CAPITAL DISTRICT
Regional
Planning
Commission

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June 3, 2016

Koon Tang, P.E.
Wastewater Permits Section, Division of Water
NYSDEC
625 Broadway, 4th Floor
Albany, NY
12233-3506

Re: Order on Consent, DEC Case # CO 4-20120911-01; Task APW-04, Sewer System Operations, Maintenance and Inspection Plan Revision

Dear Koon,

As the designated Program Coordinator on behalf of the Albany Pool Communities, CDRPC here with submits to the Department the revised Sewer System Operations, Maintenance and Inspection Plans for the City of Albany, City of Cohoes, City of Watervliet, and Village of Green Island.

This Document was originally submitted on December 15, 2015. This submission was prepared in response to the technical assessment of the Draft Albany Pool Sewer System Operations, Maintenance and Inspection Plans for the City of Albany, City of Cohoes, City of Watervliet, and Village of Green Island, as summarized in correspondence from the New York State Department of Conservation (DEC).

If you have questions about the report please do not hesitate to contact me.

Sincerely,

Martin Daley
Environmental Planner
Encl.

COMBINED SEWER SYSTEM

OPERATION, MAINTENANCE, AND INSPECTION PLAN

City of Albany
City of Cohoes
City of Watervliet
Village of Green Island

in conjunction with the
Albany County Sewer District

Original Submittal:
December 15, 2015

Revision No. 1:
June 3, 2016

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Section 1

Section 1
Introduction

1.1 Purpose

This combined sewer system (CSS) Operation, Maintenance and Inspection (OM&I) Plan is meant to formally document procedures and activities for the City of Albany, City of Cohoes, City of Watervliet, and Village of Green Island (West Side APCs) per the executed Order on Consent for the Albany Pool CSO Long Term Control Plan (LTCP). Per Chapter 2 of EPA's CSO Guidance for Proper Operation and Regular Maintenance Programs, the plan must clearly establish OM&I procedures to ensure that the combined sewer system will function in a way to minimize dry weather overflows; while maximizing treatment of combined sewage during wet weather periods. It is intended that this minimum control measure will optimize performance of the sewer system and thereby reduce the magnitude, frequency, and duration of CSOs by enabling existing facilities to perform as effectively as possible.

This document has been prepared in conjunction with the Albany County Sewer District (ACSD) based upon their ownership of critical facilities and combined sewer system elements (i.e., North and South Wastewater Treatment Plants, County interceptors, and County regulators at interceptor connections). While the communities acknowledge that the treatment plants are certainly a critical component of the system in regards to maximizing treatment of wet weather flows, the ACSD is not a responsible party for this project under the Order on Consent. As such, this plan has been developed to specifically document policies and procedures for the operation and maintenance of the critical elements of the collection systems owned and operated by the West Side APCs, as required under the Order on Consent. For the purposes of the plan, critical elements are defined as those facilities or components that affect the performance of the CSS, CSO volumes, or CSO pollutant levels; and have been developed in accordance with Chapter 2 of EPA's CSO guidance document.

It should be noted that optimization of wet weather flows to the ACSD North and South treatment plants has been considered and incorporated into the recommendations in the Albany Pool CSO LTCP; which specifically includes regulator improvement projects and the elimination of overflows which will serve to increase flows delivered to the plants during wet weather periods. Hydraulic controls for the North and South plants are governed by the pumping capacity at the headworks which were designed in accordance with the facility design reports and permitting requirements for the treatment works. Optimization improvements under the LTCP were identified and evaluated in consideration of maximizing flows to the treatment plants and reducing combined sewer overflows to receiving waters; while maintaining the hydraulic grade lines of the system within acceptable limits to prevent surcharging and system backups. In addition, the ACSD wet weather operations for the treatment plants were reviewed in relation to the proposed system optimization and wet weather performance improvements.

1.2 Background

The Albany County Sewer District (ACSD) was formed in 1969 to collect and treat wastewater from eight communities in Albany County. The District owns and operates two treatment plants designated as

North and South. The North plant serves approximately ten percent of the City of Albany, a large portion of the Town of Colonie and Guilderland, all of the cities of Cohoes and Watervliet as well as the Villages of Green Island, Menands and Colonie. The South plant treats approximately ninety percent of the City of Albany and the entire Port of Albany. The West Side APCs (i.e., City of Albany, City of Cohoes, City of Watervliet, and Village of Green Island) utilize combined sewer systems, which until the ACSD was formed, discharged directly to the Hudson River via numerous outfall pipes and creeks.

Creation of the ACSD included the installation of two interceptor sewers that transport wastewater to the North Plant and the rehabilitation of one trunk sewer that transports wastewater to the South Plant.

The Patroon Creek interceptor is considered to be a separated system as the interceptor does not receive flows from areas with combined sewers. The Hudson River interceptor conveys flows to the North Plant from the cities of Cohoes and Watervliet along with the Village of Green Island combined systems; while the Hudson River trunk line conveys flows to the South Plant from the City of Albany. Where the combined sewers connect to the interceptor and trunk line, a regulating chamber (regulator) was installed to control the volume of flow to the interceptors and treatment plants and to prevent service backups. These regulators are set to direct all dry weather flow and a portion of wet weather flow to the interceptor, while allowing the balance of the wet weather flow to overflow to the Hudson River via the original discharge pipes. In situations where the outfalls can be influenced by tidal elevations and/or submerged by high river elevations, the outfalls are equipped with tide gates to prevent inflow of river water into the ACSD system. The wet weather overflows for the West Side APCs are regulated under separate SPDES permits for their respective community; while the ACSD has its own SPDES permit for the discharge from the WWTP.

1.3 Joint Annual Evaluation

The West Side APCs and the ACSD shall complete a joint annual evaluation of this OM&I Plan along with the preceding year's inspection results to identify recurrent problems; and determine potential program modifications necessary to adequately address any problematic issues and/or to improve upon the performance of the CSS. As part of this evaluation, the respondents will submit an annual letter or report to the NYSDEC documenting the recurrent problems and outlining the proposed program modifications. A copy of the letter or report will be appended to this document in Appendix A, upon approval of OM&I Plan and implementation of the first program year, to document baseline conditions.

Section 2

Section 2
Existing Conditions

2.1 Existing Condition Survey

As part of this OM&I Plan, upon Department approval, the West Side APCs in conjunction with the ACSD will complete a baseline survey to compile an inventory and document the existing conditions of the regulators and outfalls, along with other critical elements of their combined sewer systems. Information to be included in the existing conditions survey will include, but is not specifically limited to:

- Digital photographic survey of the regulating chambers;
- Written determination of the condition of all dams, weirs, orifices and operational equipment in each regulator;
- Assessment of the conditions of the existing pump stations and any planned or required maintenance activities;
- Assessment of the conditions of any other critical elements (i.e., detention structures, floatable control facilities) and any planned or required maintenance activities;
- Determination of which CSO outfalls are visible or submerged;
- Digital photographic survey of the visible CSO outfalls and outfall signs.

The performance of this inventory and baseline condition survey will be completed prior to the development of the Asset Management Plans for the West Side APCs which are required under the executed Order on Consent. Inventory sheets and baseline survey results will be appended to this document in Appendix B upon approval of the OM&I Plan and the advancement of this work.

Section 3

Section 3
City of Albany

3.1 Background

The City of Albany is nearly 9 miles long and 4 miles wide and ranges in elevation from 15 feet to 350 feet above sea level. The sewer system consists of approximately 900 miles of sewer mains ranging in size from 8" to 120" in diameter. The City of Albany system is primarily combined and presently has 11 Combined Sewer Overflows (CSOs) or permitted outfalls. The components of the combined sewer system that the City is responsible for maintaining are:

- Collection system piping (combined, sanitary and storm sewers) within City limits up to the ACSD regulator structures.
- Outfall sewers (CSOs) and Outfall Signs.
- Catch basins and manholes within City limits, except manholes on the ACSD interceptor.
- Sixteen (16) detention facilities within the CSS (Section 3.6).
- Twenty six (26) sewage lift stations (Section 3.7).

The City's operation, maintenance and inspection program for these assets is detailed below. Samples of the inspection forms referenced herein are attached in the Appendices. The completed inspection forms are maintained in the Sewer Foreman's office.

3.2 Budget

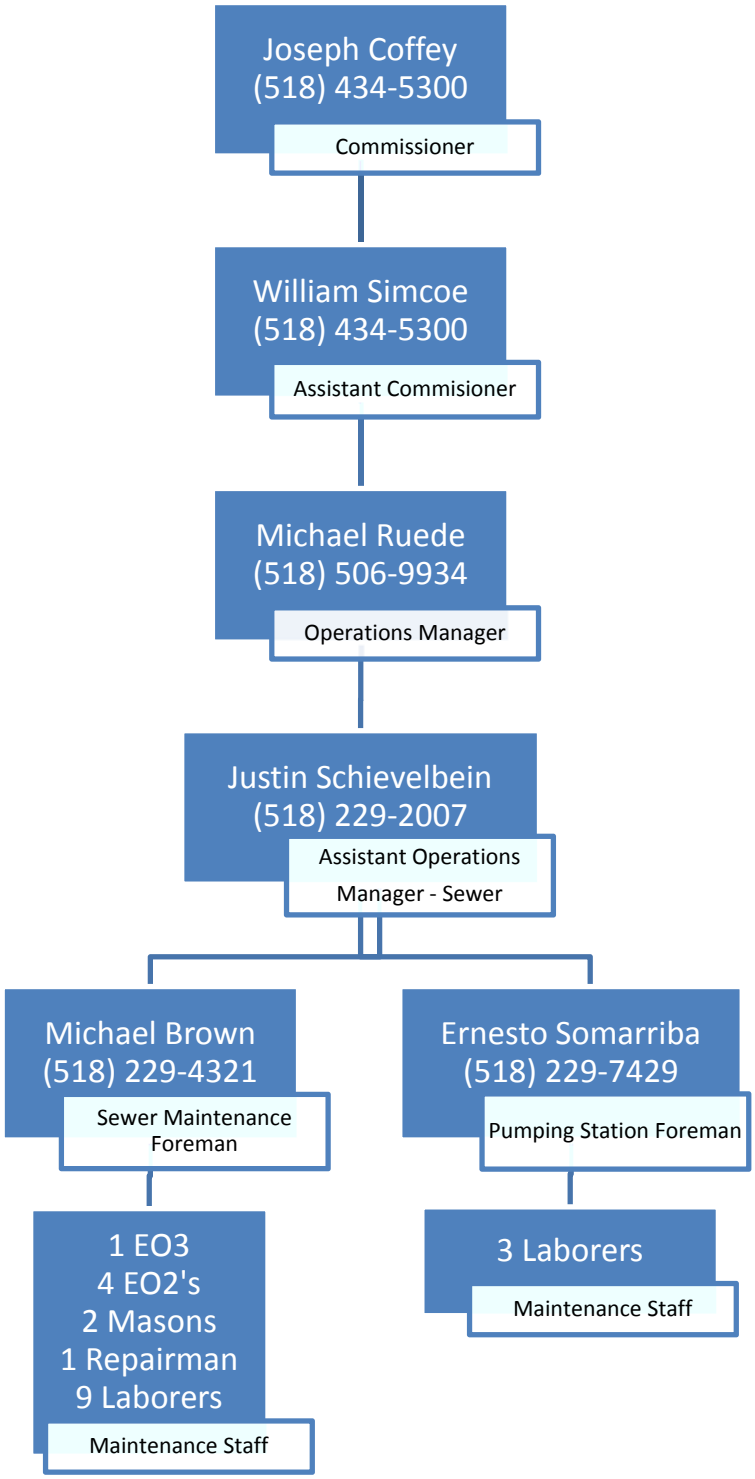
The City's 2016 budget includes about $3.3 million for the operation and maintenance of the sewer collection system. This includes the following personnel: 1 Assistant Operations Manager, 2 Foremen, 1 Equipment Operator 3, 4 Equipment Operator 2's, 2 Masons, 1 Sewer Repairman, and 9 Laborers. It also includes $1.5 million for contracted services, which is used for any contracted repairs to the collection system. The budget also includes money to be used for any equipment and materials necessary for the proper operation and maintenance of the collection system.

The City's 2016 budget includes about $0.6 million for the operation and maintenance of the sewer pumping stations. This includes the following personnel: 1 Foreman and 3 Laborers. Included in this is about $175,000 for contracted services, which is used for any contracted inspections and repairs to the pumping stations. The budget also includes money to be used for any equipment and materials necessary for the proper operation and maintenance of the collection system.

The City's 2016 budget also includes $3 million for water and sewer capital expenditures. This includes $1.25 million for improvements to the sewer collection system and sewer pumping stations. It also includes $200,000 for engineering fees for project planning and $200,000 as contingency. The annual budget for the operations and maintenance of the system is reviewed on an annual basis with key personnel. The Albany Water Board maintains reserve funds for emergency repairs and/or improvements.

The financing for the LTCP is not included in the city budget and is financed through other means.

3.3 Organizational Chart



3.3.1 Written Procedures

In an emergency situation, City personnel are dispatched to assess the situation. If possible, the emergency is resolved using City of Albany equipment and employees. This includes clearing of blockages, bypass pumping and excavation if necessary. If the City is unable to resolve the situation, they have a qualified emergency contractor who is called to respond immediately. Under their contract with the City, they are required to be available at any time of day. They provide and procure all equipment, materials and persons needed during the emergency and perform all required work. Emergency contact information for the Water/Sewer department is listed on the city website:
http://www.albanyny.org/Government/Departments/WaterAndWaterSupply.aspx

3.3.2 Policies and Procedures for Training O&M Personnel

All sewer maintenance and pump station staff are provided on-the-job training to ensure proper safe operation of all the equipment used in the department. They are also trained in confined space entry and provided with any equipment and PPE necessary to perform their daily maintenance duties.

3.4 Catch Basin Cleaning

The City of Albany owns and maintains over 10,000 catch basins. The Department of Water & Water Supply has one (1) operational sewer eductor truck that is routinely used to clean catch basins and open clogged sewers. The department also has a truck with a hydraulic clamshell to mechanically clean catch basins. As part of the cleaning process, the catch basin structures are inspected to determine the general condition of the structure.

Catch basins within the City are generally separated into two categories, and the frequency of cleaning and inspection activities are defined by the catch basin category. Catch basins in the "priority" category are located in areas subject to ponding/flooding during rainfall events. These areas are generally at the toe of steep slopes and in low points along major roadways. These catch basins are inspected and cleaned if necessary in advance of significant rainfall events. This generally includes storms with predicted rainfall totals of 1-inch or more. The priority areas are shown on Figure D1 in Appendix D.

Other catch basins in the City are cleaned and inspected on a schedule that may vary throughout the year based upon seasonal conditions. The Sewer Foreman schedules preventative maintenance activities within these "non-priority" areas based on resource availability and experience with the operation and maintenance of the combined sewer system. The City will continue to evaluate the program and adjust the schedule of cleaning and inspecting catch basins to assure potential trouble areas are continually maintained.

