City of Mount Vernon Sanitary Sewer System Capacity, Management, Operations, and Maintenance Plan

(CMOM)

August 31, 2021

(UPDATED - APRIL 2023)

City of Mount Vernon
Department of Public Works
1Roosevelt Square
Mount Vernon, NY 10550

1. COLLECTION SYSTEM MANAGEMENT PLAN OF ACTION

b. Organization

The City of Mount Vernon's Bureau of Sewers, under the Department of Public Works, is responsible for all aspects of our wastewater collection system except for treatment. The Bureau has a staff of ten (10) full time operation and maintenance positions. Contractors are used for some maintenance activities and for emergency support.

3. CLEANING INSPECTION and MAINTENANCE

Update to the "Trouble Areas " ;

Removed – The City completed repairs and was able to remove the following locations from the routine cleaning list.

1.	Beechwood Avenue	(Page #21)	CIPP
2.	Brookside Avenue	(Page #37)	CIPP
3.	Grandview Avenue	(Page #311)	CIPP
4.	Hillside Avenue	(Page #343, #721)	CIPP
5.	West Lincoln/Howard Avenue	(Page #378)	Repair
6.	MacQuesten Parkway	(Page #405-408)	CIPP
7.	Commonwealth Avenue	(Page #758)	Repair

Remain – These locations remain on the routine cleaning list, but repairs are planned.

1.	Pennsylvania Avenue	(Page #40B)	Repair
2.	Fletcher/Primrose Avenues	(Page #238)	Repair
3.	Farrell Avenue	(Page #259)	Repair
4.	North 9th Avenue	(Page #444)	Repair
5.	Pearl Street	(Page #475)	Repair
6.	Sandford Boulevard	(Page #517-518)	CIPP
7.	West 3rd Street Corridor	(Page #635-637)	CIPP

Added – These locations have been added to the routine cleaning list. Repairs are planned.

1.	North Bond Street/Mt Vernon Ave	(Page #28)	Repair
2.	South Columbus Avenue	(Page #73)	Repair
3.	Dell Avenue	(Page # 96)	Repair
4.	Edison Avenue	(Page #111-112)	Repair
5.	South Fifth Avenue	(Page #201-209)	Repair
6.	East 4th Street	(Page #252)	Repair
7.	Haven Avenue	(Page #322A)	Repair
8.	Millington Street	(Page #424)	Repair
9.	Short Street	(Page #435)	Repair
10.	East Sidney Avenue	(Page #557)	Repair

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City of Mount Vernon Sanitary Sewer System Maintenance Plan

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1. COLLECTION SYSTEM MANAGEMENT PLAN OF ACTION

a. Goals

The City of Mount Vernon's Preventive Maintenance Plan (PMP) implements all requirements of the Clean Water Act and takes all corrective actions necessary to eliminate illicit connections. The asset managed in our wastewater collection system is one component of the overall Capacity, Management, Operations and Maintenance (CMOM) Plan, PMP and Plan of Action (POA). The PMP combines preventive, predictive and corrective maintenance strategies with the best management practices. The Plans have been prepared to allow the City of Mount Vernon effectively manage the wastewater collection system to specifically address the identification and elimination of illicit connections in order to minimize discharges and sources of pathogens and minimize sanitary sewer overflows (SSO), to achieve the following goals:

- Prevent public health hazards
- Protect the environment
- Comply with regulations
- Minimize the frequency of SSOs
- Mitigate the impact of SSOs
- Minimize disruptions in service
- Minimize complaints
- Provide expeditious response to any disruption in service that occurs
- Protect City of Mount Vernon's investment in the sanitary sewer collection system by maintaining maximum capacity and extending the useful life of associated assets
- Prevent damage to public/private property
- Efficiently use available funds for the maintenance of the sanitary sewer system and the operation of services
- Reduce expenditures for emergency maintenance
- Convey wastewater to the Yonkers Joint Waste Water Treatment Plant with a minimum of infiltration and inflow (I &I)
- Provide adequate capacity to convey peak flows to serve the community
- Provide immediate, responsive, and efficient service to all emergency calls
- Provide a safe work environment for employees
- Identify illegal sump pump connections
- Utilize evolving technology to increase our effectiveness and efficiency
- Review budget for repair and rehabilitation projects

b. Organization

The City of Mount Vernon's Bureau of Sewers, under the Department of Public Works, is responsible for all aspects of our wastewater collection system with the exception of treatment. The Bureau has a staff of six (6) full time operation and maintenance positions. Contractors are used for some maintenance activities and for emergency support. Figure 1 shows the organizational structure of the Department of Public Works, Bureau of Sewers:

