

NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY

Kensico Water Quality Control Program
Semi-Annual Report

January 2012

*Prepared in accordance with Section 4.10 of the New York City Filtration
Avoidance Determination, July 2007*

This report discusses the status of the components of the Kensico Water Quality Control Program during 2011.

Prepared by the New York City Department of Environmental Protection

1.0 Introduction to Kensico Watershed Programs

Kensico Reservoir, located in Westchester County, is the terminal reservoir for the City's Catskill/Delaware water supply system. Because it provides the last impoundment of Catskill/Delaware water prior to entering the City's distribution system, DEP has prioritized watershed protection in the Kensico basin to ensure the continued success of past efforts while providing for new source water protection initiatives that are specifically targeted toward stormwater and wastewater pollution sources.

1.1 Stormwater Management and Erosion Abatement Facilities

BMP Construction, Operation, and Maintenance

DEP maintains the 45 stormwater management and erosion abatement facilities in the Kensico watershed in order to reduce pollutant loads conveyed to the reservoir by stormwater (see Figure 1). DEP entered into a new three-year contract in August 2011.

Routine inspections found that typical maintenance such as grass mowing, vegetation removal, tree removal, sediment and debris removal were necessary and completed. None of the maintenance items appeared to compromise the effectiveness of the stormwater facilities.

1.1.2 Spill Containment Facilities

During this reporting period, routine maintenance was completed at six of the spill boom sites. Eight 50-foot booms were replaced and two 100'-foot booms were replaced.

1.1.3 Turbidity Curtains

DEP continues to monitor the extended primary curtain and the back-up turbidity curtain, designed to direct flows from Malcolm and Young Brooks further out to the body of the reservoir and to provide enhanced protection of the water entering the Catskill Upper Effluent Chamber. DEP's diving contractor performed inspections of the primary and back-up turbidity curtains in May and September 2011. Based on these inspections, repair work completed included bolt, washer and fabric repairs, anchor cables replacement, anchor block repositioning, and anchor cable reconnection. In addition, stainless steel ties were placed on select grommet locations of the primary turbidity curtain and the back-up turbidity curtain. The turbidity curtains appear to be functioning as intended.

