Exhibit 15

Outfall Inspection and Monitoring Procedures

Rev 0: 2020 SWMP
Rev Date: 03/27/21
Rev By: EPW

Based upon a joint GIS Mapping effort with Rensselaer County, there are approximately 220 municipal outfalls identified and mapped within the Town. The current inventory of outfalls is presented in Exhibit 14. As also indicated in Exhibit 14, the Town believes that the outfall survey is somewhat outdated, and is in the process of developing and implementing a procedure to inspect, review, and map outfalls throughout the Town.

The Town frequently conducts visual inspections of many of the outfalls, but has not fully implemented a system for logging inspections and inspection results. This Exhibit discusses the manner in which outfall inspections are conducted, and catalogued, both as a part of the mapping update project, but also to regularly review and monitor municipal outfalls throughout the Town.

Dry Weather Monitoring Inspections:

- The Town strives to monitor all outfalls each year, but at a minimum, 25% of MS4 outfalls will receive a Dry Weather Monitoring Inspection annually. As part of the Outfall Mapping Project discussed in Exhibit 14, the Town anticipates inspecting all outfalls within the following one to two years to restore the outfall mapping baseline.

- All primary outfalls in identified priority areas will be inspected annually. As part of the Outfall Mapping Project, the Town will refine the definition of primary outfalls and priority areas. The preliminary definition of these terms is as follows:

    - Primary Outfalls are larger-diameter outfalls that have the potential to discharge larger flows.

    - Priority Areas are locations where the outfall discharges directly, or nearly directly, into a Waterbody of Concern identified in Exhibit 5 or areas in which the outfall is in close proximity to a potential generator of Pollutants of Concern discussed in Exhibit 2.

- Inspections will be carried out by the Highway Department, Building Department, Town Designated Engineer, or other qualified individual with the approval of the Stormwater Management Officer.

- Dry-Weather Inspections will be conducted following a minimum of 48 hours of dry weather (1/10th of an inch of precipitation or less).

- An outfall inspection form will be completed for each MS4 outfall inspected and a record maintained in the office of the Stormwater Management Officer. A copy of the Outfall Inspection Form is attached to this Exhibit.

- The Stormwater Management Officer will update the Outfall Tracking Spreadsheet to reflect inspected outfalls and will work with the Highway Department, Building Department, or other personnel as required to address outfall maintenance issues.

- Any illicit or suspected illicit discharges noted during inspections will be communicated to the Stormwater Management Officer the day of the inspection.

- In the event that any sampling occurs during an outfall inspection, this will be communicated to the Stormwater Management Officer the day of the inspection.

- Maintenance performed on outfall structures will be communicated to the Stormwater Management Officer prior to the commencement of work.

Storm Event Monitoring:

- The Town does not currently have a formal program for monitoring outfalls during storm events, and is discussing the development of a limited procedure to review outfall operation during a storm. Generally, the program would potentially involve:

    - Witnessing outfall flows for primary outfalls in priority areas as defined above.

    - Witnessing flows for outfalls in which the public has contacted the Stormwater Management Officer with concerns.

    - Reviewing newly-installed outfalls to verify that they are operating generally as designed.

Town of North Greenbush Outfall Inspection Form

General Outfall Data

Outfall ID:	Location:	New?
Inspector:	Date:	Time:
Temp:	Rainfall inches in: Last 24 Hours	Last 48 Hours
Latitude:	Longitude:	As Mapped?
Photos:	Logged:	

Drainage Area Land Use (Select all that apply)

☐ Industrial ☐ Open Space

☐ Urban Residential ☐ Suburban Residential

☐ Institutionall ☐ Commercial

☐ Other:

Notes: _____

_____

Maintenance Priority

☐ High

☐ Medium

☐ Low

Notes: _____

_____

_____

Outfall Characteristics

☐ Closed Pipe

Material

☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____

Shape and Configuration

☐ Circular ☐ Elliptical ☐ Box ☐ Other: _____ Diameter/Dimensions: _____

☐ Single ☐ Double ☐ Triple ☐ Other: _____ Supplemental Dim's: _____

Submergence

In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully

☐ Open Drainage

Material

☐ Concrete ☐ Earth ☐ Rip-Rap ☐ Other: _____

Shape and Configuration

☐ Trapezoid ☐ Parabolic ☐ Other: _____

Depth: _____ Top Width: _____ Bottom Width: _____ Other: _____

Flow Present? ☐ Yes ☐ No Flow Description (ifapplicable): ☐ Trickle: ☐ Moderate ☐ Substantial

Notes: _____

_____

_____

Town of North Greenbush Outfall Inspection Form

Flow Characteristics			
☐ Flow Rate By Known Volume Container Volume: _____ Time to Fill: _____ Calculated Flow Rate: _____			
☐ Flow Rate By Measured Flow Geometry Flow Depth: _____ Flow Width: _____ Calculated Flow Volume: _____ Measured Length of Travel: _____ Time of Travel :_____ Calculated Flow Rate: _____			
Temperature: _____ pH: _____ Ammonia: _____			
Odor	☐ Sewage ☐ Rancid/sour ☐ Petroleum ☐ Sulfide ☐ Other:_____	☐ Faint ☐ Easily Detected ☐ Detected From Afar	
Color	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other	Sample in Bottle ☐ Faint ☐ Easily Detected	Outfall Flow ☐ Visible in Flow
Turbidity	☐ Slight cloudiness ☐ Cloudy ☐ Opaque ☐ Other: _____		
Floatables	☐ Sewage (Toilet Paper) ☐ Suds/Froth ☐ Petroleum (Sheen) ☐ Other	☐ Few (origin unknown) ☐ Some (indic. of origin) ☐ Some (origin clear)	
Notes: _____ _____ _____			

Physical Indicators/Characteristics Not Related to Flow		
Outfall Damage	☐ Spalling/Cracking ☐ Peeling Paint ☐ Corrosion ☐ Other	Comments:
Desposits / Stains	☐ Oily ☐ Flow Line ☐ Paint ☐ Other	Comments:
Abnormal Vegetation	☐ Excessive ☐ Inhibited ☐ Other	Comments:
Poor Pool Quality	☐ Odors ☐ Colors ☐ Floatables ☐ Sheen ☐ Suds ☐ Excessive Algae	Comments:
Pipe Benthic Growth	☐ Brown ☐ Orange ☐ Green ☐ Other	Comments:
Notes: _____ _____ _____		

Town of North Greenbush Outfall Inspection Form

Sample Data Collection	
Has a sample been collected for lab analysis?	☐ Yes ☐ No
If yes, from where was the sample taken?	☐ Flow ☐ Pool
Has an intermittent flow trap set?	☐ Yes ☐ No Type: _____

Notes: _____

_____

_____

Other

Is the structure to be characterized as an outfall?

☐ Unlikely ☐ Potential (two or more indicators) ☐ Suspect (one or more severe indicators) ☐ Obvious

Notes: _____

_____

_____

Are there any non-illicit discharge concerns (trash, required repairs, etc)?

Notes: _____

_____

_____

Are there any illicit discharge concerns?

Notes: _____

_____

_____

Other general comments

Notes: _____

_____

_____

_____

_____

_____

_____

_____