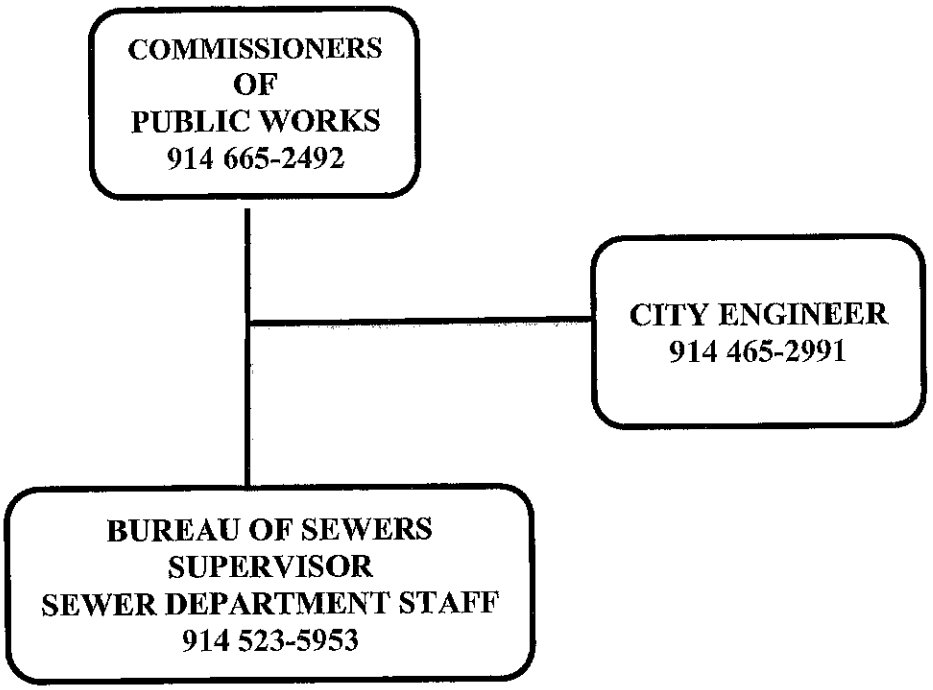

Figure 1 - City of Mount Vernon Bureau of Sewers

The City Engineer will assist in preparing wastewater collection system planning documents, manages capital improvement delivery system, documents new and rehabilitated assets, and coordinates development and implementation of the CMOM, PMP and POA Plans.

The Bureau of Sewers' Supervisor manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

City Staff and Consultants ensures that new and rehabilitated assets meet the Mount Vernon Sewer Department Standards, works with field crews to handle emergencies when contractors are involved, and provides reports to Commissioner of Public Works.

Sewer Department Staff – conduct operations and preventive maintenance activities, mobilize and respond to notification of stoppages and SSOs (i.e., mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

Administrative Staff - support staff operations and preventive maintenance activities, assist with data entry and quality control, handle billing, dispatch, payroll, customer response, outreach, education, and other support functions as needed

c. Training/Safety

- Routine Line Maintenance
- Heavy Equipment Operation
- Maintenance Equipment Operation
- Line Testing and Inspection
- Infrastructure Installation
- Pump Station Operation and Maintenance
- Electrical and Instrumentation

- Emergency Response
- Public Relations
- Safety - Safety training is obtained from training agencies and from other City Departments (i.e. Fire)
- Hard Hat Policy
- Vehicle Operation Policy
- Seat Belt Policy
- Respiratory Protection Program
- Excavation Safety Policy and Program
- Chlorine Safety Policy
- Injury Reporting Policy
- Post-Accident Drug Testing Policy
- Safety Teams and Committee Policy
- Personal Protective Equipment (provided for the employee)
- First Aid, CPR and AED (First aid supplies are available in office areas and vehicles)
- Flaggers
- Hazard Communication Program
- Defensive Driving Program employees who are required to maintain a commercial driver's license must complete a four (4) hour defensive driving course)

Training is provided by the supervisors and Foremen. Training records are maintained for each employee in the DPW Office. Training is provided to all new hires and is performed on an as needed basis to the existing workforce. As needed training is used when a new piece of equipment is purchased or there are new regulations or requirements to be implemented. It maintains appropriate safety equipment including: protective clothing, safety glasses, hard hats, gloves, respirators, filters, harnesses, tripods, hoists, fire extinguishers and self-contained breathing apparatus. The Bureau of Sewers also maintains atmospheric testing equipment. Lights, barricades, signage and exhaust fans are also available

d. Customer Service

1. Complaint Management Program

Complaints and requests are received by various means (e.g., phone calls, e-mail, mail, Fire / Police departments, and occasionally in person). Regardless of the nature or means of receipt, all complaints and requests are entered via the dispatcher into a log book. Entries include the following detailed information about the complaint/request. All complaints are responded to within one (1) hour and detailed information to be collected within 24 hrs.

The City has established a 24-hour emergency contact phone line: (914) 665-2719 in a jobsite trailer permanently located on the DPW yard at 33 Canal Street. The landline is manned by Teamsters-456 Union full-time personnel assigned to the City's DPW fuel station. The fuel station is staffed 24/7 by attendants on 8-hour rotating shifts to include weekends and holidays. During scheduled breaks, the fuel attendant forwards the line to the Deputy Commissioner's cellular line to ensure 24-hourcoverage to respond to sewer related calls. Upon receiving a complaint, the attendant logs the necessary information, listed below. That information is then forwarded to Ramone Bennett or Robert Hackett to arrange the necessary emergency personnel to respond within one hour. The personnel assess the situation and determine the next course of action which range from identification of private plumbing issues, deployment of additional CMV Sewer Staff, and/or notification of neighboring municipalities, or Westchester County personnel.

- Receiver of complaint / dispatcher
- Time and date of request
- Form number (Work Order)

- Complainant information (Name, address, call back phone number)
- Location of the problem
- Type of complaint (Codes, e.g. home back up, odor, manhole overflow, etc.)
- Specific request
- Personnel assigned to complaint
- Findings type, including cause of problem
- Complaint closeout information
- Date complaint closed

Once a complaint is assigned, field personnel perform an investigation. If the problem cannot be immediately resolved, a work order is processed to take appropriate action for permanent correction of the problem. If the City is not responsible for correcting the problem, the DPW will provide the complainant with the guidance to contact a plumber or service contractor. Once an investigation has been completed, the work order is placed in a DPW file.

