



Haverhill

Robert E. Ward, Deputy DPW Director
Water/Wastewater Division
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April 29, 2016

Environmental Protection Agency
Water Technical Unit (OES04-3)
U.S. EPA - New England, Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912
Attn: Joy Hilton

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of resource Protection
205B Lowell Street
Wilmington, MA 01887-2941
Attn: Nihar Mohanty

Subject: City of Haverhill NPDES Permit # MA0101621
Infiltration Inflow Report 2015

Dear Ms. Hilton & Mr. Mohanty:

In accordance with the City of Haverhill's NPDES Permit # MA0101621, we are providing this status report as required by Item 3 Infiltration/Inflow Plan page 14 of 18. Please note the headings below are taken directly from the NPDES permit.

In past annual I/I reports, the City provided an analysis that indicated, based on an average system wide infiltration and inflow evaluation, that I/I was not excessive in the Haverhill collection system.

Inspection and Maintenance Activities Conducted and Corrective Actions Taken in 2015

Sewers were inspected periodically as a result of sanitary sewer overflow corrective actions but these CCTV inspections have not identified any actionable I/I sources.

The City completed an I/I investigation of Sewer Area 14 and 23 in 2014. A draft set of piping system recommendations were developed. The City is in the process of completing an Integrated LTCP that will prioritize the implementation of system improvements to address I/I reduction.

Annual Average and Maximum Month I/I

The Annual Average is 5.49 MGD and Maximum Month I/I was 22.13 MGD in June 2015 base upon meter flow billable account information.

Infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit.

CCTV inspection of sewer lines that experienced a sanitary sewer overflow was added to the procedures for follow-up on sanitary sewer overflows. To date these inspections have not shown any evidence that infiltration and inflow may have caused a sanitary sewer overflow or any identified actionable, excessive I/I.

The City continues to develop an approach to include the CCTV pipe inspections (of sewer lines that experienced sanitary sewer overflows) into the GIS.

Areas Identified for I/I-Related Investigation/Action in 2016

The City will be working with its wastewater consultants in 2016 to review its existing system practices and develop a comprehensive set of capital and operational improvements to address I/I.

This effort includes a reassessment of the City's Capacity Management and Operations and Maintenance Plan. One of the objectives of the plan is to reduce infiltration and inflow. The scope of work also includes CCTV inspection of 10 percent of the collection system and providing recommendations for sewer system improvements. The cost of this project is \$945,000.

In addition, the City is working on updating its CSO Long Term Control Plan in 2016. The LTCP assessment will consider the CSO reduction benefits achieved using a more comprehensive I/I reduction program. As part of the scope of work, the City will be completing another I/I Investigation of a separated, sanitary sewer area (Sewer Area 24). The attached plan shows the area where the I/I Investigation will be performed including flow monitoring, flow isolation, and television inspection of sewer lines with excessive extraneous flow. The cost of this Investigation is about \$120,000.

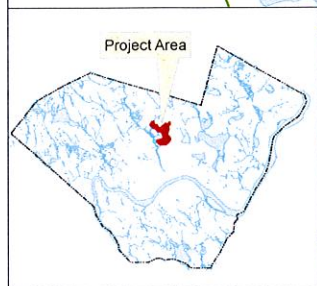
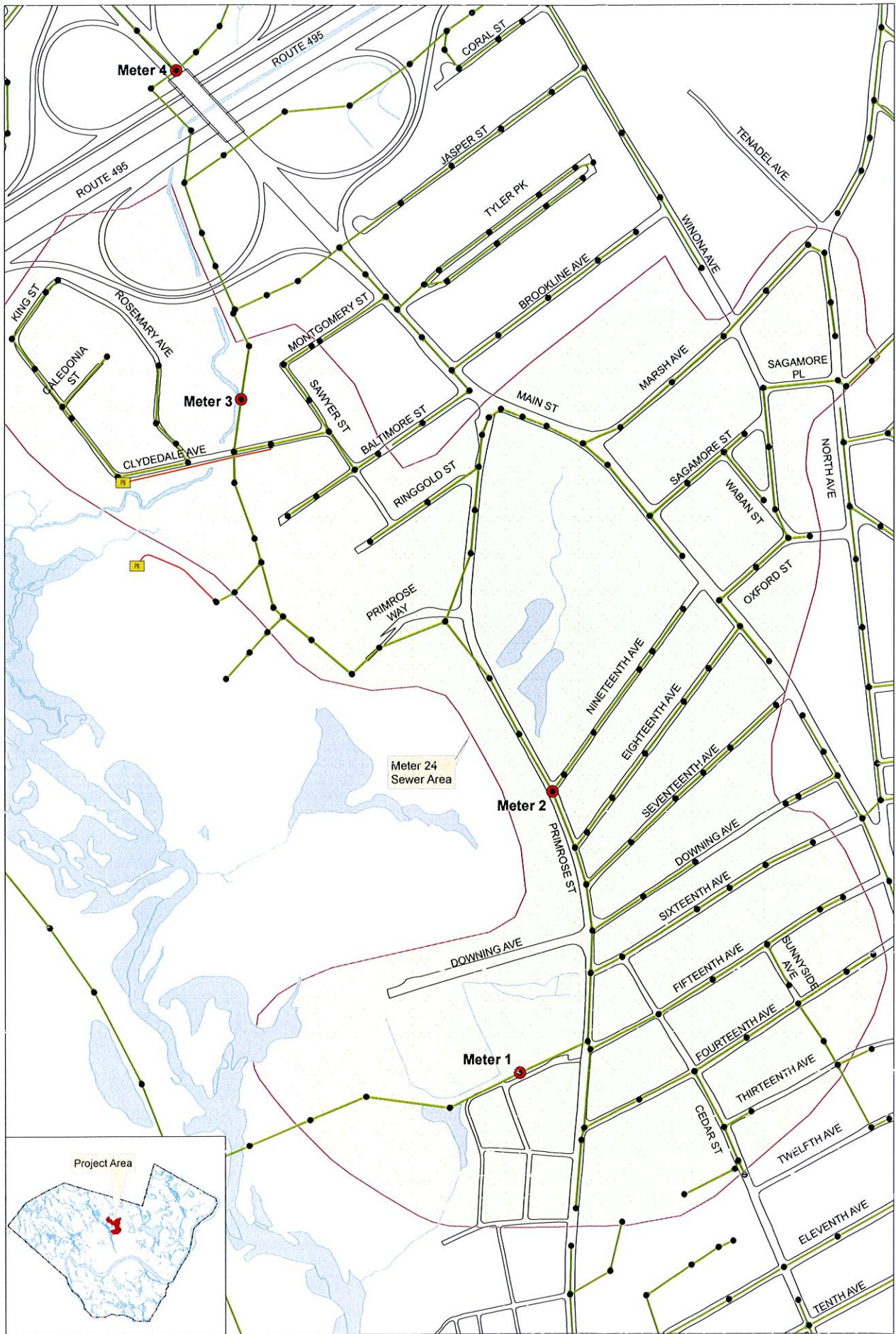
If you require additional information, please contact Paul Jessel at 978-374-2382 or via email at pjessel@haverhillwater.com.

Sincerely,



Robert E. Ward
Deputy DPW Director

cc: Mike Stankovich, DPW Director
Paul Jessel, Collection system Supervisor
Fred Haffty WWTP Facility Manager
Jeff Kennedy Massachusetts Division of Marine Fisheries, jeff.kennedy@state.ma.us



LEGEND

- Sewer Manhole
- Sewer
- Meter Location
- Pump Station
- Meter 24 Area

City of Haverhill, MA
I/I Study
2016