



# City of Northampton

Department of Public Works

## Stormwater and Flood Control Utility

### FY 2018 Annual Report

## **STORMWATER AND FLOOD CONTROL UTILITY BUDGET AND RATES**

The FY 2018 Stormwater and Flood Control Utility Budget was set to \$1,957,558. The calculation of bills for all properties resulted in a total hydraulic area or usage number of 75,217,402 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 and issued to 11,202 properties.

As of the end of June 2018, active credits were approved for 1,196 properties for a total annual value of \$87,110.

## **STORMWATER CAPITAL PROJECTS**

### **Drainage Improvements for Annual Pavement Projects**

As part of the Department of Public Works' (DPW) FY18 annual roadway paving projects, Palmer Paving made drainage improvements by addition of sub-drainage on Ryan Road and by replacing catch basin and manhole frames, grates and covers. Bids were received for the FY19 paving and drainage improvements for Pleasant Street, Cooke Avenue, Hampton Avenue, Wright Avenue and Fulton Avenue.

### **Lower Chesterfield Road Reconstruction Project**

Palmer Paving was awarded a contract for the reconstruction of Chesterfield Road from Shepard's Hollow to Spring Street, including paving and drainage reconstruction. The drainage work included: catch basin replacement, replacement or resetting of frames and grates or covers for catch basins and/or manholes, installation of rip rap areas to help drainage flows and the replacement of an existing culvert.

### **Hinckley Street Drain System Reconstruction**

Ludlow Construction Company, Inc. completed the reconstruction of the drainage outfall and drainage system on Hinckley Street that was started in 2017.

### **Audubon Road Drainage and Culvert Reconstruction**

Borges Construction, Inc., completed the reconstruction of the drainage system and culvert that was started in 2017.

### **Northampton Lumber Yard Redevelopment**

George Cairns and Sons Construction installed drainage system infrastructure to accommodate the redevelopment of 256 Pleasant Street.

### **Drain Repair Contract**

An emergency repair contract with Geeleher Construction for repair and/or replacement of sewer and stormwater structures included the following project specific to stormwater:

- Installation of 28 linear feet of 12" PVC drainage pipe and a new catch basin to eliminate a large puddle at the intersection of Florence and Ryan Roads.

### **FLOOD CONTROL CAPITAL PROJECTS**

#### **Hockanum Road Pumping Station Evaluation Study**

An evaluation of the existing pumping station at Hockanum Road was undertaken in 2018, including inspection and testing on all electrical, structural (building and integral floodwall), and mechanical systems (pumps and engines). The results of the existing conditions engineering evaluation and assessment of feasible alternatives for repair and upgrades to the station is expected in early 2019.

#### **West Street Pumping Station Fuel Tank Replacement**

The 60 gallon propane fuel tank used to operate the West Street pump was replaced with a 500-gallon tank, as recommended in the AECOM engineering assessment in 2015-2016.

#### **Emergency Action Plan**

Revisions and updates have been completed for the City of Northampton Emergency Flood Plan.

### **STORMWATER OPERATIONS AND MAINTENANCE**

#### **Catch Basin Maintenance**

- Cleaned over 950 catch basins;
- Inspected these catch basins and measured for depth of sump and depth of sediment to collect baseline data for the City's Environmental Protection Agency (EPA) issued National Pollutant Discharge Elimination System (NPDES) MS4 permit.

#### **Catch Basin and Drain Manhole Cover Repairs/Replacement**

- Repaired, replaced or reset more than 40 catch basin covers and grates.

#### **Drain Pipe Repairs**

- Repaired broken stormwater pipes, including work on Crafts Avenue.

#### **Storm Event Flood Mitigation**

- Performed ongoing removal of leaves, snow and debris from catch basin grates before and during storm events to mitigate drainage backups and roadway flooding;
- Cleaned debris from culverts to mitigate drainage backups and roadway flooding.

### **Street Sweeping**

- All City streets were swept at least one time;
- The Central Business District was swept 2 times each month;
- The Central Business District was swept for special events such as First Night and the Holiday Stroll;
- Florence Center, Baystate Village, Leeds Village, King Street/Damon Road/Bridge Street Area, Glendale Road, West Farms Road and Downtown Parking Lots were swept each month.

### **Cleaning of Drain Ditches and Swales**

- Cleaned sediment and debris from 6 ditches and swales.

### **Stormwater System Inspections**

- Performed pipe video inspections of drain lines and other assets to identify and investigate structural failures, sink holes and other problems in the drainage system;
- Inspected drain outfalls to investigate erosion problems and inspect for possible illicit discharges to the drainage system in accordance with the EPA MS4 Permit.

### **King Street Brook / Barrett Street Marsh Flood Mitigation**

- Inspected the King Street Brook at the bike path culvert weekly and during major storms throughout the year;
- Performed annual cleaning of the King Street Brook Sediment Basin and culvert under the bike path in August 2017 to maintain flow during storm events and to reduce sedimentation of the Barrett Street Marsh;
- Removed vegetation and debris in the brook channel between Barrett Street and the culvert behind CVS;
- Cleaned debris from the grate at the culvert entrance behind CVS weekly.

### **Development Project Engineering Review**

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

### **Public Drainage Information Requests**

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

### **Stormwater Management Permits**

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

### **Illicit Discharge Investigations and Enforcement**

- DPW discovered two illicit connections to the stormwater system. Staff worked with the property owners to correct the illicit connections at both locations;
- DPW staff attended a training workshop on Illicit Discharge Detection and Elimination (IDDE).

### **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.

### **New EPA NPDES Stormwater MS4 Permit**

- The EPA NPDES Stormwater MS4 Permit went into effect on July 1, 2018;
- DPW submitted the City's Notice of Intent to EPA on September 28, 2018.

## **FLOOD CONTROL SYSTEM OPERATIONS AND MAINTENANCE**

### **Levee Inspection and Maintenance**

- Performed vegetation maintenance and routine inspection of the Connecticut River and Mill River levee systems.

### **Connecticut River Flood Control – Hockanum Road Pumping Station**

- Activated the Connecticut River flood control pumps 33 days during high river levels and major precipitation events;
- Maintained the flood control station including preventative routine maintenance of pumping systems, gates, trash racks, electrical components, the National Weather Service river gauge and other associated equipment. The pumps are run monthly to ensure that they will operate as required.

### **Mill River Flood Control – West Street Pumping Station**

- Maintained the station including preventative routine maintenance of the engine, pump, fuel system and other equipment. The pumps are run monthly to ensure that they will operate as required.

### **Stop Log Structure Operation and Maintenance**

- Performed a partial trial deployment of the Pleasant St stop log structure on the Connecticut River System.

### **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**

- Maintained records and processed quarterly Stormwater and Flood Control Utility bills;
- Processed abatements and credits to Stormwater and Flood Control Utility Fees;
- Communicated with property owners regarding billing questions.

**DPW Engineering Division**

- Reviewed Stormwater and Flood Control Utility credit applications and administration of the credit program;
- Reviewed Stormwater and Flood Control Utility abatement requests;
- Communicated with property owners regarding technical billing questions;
- Maintained and corrected property data and fee calculations for the Stormwater and Flood Control Utility.

**FUTURE PROJECTS**

In FY19 and FY20, the City plans reconstruction of significant portions of roadway. Stormwater infrastructure improvements will be designed and implemented as part of these projects.

Levee vegetation control on both the Mill River and Connecticut River systems will be completed.