Cleaning and inspection in either area can also be triggered by customer complaints. These complaints are generally forwarded directly to the sewer department trucks to allow for a quick response. This type of reactive inspection will supersede the schedule defined above and define the place in the cycle for a given structure moving forward.

All cleaning and inspection activities are documented on the "Investigation Report" included in Appendix C1. All work performed is also recorded in a spreadsheet program maintained by the Water & Water Supply operations staff.

3.5 Collection System Cleaning

The City of Albany owns and maintains about 900 miles of combined and separate sanitary sewers. Within that total, the sewer department will identify specific segments of the combined sewer system that may need more attention than other areas. These areas may change from year to year as improvements are made to the collection system. Other areas may develop problems as a result of a number of things such as aging, root invasion, grease buildup etc. A list, indicating all of the sewer mains cleaned preventatively by the sewer department is provided in Appendix E1 and will be updated in the annual report. Each of these identified sewers is cleaned annually.

Pipe cleaning and inspection is triggered in areas which have a history of sinkholes, backup issues, or other maintenance issues within the collection system. They can also be triggered by customer complaints, which are forwarded directly to the Sewer Foreman which deploys trucks to allow for a quick response. The sewer crew records work performed on the "Investigation Report" included in Appendix C1. All work performed is also recorded in a spreadsheet program maintained by the Water & Water Supply operations staff. Sewers that have a documented history of frequent customer complaints and cleaning needs are added to a list by the Sewer Department Supervisors. The City owns its own CCTV inspection camera for televising sewer mains. This list will be evaluated continually throughout year for the need to schedule CCTV work, and the evaluation will be completed and included in the annual report.

3.6 Critical Storage Facilities

The city owns, operates and maintains the critical storage facilities identified in Table 3-1 below:

Table 3-1 Critical Storage Facilities within the City of Albany

Name	Brief Description	Latitude	Longitude
Beaver Creek Phase 1	Underground combined sewer storage @ Albany HS	42°39'55.3"N	-73°46'59.0"W
Beaver Creek Phase 2	Underground stormwater storage @ N. Main Ave	42°40'01.5"N	-73°47'10.4"W
Beaver Creek Phase 3	Underground stormwater storage @ W. Lawrence St	42°40'06.3"N	-73°47'14.9"W
Beaver Creek Phase 4	Underground combined sewer storage @ Benson St	42°39'53.5"N	-73°46'32.7"W
Beaver Creek Phase 5	Underground combined sewer storage @ Bradford St	42°39'55.7"N	-73°46'28.1"W
Hansen Avenue Phase 1	Underground combined sewer storage @ Hansen Ave	42°39'30.1"N	-73°47'23.3"W
Hansen Avenue Phase 2	Underground combined sewer storage @ Hansen Ave	42°39'30.3"N	-73°47'24.4"W
Academy Road Detention	Stormwater detention pond @ Academy Road	42°38'47.8"N	-73°46'54.7"W
Rose Court Detention	Underground stormwater storage @ Rose Ct	42°38'31.6"N	-73°47'38.3"W
Hansen Alley Detention	Underground stormwater storage @ Hansen Alley	42°39'33.0"N	-73°47'32.3"W
Ridgefield Alley Detention	Underground stormwater storage @ Ridgefield Alley	42°39'32.9"N	-73°47'23.5"W
Elberon Place Detention	Underground stormwater storage @ Elberon Place	42°39'39.0"N	-73°46'36.3"W
Marion Avenue Detention	Underground stormwater storage @ Marion Ave	42°40'00.9"N	-73°47'51.8"W

Beacon Avenue Detention	Underground stormwater storage @ Beacon Ave	42°40'11.8"N	-73°49'04.9"W
Melrose Avenue Recharge	Underground stormwater infiltration @ Melrose Ave	42°40'26.0"N	-73°48'04.3"W
Upper Washington Recharge	Underground stormwater infiltration @ Washington Ave	42°40'31.5"N	-73°47'37.7"W

Each of these critical storage facilities are inspected annually and cleaned when necessary. Outlets of the structures are inspected before a large rain event to ensure proper operation during the rain event. All cleaning and inspection activities are documented on the "Investigation Report" included in Appendix C1. All work performed is also recorded in a spreadsheet program maintained by the Water & Water Supply operations staff.

3.7 Pump Station Inspections

The City owns, operates and maintains twenty six pump stations identified in table 3-2 below:

Table 3-2 Pump Stations within the City of Albany

Station #	Name	Generator	Latitude	Longitude
1	Berkshire Boulevard	NO	42°39'55.7"N	-73°48'38.7"W
2	Broadway	YES (gas)	42°38'16.3"N	-73°45'11.5"W
3	Corning Preserve Park	NO	42°39'10.5"N	-73°44'44.0"W
4	Corporate Circle	YES (gas)	42°42'12.9"N	-73°52'56.4"W
5	Delaware Ave. #1	NO	42°38'4.4"N	-73°47'54.5"W
6	Delaware Ave. #2	NO	42°38'2.8"N	-73°47'49.2"W
7	Golf Course	NO	42°39'5.2"N	-73°49'16.0"W
8	Karlsfeld (McCormack Rd)	NO (2 power feeds)	42°38'33.7"N	-73°50'24.2"W
9	Marlborough Court	NO	42°38'40.6"N	-73°48'6.0"W
10	Meadow Lane	YES (diesel)	42°38'28.3"N	-73°50'7.1"W
11	McAlpin Street	NO	42°38'14.7"N	-73°47'23.1"W
12	New Scotland Woods	YES (diesel)	42°39'14.4"N	-73°50'2.4"W
13	Northern Boulevard	NO	42°40'17.0"N	-73°45'11.7"W
14	Olympian Acres	NO	42°38'54.9"N	-73°49'59.6"W
15	Par Circle	NO	42°39'8.9"N	-73°49'25.9"W
16	Pinehurst Estates	YES (diesel)	42°42'43.7"N	-73°52'49.4"W
17	St. Agnes Lane	NO	42°40'42.2"N	-73°45'16.2"W
18	South Pearl Street	YES (diesel)	42°37'39.1"N	-73°46'3.4"W
19	Turning Point	YES (diesel)	42°42'49.5"N	-73°52'52.3"W
20	Whitehall Station	NO	42°38'49.5"N	-73°48'16.5"W

21	Wilan Lane	NO	42°41'43.6"N	-73°51'30.3"W
22	Woodville	YES (diesel)	42°41'43.6"N	-73°51'30.3"W
23	Snow Dock	NO	42°38'30.9"N	-73°45'2.6"W
24	Lowell Street	NO	42°41'17.6"N	-73°48'18.5"W
25	Six Mile	NO	42°41'51.5"N	-73°49'51.2"W
26	I-90	YES (diesel)	42°41'18.1"N	-73°48'40.0"W

Of the Pump Stations listed, only 2 have overflows located at the station:

1	Woodville	CSO Overflow
2	Karlsfeld (McCormack Rd)	Emergency Use Overflow

The pump stations undergo full mechanical inspections twice per year. These inspections are done by a qualified contractor hired by the City. The same contractor performs any repairs as needed, both preventatively and on an emergency basis. The emergency generators at each pump station are automatically exercised weekly. The generators also undergo full mechanical inspections twice per year by a qualified contractor hired by the city. This contractor also performs any repairs on the generators as needed, both preventatively and on an emergency basis. Any station which does not have a backup generator on site is equipped to be powered by an emergency tow-behind generator. This emergency generator is kept at the shop building for use when needed and is tested and operated monthly. All records of inspections and repairs performed by the contractors are maintained at the shop building and transcribed into a spreadsheet.

The pump stations are also inspected on a daily basis by City staff, where the hour meters are checked to ensure normal operation. If any station is not running properly, the Pump Station Supervisor is immediately notified. These inspections are documented on the "Pump Station Inspection" forms in Appendix F1. The completed forms are kept at the shop building and transcribed into a spreadsheet program maintained by the Water & Water Supply operations staff.

3.8 Outfalls

3.8.1 Outfall Pipes

Of the 11 permitted CSO outfalls within the City of Albany, only 2 outfalls are continuously visible and 9 others are visible depending on tidal conditions. Several of these visible outfalls can only be seen from the river or eastern riverbank. Outfalls are typically inspected at the control structures to determine if backwaters from the river are entering the CSS, thereby indicating that maintenance of the tide gate is required (see section 3.9).

3.8.2 Outfall Signs

Signs are posted at each outfall with the SPDES permit number, outfall number and point of contact to report problems. On an annual basis, the City of Albany visits each outfall to verify the presence of the outfall sign and to determine if the condition of the sign warrants replacement.

3.8.3 Floatable Control Facilities

Three new City of Albany Floatable Control facilities will be constructed as part of the Albany Pool CSO LTCP.

Table 3-4
Future Floatables Control Facilities within the City of Albany

LTCP Facility, SPDES Outfall	Purpose	Latitude and Longitude	Operational Start-Up Date:
"Big C" Disinfection and Floatables Control Facility for CSO A-016 Outfall	The proposed satellite treatment facility provides CSO controls for flows up to 75 mgd to reduce floatable and fecal coliform discharges to the Hudson River. The "Big C" Disinfection Project would provide treatment consisting of screening and disinfection for an additional ~285MGal on an average annual basis.	TBD	5/1/23
Floatables Control Facility for CSO 026 Outfall (Regulators Maiden, Steuben and Orange),	The proposed floatables facility will collect floatable debris and materials associated with CSOs from the Maiden, Steuben and Orange regulator structures.	42°38'57"N 73°44'48"W	12/15/19
Floatables Control Facility for CSO 030 Outfall (Regulators Quackenbush, Jackson and Livingston)	The proposed floatables facility will collect floatable debris and materials associated with CSOs from the Quackenbush, Jackson and Livingston regulator structures.	42°39'16"N 73°44'54"W	12/15/19

3.9 ACSD Regulator Inspections

Although the ACSD regulators are not owned by the City of Albany, the City does own a portion of the outfall pipes with the remainder being part of the drainage along I – 787; and is mutually responsible (with the ACSD) for preventing dry weather overflows. As many of the outfalls are submerged (see Section 3.8), the City has developed a program to inspect certain dams upstream of the regulators on a regular basis. The ACSD inspects each regulator on a weekly basis and more frequently where warranted. The regulators the ACSD monitors are presented in Table 3-3.

Table 3-3 Regulator Locations within the City of Albany

Regulator No.	Location	Type	Tide Gate	Latitude	Longitude
013	Bouck Street	Float	YES	42°38'11"N	-73°45'14"W
014	Gansevoort Street	Float	NO	42°38'11"N	-73°45'12"W
015	Schuyler	Float	NO	42°38'22"N	-73°45'06"W
016	Rensselaer Street	Float	YES	42°38'25"N	-73°45'04"W
017 & 018	4 & 4A	Float	NO	42°38'23"N	-73°45'17"W
019	Arch Street	Float	NO	42°38'29"N	-73°45'03"W
020	Ferry	Float	YES	42°38'16"N	-73°45'15"W

021	Madison	Float	NO	42°38’26”N	-73°45’19”W
022	Hamilton Street	Float	NO	42°38’46”N	-73°44’54”W
024	Division Street	Float	NO	42°38’48”N	-73°44’53”W
025	State	Float	NO	42°38’56”N	-73°45’05”W
026	Maiden Lane	Float	NO	42°38’57”N	-73°44’48”W
027	Steuben	Float	NO	42°39’05”N	-73°45’02”W
029	Orange	Float	NO	42°39’13”N	-73°44’56”W
030	Quackenbush	Float	NO	42°39’16”N	-73°44’54”W
031	Jackson	Float	NO	42°39’28”N	-73°44’52”W
030	Spencer Street	Float	NO	42°39’13”N	-73°44’39”W
032	Thatcher Street	Float	NO	42°39’35”N	-73°44’19”W
033	Tivoli	Float	NO	42°39’50”N	-73°44’41”W

The list of regulators to be inspected as part of this program identified in Table 3-3 are included on the County Regulator Inspections form in Appendix G.

As recorded on the inspection form in Appendix G, the inspections include documentation of the current weather condition, condition of the regulator components, and any work required during the time of the inspections (see Section 7). However, if the County notes a dry weather overflow condition, corrective action is taken immediately and the respective community is notified. Dependent on responsibility, the community or the District shall issue a report utilizing the NYAlert system.

Section 4

Section 4
City of Cohoes

4.1 Background

The City of Cohoes sewer system consists of approximately 56 miles of sewer mains ranging in size from 6" to 48" in diameter. The system is primarily combined and has 14 Combined Sewer Overflows (CSOs) or permitted outfalls. The components of the combined sewer system that the City is responsible for maintaining are:

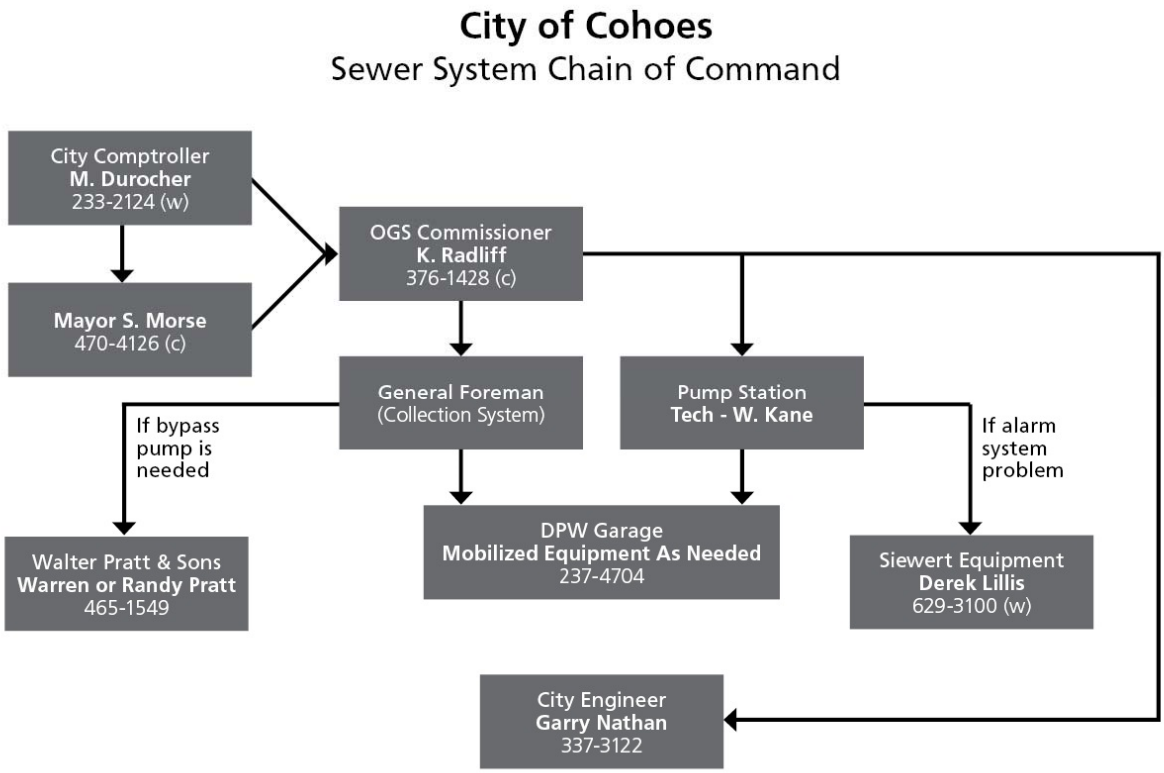
- Collection system piping (combined, sanitary and storm sewers) within City limits up to the Albany County Sewer District (ACSD) regulator structures.
- Outfall sewers (CSOs) and Outfall Signs.
- One (1) Floatable Control CDS Unit at the Vliet Street CSO.
- Catch basins and manholes within City limits, except manholes on the ACSD interceptor.
- Thirteen (13) small sewage lift stations;
    - seven (7) of these lift stations with CSO Outfalls.