2. Public Information and Education Program

The City of Mount Vernon uses a variety of outlets for providing information and education to customers. The outlet(s) used to disseminate information is often based on the type of information and the targeted audience. The outlets listed below provide citizens with up-to-date information:

- City of Mount Vernon Mayors Office Public Relations Coordinator
- Time Warner Cable TV Channel
- City of Mount Vernon Website
- Local Media
- Neighborhood /Town Hall Meetings
- City Council Agenda
- Public Hearings
- Personal Visits /Phone Calls
- Door Hangers
- Sign Postings
- Customer Mailings

City of Mount Vernon has a program for community relations regarding issues with the operation and maintenance of our collection system. Types of information and education provided are as follows:

Sewer System Evaluation Survey Work
Major Repairs and Rehabilitation
New Construction
Road Closures
Point Repairs for Street Paving
Sanitary Sewer Use Rates
Grease Handling Information
Grease Disposal Pamphlet
Private Hauler Instructions
Sanitary Sewer Use Ordinances
Types of Waste Treated
Industry Pretreatment Requirements
Wastewater Treatment Processes
Customer Emergency Response
Grinder Pump Operation and Maintenance
Complaint Procedures
Service Connection Requirements
Wastewater Collection and Treatment

e. Information Management and Geographic Information Systems

The Cities mapping has been significantly delayed with the loss of its GIS coordinator. With the assistance of Westchester County GIS Department the City has developed 40% of the preliminary mapping for the sanitary and storm sewer system. As part of our collaboration with the Westchester County GIS the City will continue to

research options to develop a management tool and GIS system to manage the following items. We anticipate that all sanitary sewers will be mapped with these features within 3 years:

- System features such as pipe size, type, age, location, condition assessment, etc.
- Inspection scheduling and tracking
- Flow monitoring
- Planned maintenance
- Parts inventory
- Customer service and complaints
- Overflow, safety and reportable
- Emergency response
- Employee training

Below is a template of the data the City desires to capture and store as per NYSDEC:

Manholes Basic Map Information - ID number or other unique identifier - Location: refer to streets and property lines - Date constructed - Depth - GPS coordinates - Diameter -	**Manholes Additional Map Information** - Rim elevation - Invert elevation - Material Type - Worker safety information - Evidence of surcharge, if any - Condition Assessment - Maintenance - Inspection scheduling and tracking
Pipes Basic Map Information - ID number or other unique identifier - Location: refer to streets, surface waters, property lines and manholes - Size - Direction of flow - Length - Material type - Date constructed	**Pipes Additional Map Information** - Slope - Pipe invert elevations - Plan or as-built ID number - Condition Assessment - Maintenance - Inspection scheduling and tracking - Service laterals
Pump Station Basic Map Information - ID number - Location - Capacity	**Pump Stations Additional Map Information** - Additional information on drawings, and in the CMMS, i.e. pumps, stand-by power and type
Force Main Basic Map Information - ID number or other unique identifier - Location: refer to streets, surface waters, and property lines - Direction of flow and pump station associated - Length - Material type - Location of air release valves - Date built - Capacity	**Force Main Additional Map Information** - Slope - Invert elevations - As-built Plan

General Information:

- Parts inventory
- Equipment and tools
- Purchase orders/expenses
- Revenue

Collection System Information:

- Continuous Sanitary Sewer System Assessment
- Collection system mapping
- Collection system inventory
- FOG compliance
- Flow monitoring
- SSO/Emergency response

Personnel Information:

- Department staff
- Accident information
- Training
- Job performance

Maintenance Program Information:

- Routine and Priority Planned maintenance (cleaning, etc.)
- Inspection scheduling and track
  - o Manhole
  - o Pipeline (Closed Circuit Television (CCTV), camera)
  - o Pump station
- Work Orders
- Monitoring/Sampling.
- Vehicle maintenance

Customer Service Program Information:

- Complaints
- Customer service response
- Billing information

Any activity performed by department personnel is generated and tracked through the Department of Public Works' written work orders for the performance of routine maintenance as well as repairs and corrective actions in response to inspection findings or customer complaints. Upon completion of the task(s), data related to the work order is entered into the Department's files.

f. Legal Authorities and Controls

1. The City of Mount Vernon has the following authority:

   - Control the quantity and quality of wastewater from new development and satellite collection systems

- Identify and mitigate sources of infiltration and inflow
- Identify and mitigate sources of Fats, Oils and Grease (FOG)
- Require standardized design and construction of new and rehabilitated sewers, and connections as per Ten State Standards
- Require standard installation, testing and inspection of new and rehabilitated sewers
- Access to all components of the collection system
- Identify and eliminate illicit discharges into storm sewer system, storm drains and water bodies

2. Sanitary Sewer Use Ordinance

The City of Mount Vernon has established and implemented standards and regulations regarding the use of the wastewater collection system. The City has a comprehensive sewer use ordinance, adopted in 1935. As regulations and requirements have changed, the City has updated its ordinances to address those issues. Ordinances are available electronically on the City of Mount Vernon Website.

The items addressed in the Sewer Use Ordinance include: sewer use and standards, access to pipelines and structures, FOG management, pretreatment requirements, service connections, hauled waste/sewage, user rates, permitting of flows into the system, inflow/infiltration control, enforcement of proper design, installation, and testing standards, and inspection requirements for new and rehabilitated sewers.