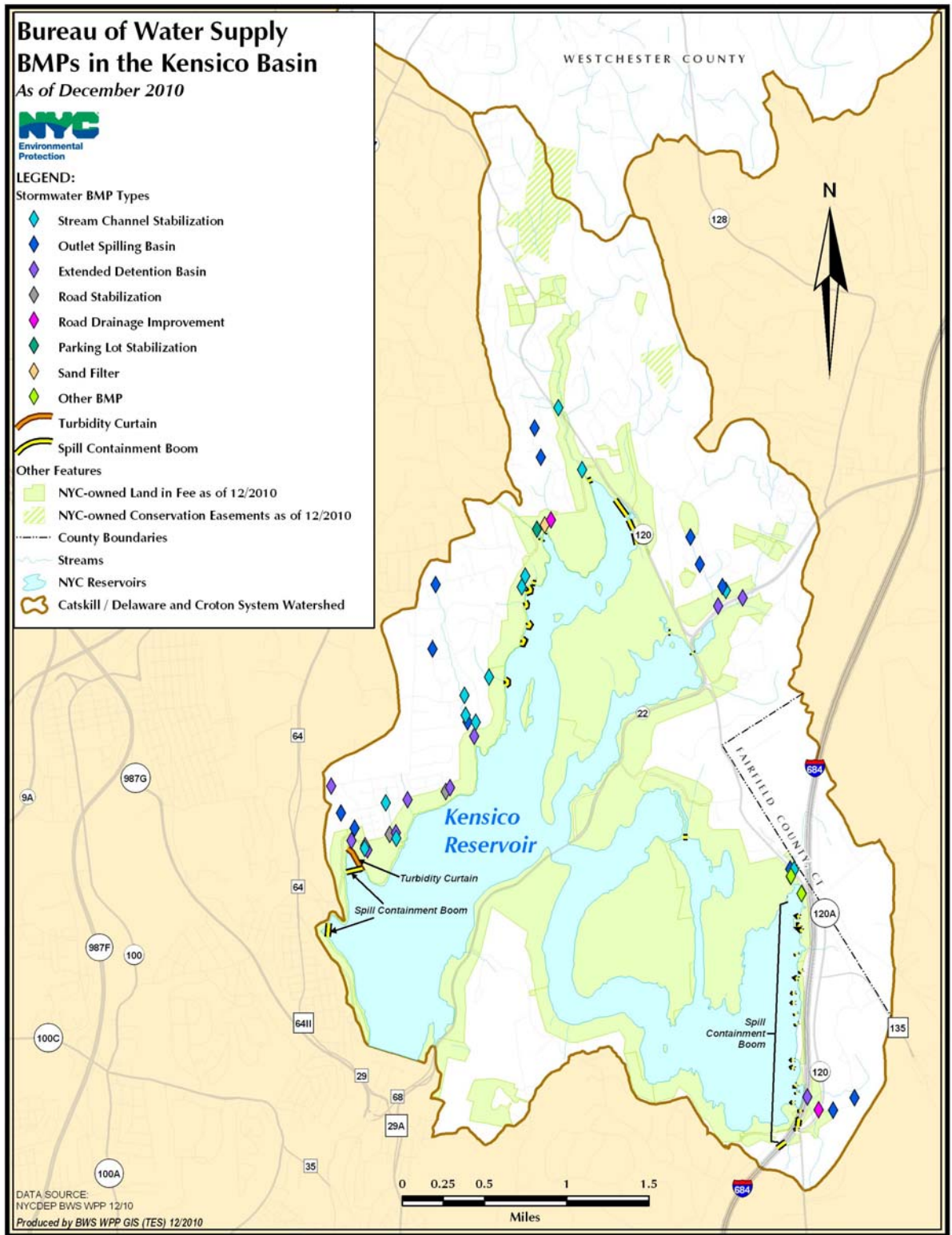


Figure 1. Location of nonpoint source management facilities in Kensico watershed

1.2 Kensico Action Plan

During 2011, DEP continued progress on the implementation of the four project sites that were identified in the Kensico Action Plan. The construction contract was awarded in April with the notice to commence work issued in June. Since June, DEP and the contractor have worked to secure various internal approvals required to begin construction including the contractor's health and safety, waste management, and minority/women-owned business utilization plans. DEP and the contractor continue to work to secure the remaining approvals for subcontractors, vendors, and materials. A summary of progress and current site status is as follows:

N1 - West Lake Drive Drainage Improvements:

The contractor's site Sediment and Stormwater Control Plan (SSCP) was reviewed and approved. An existing road conditions report and maintenance and protection of traffic plan were submitted to the Town of Mount Pleasant as required by the contract. Pre-construction photographs were taken and the contractor has marked trees for removal within the limits of disturbance.

N7 - Sub-Basin Pipeline System:

The contractor's site SSCP was reviewed and approved. A topographic survey of existing ground conditions was reviewed with design staff. Changes to the cut and fill scope are required as a result of this review. A change order to the contract was initiated in November. Also in November, Consolidated Edison (Con Ed) indicated that they will require an approved Work Plan for N7 showing compliance with 25-foot clearance limit from power lines. The contractor is currently preparing a plan in accordance with Con Ed requirement. All new areas of disturbance required to maintain the clearance limit will be added to the SSCP and assessed for potential permit modifications. Pre-construction photographs were taken and trees slated for removal were marked and cut.

N12 – Extended Detention Basin:

The contractor worked with design staff to prepare the site SSCP. A maintenance and protection of traffic plan was submitted to the town. A required NYSDEC permit extension was obtained. Trees to be removed as part of the project were identified and marked.

Whippoorwill Stream Rehabilitation:

During the reporting period, the contractor identified and transplanted Red Trillium as required by project permits. Indiana Bat roosting trees were felled in accordance with applicable permit requirements. DEP applied for and received an extension to the Town of North Castle Wetland permit. The contractor is currently developing the site SSCP. Design staff is preparing a modified Stormwater Pollution Prevention Plan that conforms to permit conditions.