The City's maintenance and inspection program for these assets is detailed below. Samples of the inspection forms referenced herein are attached as Appendix C2. The completed inspection forms are maintained in the Commissioner's office.

4.2 Budget

The CSS operations, maintenance and repairs are funded through the City's Sewer Fund. The budget for the operations and maintenance of the system is reviewed on an annual basis with key personnel. In the event of an emergency which exceeds available funds in the budget, the Common Council re-appropriates the required funding from the City's General Fund.

4.3 Organizational Chart



3.3.1 Written Procedures

Written procedures for wet weather preparedness and activities are documented in the City's BMP plan. Emergency contact information for the Water/Sewer department is listed on the city website: http://www.cohoes.com/Cit-e-Access/webpage.cfm?TID=34&TPID=6418

3.3.2 Policies and Procedures for Training O&M Personnel

All sewer maintenance and pump station staff are provided on-the-job training to ensure proper safe operation of all the equipment used in the department. Standard training applies to staff assigned to the pump stations, and all DPW staff gets trained every 2 years on "Spills and Skills" and "After the Storm".

4.4 Catch Basin Cleaning

The City of Cohoes owns and maintains over 800 catch basins. The Department of Public Works has one (1) operational sewer eductor trucks that is routinely used to clean catch basins and open clogged sewers. As part of the cleaning process, the catch basin structures are inspected to determine the general condition of the structure. The City has found that about twenty percent of the catch basins inspected have either a sump or hood.

Catch basins within the City are generally separated into two categories, and the frequency of

cleaning and inspection activities are defined by the catch basin category. Catch basins in the "priority" category are located in areas subject to ponding/flooding during rainfall events. These areas are generally at the toe of steep slopes and in low points along major roadways. These catch basins are inspected and cleaned, if necessary, in advance of significant rainfall events. This generally includes storms with predicted rainfall totals of 1-inch or more. The priority areas are shown in Appendix D2.

Catch basins in the rest of the City are cleaned and inspected on a schedule that is based upon seasonal conditions that may change throughout the year. The Commissioner of Public Works schedules preventative maintenance activities within these non-priority areas based on resource availability and experience with the operation and maintenance of the combined sewer system. The City will continue to evaluate the program and adjust the schedule of cleaning and inspecting catch basins to assure potential trouble areas are continually maintained.

Cleaning and inspection can also be triggered by customer complaints. These complaints are generally forwarded directly to the sewer department trucks to allow for a quick response. This type of reactive inspection will supersede the schedule defined above and define the place in the cycle for a given structure moving forward. All cleaning and inspection activities are documented on the "Catch Basin Inspection Form" included in Appendix C2.

4.5 Combined Sewer Cleaning

The City of Cohoes owns and maintains about 56 miles of combined and separate sanitary sewers. Within that total, the sewer department will identify specific segments of the combined sewer system that may need more attention than other areas. Pipe cleaning and inspection is triggered in areas which have a history of sinkholes, backup issues, or other maintenance issues within the collection system. These areas may change from year to year as improvements are made to the collection system. Other areas may develop problems as a result of a number of things such as aging, root invasion, grease buildup etc. A checklist, identifying all of the trouble mains identified by the sewer department is provided in Appendix E and will be updated in the annual report.

Pipe inspections can also be triggered by customer complaints, which are forwarded directly to the sewer department supervisor which deploys trucks to allow for a quick response. The sewer crew records work performed in response to a customer complaint in a log book and catch basin/sewer call log form. The forms are filed by date, and a summary of these work orders is provided to the Sewer Department Supervisors on a routine basis. Sewers that have a documented history of frequent customer complaints and cleaning needs are added to a list by the Sewer Department Supervisors. This list will be evaluated continually throughout year for the need to schedule CCTV work. The City will continue to evaluate the program and adjust the schedule of cleaning and inspection to assure potential trouble areas are continually maintained. Details of the City's operations, maintenance and inspection will be summarized on an annual basis and included in the annual report.

4.6 Pump Station Inspections

The City owns, operates and maintains ten (13) small pump stations. Six (6) of stations are located in portions of the system that are separated (i.e., wastewater flows only); and as such, do not have CSO outfalls. The seven (7) stations which can overflow to receiving waters, along with their respective CSO

outfalls, are identified below.

Table 4-1
City of Cohoes Pump Station Locations

SPDES Outfall	Location	Latitude	Longitude
001, 002, 003 & 004	Bridge Ave PS#4	42°46'04"N	-73°41'40"W
005	North Gansvoort Ave PS#6	42°46'40"N	-73°41'08"W
006	Delaware Ave PS#5	42°46'21"N	-73°40'01"W
009	Conboy Ave PS#7	42°47'27"N	-73°42'16"W
010	Peach & Oliver St PS#12	42°46'01"N	-73°41'09"W
011	Cedar St PS#11	42°46'12"N	-73°41'33"W
017	Linden St PS#10	42°46'18"N	-73°41'45"W
N/A	McDonald Drive #1	42°47'15"N	-73°43'48"W
N/A	Linen Place #2	42°45'12"N	-73°41'59"W
N/A	Delaware Ave #3	42°46'03"N	-73°41'10"W
N/A	DPW Garage #9	42°46'28"N	-73°41'41"W
N/A	Niver St #13	42°45'33"N	-73°41'52"W
N/A	Waterview #14	42°46'44"N	-73°40'57"W

Overflows exist at the pump stations in combined sewer areas for both CSO's and emergency use. All stations have propane/gas fired emergency electrical generators for use in power outages. In addition, the pump stations have a wireless alarm system to report high water (and other data) along with provisions for bypass pumping in case of emergency. The City owns a bypass pump which can be readily mobilized to the site, and maintains O&M manuals for all pump stations along with tie-in information for bypass pumping operations.

The Pump Stations are inspected on a weekly basis and the emergency generators at each pump station are exercised regularly. These inspections are documented on the "Pump Station Inspection" form in Appendix F2. The completed forms are kept at the shop building. A summary of these work orders is provided to the Sewer Department Supervisors on a routine basis.

4.7 Regulator Inspections

4.7.1 City Owned Regulators

The City of Cohoes owns and maintains thirteen (13) regulators within the City. These regulators are inspected every two (2) weeks by City personnel. The regulators that the City monitors are presented in Table 4-2.

Table 4-2
ACSD Regulator Locations within the City of Cohoes

SPDES Outfall	Location	Latitude	Longitude	Regulator Type	Tide Gate
001	Myrtle Avenue	42°58'09"N	-73°41'39"W	Elevated Pipe	No
002	Hudson Avenue	42°46'01"N	-73°41'42"W	Elevated Pipe	No
003	Bridge Avenue	42°46'03"N	-73°41'41"W	Elevated Pipe	No
004	Van Schaik Avenue	42°46'06"N	-73°41'40"W	Elevated Pipe	No
005	N. Gansvoort Avenue	42°46'38"N	-73°41'06"W	Dam Well Overflow	No
006	Ontario Street	42°46'22"N	-73°41'03"W	Wet Well Overflow	No
009	Conboy Avenue	42°47'25"N	-72°42'45"W	Dam	No
010	Peach Street	42°46'04"N	-73°41'56"W	Dam	No
011	Cedar Street	42°46'12"N	-73°41'52"W	Dam	No
014	Johnston Avenue	42°46'9"N	-73°42'30"W	Elevated Pipe	No
015	Saratoga and Main St.	42°45'51"N	-73°41'57"W	Top of Pipe Removed	No
016	Ontario and River St.	42°46'38"N	-73°41'24"W	Fixed Dam	No
017	Linden Street	42°46'18"N	-73°41'45"W	Wet Well Overflow	No

Footnote: ACSD Regulator No. 008 and 015 discharge at same CSO outfall, ACSD Regulator No. 012 and 014 discharge at same CSO outfall

4.7.2 ACSD Owned Regulators

Although the regulators are not owned by the City of Cohoes, the City does own the outfall pipes and is mutually responsible (with the ACSD) for preventing dry weather overflows. As many of the outfalls are submerged (see Section 4.6) and cannot therefore be inspected at the outfall to determine the presence of dry weather overflows, the City has developed a program to inspect upstream dams on a regular basis. The District inspects each regulator on a weekly basis and more frequently where warranted.

The regulators the District monitors are presented in Table 4-3.

Table 4-3
ACSD Regulator Locations within the City of Cohoes

SPDES Outfall	Location	Latitude	Longitude	Regulator Type	Tide Gate
007	N. Mohawk and Vliet St.	42°46'52"N	-73°42'16"W	Float/Dynamic	N
008	Saratoga Street	42°45'50"N	-73°41'08"W	Top of Pipe Removed	N
012	Garner Street	42°46'36"N	-73°42'30"W	Float/Dynamic	N

The list of regulators to be inspected as part of this program are identified on the County Regulator Inspections form included in Appendix G.

As recorded on the inspection form in Appendix G, the inspection includes documentation of the current weather condition, condition of the regulator components, and any work required during the time of the inspection (see Section 7). However, if the County notes a dry weather overflow condition, corrective action is taken immediately and the respective community is notified. Dependent on responsibility, the community or the District shall activate the NYAlert system.

4.8 Outfalls

4.8.1 Outfall Pipes

Of the permitted CSO outfalls within the City of Cohoes, only 12 outfalls are continuously visible and 2 others are visible depending on tidal conditions. Several of these visible outfalls can only be seen from the river or eastern riverbank. The remaining outfalls are submerged. The pipe visibility will be noted on the regulator summary form to be included in Appendix B.

The City of Cohoes completes bimonthly inspections of the visible CSO outfalls, using the "CSO Outfalls" inspection form in Appendix C1. The vantage point of the inspection (at outfall or from eastern riverbank) is noted on the inspection form for each outfall. The submerged outfall pipes are not inspected unless there is a condition that would warrant an inspection since it would require the use of underwater cameras and/or divers.

4.8.2 Outfall Signs

Signs are posted at each outfall with the SPDES permit number, outfall number and point of contact to report problems. On annual basis, the City of Cohoes visits each outfall to verify the presence of the outfall sign and to determine if the condition of the sign warrants replacement. These findings will be documented in the Annual CSO Report.

4.8.3 Floatable Control Facilities

Table 4-4
Floatable Control Facility within the City of Cohoes

SPDES Outfall	Location	Latitude	Longitude
007	North Mohawk and Vliet	42°46'52"N	-73°42'16"W

This facility is inspected on a monthly basis, and after significant wet weather events, to ensure proper operations and maintenance. Floatable materials along with other collected grit and debris are typically removed two to four times annually, based upon the loadings which vary on a seasonal basis.

A new City of Cohoes Floatable Control facility will be constructed as part of the Albany Pool CSO LTCP.

Table 4-5
Future Floatable Control Facility within the City of Cohoes

LTCP Facility, SPDES Outfall	Purpose	Latitude and Longitude	Operational Start-Up Date:
"Little C" Floatables Control Facility, C-008, 015	The proposed floatables facility will collect floatable debris and materials associated with the 'Little C" outfall in Cohoes, discharging to the Mohawk River.	42°45'51"N 73°41'57"W	12/15/26

Section 5

Section 5
Village of Green Island

5.1 Background

The Village of Green Island is nearly 2 miles long and 0.5 miles wide and ranges in elevation from 27 feet to 32 feet above sea level. The sewer system consists of approximately 10 miles of sewer mains ranging in size from 8" to 30" in diameter. The system is primarily combined and has 3 Combined Sewer Overflows (CSOs). The components of the combined sewer system that the Village is responsible for maintaining are:

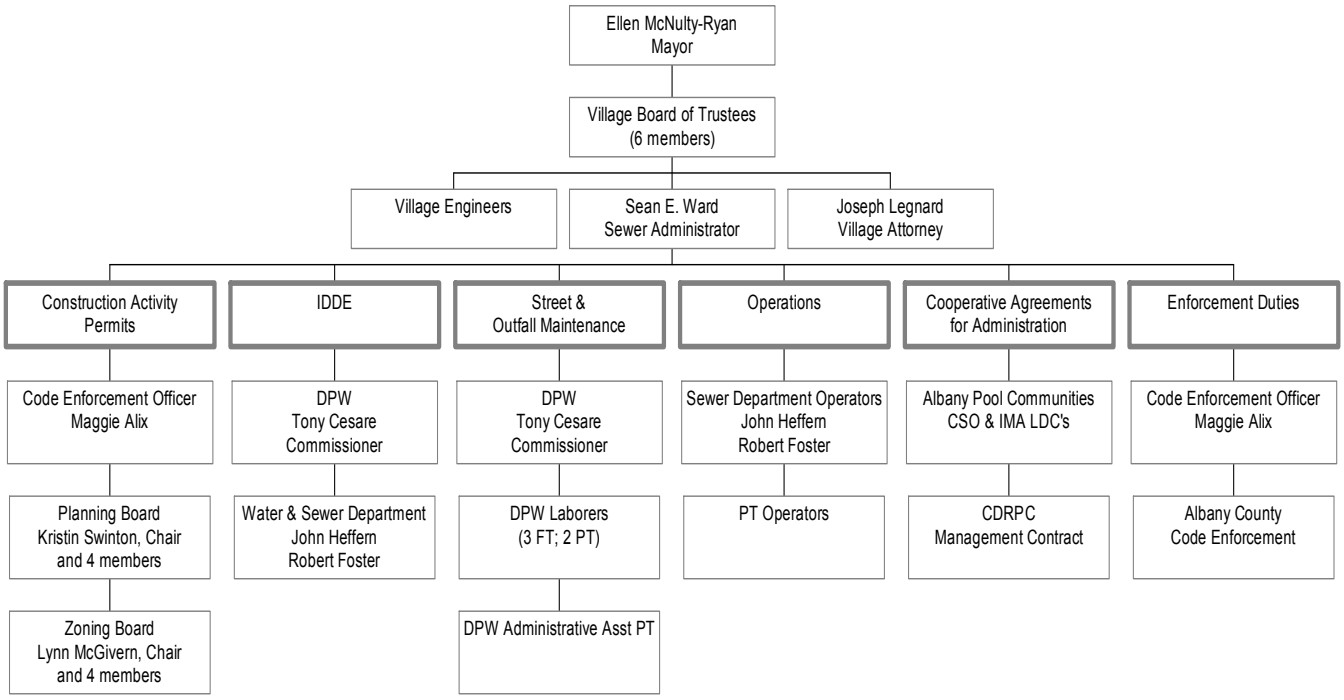
- Collection system piping (combined, sanitary and storm sewers) within Village limits up to the Albany County Sewer District (ACSD) regulator structures and force mains to the District interceptor.
- Outfall sewers (CSOs) and Outfall Signs.
- Catch basins and manholes within Village limits.
- Three (3) sewage lift stations.