3. Joint Sanitary Sewer System Agreement

As posted on the City of Mount Vernon's website, the City of Mount Vernon has an agreement with Westchester County for treatment of the City's wastewater since 1935. The latest agreement is dated 2001. All municipalities are compelled to abide by Westchester County Ordinance "Chapter 824- County Environment Facilities Sewer Act" that adversely impacts the County Public Owned Treatment Works (POTW) treatment plants. The County of Westchester assesses an annual sanitary sewer charge which is billed directly to the individual homeowners. The sanitary sewer service charge includes costs for wastewater treatment and a sewer reserve fund.

2. GENERAL SANITARY SEWER SYSTEM INFORMATION

a. Wastewater Treatment and Collection System Description

The City's first formal wastewater collection system dates back to the 1880s and the first wastewater treatment facility was constructed in 1918. The collection system transports wastewater to the Yonkers Joint Wastewater Treatment Plant, in the City of Yonkers.

b. Collection System Details

Miles of gravity Sanitary Sewer	Miles of force main	Number of manholes	Number of pump stations		Number of siphons	Number of air relief valves
			Public	Private		
105.68	0.15	2,232	1		0	0

Number of Service Connections:

Residential:	8,620
Commercial:	1,475
Industrial:	346
Total:	10,441

c. Age Distribution of Collection System

The City of Mount Vernon has purchased the SL-RAT (Sewer Line Rapid Assessment Tool) and the SPIDER (Spherical Imagery Digitally Enhanced Rendering) Manhole Scanner equipment to assess the structural condition (in order of age) and maintenance needs of the collection system as a part of the Cleaning, Inspection and assessment program.

The City of Mount Vernon has categorized the sanitary sewer system by age and size; and the components of the wastewater collection system are as follows:

Age	Gravity Sewer miles	Force Main miles	Number of pump stations
0 – 31 years	2.68		
32 – 56 years	25		
57 – 81 years	50	0.15	1
> 82 years	28		

Total = 105.68

d. Length of Pipe by Diameter

Pipe Diameter (inches)	Length (lineal feet)	Material	Replacement Cost per foot
6	10,600	VCP	200
8	300,500	VCP	250
10	150,000	VCP	250
12	25,000	VCP & CI	325
15	25,000	VCP & CI	375
18	16,000	VCP & CI	400
24	27,000	VCP	425
36	3,900	RCP	550
TOTAL	558,000		
Total miles of Sanitary Sewer Pipe = 105.68			

e. Sanitary Sewer Overflow History

Overflow dates, locations, quantities and causes are tracked via data base on work tickets in an excel spreadsheet. The City is using this database to manage and track trouble areas in the city.

In order to screen the sanitary sewer capacity before the actual evaluation of the system, the City of Mount Vernon has purchased the SL-RAT equipment to address capacity, inflow/infiltration, and condition of our collection system. With its use, the entire sanitary sewer collection system can be practically and economically screened in 12 to 18 months. Using the SL-RAT and the info being collected during the Cities ongoing investigation, this program has been fashioned to identify, track and develop a plan to mitigate and eliminate SSOs. As the program progresses the workers involved in the work will be instructed as to how the system operates.

f. System Map

The City uses its street As-Built sewer plans and the preliminary sanitary and storm sewers mapping developed by the Westchester County GIS Department. As part of our ongoing collaboration with the Westchester County GIS the City has been working to develop a GIS mapping management tool for the sewers. The GIS will be our framework for gathering, managing, and analyzing data.

3. CLEANING, INSPECTION AND MAINTENANCE

a. Cleaning

The City cleans quarterly, by jetting and rodding, various portions of the sanitary sewer system that are considered "trouble areas" in order to maintain flow and minimize blockages. Chemical root inhibitors are periodically used in areas where root intrusion is prevalent.

b. Pipe and Manhole Inspection

The City inspects quarterly, sewer pipe and manholes in areas that are considered trouble areas in order to affect cleaning, if necessary, to minimize blockages.

The City, as part of the 2014 EPA Order, continues to develop a protocol for a cleaning and inspection program for the entire system using the data collected and parameters set by the USEPA. The City will be using newer technology to assist in the assessment of the existing system.
Please see Section 6 - Sewer Overflow Response Plan. The City has created a list of "trouble areas" These will be integrated into the GIS system as to better track and respond to incidents. It is anticipated that the majority of the system will be inspected/cleaned as part of the USEPA mandated work. As the list of trouble areas evolves with digital and GIS mapping, schedules will be prepared.

Current identified "trouble areas":

- Grandview Avenue (Page #311)
- Beechwood Avenue (Page #21)
- Farrell Avenue (Page #259)
- Brookside Avenue (Page #37)
- Hillside Avenue (Page #343, #721) (Adjacent to Hutchinson River)
- Sandford Boulevard (Page #517, 518)
- Pease Street (Page #477)
- West 3rd Street Corridor (Page #637) (from 7th Avenue to 14th Avenue)
- Pearl Street (Page #475)
- MacQuesten Parkway (Page #404 – 408)
- North 9th Avenue (Page #444)
- West Lincoln /Howard Avenue (Page #378)
- Fletcher /Primrose Avenue (Page #238)
- Commonwealth Avenue (Page #758)
- Pennsylvania Avenue (Page #40B)

These are "trouble areas" that require periodic flushing or chemical treatment for grease and roots.

c. Mechanical and Electrical Maintenance

The City of Mount Vernon owns and operates one wastewater pump station. The pump station located on

Edison Avenue near Leona Lane, the station consists of 3 grinder pumps that service an industrial district along the Hutchinson River. The maintenance for the grinder pumps stations is the responsibility of the City of Mount Vernon Bureau of Sewers.

