King St/Damon Rd/Bridge St Area, Glendale Rd, West Farms Rd and Downtown Parking Lots swept monthly.

Cleaning of Drain Ditches and Swales

- Cleaned sediment and debris from 9 ditches and swales throughout the City.

Stormwater System Inspections

- Pipe video inspections of drain lines and other system inspections throughout the City to identify and investigate structural failures, sink holes and other problems in the drainage system.
- Inspected drain outfalls throughout the City to investigate erosion problems and inspect for possible illicit discharges to the drainage system in compliance with the EPA MS4 Permit

King Street Brook / Barrett Street Marsh Flood Mitigation

- Inspection of King St Brook at the bike path culvert weekly and during major storms throughout the year
- Clean out of the King Street Brook Sediment Basin – Annual cleaning of the sediment basin and culvert under the bike path to maintain flow during storm events and reduce sedimentation of Barrett Street Marsh
- Vegetation and debris removal in the brook channel between Barrett St and the culvert behind CVS
- Clean debris off the grate at the culvert entrance behind CVS weekly

Development Project Engineering Review

- DPW Engineering staff review of all development plans submitted for permitting through the Office of Planning and Sustainability for impacts to the City's drainage system, proposed drainage connections and/or alterations to the City drainage system.

Public Drainage Information Requests

- DPW Engineering staff responds to inquiries from designers, contractors, developers and land owners with questions about the drainage system and provides documents and information.

Stormwater Management Permits

- DPW Engineering staff provides ongoing review and inspection of development projects that disturb over 1 acre in the City under the Stormwater Management Permit program in compliance with EPA MS4 Permit.

Illicit Discharge Investigations

- Federal Street and Mill River bacteria investigation—Sampling and investigation of the Mill River and adjacent drain systems and waterways for levels of e-coli bacteria. Follow-up investigations of the drainage and sanitary sewer systems.
- King Street Brook bacteria investigation – Investigated drainage and sewer systems in the Prospect St, Franklin St, Crescent St, Bancroft Ave, Arlington St and Massasoit St areas to identify cross connections and system problems that could result in

sewage flowing to the stormwater system. Discovered and eliminated a piped sanitary sewer overflow to the drain system.

DPW Engineering Project Coordination and Development

- DPW Engineering staff provided coordination, development support and construction oversight on certain projects for stormwater management system capital projects.

Catch Basin Label Installation

- Installed “No Dumping Drains to River” Labels at catch basins throughout City as part of public education activities in compliance with the EPA MS4 Permit.

New EPA NPDES Stormwater MS4 Permit

- Preparation for compliance with new EPA NPDES Stormwater MS4 Permit that will be currently effective July 1, 2018.

Catch Basin Material Dewatering Facility at DPW

- Preliminary design and utility investigation to accommodate a catch basin material dewatering facility at the DPW.

Relocation of the Market Street Brook Culvert

- Management and oversight of the design for the reconstruction of a portion of the Market Street Brook drainage conduit to accommodate a proposed building development at the former Northampton Lumber site.

Bridge Street Area Drainage Improvements

- Management and coordination of a project to explore the feasibility of improving the drainage systems in the Bridge Street area.

FLOOD CONTROL SYSTEM OPERATION AND MAINTENANCE

Operation and Maintenance of the Connecticut River Flood Control Pump Station

- Activated the Connecticut River flood control pumps 44 days during high river levels and major precipitation events
- Maintenance of the station including pumping systems, gates, trash racks, electrical components, National Weather Service river gauge and other associated systems.

Operation and Maintenance of the Mill River Flood Control Pump Station

- Activated the Mill River flood control pump 0 days during high river levels and major precipitation events
- Maintenance of the station including the engine, pump, fuel system and other components of the station. The pumps are run monthly to ensure that they will operate during flooding events.

Stop Log Structure Operation and Maintenance

- Trial deployment of the Route 5 and railroad stop log structures on the Connecticut River System and the West Street stop log structure on the Mill River system, one per year on a rotating basis

Levee Inspection and Maintenance

- Vegetation maintenance and routine inspection of the Connecticut River and Mill River levees.

DPW Engineering Coordination and Development

- DPW Engineering staff provided coordination and development support for all flood control capital projects.

STORMWATER AND FLOOD CONTROL UTILITY ADMINISTRATION**DPW Utility Billing Department**

- Maintenance of records and processing of quarterly Stormwater and Flood Control Utility bills
- Processing of abatements and credits to Stormwater and Flood Control Utility Fees
- Communication with property owners regarding billing questions

DPW Engineering Department

- Review of Stormwater and Flood Control Utility credit applications and administration of the credit program.
- Review of Stormwater and Flood Control Utility abatement requests.
- Communication with property owners regarding technical billing questions
- Maintenance and correction of property data and fee calculations for the Stormwater and Flood Control Utility