The Village's maintenance and inspection program for these assets is detailed below. Samples of the inspection forms referenced herein are attached as Appendix C3. The completed inspection forms are maintained in the Sewer Department Supervisor's office.

5.2 Budget

The CSS operations, maintenance and repairs are funded through the Village of Green Island Sewer Fund. The budget for the operations and maintenance of the system is reviewed on an annual basis with key personnel. In the event of an emergency which exceeds available funds in the budget, the Village Board would re-appropriate the required funding from the Village Capital Projects and/or General Fund. The budgeted sewer expenditures for 2016-17 are $809,398 including personnel.

5.3 Organizational Chart



5.3.1 Written Procedures

In the event of an emergency, the Village of Green Island has a specific notification policy that is followed in order as listed:

1. Water Department and Department of Public Works
2. Executive Assistant to the Mayor
3. Albany County Sewer District
4. Department of Environmental Conservation (if needed)

Others, including outside contractors, may be contacted if necessary. Any procurement would be done in accordance with General Municipal Law Section 103 and the Village of Green island Procurement Policy as they pertain to emergencies. Emergency contact information for the Department of General Services and Water/Sewer is listed on the Village websites: http://www.villageofgreenisland.com/village/public-works/ and http://www.villageofgreenisland.com/village/water-sewer/

5.3.2 Policies and Procedures for Training of Sewer Personnel

All sewer department staff are provided both hands on and classroom training to assure proper use of any equipment used and/or proper procedures for maintenance of our system. They are assigned any personal protective equipment (PPE) needed to perform duties in safe manner. Training records are kept by both the Commissioner of Public Works and the Sewer Department Administrator.

5.4 Catch Basin Cleaning

The Village owns and maintains over 200 catch basins. The Department of Public Works does not own a sewer eductor truck but the Village receives assistance from the City of Cohoes and the District to routinely clean catch basins and open clogged sewers. As part of the cleaning process, the catch basin structures are inspected to determine the general condition of the structure. The Village has found that about ninety percent of the catch basins inspected have either a sump or hood.

Catch basins within the Village are generally separated into two categories, and the frequency of cleaning and inspection activities are defined by the catch basin category. Catch basins in the "priority category" are located in areas subject to ponding/flooding during rainfall events. These areas are generally at low points along major roadways. These catch basins are inspected and cleaned if necessary in advance of significant rainfall events. This generally includes storms with predicted rainfall totals of 1-inch or more. The priority areas are shown in Appendix D3.

Catch basins in the rest of the Village are cleaned and inspected on a schedule that may vary throughout the year based upon seasonal conditions that may change throughout the year. The Sewer Department Supervisor schedules preventative maintenance activities within these non-priority areas based on resource availability and experience with the operation and maintenance of the combined sewer system. The Village will continue to evaluate the program and adjust the schedule of cleaning and inspecting catch basins to assure potential trouble areas are continually maintained.

Cleaning and inspection in either area can also be triggered by customer complaints. These complaints are generally forwarded directly to the sewer department trucks to allow for a quick response. This type of reactive inspection will supersede the schedule defined above and define the place in the cycle for a given structure moving forward.

All cleaning and inspection activities are documented on the "Catch Basin Inspection Form" included in Appendix C3.

5.5 Combined Sewer Cleaning

The Village of Green Island owns and maintains about 3 miles of combined and separate sanitary sewers. Within that total, the sewer department will identify specific segments of the combined sewer system that may need more attention than other areas. These areas may change from year to year as improvements are made to the collection system. Other areas may develop problems as a result of a number of things such as aging, root invasion, grease buildup etc. A checklist, identifying all of the trouble mains identified by the sewer department is provided in Appendix E3 and will be updated in the annual report.

Pipe inspections can also be triggered by customer complaints, which are forwarded directly to the sewer department supervisor which deploys trucks to allow for a quick response. The sewer crew records work performed in response to a customer complaint on a "work order". The work orders are transcribed into a spreadsheet program by the Public Water Department, and a summary of these work orders is provided to the Sewer Department Supervisors on a routine basis. Sewers that have a

documented history of frequent customer complaints and cleaning needs are added to a list by the Sewer Department Supervisors. This list will be evaluated continually throughout year for the need to schedule CCTV work. The evaluation will be completed and included in the annual report.

5.6 Pump Station Inspections

The Village owns, operates and maintains three pump stations. The Center Street and Saratoga Avenue Pump Stations were installed in 1970. Center St. and Center Island are emergency overflows and will only overflow in situations of complete power failure. Both Center Street and Center Island have diesel fired emergency electrical generators for use in power outages, while Saratoga Street has dual feed power service. The pump station at Saratoga St. is downstream of significant separation work performed along Albany Avenue, thus adding significant capacity at the station and reducing the likelihood of overflows. Block testing will be performed at a future date to assess the impact of the separation work on this station.

The Pump Stations are inspected on a weekly basis and the emergency generators at each pump station are exercised regularly. These inspections are documented on the "Pump Station Inspection" form in Appendix F3. The completed forms are kept at the shop building and transcribed into a spreadsheet program by the Public Works Department. A summary of these work orders is provided to the Sewer Department Supervisors on a routine basis.

Table 5-1
Village of Green Island Pump Station Locations

SPDES Outfall	Location	Latitude	Longitude
002	Center Street	42.7429488 N	-73.6902308 W
003	Center Island	42.7390861 N	-73.6926805 W
004	Saratoga	42.734859 N	-73.6964202 W

5.7 ACSD Regulator Inspections

Although the regulators are not owned by the Village of Green Island, the Village does own the outfall pipes and is mutually responsible (with the ACSD) for preventing dry weather overflows. Two outfalls are visible and one is submerged (see Section 5.8) and cannot therefore be inspected to determine the presence of dry weather overflows. The Village has developed a program to inspect ACSD regulators on a regular basis. The District inspects each regulator on a weekly basis and more frequently where warranted.

The regulators the District owns and monitors are presented in Table 5-1.

Table 5-1
ACSD Regulators locations within the Village of Green Island

SPDES Outfall	Location	Latitude	Longitude	Regulator Type	Tide Gate
002	Swan Street	42°44'39"N	-73°44'29"W	Valve (Open)	N

003	Hamilton Street	42°44'21"N	-73°41'35"W	Valve (Open)	Y
004	Saratoga Street	42°44'04"N	-73°41'46"W	Valve (Open)	Y

5.8 Outfalls

5.8.1 Outfall Pipes

Of the 3 permitted CSO outfalls within the Village of Green Island, only two outfalls are continuously visible and one other are visible depending on tidal conditions. Several of these visible outfalls can only be seen from the river or eastern riverbank. The remaining outfalls are visible from Swan Street. The pipe visibility will be noted on the regulator summary form to be included in Appendix B.

The Village of Green Island completes monthly inspections of the visible CSO outfalls, using the "CSO Outfalls" inspection form in Appendix C3. The vantage point of the inspection (at outfall or from eastern riverbank) is noted on the inspection form for each outfall.

Submerged outfall pipes are not inspected unless there is a condition that would warrant an inspection since it would require the use of underwater cameras and/or divers.

5.8.2 Outfall Signs

Signs are posted at each outfall with the SPDES permit number, outfall number and point of contact to report problems. On an annual basis, the Village of Green Island visits each outfall to verify the presence of the outfall sign and to determine if the condition of the sign warrants replacement. These findings are documented in the Annual CSO Report.

Section 6

Section 6
City of Watervliet

6.1 Background

The City of Watervliet is a small urban community located on the western shore of the Hudson River, directly across from Troy. The City is approximately 1.0 mile long and 1.5 miles wide. The sewer system includes combined sewers in the City, where there is heavy residential development. There are five permitted Combined Sewer Overflows (CSOs) discharging to the Hudson River and the Dry River Creek. The components of the combined sewer system that the City is responsible for maintaining are:

- Collection system piping (combined, sanitary and storm sewers) within City limits up to the Albany County Sewer District (ACSD) regulator structures. While ACSD owns and operates four regulating chambers within the City, the City owns and operates one on Avenue A, and one 25th street and RR Avenue.
- Outfall sewers (CSOs) and Outfall Signs.
- Catch basins and manholes within City limits, except manholes on the ACSD interceptor.

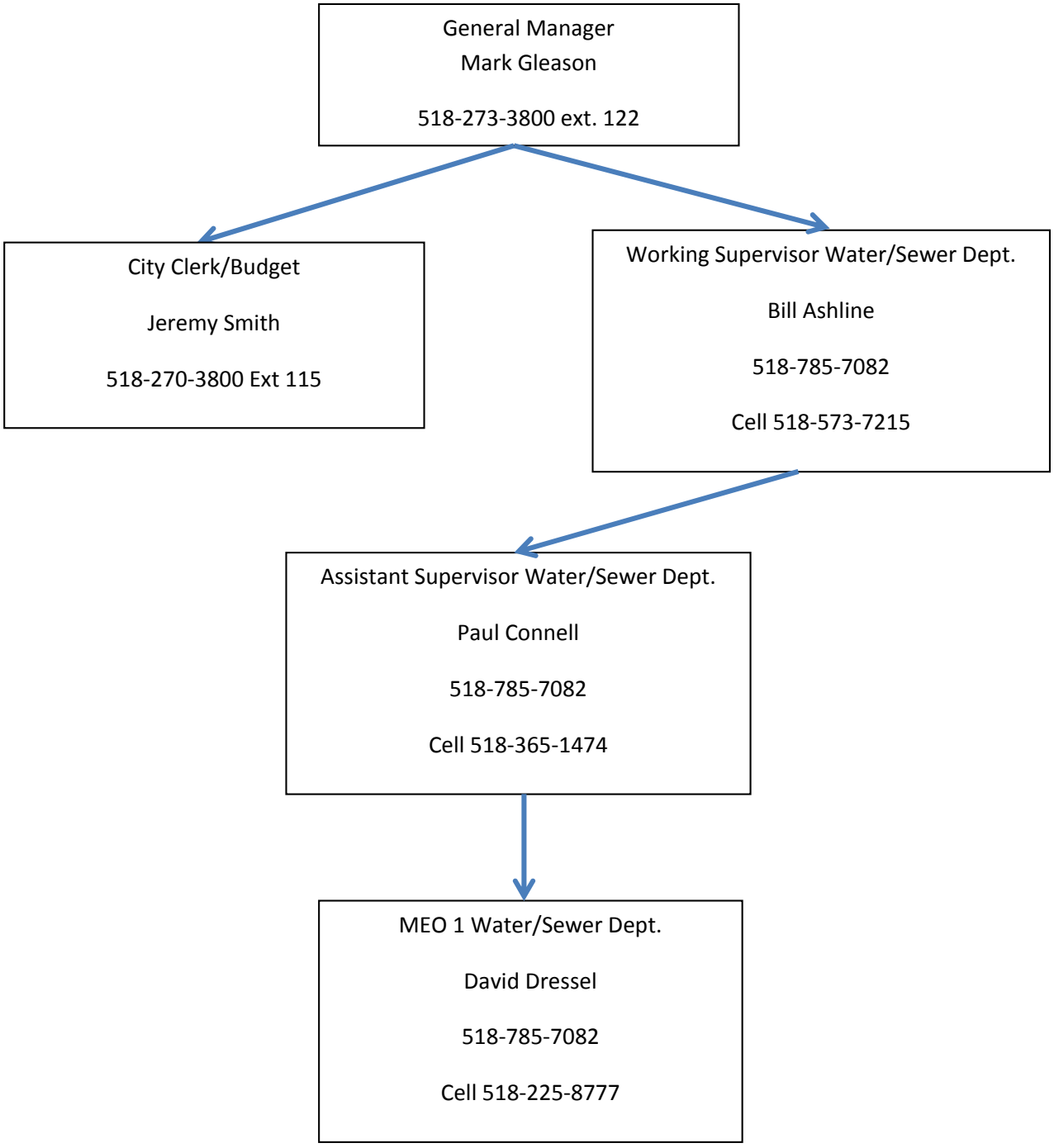
The City's maintenance and inspection program for these assets is detailed below. Samples of the inspection forms referenced herein are attached as Appendix C4. The completed inspection forms are maintained in the Water and Sewer Departments office.

6.2 Budget

Every year starting in September the City reviews the budget for the next working year. This process goes on for three months before it is adopted by the city council. In this budget there are specific lines items for MS4 work and CSO work that is done. There is also a separate reserve line for any potential projects that are being discussed in the city or for emergency issues should they arise. Every year the City also has an MOA for shared services regarding sewer issues with the City of Cohoes and with the Albany County Sewer District. The FY2016 Sewer Fund is budgeted at $1,164,667

6.3 Organizational Chart

Chain of Command for City of Watervliet CSO Inspection and Maintenance Plan



6.3.1 Written Procedures

If an emergency situation shall arise for any sewer problem the city would first evaluate whether or not it is something that can be handled in house with the resources the city has at its disposal. If it is deemed that it cannot be done in house then the city can take action under an emergency policy to hire a contractor who suitable to fix this problem. The city has both a sewer fund and a reserve fund where the cost of the fix can come out of. Emergency purchases are not subject to competitive bidding pursuant to General Municipal Law §103. Emergency purchases pursuant to Section 103(4) of the General Municipal Law (GML). Section 103(4) of GML permits emergency goods or services to be purchased, but only immediately and when delay in order to seek alternate proposals may threaten the life, health, safety or welfare of the residents.

6.3.2 Policies and Procedures for Training O&M Personnel

The City does training for all of its relevant municipal employees every year with regards to stormwater. These trainings usually consist of videos on topics of IDDE, Spills and Skills, and good housekeeping for municipal facilities.

6.4 Catch Basin Cleaning

The City of Watervliet owns and maintains over 300 catch basins. The City of Watervliet does not own a sewer Vac truck but does own a sewer jet truck which is used to clean clogged sewers. The department is assisted by the City of Cohoes and the Albany County Sewer District through the use of a sewer Vac truck to clean catch basins and open clogged sewers. As part of the cleaning process, the catch basin structures are inspected to determine the general condition of the structure. The City has found that about eighty percent of the catch basins inspected have either a sump or hood.