The performance of the pump station is monitored through daily inspections. During these Inspections, City staff review pump run hours, totalized flow, wet well levels and alarms.
A contractor is utilized to service the pumps, the wet wells, remove grease build up, and calibrate the floats on an annual basis.

The City has installed an Omni Beacon Wireless Alarm Dialer. The Beacon has been mounted to the Control Panel and will provide alarms for the dialer Battery, and High level alarm for the Pump Station. The dialer is programmed to call, send text messages, and or emails to persons to be notified. The City will continue to explore options to upgrade the station and install a SCADA based system (or similar) to monitor and record the following:

- Number of pumps in operation
- Status of pumps (including operational alarms)
- Current pumping flow rate
- Historic flow rate (24 hour Flow Chart)
- Pump start *I* stop cycles
- Power status (including power failure alarms)
- Wet well conditions (depth, lead *I* lag elevations, etc.)
- Personnel status (entry *I* exit alarms)

Pump Station Equipment:

Equipment	Number	Specifications
Pumps	3	150 gpm pumps (Hydromatic)
Motors	3	4 horsepower motors
Control Panel		
Float Switches		
Valves		
Air Compressor		
Meters		
Alternate Power Sources		1 back-up generator-trailer mounted diesel

Manufacturer's Operation and Maintenance (O&M) manuals for equipment are located in the DPW Garage Office

Pump Station Maintenance:

The Maintenance program noted below will be tracked in the same manner as the current DPW work order system to create a permanent and formal record of the work performed. A log book will kept at the Pump Station to log date and time of the inspection and what work was performed and the conditions found. The pump station will be secured and locked, with "Restricted Area -- Authorized Personnel Only"signs to prevent unauthorized access.

Mechanical Maintenance/Inspections	Electrical Maintenance/Inspections
Weekly	
Visit pump station Review pump run hours	Ensure all breakers are on Ensure that all switches and controls are in the

Review totalized flow Check wet well levels, check for debris, turbulence or unusual noise Check alarms Ensure that all switches, controls and valves are in the correct position Pick up litter, general housekeeping Record findings in log book Log pump hours Check hydraulic levels Operate each pump Check drive belt Check bearings and packing Check for pump vibrations, unusual noise, and excessive heat Check pump and pump base connections Check chart recorder for routine pump performance Check valve operations and signs of leakage Lube and grease equipment (as required by manufacture) Check, clean and maintain property	correct position Check Motor Control Centers (MCC) Check level controllers Check electrical service feed Check remote monitoring equipment Check indicator and alarm lamps Check general electrical items (lighting, etc.) Check and release intrusion alarm
Monthly	
	Check back up generator Exercise stand by power
Bi-Annual	
Replace hydraulic fluids and oils (as required by manufacturer) Inspect pumps (oil levels, seals, packing, bearings etc.) Replace packing Inspect pump impellers and clearances Inspect discharge piping Check outflow pressure Calibrate gauges (including pressure gauges used in monitoring) Check for corrosion problems Exercise check values Check air release valves Check floats/bubbler system (clean and/or replace) Inspect building and grounds Check operation of building heat and fans Inspection HVAC equipment Check building security	Inspect internal Motor Control Center components Check insulation resistance Inspect & grease electrical contacts Inspect electrical pump cables Inspect electrical breakers Perform amperage readings on equipment Check MCC for proper operations Check Generator: oil level water level fuel level inspect hoses and belts check piping for leaks check battery condition
Annual	
Pump the wet wells Remove grease build up Service and calibrate all instrumentation: flow meters, level sensors, alarms, elapsed time meters and telemetry equipment	Alternate Power Sources checked and run as part of emergency drill

Capacity and discharge head in the pump stations are reviewed annually, following confirmation that the pumps are in good working order. Changes in capacity and discharge head are evaluated to determine whether cleaning of the force main is warranted.

d. Force Main Maintenance

City of Mount Vernon currently has one force main in the collection system with a combined length of 800 feet. The force main has is not long enough to warrant air release valves.

e. Private Pump Stations

There are no private pump stations maintained by the City of Mt. Vernon.

f. Corrosion Control

Corrosion control measures are utilized when and where necessary, to maintain mechanical and electrical operations/functions of the pump station and grinder pumps.

4. CAPACITY MANAGEMENT

County sewer impacts, the proposed developments will increase sewage flows from their site into the existing infrastructure. The increased flow will add to the volume of sewage flow requiring treatment at the Yonkers Joint Water Resource Recovery Facility operated by Westchester County. Since 2010, it has been the policy of the County Department of Environmental Facilities (WCDEF) that municipal governments require the applicants to identify mitigation measures that will offset the projected increase in flow. The best means to do so is through the reduction of inflow and infiltration (I&I) at a ratio of three for one for market rate units and at a ratio of one for one for affordable units.