1.3 Westlake Sewer

The Westlake Sewer Trunk Line, owned and maintained by the Westchester County Department of Environmental Facilities (WCDEF), conveys untreated wastewater to treatment facilities located elsewhere in the county. Given the proximity of the collection

system to Kensico Reservoir, potential defects or abnormal conditions within the sewer line and its components could lead to exfiltration or overflows of wastewater. The intent of this program is to work with the County to mitigate risks posed by the line while maintaining the collection system's location and gravity flow.

1.3.1 Sanitary Sewer Remote Monitoring System

DEP proposed a sanitary sewer remote monitoring system for the Westlake Sewer Trunk Line in order to provide real-time detection of leaks, system breaks, overflows, and blockages. During the reporting period, DEP and the Westchester County Department of Environmental Facilities (WCDEF) completed the project scope of work and intermunicipal agreement (IMA). The IMA contains language that requires WCDEF to provide the contracting services for installation, monitoring, and maintenance of the system. DEP issued the Notice of Award to WCDEF in November 2011 with a proposed start date in the first quarter of 2012. The IMA proposes to use Smart Cover technology to monitor up to 25 manholes in the Westlake System. It is anticipated that the installation of the monitoring devices will be completed in 2012.

1.3.2 Sewer Line Visual Inspection

DEP conducts an annual visual inspection of the trunk line in order to assess the condition of exposed infrastructure, including manholes, for irregularities. The annual full inspection was performed in September 2011. Routine partial inspections have been conducted throughout the year in association with ongoing maintenance of Kensico stormwater best management practices in the vicinity of the line. No defects or abnormalities have been noted.

1.4 Video Inspection of Sanitary Sewers

DEP has established an inspection program for targeted portions of the sanitary sewer system located within the Kensico basin. These selected areas, identified as possible areas of concern during the prior video inspection of sanitary infrastructure in the Kensico basin, were inspected under the same contract as was entered into for the inspection and cleaning of the sanitary infrastructure contained within the EOH Cat/Del reservoir basins.

During the reporting period, DEP received and accepted the Comprehensive Summary Report, which compiles the information obtained as part of the video inspection and digital mapping of the sanitary lines. The report narrative includes the use of a standardized coding system to establish the salient criteria for the hydraulic performance of the sanitary system and includes repair, rehabilitation, and maintenance options for the sections that present the greatest potential for exfiltration. None of the pipe sections located within the Kensico reservoir basin were cited as having severe structural defects that required immediate restoration or replacement. The closed circuit television inspection reports will be forwarded to the responsible municipalities for review and investigation.

1.5 Septic Repair Program

In April 2011, NYS EFC mailed an annual reminder letter to eligible residents notifying them of the availability of funding. Based on responses to that mailing, EFC continued to update the database and sign interested participants into the program. Figure 2 shows the sewage service status of each parcel based on resident responses and other available records. During

2011, four residents who were cited by the Westchester County Health Department participated in the Program.