Catch basins within the City are generally separated into two categories, and the frequency of cleaning and inspection activities are defined by the catch basin category. Catch basins in the "priority" category are located in areas subject to ponding/flooding during rainfall events. These areas are generally at the toe of steep slopes and in low points along major roadways. These catch basins are inspected and cleaned if necessary in advance of significant rainfall events. This generally includes storms with predicted rainfall totals of 1-inch or more. The priority areas are shown on Figure D4 in Appendix D.

The City cleans approximately 1/3 of the catch basins every year on a rotating schedule, to ensure each catch basin is cleaned once every 3 years. In addition, the city cleans the priority basins that require more frequent cleaning. The Sewer Department Supervisor schedules preventative maintenance activities within these "non-priority" areas based on resource availability and experience with the operation and maintenance of the combined sewer system. The City will continue to evaluate the program and adjust the schedule of cleaning and inspecting catch basins to assure potential trouble areas are continually maintained.

Cleaning and inspection in either area can also be triggered by customer complaints. These complaints are generally forwarded directly to the sewer department trucks to allow for a quick response. This type of reactive inspection will supersede the schedule defined above and define the place in the cycle for a given structure moving forward.

All cleaning and inspection activities are documented on the "Catch Basin Inspection Form" included in Appendix C.

6.5 Combined Sewer Cleaning

City sewers are cleaned on an annual basis, however, the DPW understands that there are portions of the combined sewer system that typically require more frequent cleanings to maintain flow capacity. These areas are inspected and cleaned, as necessary, on a more frequent basis. The areas are depicted in Appendix D4. Additionally, sewer cleaning and inspection may be performed in response to customer complaints.

All sewer cleaning work is coordinated and tracked by the Sewer Department Supervisor. Any sewer cleaning work performed is logged on standard work orders. An example work order is provided in Appendix C4.

Internal pipe inspections using CCTV are performed on an as needed basis to address customer complaints and identify sewers that are in need of replacement. The City hires a contractor to preform CCTV work when needed.

6.6 Regulator Inspections

Albany County Sewer District (ACSD) owns the majority of the regulating structure in the City of Watervliet (Table 6-1), and is therefore responsible for maintaining and inspecting these structures. The City does, however, own the regulating structure on Avenue A and one on 25th Street and RR Avenue (Table 6-2). This regulator is a manhole with a high-level overflow pipe; the overflow pipe discharges to Dry River Creek. The City performs bi-weekly inspections that are documented on the "Regulator Inspection Form" in Appendix G4.

Table 6-1
ACSD Regulator Locations in the City of Watervliet

SPDES Outfall	Location	Latitude	Longitude	Regulator Type	Tide Gate
001	Third Street	42°42'31"N	-73°42'22"W	Float/Dynamic	Y
002	Sixth Street	42°42'44"N	-73°42'15"W	Float/Dynamic	Y
003	Seventh Street	42°42'49"N	-73°42'13"W	Float/Dynamic	Y
004	Fourteenth Street	42°43'27"N	-73°04'58"W	Float/Dynamic	Y

Table 6-2

Regulators Owned by the City of Watervliet

SPDES Outfall	Location	Latitude	Longitude	Regulator Type	Tide Gate
005	18th & Avenue A	42°43'47"N	-73°42'31"W	Dam	N

	25th Street & RR Avenue	42°44'09"N	-73°42'32"W	Dam	N

6.7 Outfalls

6.7.1 Outfall Pipes

Of the 5 permitted CSO outfalls within the City of Watervliet, only one outfall is continuously visible and 4 others are not visible. The pipe visibility will be noted on the regulator summary form to be included in Appendix B.

6.7.2 Outfall Signs

Signs are posted at each outfall with the SPDES permit number, outfall number and point of contact to report problems. On an annual basis, the City of Watervliet visits each outfall to verify the presence of the outfall sign and to determine if the condition of the sign warrants replacement or clearing any obstructions to the sign visibility. These findings are documented in the Annual CSO Report.

6.8 CSO Inspection and Maintenance Plan Procedures for Storm Events

The City maintains a list of actions for Preparation of Incoming Storm Events:

1.) Check and have ready all pumps and hoses that are available.
2.) Check on inlet structures of creeks at Hillside Drive and High School, Behind 1238 Hillside Drive, Behind Van Rensselaer Village.
3.) Check all catch basins for tops that are covered. (i.e., leaves, trash etc.)
4.) Check on availability of personal for after-hours events.

List of actions during Storm Events:

1.) Keep problem catch basin cleaned and open.
2.) Keep a watch on stream inlet structures.
3.) If basements from residents/ businesses flood act accordingly with assistance via pumping out.

List of actions for after the Storm Event:

1.) Inspect all catch basins and clean if needed.
2.) Inspect all inlet structures. If cleaning is needed schedule with DPW to clean with backhoe and dump truck.
3.) Inspect the two weirs (18th St. & Ave A, 25th St. & RR Avenue) to see if they have returned to normal operating flow.
4.) Return all pumps and hoses used back at DPW.
5.) Inspect any other equipment that was used for them storm including vehicles, pumps, and hand tools.

Section 7

Section 7
Albany County Sewer District

7.1 Background

The Albany County Sewer District's two wastewater treatment plants provides secondary treatment for approximately 200,000 residential and commercial users within eight surrounding communities (Cities of Albany, Cohoes, Watervliet, Towns of Colonie and Guilderland, Villages of Green Island, Menands and Colonie). The District owns and operates approximately 20 miles of interceptor sewers and 30 flow regulating chambers. The components of the combined sewer system that the ACSD is responsible for maintaining are:

- Flow regulating chambers in Albany, Cohoes, Green Island and Watervliet.
- Interceptor Sewers and associated manholes.

ACSD's maintenance and inspection program for these assets is detailed below. Samples of the inspection forms referenced herein are attached as Appendix G. The completed inspection forms are maintained at District offices.

7.2 Regulators

The ACSD is responsible for inspecting and maintaining a total of 30 flow regulating chambers within the Cities of Albany (20), Cohoes (3), Watervliet (4) and Village of Green Island (3). There are two basic configurations for these regulators, but typically a regulator includes an influent chamber with a dry weather flow channel and discharge orifice (Appendix H). This chamber also has a dam structure with an overflow weir. Numerous overflows require a tide gate to prevent river inflow to the ACSD system (Appendix H). The specific configuration for each regulator will be presented in the Existing Conditions Summary provided in Appendix B5. ACSD evaluates the condition of the regulators through annual inspections. Extreme storm events may require additional evaluations determined by weekly inspections.

The regulators are inspected on a weekly basis, as documented on the "Regulator Inspection and Maintenance Form" included in Appendix G. During the course of a regulator inspection the District will also inspect the community's dam chamber. If a dry-weather overflow is observed, the ACSD will notify the respective community using the "Dry Weather Overflow Form" (see Appendix G). When this notification is made the ACSD will indicate the recognized cause of the overflow. If the cause of the overflow is due to a condition of the regulator the District will issue a report utilizing the NYAlert system. If the cause is a condition of the municipality's system the respective municipality will issue a report utilizing the NYAlert system. Where possible the District will immediately correct the condition and/or assist the municipality to correct the condition and evaluate the cause.

In addition to weekly inspections, the ACSD performs daily maintenance activities on the regulators. These activities typically involve removing any accumulated debris to maximize flow to the interceptor. The ACSD owns and uses a Vac truck for this purpose. Maintenance activities are generally scheduled to ensure that each regulator is properly maintained. Additional maintenance visits are typically

scheduled following large storm events.

7.3 Interceptor Sewers

The interceptor sewers are jetted and examined for backups on a continual basis. The District has strategic locations on all three interceptors that are examined on a regular basis. Strategic locations are identified to include but not limited to, areas of low pipe slope, high volume areas, areas of steep grade, and areas with significant industrial discharges.

The ACSD owns a Vac truck to perform cleaning work on a regular basis. The ACSD has never had a reported incident of backup associated with the interceptor sewer.

Appendices

Appendix A

Attached and updated annually upon approval

Appendix B

Attached and updated annually upon approval

Appendix C

Appendix C1

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 N. ENTERPRISE DRIVE
ALBANY, NEW YORK 12204
TELEPHONE (518) 434-5300
FAX (518) 434-5332

KATHY M. SHEEHAN
MAYOR

JOSEPH E. COFFEY JR., P.E.
COMMISSIONER

INVESTIGATION REPORT

Address: _____ Date: _____

Nearest Cross Street: _____ Time: _____

Employee Name(s): _____ Unit #: _____

Property Owner's Name: _____ Phone #: _____

Reason for Call: _____

WATER

Water Showing: ☐ YES ☐ NO

Location: _____

Curb Box:

Condition:	Located In:
☐ Working	☐ Street
☐ Not Working	☐ Sidewalk
☐ Not Showing	☐ Driveway
☐ Plugged	☐ Lawn
☐ Bent	☐ Other:
☐ Painted	_____

Leak Detected: ☐ YES ☐ NO

☐ Inside C-Stop	☐ Main Break
☐ Outside C-Stop	☐ On Valve
☐ Unable to Confirm	☐ On Hydrant

SEWER

☐ Backup: Location: _____

Sump Pump: ☐ YES ☐ NO

Roof Drain: ☐ YES ☐ NO

☐ Sinkhole: Location: _____

Size: L ____ x W ____ x D ____

☐ Odor: Location: _____

☐ Cleaned Catch Basin(s)

☐ Mainline Work: ☐ Jet ☐ Cut ☐ Camera

Main Size: _____ Length: _____

From: _____

To: _____

Left Excavation Policy: ☐ YES ☐ NO

Left Contractors List: ☐ YES ☐ NO

Remarks: _____

Appendix C2

City of Cohoes Inspection Form (Circle One)

Catch Basin; Manhole; Main/Piping; Outfall Sign; Outfall Pipe

Date:_____ Operators:_____

Location ID/Name:_____

Pipe/Basin Condition:	N/A	Clear	Slightly Clogged	Fully Clogged
Manhole/Basin Grate Collar Condition:	N/A	No Damage	Light Damage	Heavy Damage
Basin Sedimentation	N/A	Low	Medium	High
Presence of Additional Pollutants	Floatable/Trash	Yard Waste	Oil	Other
Asset Cleaned	N/A	Yes	No	
Outfall Sign Visibility	N/A	Yes	No	
Outfall Pipe Condition	N/A			
Additional Notes				

Appendix C3

Village of Green Island Inspection Form (Circle One)

Catch Basin; Manhole; Main/Piping; Outfall Sign; Outfall Pipe

Date:_____ Operators:_____

Location ID/Name:_____

Pipe/Basin Condition:	N/A	Clear	Slightly Clogged	Fully Clogged
Manhole/Basin Grate Collar Condition:	N/A	No Damage	Light Damage	Heavy Damage
Basin Sedimentation	N/A	Low	Medium	High
Presence of Additional Pollutants	Floatable/Trash	Yard Waste	Oil	Other
Asset Cleaned	N/A	Yes	No	
Outfall Sign Visibility	N/A	Yes	No	
Outfall Pipe Condition	N/A			
Additional Notes				

Appendix C4

City of Watervliet Inspection Form (Circle One)

Catch Basin; Manhole; Main/Piping; Outfall Sign; Outfall Pipe

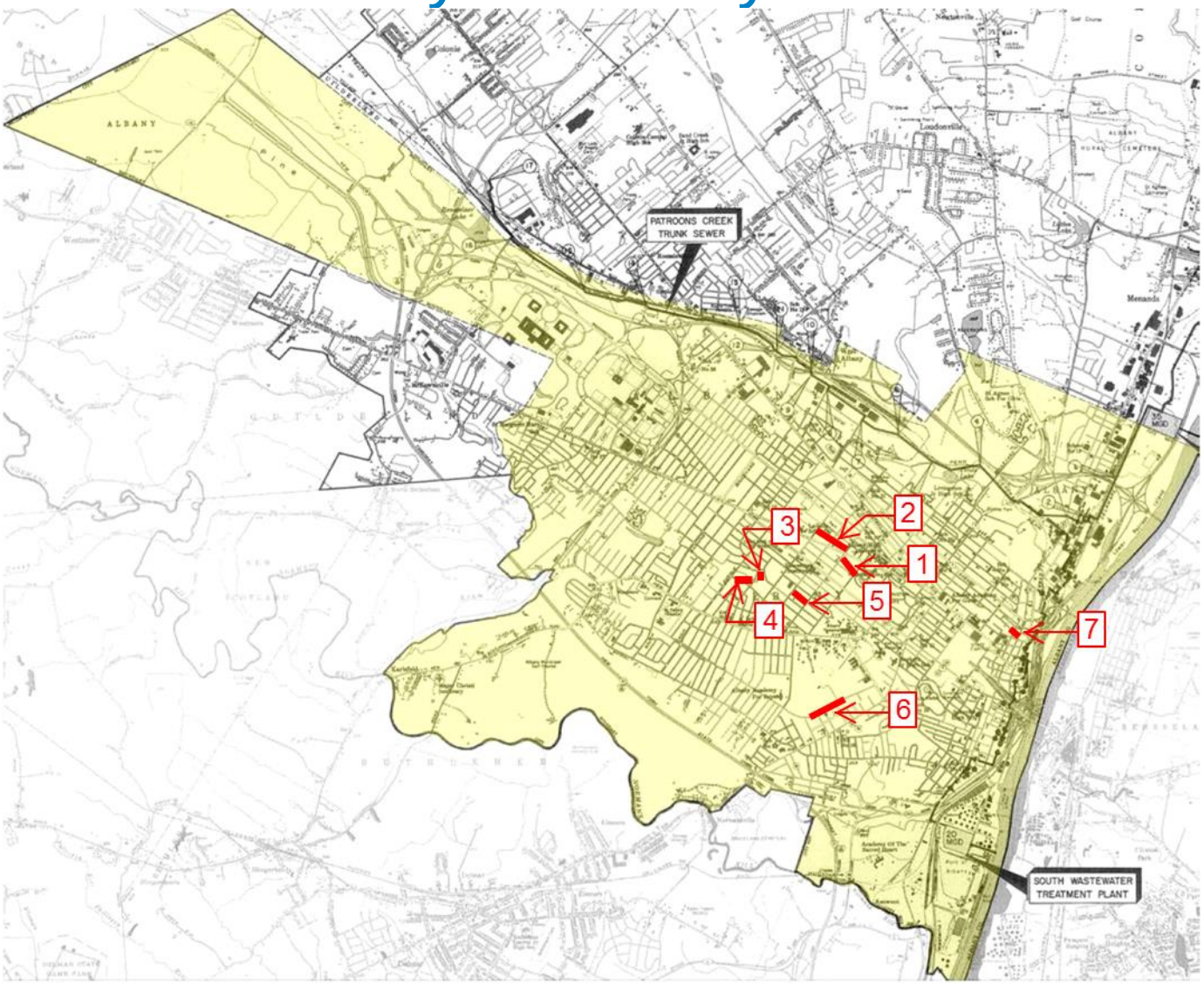
Date:_____ Operators:_____

Location ID/Name:_____

Pipe/Basin Condition:	N/A	Clear	Slightly Clogged	Fully Clogged
Manhole/Basin Grate Collar Condition:	N/A	No Damage	Light Damage	Heavy Damage
Basin Sedimentation	N/A	Low	Medium	High
Presence of Additional Pollutants	Floatable/Trash	Yard Waste	Oil	Other
Asset Cleaned	N/A	Yes	No	
Outfall Sign Visibility	N/A	Yes	No	
Outfall Pipe Condition	N/A			
Additional Notes				