Westchester County undertook a program to remove a certain percentage of inflow and infiltration (I&I) from the sanitary sewers as per the NYSDEC Order-on-Consent. The 1993 Yonkers Joint Sewer Districts Sewer System Evaluation Survey (SSES), report provided the County with priority rankings that were used to determine which (I&I) sources they would address in the City of Mount Vernon. The City received a list of findings/recommendations remaining work for the City of Mount Vernon, which would not be addressed as part of the County's (I&I) Program. It was recommendation of the County that this work should be considered a priority in the City of Mount Vernon to schedule future sewer system rehabilitation work

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a. Lateral Replacement Program

The City does not presently have a lateral replacement program. Laterals are the responsibility of the individual homeowner(s).

b. Sewer Capacity Certification/ Connection Policy

Separate from the connection fee, developers of newly-constructed homes and businesses are required to pay a sewer capacity charge for removal of infiltration/inflow (I&I) from the system. The fee is based on removing an amount of (I&I) equivalent to three (3) times the difference between the existing average design flow and the development's average design flow. This work is coordinated with the WCDEF and the WCDOH and the removal of (I&I) must be certified by a Professional Engineer, licensed in the state of New York. Development in the City funded by HUD which only requires a 1-to-1 removal of (I&I).

5. RESOURCES AND BUDGET

a. Budget Process

The Public Works Department's budget process complies with the City of Mt. Vernon's budget cycle, which requires that the annual budget be completed and approved by December 31 of each year. The Bureau of Sewers Operations and Maintenance budget process originates with the prior year's budget numbers and projected needs for the coming year.

The Department of Public Works coordinates with the City Budget Committee to present their budget to the City Council for review and approval.

b. Rate Setting, Budgetary Policies and Financial History

1. Sewer use rates are established by the Westchester County Department of Environmental Facilities in coordination with the Westchester County Finance Department and billed directly to the City's individual homeowners.

2. Budgetary policies are established /controlled by the City Council in coordination with the Department of Finance and the Law Department.

3. Financial history is maintained by the City Clerk's Office and the Finance Department.

c. Historical Rate Review

The WCDEF, the WC Finance Department and the WC Clerk's office maintain historical sewer rate reviews.

d. Operating and Maintenance Expense

The City Department of Finance along with the City Council control/regulate the amount of Operating and Maintenance expenses for the DPW Bureau of Sewers. If additional funds are required in excess of budget amounts, the Commissioner of DPW must make a formal request through the Finance Department and the City Council.

e. Capital Improvement Program Overview

The Commissioner of Public Works provides a Capital Improvement Program (CIP) Overview including a list of Capital Projects required to meet certain needs insofar as Bureau of Sewers requires to meet the various goals outlined in the CMOM, PMP and the POA Plans. The CIP is presented to the City Budget Committee for review and submittal to the City Council for approval.

f. Capital Improvement Plan

The Capital Improvement Plan, as approved by the City Council, is established in the Annual Budget and implementation therefore becomes the responsibility of the appropriate Department; in this case the DPW. The CIP projects are either performed by City forces and/or by public bidding and contractual agreements.

g. Federal and State Grants/Loans

The Department of Public Works coordinates with the Grant Office, situated in the Department of Planning and Community Development. The Grants Office is comprised of a Research and Grants Administrator and Grants and Partnership Compliance Officer who use a variety of management systems to search for and analyze a comprehensive listing of federal, state, and foundation grant opportunities.

6. SANITARY SEWER OVERFLOW RESPONSE PLAN

The City's Sanitary Sewer Overflow Response Plan is established as follows:

- Personnel responsibilities
- Recording a Communication of the SSO
- Confirmation of the SSO
- Report of the SSO

a. Personnel Responsibilities Chart:

Name and title	Responsibilities for SSO Response	Contact numbers
Dispatcher	Responsible for overall management and decision making for the sewer collection system. Takes the lead for managing the response to a SSO, providing information to regulatory agencies, the public and news media. Responsible for determining the need to contact Fire department (for response to toxic spills and containment booms, etc.), local conservation department(s), and/or town officials.	Phone: 914-665-2465
Mr. Ramone Bennett Sewer Foreman	In charge of operating the collection system, performing inspections, maintenance and relaying critical information, assessing facilities, and providing recommendations to the Commissioner of Public Works. Responsible for organizing crews for response.	Phone: 914-523-5953
Mr. Curtis Woods, P.E. City Engineer	Responsible for administrative functions in the office including receiving phone calls and keeping a log of events. Will provide a standard carefully pre-scripted message to those who call with general questions. Additional information will be released through the Commissioner's office.	Phone: 914-465-2991

b. Recording a Communication of a Sanitary Sewer Overflow (SSO)

Generally, telephone calls from the public reporting possible sewer overflows/ basement back up's, are received at the Department of Public Works, Bureau of Sewers. After hours 24-hour Emergency 914-665-2719 / Fire Department / Police Department.

Telephone calls reporting overflows and back-ups are recorded by the Dispatcher and include all relevant information available regarding the overflow including:

- Time and date of the call;

- Specific location of the overflow;
- Description of problem (e.g., what is overflowing, extent of spill, if the cause is obvious, etc.);
- Time possible overflow was noticed by the caller;
- Caller's name and phone number;
- Observations of the caller (e.g., odor, duration, back or front of property); and
- Other relevant information that will enable the Sewer Department to quickly locate, assess and stop the overflow.

c. Confirmation of SSO

The Sewer Bureau's response crew is dispatched by the Sewer Foreman and /or Dispatcher to confirm the overflow. A report follows the confirmation of the SSO.

d. Report of the SSO

The City will report discharges of untreated or partially treated sewage within two hours of discovery to DEC and DOH, and within four hours of discovery to the general public using the NY-ALERT system. Within 5 days a written report as defined by 6NYCRR Part 750-2.7, will be submitted to the NYSDEC. The City of Mount Vernon's POSS Number is NYS400026.