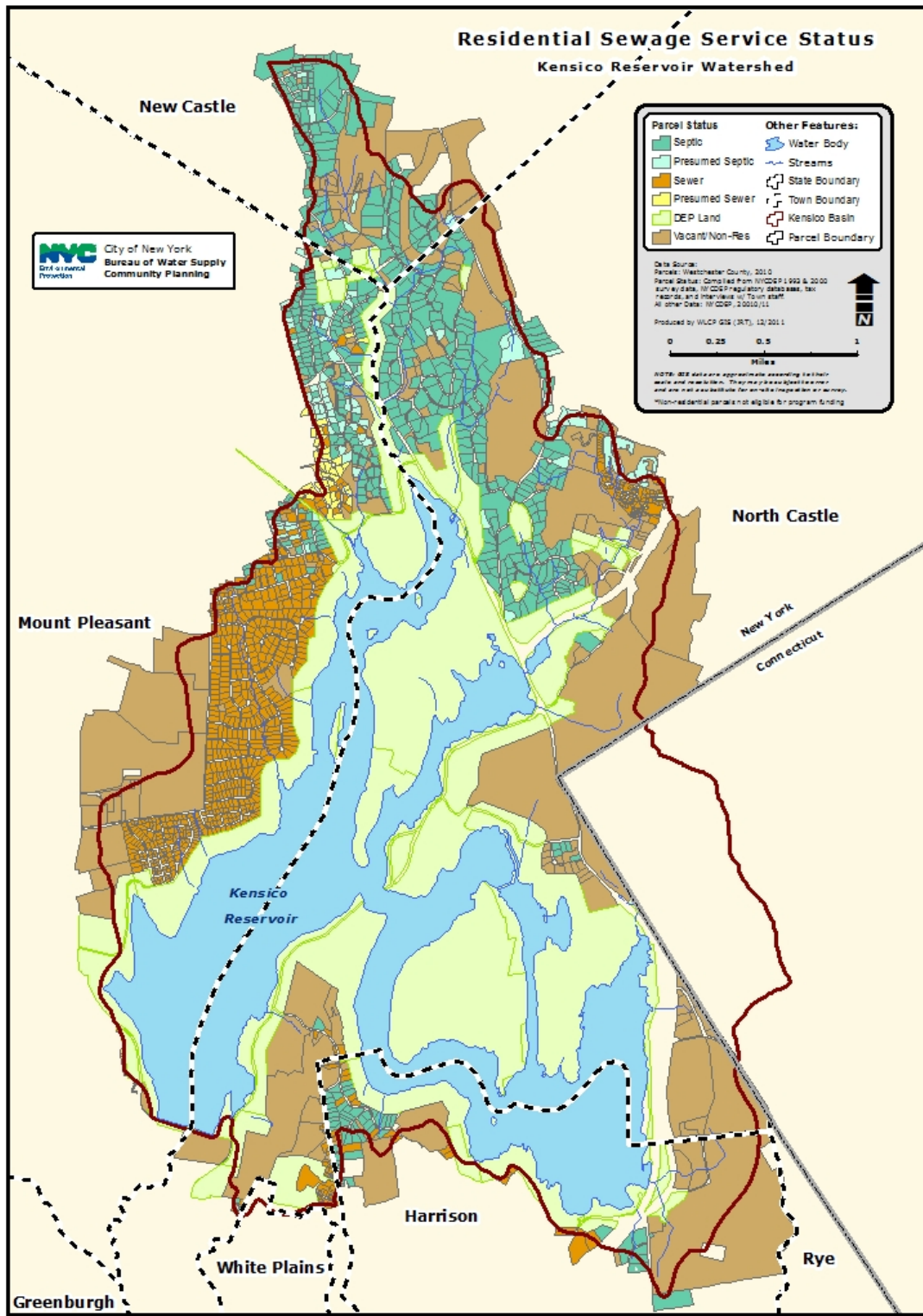


Figure 2. Projected sewage service status of residential parcels in the Kensico watershed

1.6 Turbidity Reduction/Shoreline Stabilization

DEP is assessing the feasibility and need for the shoreline stabilization project based on the future use and location of CATUEC. If appropriate, a shoreline stabilization project south of CATUEC would mitigate the erosion and possible resuspension of near-shore materials near CATUEC during wind events. During the reporting period, DEP worked to secure the permits required to mitigate potential impact to wetlands of a shoreline project. DEP secured the required NYSDEC Water Quality Certification Permit on November 16, 2011. Still pending is the US Army Corp. of Engineers Individual Permit, which is currently under review by the US Army Corp. of Engineers and is expected in the first half of 2012.

1.7 Route 120

In February 2011, the New York State Department of Transportation started the project to resurface I-684 and construct stormwater treatment basins in the I-684 median from just south of the new Lake Street overpass in New York northward to the bridge over Tamarack Swamp in Connecticut. During the reporting period, all of the main project elements listed above were completed with the exception of some electrical components that will be completed in the spring of 2012. DEP will continue to monitor the project until all work is complete.

1.8 Westchester County Airport

The Westchester County Airport is located east of Kensico Reservoir in close proximity to Rye Lake. As such, DEP continues to review any activities that are being proposed at the airport. There was no activity to report in 2011.