Appendix D

Appendix D1
City of Albany

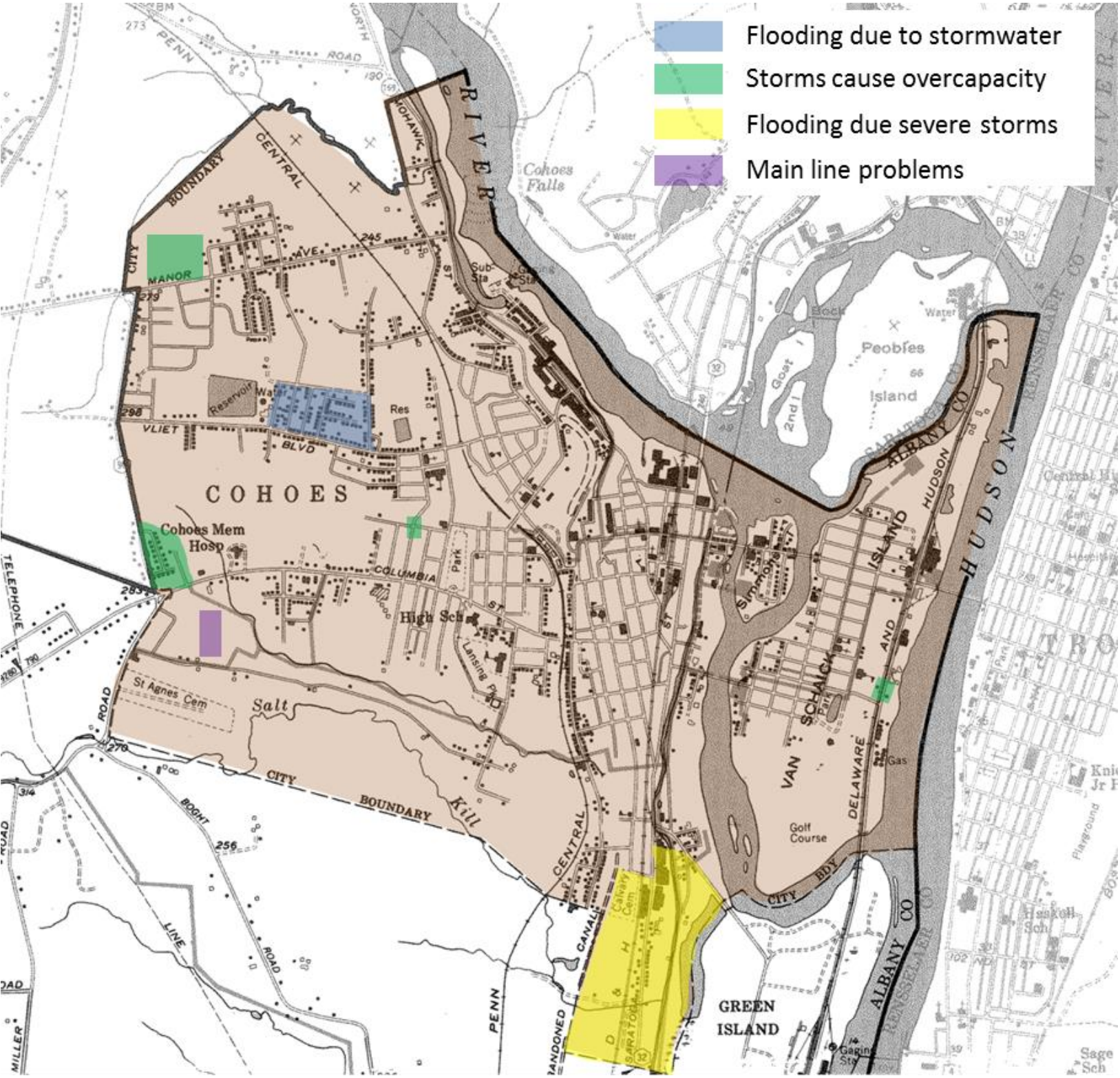


City of Albany Priority Areas

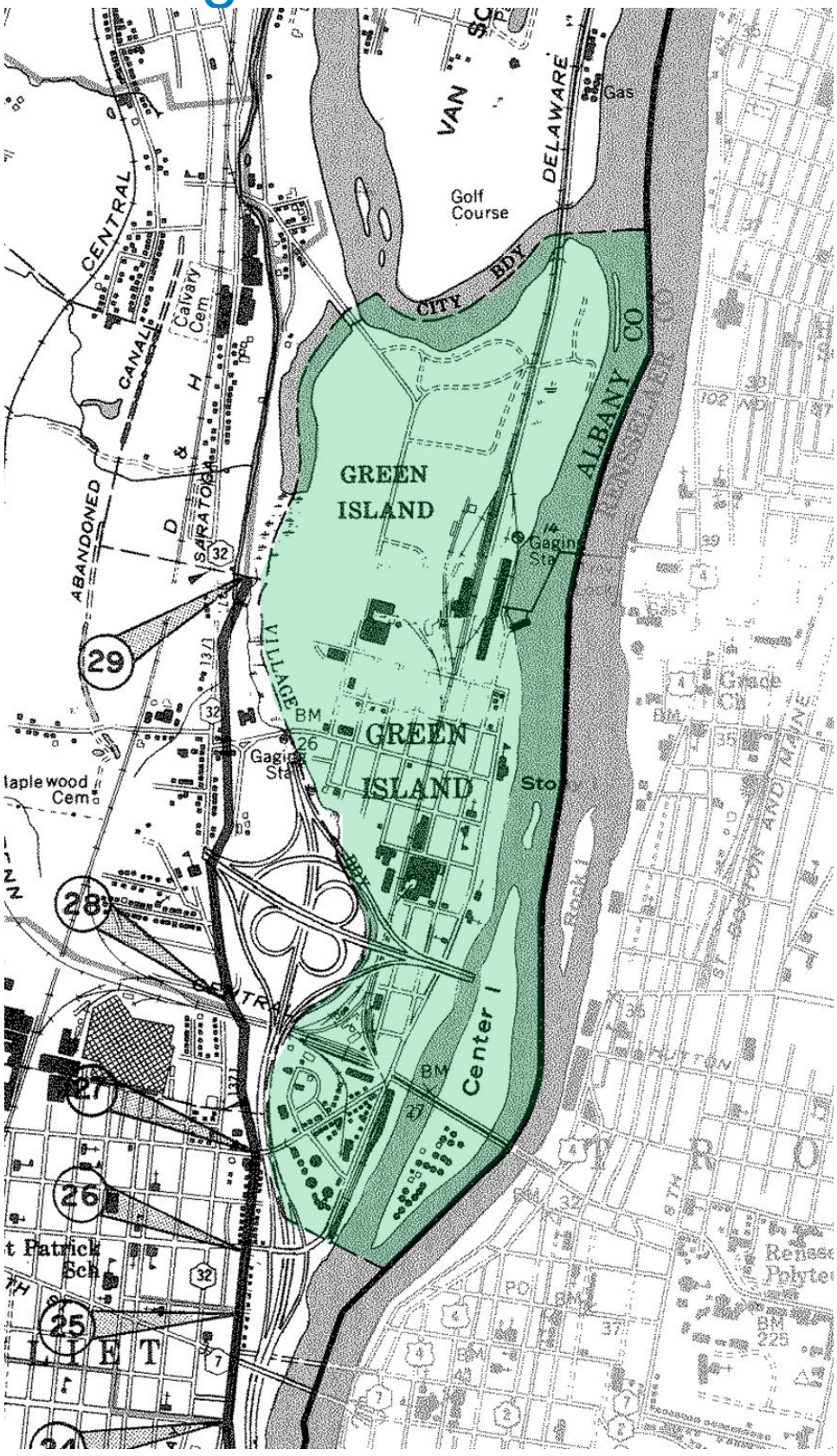
1. Elberon Place
2. SUNY Alumni Quad & Rear of Western & Quail
3. Ryckman Avenue
4. Hansen Avenue
5. Warren Street
6. Hackett Boulevard
7. Sheridan Avenue & Chapel Street

Appendix D2

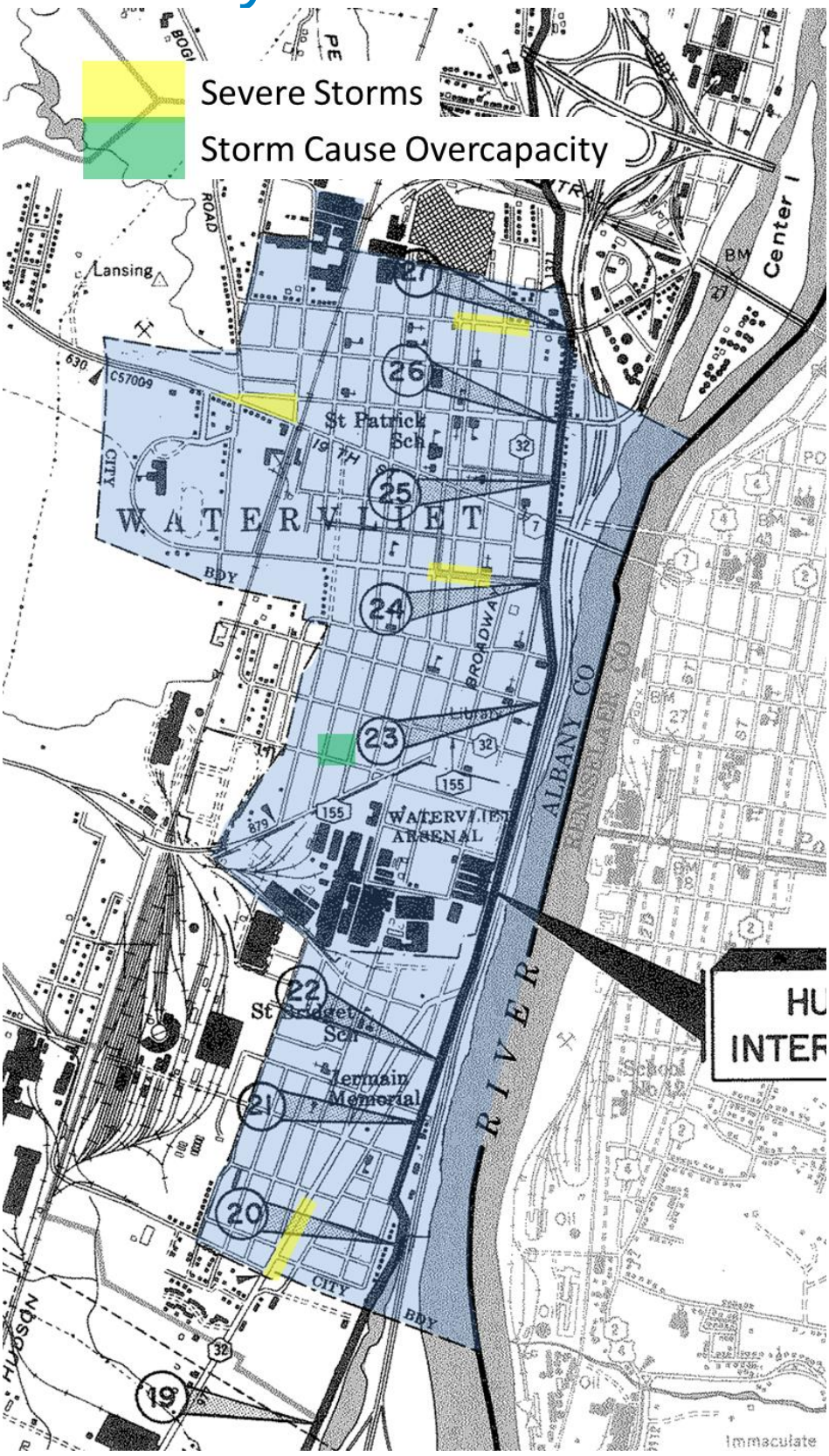
City of Cohoes



Appendix D3
Village of Green Island



Appendix D4
City of Watervliet



Appendix E

Appendix E1

Street Name	Cross Streets	Cleaning Schedule
Academy Road	Bethlehem and New Scotland	September
Alden Street	Second and Twiller	November
Avon Place	Locust and Russell	March
Barclay Street	dead end and Delaware	October
Barrows Street	Second and Leedale	November
Beacon Avenue	Western and dead end	March
Benson Street	Quail and Ontario	May
Benson Street	Partridge and Ontario	May
Benson Street	N. Main and W. Erie	May
Berncliff Avenue	Crescent and New Scotland	March
Besch Avenue	dead end and Delaware	October
Bethlehem Street	Forest and Academy	September
Bogart Terrace	dead end and Second	November
Bohl Avenue	Delaware and dead end	October
Brevator Street	Lincoln and Washington	April
Brevator Street	Washington and Melrose	April
Briar Avenue	Huron and Woodville	March
Buchanan Street	Lincoln and Manning	May
Buckingham Drive	#91/#94 and Davis	March
Buell Street	Lincoln and dead end	May
Cambridge Road	Western and dead end	March
Cardinal Avenue	Whitehall and Hackett	August
Cardinal Avenue	New Scotland and Hackett	August
Catalpa Drive	dead end and Summit	October
Chestnut Street	W. Lawrence and N. Allen	May
Clermont Street	Belvidere and Western	April
Clermont Street	Hawkins and Washington	April
Clermont Street	Hawkins and Melrose	April
Colonial Avenue	#19 and Western	April
Corlaer Street	Hoffman to S. Marshall	November
Cortland Street	Beacon and Russell	March
Croswell Street	Lincoln and dead end	May
Cuyler Avenue	Delaware and dead end	October
Danker Avenue	Lincon and Washington	May
Dartmouth Street	Kelton and #95/#96	September
Delaware Avenue	Jeanette and Beekman	October
Delaware Avenue	Sparkill and Mapleridge	October