The goal of this Sanitary Sewer Overflow Response Plan (SSORP) is to document and implement the City's plans for mitigating or preventing potential emergency overflows whenever possible, to prepare the City of Mt Vernon's personnel and responding departments to implement actions to mitigate the effects of such events, and to protect health, environment, and property.

This SORP is designed to ensure that appropriate crews are immediately dispatched to all reported SSOs to stop the overflow as quickly as possible; to minimize the effects of the overflow on public health and the environment; to minimize the impact of the overflow on collection system operations; and to report the overflow to the appropriate regulatory agencies, and to the public when warranted. The objectives of this plan include controlling waste discharge and providing procedures for managing sanitary sewer overflows, preventing harm to public health and the environment, and satisfying regulatory and reporting requirements.

Additional objectives of the SSORP are to: provide appropriate customer service, protect collection system personnel and the wastewater treatment plant, and protect all parts of the collection system. This plan needs to be updated as necessary (at least annually) to reflect any changes in staffing, notification requirements (including contact numbers), operations or system status. It will be updated and revised as insight and experience dictate.
The City will inform the NYSDEC via phone to the hotline within 2 hours of an overflow and will provide a written response via email to the DEC within 5 days in compliance with the Sewage Pollution Right to Know Law requirements.

e. Examples of Sanitary Sewer Overflows and Requisite Responses:

1. PROBLEM: Sewer Blockage and/or Back- Up Emergency Procedures:

- Dispatcher refers to sewer maps for location and to determine critical facilities and sewer sub-area to provide to dispatch crew. If the area of the complaint is served by a pump station, check to confirm whether any alarms from the pump station have been received.
- Dispatch the crew immediately to the complainant address with details. Crew notifies

complainant/property owner(s) when they are on site.

- If the flow is questionable (not reasonable for the given service area) go to the upstream manhole to visually compare flows.
- If the flow from both manholes is reasonable for the area, notify the property owners that the problem is in their service lateral and to contact a plumber or sewer service contractor to relieve the blockage.
- If the downstream manhole is full and there is a potential for overflow, immediately begin the set up for pumping around the blockage (see "Overflowing Sewer Manhole" procedure)
- Request additional manpower and equipment as needed (e.g. Fire Department, excavating crew, bypass pumping equipment, etc.)
- Set up pump out equipment and hoses from the upstream manhole to the nearest flowing manhole below the blockage.
- Continue checking manholes downstream until a dry manhole is found indicating a blockage upstream.
- See Sewer Collapse procedure for pumping around the blockage while the line is repaired
- Note: if no blockage is found and the problem is attributable to a pump station problem refer to Pump Station responses.
- If a vacuum-truck and/or a jet-truck are available, jet line and have vacuum clear. Remove the debris from the manhole and observe it to try to determine the cause of the blockage.
- Use the necessary equipment to relieve the blockage, either by jet flushing or power rodding (if jet flushing is not sufficient to clear the blockage, request staff to bring power rodding equipment).
- Notify supervisor and describe the blockage. The supervisor will notify the proper authorities and agencies (See responsibility chart).
- Cordon off the area if ponding occurs on the street or easement (public or private).
- Collect as much of the sewage as possible, disinfect according to policy.
- Notify Contractor to schedule a television inspection.
- If the blockage is in a public line, relieve the blockage, clean up the property owner's basement as per policy on disinfecting. If blockage is determined to be in property owner's lateral connection, direct property owner to clear the line. The city has no ownership or responsibility for individual sewer services. The property owner is responsible for their service from the property to its connection to the City sewer.
- Make out a report indicating the time of the call, a description of the problem, repair work done, personnel present and equipment used.

NOTES:

When available, use collected debris to try to determine the cause of the blockage. Confirm removal of all debris from the manhole.
Record the water damage to all items in the basement. Record all actions taken (from start to finish) in log/record book, including equipment and personnel utilized.

Sewer Blockage or Back up into Basement, Minimum Levels of Staffing (people): 2	
Minimum Emergency Equipment	**Specialized Equipment**
• Jet flushing unit if available (sand trap) • Rodding machine & associated cleaning/cutting attachments (sand trap) • Standard harness and lifeline if applicable • Air blower with hose • Power vacuum	• Closed Circuit Television camera unit • Truck with hoist • Vacuum unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap

• Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	

2. PROBLEM: Force-Main Break

Emergency Procedures:

- Dispatch a crew to the site to assess the situation, including determination of who and what might be affected and the immediate danger to the environment.
- Refer to sewer maps for location of sewers (private lands flow patterns, manholes, etc.) and determine the pump station associated and which critical facilities are in the area.
- Set up traffic cones and barricades as needed.
- Initiate measures to contain the sewer overflow, protect any streets, public areas, catch basin inlets, etc. that might be subject to flooding, and collect wastewater that has been discharged so as to minimize impact to public health and the environment.
- Determine if it will be possible to pump around the break, from the pump station wetwell to the force main discharge manhole or other accessible manhole, and if so, prepare to pump around the break as described below:
  - o Request additional manpower and equipment as needed (e.g. Fire Department, excavating crew, bypass pumping equipment, etc.)
  - o Set up pump out equipment and hoses from the wet well to the nearest sewer discharge point.
  - o Draw down the wet well as much as possible to maintain the low level.
  - o Lock-out and tag-out (LOTO) the pumps in the pumping station.
- If pumping around the break is not possible, utilize the vacuum truck or sewage truck to draw down the wet well as much as possible and maintain a low level.
- Call in additional crews as necessary to help contain the sewer overflow. Set up flotation booms across streams; sandbag storm drains, etc., as necessary.
  - o Check the tributary area to determine if the discharge will affect any receiving waters.
  - o If it is determined that the receiving water may be affected, the supervisor should notify the proper authorities or agency.
  - o If the wastewater is in streets/roads (public or private), contain the waste water to the extent possible with sandbags or other berms
  - o Sandbag nearby catch basin inlets or paved areas to prevent the wastewater from entering the drainage system and causing potential contamination to the receiving waters.
  - o Barricade the area if ponding occurs.
  - o Collect as much of the sewage as possible, clean and disinfect the area. If the wastewater jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
  - o Gather and remove sewage related debris and organic matter from the affected area.
- Drain the force-main:
  - o Close down the gate valve on the upstream side of the discharge check valve in the pumping station.
  - o Open the check valve by hand and secure it in place.
  - o Slowly bleed the force-main back into the wet-well by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must take place between the crew

located at the break and the crew located at the pump station.
- o Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.

- Repair the force main break.
- After the repair is complete, remove LOTO and return the pumps to normal operating position.
- Run the pump in the hand manual position to fill the force-main (Care must be taken during filling of force main – use only one pump during filling). Once completed, observe several pumping cycles before completely back-filling the excavation.
- Upon confirmation of adequacy of the repair, backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- While the crew is restoring the excavation, the crew leader should conduct a preliminary assessment of damage to private and public property. The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, inform the NYSDEC and WCDOH.

Sewage Force-Main Break, Minimum Levels of Staffing (people): 4-5	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck with hoist • Vactor unit or septage hauler • Power saw (circular) • Pipe cutter (hydraulic) • Caution tape • Sand trap • Floatation booms if necessary • Self-Contained Breathing Apparatus (SCBA)

3. PROBLEM: Sewer Main Break *I* Manhole Surcharge

Emergency Procedures:

- Dispatch a crew to location immediately while referring to the sewer maps for location of sewers (private lands flow patterns, manholes, etc.) to determine which critical facilities are in the area.
- Crew sets up signs, barricades, and/or barrels for traffic control and public safety, rerouting traffic as necessary and deploying traffic control measures such as police or flag person as needed.
- If it is a main line break, the Superintendent shall notify the appropriate authorities and town officials immediately.
- Request additional manpower and equipment as needed based on initial damage assessment (e.g. Fire Department, excavating crew, equipment to pump around the break, etc.)
- By-pass pumping around the break from the upstream manhole to the downstream manhole may be required. If not necessary, prepare for repairs while the pipe is flowing.
- Call in additional crews to set up flotation booms across streams, install sandbags, etc., as necessary. Unless special conditions exist, by-pass pumping around the failed sewer main is a priority before containing the overflow.
- Gather and remove sewage related debris and organic matter from the affected area.
- If the wastewater is in the streets/roads (public or private), use sand bags or other berm to contain

the wastewater to minimize any impact to public health or the environment.

- Sandbag nearby catch basin inlets or paved areas to prevent the waste water from entering the drainage system and causing potential contamination to the receiving waters.
- Cordon off the area if ponding occurs.
- Isolate and collect as much of the sewage as possible, disinfect according to policy, notify surrounding homes (superintendent notifies appropriate officials, as needed).
- Ifthe waste water jeopardizes a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local park superintendent.
- Determine the location of the break/collapse and make any necessary repairs. Use repair procedures consistent with policy. Ifthe break is on the pipe length, then a repair can be made with a wrap-around sleeve. Ifthe break is at the bell, then a bell-joint clamp may be used.
- Upon confirmation of adequacy of the repair by the City Engineer, backfill the excavation and restore surface conditions to match existing conditions.
- To restore the sewer line to full capacity, the crew should remove any debris that may have entered and accumulated in the sewer line downstream and upstream from the break/collapse. The crew should clean the sewer line as described below.
- Using a high velocity jet-flushing vehicle, begin flushing from the downstream manhole against the flow to the upstream manhole.
- Repeat this procedure for several upstream and downstream pipe reaches.
- The crew leader should thoroughly document the nature and extent of the impacts including the use of photographs and video footage where possible.
- Make out a report indicating the time of the call, a description of the problem, the repair work done, personnel present and equipment used.
- If sewage overflowed the collection system, inform the NYDEC and the WCDOH

Sewer Main Break/Collapse, Minimum Levels of Staffing (people): 4	
Minimum Emergency Equipment	**Specialized Equipment**
• Portable bypass pumping units • Hoses • Jet flushing unit if available (sand trap) • Standard disinfectants • Safety harness and lifeline if applicable • Air blower with hose • Power vacuum • Portable pumps • Portable generators • Safety cones/barricades • Gas meter-for oxygen deficient, explosive or toxic gases • Confined space entry tripod and associated equipment	• CCTV camera unit • Truck with hoist • Vacuum unit • Power saw (circular) • Pipe cutter (hydraulic) • Sand trap • Caution tape • Floatation booms and sand bags as necessary • Self-Contained Breathing Apparatus (SCBA)