Street Name	Cross Streets	Cleaning Schedule
Edenburg Avenue	Homestead and Magazine	March
Edgewood Avenue	Hawkins and Melrose	April
Eileen Street	Hawkins and Melrose	April
Eileen Street	Hawkins and Washington	April
Eileen Street	Belvidere and Western	April
Eliot Avenue	Wellington and Wellington	March
Euclid Avenue	Berkshire and New Scotland	March
Fairlawn Avenue	#156/#161 and Washington	April
Federal Street	Summit and Delaware	October
Ferndale Street	Marsdale and New Scotland	March
Fleetwood Avenue	New Scotland and Hackett	August
Fordham Court	Stanford and #14/#15	August
Glendale Avenue	Helderberg and New Scotland	September
Glendale Avenue	Helderberg and Bethlehem	September
Grove Avenue	New Scotland and Woodlawn	July
Grove Avenue	New Scotland and Bethlehem	September
Hackett Boulevard	Pinewood and #167	September
Hackett Boulevard	Bancroft and Westford	March
Hamilton Street	Quail and dead end	June
Hamilton Street	Lark and Dove	June
Hampton Street	Second and Leedale	November
Hansen Avenue	S. Main and Ryckman	June
Harris Avenue	#69/#72 and New Scotland	September
Harvard Avenue	W. Lawrence and S. Main	July
Highfield Lane	McCormack and dead end	March
Highland Avenue	#33 and Homestead	March
Hillcrest Avenue	#6/#9 and Cortland	March
Hollywood Avenue	Whitehall and Hackett	August
Holmes Dale	#163/#164 and Buckingham	March
Homestead Avenue	Washington and Lincoln	May
Jay Street	N. Allen and W. Lawrence	May
Joelson Court	Whitehall and New Scotland	September
Kehoe Street	Southern and Leedale	November
Kelton Court	Whitehall and Dartmouth	September
Kenosha Street	Philbrick and dead end	November
Kent Street	Partridge and Ontario	May
Leedale Street	Hoffman and Kehoe	November
Leighton Street	Southern and Leedale	November
Lenox Avenue	Berkshire and Greenway	March
Limerick Drive	Lawn and dead end	November

Street Name	Cross Streets	Cleaning Schedule
Lincoln Avenue	W. Lawrence and N. Allen	May
Lincoln Avenue	Roosevelt and Cleveland	May
Lindberg Avenue	Hutton and N. Pearl	November
Lowell Street	Kneeland and Yardboro	April
Madison Avenue	Quail and S. Lake	June
Madison Avenue	S. Allen and S. Main	June
Madison Avenue	Lark and Willet	June
Magnolia Terrace	dead end and Delaware	October
Manning Boulevard	W. Lawrence and N. Main	May
Maple Avenue	Woodlawn and Grove	July
Mariette Place	Dartmouth and Whitehall	September
Marinello Terrace	Delaware and dead end	October
Marlborough Court	Fordham and dead end	August
Marwill Street	Whitehall and New Scotland	October
Matilda Street	Cuyler and Whitehall	October
Maxwell Street	Pine Tree and dead end	March
McDonald Road	dead end and Whitehall	October
Melrose Avenue	N side, Brevator and Edgewood	April
Mercer Street	Quail and S. Lake	July
Morris Street	Knox and Lark	June
Morris Street	S. Allen and W. Lawrence	June
Mount Hope Drive	Garland and S. Pearl	November
Mountain Street	Philbrick and Southern	November
Mountain Street	dead end and Southern	November
Myrtle Avenue	Robin and S. Lake	June
Myrtle Avenue	W. Lawrence and S. Main	June
New Scotland Avenue	S. Lake and Ontario	July
New Scotland Avenue	Winnie and S. Main	July
Norfolk Street	dead end and Kenosha	November
Norwood Avenue	New Scotland and Woodlawn	July
O'Connell Street	Garden and Second	October
Ontario Street	New Scotland and Woodlawn	July
Ontario Street	Park and Warren	June
Ontario Street	Madison and Hudson	June
Orlando Avenue	Berkshire and dead end	March
Palmer Avenue	dead end and Yardboro	April
Par Circle	O'Neil Road	March
Park Avenue	Quail and Partridge	June
Park Avenue	Ridgefield and S. Main	June
Parkwood Street	New Scotland and Edison	July

Street Name	Cross Streets	Cleaning Schedule
Partridge Street	Fairview and Woodlawn	July
Partridge Street	Warren and Providence	June
Partridge Street	Bradford and Benson	May
Pine Tree Lane	Harding and dead end	March
Plum Street	Franklin and Green	November
Prospect Terrace	dead end and Hackett	September
Providence Street	Quail and S. Lake	July
Putnam Street	Second and dead end	November
Quail Street	Warren and Woodlawn	July
Quail Street	Park and Yates	June
Ramsey Place	New Scotland and Hackett	September
Raymo Street	Garden and Second	October
Regent Street	Second and dead end	November
Roosevelt Street	Lincoln and Manning	May
Rose Court	Whitehall and Dartmouth	September
Rose Court	Hackett and Whitehall	September
Rosemont Street	#56/#53 and Western	April
Rosemont Street	Washington and Melrose	April
Rosemont Street	Lincoln and Washington	April
Russell Road	#126/#139 and city line	March
S. Main Avenue	#347 and Whitehall	July
S. Main Avenue	New Scotland and Hackett	July
S. Pine Avenue	Mercer and Myrtle	June
Sard Road	dead end and Whitehall	October
Slingerland Street	Garden and Second	October
Southern Boulevard	dead end and Southern	November
Southern Boulevard	Delaware and McAlpin	November
St. James Place	Summit and Delaware	October
Summit Avenue	Barclay and Marinello	October
Sunset Avenue	Western and Cortland	March
Sycamore Street	New Scotland and Hackett	August
Sycamore Street	Hackett and Whitehall	August
Ten Eyck Avenue	Whitehall and Marwill	October
Third Street	#351 and N. Lake	May
Third Street	N. Lake and Quail	May
Turner Place	Whitehall and Hackett	August
Twiller Street	Hoffman and Alden	November
Van Buren Street	Lincoln and Washington	May
Van Schoick Avenue	New Scotland and Hackett	August
Van Schoick Avenue	Whitehall and Hackett	August

Street Name	Cross Streets	Cleaning Schedule
Victor Street	dead end and Washington	April
W. Lawrence Street	Madison and Park	June
W. Lawrence Street	Bancker and Mercer	June
W. Lawrence Street	#468 and #442	June
W. Van Vechten Street	Garden and Second	October
Warren Street	Quail and S. Lake	July
Washington Avenue	Lexington and Robin	May
Washington Avenue	N. Lake and Robin	May
Washington Avenue	Partridge and W. Erie	May
Washington Avenue	N. Allen and N. Pine	May
Washington Avenue	Manning and N. Pine	May
Washington Avenue	S side, Brevator and Hawthorne	April
Washington Avenue	N side, Victor and Colvin	April
West Street	W. Lawrence and N. Allen	May
Western Avenue	Beacon and Sunset	March
Western Avenue	Oxford and Tudor	March
Whitehall Road	Marwill and Kate	October
Whitehall Road	Rose and Betwood	September
Whitehall Road	Sycamore and Cardinal	August
Winnie Street	#81 and Cliff	June
Woodlawn Avenue	Quail and S. Lake	July
Woodlawn Avenue	Quail and Partridge	July
Yardboro Avenue	Kneeland and Central	April
Yates Street	Quail and Ontario	June
Yates Street	Quail and #282	June

Appendix E2

City of Cohoes Identification and Maintenance of Troubled Mains

Date	Location	Description of Issue	Checked by	Notes

Appendix E3

Green Island Identification and Maintenance of Troubled Mains

Date	Location	Description of Issue	Checked by	Notes

Appendix E4

Watervliet Identification and Maintenance of Troubled Mains

Date	Location	Description of Issue	Checked by	Notes

Appendix F

Appendix F1

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 N. ENTERPRISE DRIVE
ALBANY, NEW YORK 12204
TELEPHONE (518) 434-5300
FAX (518) 434-5332

KATHY M. SHEEHAN
MAYOR

JOSEPH E. COFFEY, JR., P.E.
COMMISSIONER

PUMP STATION DAILY REPORT (ROUTE #1)

Employee Name(s): _____ Date: _____

Station Name	Pump Running Time		Generator Test	Maintenance Work Performed
Karlsfeld (McCormack Road)			☐ Yes ☐ No	
Meadow Lane			☐ Yes ☐ No	
Olympian Acres (Olive Tree Lane)			N/A	
New Scotland Woods (Woodside Drive)			☐ Yes ☐ No	
Par Circle			N/A	
Golf Course			N/A	
Whitehall Station (Windsor Place)			N/A	
Marlborough Court			N/A	
Delaware Ave #1 (lower end of Mill Rd)			N/A	
Delaware Ave #2 (upper end of Mill Rd)			N/A	
Corning Preserve Park			N/A	
Northern Boulevard			N/A	
Saint Agnes (Greyledge Drive)			N/A	
Woodville			☐ Yes ☐ No	

CITY OF ALBANY
DEPARTMENT OF WATER & WATER SUPPLY
10 N. ENTERPRISE DRIVE
ALBANY, NEW YORK 12204
TELEPHONE (518) 434-5300
FAX (518) 434-5332

KATHY M. SHEEHAN
MAYOR

JOSEPH E. COFFEY, JR., P.E.
COMMISSIONER

PUMP STATION DAILY REPORT (ROUTE #2)

Employee Name(s): _____ Date: _____

Station Name	Pump Running Time		Generator Test	Maintenance Work Performed
McAlpin Street			N/A	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
South Pearl Street			☐ Yes ☐ No	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Broadway			☐ Yes ☐ No	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Turning Point (Point of Woods)			☐ Yes ☐ No	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Pinehurst Estates (Woodridge Street)			☐ Yes ☐ No	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Corporate Circle			☐ Yes ☐ No	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Berkshire Boulevard			N/A	
	Air Monitor: O2: _____ CO2: _____ H2S: _____ LEL: _____			
Lowell Street			N/A	
Wilan Lane			N/A	
Snow Dock (by Dutch Apple)			N/A	
I-90			☐ Yes ☐ No	

Appendix F2

City of Cohoes Pump Station Maintenance & Inspection

Inspection	Station: _____		Station: _____		Station: _____	
Leaks	Yes	No	Yes	No	Yes	No
Grease Pumps	Yes	No	Yes	No	Yes	No
Clean Glass Filter	Yes	No	Yes	No	Yes	No
Run Pumps	Yes	No	Yes	No	Yes	No
Check Wet Seal	Yes	No	Yes	No	Yes	No
Check Valve Operation	Yes	No	Yes	No	Yes	No
Check Hand Operation	Yes	No	Yes	No	Yes	No
Check Auto Operation	Yes	No	Yes	No	Yes	No
Exercise Emergency Generator	Yes	No	Yes	No	Yes	No
Check Inlet Manhole	Yes	No	Yes	No	Yes	No
Check Outlet Manhole	Yes	No	Yes	No	Yes	No
Comments						

Appendix F3

Green Island Pump Station Maintenance & Inspection

Inspection	Station: _____		Station: _____		Station: _____	
Leaks	Yes	No	Yes	No	Yes	No
Grease Pumps	Yes	No	Yes	No	Yes	No
Clean Glass Filter	Yes	No	Yes	No	Yes	No
Run Pumps	Yes	No	Yes	No	Yes	No
Check Wet Seal	Yes	No	Yes	No	Yes	No
Check Valve Operation	Yes	No	Yes	No	Yes	No
Check Hand Operation	Yes	No	Yes	No	Yes	No
Check Auto Operation	Yes	No	Yes	No	Yes	No
Exercise Emergency Generator	Yes	No	Yes	No	Yes	No
Check Inlet Manhole	Yes	No	Yes	No	Yes	No
Check Outlet Manhole	Yes	No	Yes	No	Yes	No
Comments						

Appendix G

Appendix G

ALBANY	Date	Inspected	Cleaned	Grit	Plugged	Rags	Floatables	Debris	Muck	Dry Weather Overflow	Wet Weather Overflow	Snowmelt
Tivoli												
Thatch												
Living												
Jack												
Quacken												
Orange												
Stuben												
Maiden												
State												
Division												
Hamilton												
Madison												
Ferry												
Arch												
4-4A												
Renns./Green												
Schyler												
Gansvort												
Bouch												

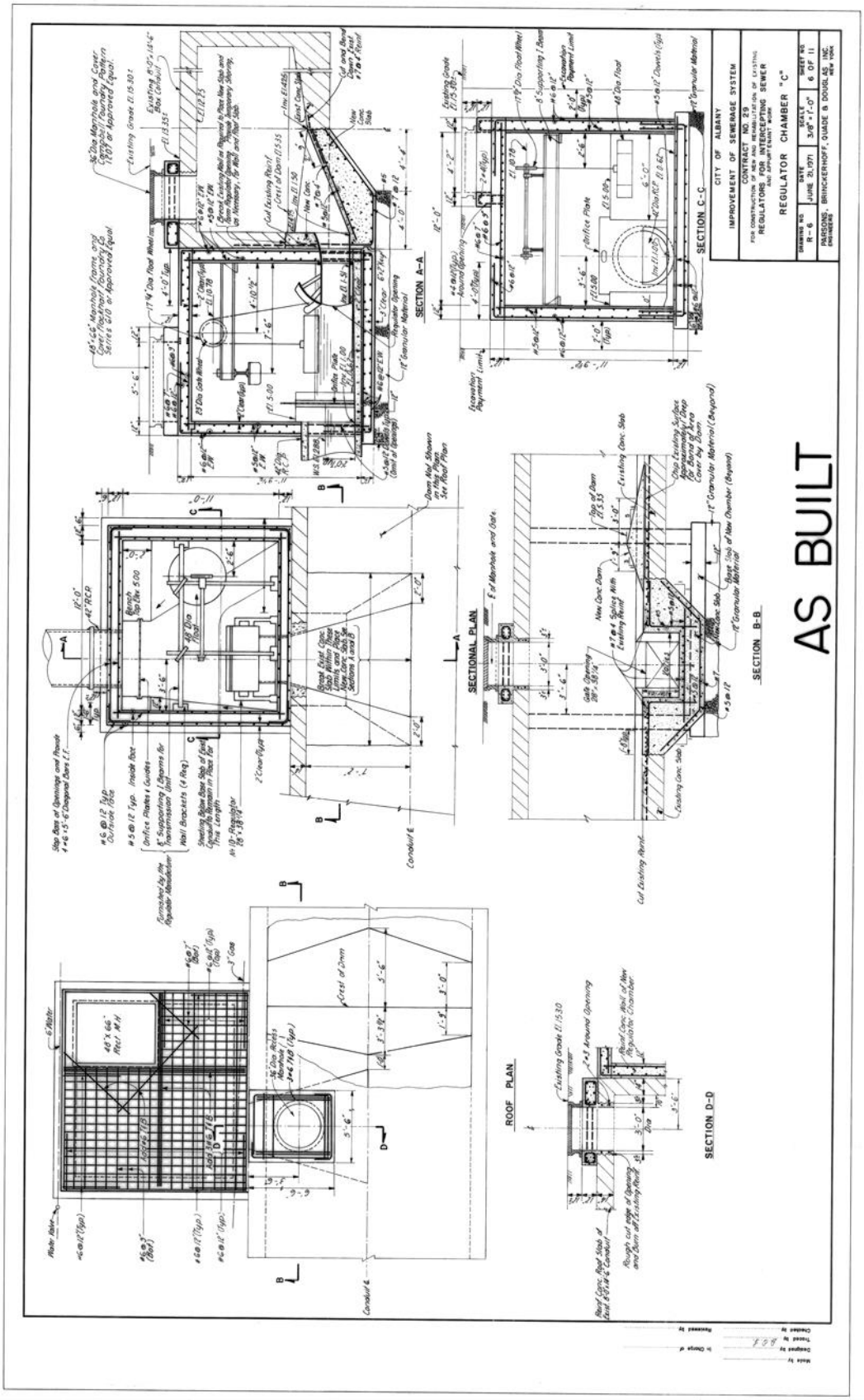
Cohoes	Date	Inspected	Cleaned	Grit	Plugged	Rags	Floatables	Debris	Muck	Dry Weather Overflow	Wet Weather Overflow	Snowmelt
Duncan												
Mohawk												
Little C												

Green Island	Date	Inspected	Cleaned	Grit	Plugged	Rags	Floatables	Debris	Muck	Dry Weather Overflow	Wet Weather Overflow	Snowmelt
S. Swan												
Hamilton												
Saratoga												

Watervliet	Date	Inspected	Cleaned	Grit	Plugged	Rags	Floatables	Debris	Muck	Dry Weather Overflow	Wet Weather Overflow	Snowmelt
14th												
7th												
6th												
3rd												

Appendix H

Appendix H


AS BUILT
CITY OF ALBANY
IMPROVEMENT OF SEWERAGE SYSTEM
CONTRACT NO. 29
REGULATORS FOR INTERCEPTING SEWER
REGULATOR CHAMBER "C"
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTIONAL PLAN
ROOF PLAN
BRINCKERHOFF, QUADE & DOUGLAS, INC.

Appendix I


N.Y.S. PERMITTED DISCHARGE POINT
(wet weather discharge)
SPDES PERMIT No. : NY 0025747
OUTFALL No.: 014
For information about this permitted discharge contact:
Permittee Name: Albany Water Board
Permittee Contact: City Of Albany
Permittee Phone: (518)434-5300
OR:
NYSDEC Division of Water Regional Office Address: Region 4
1150 Wescott Rd., Schenectady, NY 12306
NYSDEC Division of Water Regional Phone: (518) 357-2069

Appendix J


N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 1
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
NYSDEC Division of Water Regional Office Address:
1150 North Wescott Rd., Schenectady NY 12306-2014
NYSDEC Division of Water Regional Phone:
(518) 357-2045
02/25/2013
SPDES PERMIT No. NY:
OUTFALL No.: 2
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013
N. Y. S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 3
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 4
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013
SPDES PERMIT No. NY:
OUTFALL No.: 5
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013
N. Y. S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 6
For information about this permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/07/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 7
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 9
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
NYSDEC Division of Water Regional Office Address:
1150 North Wescott Rd., Schenectady NY 12306-2014
NYSDEC Division of Water Regional Phone:
(518) 357-2045
02/25/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 10
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
NYSDEC Division of Water Regional Office Address:
1150 North Wescott Rd., Schenectady NY 12306-2014
NYSDEC Division of Water Regional Phone:
(518) 357-2045
02/25/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 11
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
SPDES PERMIT No. NY:
OUTFALL No.: 12
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
NYSDEC Division of Water Regional Office Address:
1150 North Wescott Rd., Schenectady NY 12306-2014
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 13
For information about the permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
NYSDEC Division of Water Regional Office Address:
1150 North Wescott Rd., Schenectady NY 12306-2014
NYSDEC Division of Water Regional Phone:
(518) 357-2045
SPDES PERMIT No. NY:
OUTFALL No.: 15 8
For information about this permitted discharge contact:
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
1150 North Wescott
NYSDEC Division of Water Regional
(518) 357-2045
02/07/2013
N. Y. S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 16
For information about this permitted discharge contact:
City of Cohoes
02/07/2013
N.Y.S. PERMITTED DISCHARGE POINT
SPDES PERMIT No. NY:
OUTFALL No.: 17
City of Cohoes
Dept. of Public Works
518-237-4704
OR:
02/25/2013

Appendix K


SPDES PERMIT No.: NY 0033031
OUTFALL No.: 004
For information about this permitted discharge, contact:
Permit Contact Name: Village of Green Island
Permit Contact Person: Executive Assistant to the Mayor
Permit Contact Phone: (518) 273-2201
NYS PERMITTED DISCHARGE POINT
OUTFALL No.: 002
Permit Contact Person: Executive Assistant to the Mayor
Permit Contact Phone: (518) 273-2201
NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0033031
OUTFALL No.: 003
For information about this permitted discharge, contact:
Permit Contact Name: Village of Green Island
Permit Contact Person: Executive Assistant to the Mayor
Permit Contact Phone: (518) 273-2201

Appendix L


NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0030899
OUTFALL No.: 001
For information about this permitted discharge, contact:
Permit Contact Name: City of Watervliet
Permit Contact Person: Watervliet General Manager
Permit Contact Phone: (518) 270-3800
NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0030899
OUTFALL No.: 002
For information about this permitted discharge, contact:
Permit Contact Name: City of Watervliet
Permit Contact Person: Watervliet General Manager
Permit Contact Phone: (518) 270-3800
NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0030899
OUTFALL No.: 003
For information about this permitted discharge, contact:
Permit Contact Name: City of Watervliet
Permit Contact Person: Watervliet General Manager
Permit Contact Phone: (518) 270-3800
NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0030899
OUTFALL No.: 004
For information about this permitted discharge, contact:
Permit Contact Name: City of Watervliet
Permit Contact Person: Watervliet General Manager
Permit Contact Phone: (518) 270-3800
NYS PERMITTED DISCHARGE POINT
SPDES PERMIT No.: NY 0030899
OUTFALL No.: 005
For information about this permitted discharge, contact:
Permit Contact Name: City of Watervliet
Permit Contact Person: Watervliet General Manager
Permit Contact Phone: (518) 270-3800

Appendix M

Bouck Street		
Gansvort		
Schuyler		
Rensselaer Street 4		
Rensselaer Street 4A		
3rd Street		

6th Street		
7th Street		
14th Street		
Hamilton Street		
Swan Street		
Saratoga Street		

Garner Street		
Ferry Street		
Arch Street		
Liberty Street		
Division Street		
Maiden Lane		

Steuben Street		
Orange Street		
Thatcher Street		
Mohawk Street		
Quackenbush Street		
Jackson Street		

Livingston Ave		
Rensselaer Street Big C		
State Street		
Madison Ave		
Tivoli Street		

Appendix M

Response to Comments

This document was originally submitted on December 15, 2015. This re-submission was prepared in response to the technical assessment of the Draft Albany Pool Sewer System Operations, Maintenance and Inspection Plans ("Plan") for the City of Albany, City of Cohoes, City of Watervliet, and Village of Green Island (West Side APCs), as summarized in correspondence from the New York State Department of Conservation (DEC).

Comment: *"The plan should focus on the most critical elements and establish procedures for at least catch basins, manholes, sewers, pump stations, regulators (including tide gates), retention basins, floatables controls, treatment works, outfalls, and CSO controls implemented under the LTCP (use place holders for future installations) with the goals of optimizing performance of the sewer system, minimizing dry weather overflows, and maximizing wet weather flow to the treatment plants while maintaining compliance with the effluent limits."*

Response: The Plan has been expanded to list critical facilities or components that affect the performance of the CSS, CSO volumes, or pollutant levels; and has been developed in accordance with Chapter 2 of EPA's CSO Guidance Document regarding proper operation and regular maintenance programs. Specifically, the plan has been expanded to include:

- 3.6 City of Albany Critical Storage Facilities
- 3.7 City of Albany Pump Stations with Overflows
- 3.8.3 City of Albany Floatables Control Facilities
- 4.6 City of Cohoes Pump Station Locations (expanded to include all City pump stations, not just those with CSO outfalls)
- 4.1.1 City of Cohoes Owned Regulators
- 4.8.3 City of Cohoes Floatables Control Facilities
- 6.6 City of Watervliet Owned Regulators

In addition, placeholders have been added for new floatables control facilities and planned regulator modifications.

Comment: *"Although the Albany County Sewer District (ACSD) is not listed as a responsible party for this project under the order, the plan should include the treatment plants as they are critical in achieving these goals. The plan can reference the ACSD wet weather operating plan as* well as other operation and maintenance plans for existing facilities, but existing plans should be reviewed to determine if improvements are necessary to achieve these goals"

Response: This document has been prepared in conjunction with the Albany County Sewer District (ACSD) based upon their ownership of critical facilities and combined sewer system elements (i.e., North and South Wastewater Treatment Plants, County interceptors, and County regulators at interceptor connections). While the communities acknowledge that the treatment plants are certainly a critical component of the system in regards to maximizing treatment of wet weather flows, the ACSD is not a responsible party for this project under the

Order on Consent. As such, this plan has been developed to specifically document policies and procedures for the operation and maintenance of the critical elements of the collection systems owned and operated by the West Side APCs, as required under the Order on Consent.

The optimization of wet weather flows to the ACSD North and South treatment plants has been considered and incorporated into the recommendations in the Albany Pool CSO LTCP; which specifically includes regulator improvement projects and the elimination of overflows which will serve to increase flows delivered to the plants during wet weather periods. Optimization improvements under the LTCP were identified and evaluated in consideration of maximizing flows to the treatment plants and reducing combined sewer overflows to receiving waters; while maintaining the hydraulic grade lines of the system within acceptable limits to prevent surcharging and system backups. In addition, the ACSD wet weather operations for the treatment plants were reviewed in relation to the proposed system optimization and wet weather performance improvements.

Comment: *"Chapter 2 of EPA's CSO Guidance for Nine Minimum Controls and sections II.C.6, IV.A, and IV.B.2.b. of EPAs CSO Policy should be reviewed for further clarification on the desired scope of the plan."*

Response: The Plan has been updated to include the required elements for each community, including, but not specifically limited to the following:

- The organization structure and people responsible for various aspects of the O&M programs
- Budget allocated and procedures for O&M costs and repairs
- Written procedures and schedules for routine, periodic maintenance of major items of equipment and CSO diversion facilities, as well as written procedures to ensure that regular maintenance is provided
- Written procedures for responding to emergency situations
- Policies and procedures for training O&M personnel

Comment: *"The existing conditions survey should be the inventory and assessment of current conditions for the CSS assets and treatment plants. The operation, maintenance, and inspection plan should establish the framework for the development of the complete inventory and assessment of current conditions, which should begin now and continue throughout the implementation of the plan, to generate the information necessary for the asset management plan (due two years following the operation, maintenance and inspection plan)."*

Response: The Plan has been developed to specifically document policies and procedures for the operation and maintenance of the critical elements of the collection systems owned and operated by the West Side APCs. Critical elements have been defined as those facilities or

components that affect the performance of the CSS, CSO volumes, or CSO pollutant levels; and have been developed in accordance with Chapter 2 of EPA's CSO guidance document.

The West Side APCs, in conjunction with the ACSD, intend to complete a baseline survey to compile the inventory and document the existing conditions of the regulators and outfalls, along with other critical elements of their combined sewer systems. The performance of this inventory and baseline condition survey will be completed prior to the development of the Asset Management Plans for the West Side APCs which are required under the executed Order on Consent.

In addition, the communities do intend to perform additional inspections for representative portions of "non-critical elements" for the system (i.e., pipes and catch basins) to assess the condition of the system. It is anticipated that this work will take place during the development and implementation of the Asset Management Plan. We appreciate that the allocation of plan elements between the OM&I and Asset Management plans is a question that is open to interpretation; and whose answer may still be in the process of being sorted out. The allocation that we have adopted here reflects what we believe is a reasonable and practical response to this question. Should the Department wish to discuss the matter in more detail, we are, of course, available to have that discussion.

Comment: *"Sections 3.3, 4.3, 5.3: The plan indicates that pipe inspections can also be triggered by customer complaints. What else triggers pipe inspections? Please include a description of the pipe inspection equipment available. I could be wrong but CATV is typically used to abbreviate cable television, not the closed circuit inspections used for pipes. CCTV is more appropriate."*

Response: These sections have been updated accordingly to provide more detailed descriptions of the inspection process and triggers for inspection. Please note section 3.3 has been renumbered 3.5. CATV has been changed to CCTV.

Comment: *"Sections 3.4, 4.4, 5.4: Please indicate if any overflows exist at each pump station and, if so, indicate their intended use (CSO vs. emergency use only)."*

Response: These sections have been updated accordingly to include this data for pump station outfalls. Please note section 3.4 has been renumbered 3.7, 4.4 has been renumbered 4.6, and 5.4 renumbered 5.6.

Comment: *"Sections 3.5, 4.5, 5.5 & 6.4: Please also indicate the regulator type (float-actuated, hand-wheel adjustable, etc.) and if a tide-gate is present in the tables."*

Response: These sections have been updated accordingly to include regulator type and tide gates. Please note section 3.5 has been renumbered 3.8.3, 4.5 has been renumbered 4.7.1, and 5.4 renumbered 5.7.

Comment: *"Section 3.5: Please clarify the difference between the SPDES Outfall column and the City Outfall ID column."*

Response: This table has been updated and/or clarified. Please note the table has been relocated to Section 3.9.

Comment: *"Section 4.1 indicates thirteen (13) pump stations while Section 4.4 indicates ten (10). Please clarify."*

Response: The table has been updated and/or clarified. The City of Cohoes operates and maintains ten (13) small pump stations. Six (6) of stations are located in portions of the system that are separated (i.e., wastewater flows only); and as such, do not have CSO outfalls. The seven (7) stations which can overflow to receiving waters, along with their respective CSO outfalls, are identified and described within a table in Section 4.6 (formerly section 4.4).

Comment: *"Section 7.3: How are the interceptor sewers "examined"?"*

Response: The ACSD has historically employed a variety of ways to inspect pipes, including but not limited to: "sticking" to examine for grit deposits; visual inspections at lateral connections as well as access points; dye testing; camera inspections, etc. Specific means and methods for inspection are determined based upon the type or intent of the inspection (i.e., routine or emergency) and conditions experienced at the time of the inspections.

Comment: *"The plan should include a section for each community that discusses any regulators that are not owned by ACSD and list the type of regulator (elevated pipe in MH, pump station wet-well overflow, etc.)."*

Response: "Non-ACSD, City-owned regulator tables have been added in sections 4.7.1 and 6.6."