



July 3, 2014

Emily Lloyd
Commissioner

Paul V. Rush, P.E.
Deputy Commissioner
Bureau of Water Supply
prush@dep.nyc.gov

465 Columbus Avenue
Valhalla, NY 10595
T: (845) 340-7800
F: (845) 334-7175

Pamela Young, Ph.D.
New York State Department of Health
Bureau of Public Water Supply Protection
Empire State Plaza – Corning Tower 11th Floor
Albany, NY 12237

Phil Sweeney
United States Environmental Protection Agency - Region II
290 Broadway - 24th Floor
New York, NY 10007-1866

Dear Dr. Young and Mr. Sweeney:

Enclosed is the DEP Response to NYSDOH/USEPA Comments on the 2013 FAD Annual Report submitted March 31, 2014, in accordance with the 2007 Filtration Avoidance Determination (FAD).

As always, if you have any questions about these comments or other aspects of the City's watershed protection efforts, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'David S. Warne', written over a horizontal line.

David S. Warne
Assistant Commissioner

DEP Response to NYSDOH/USEPA Comments on the FAD Deliverable Reports
Submitted March 31, 2014
2013 FAD Annual Report
Response Date July 3, 2014

11. Reporting

The Filtration Avoidance Annual Report for the period January 1 through December 31, 2013 was submitted as required by the 2007 FAD, Section 11 - Reporting. The report summarizes the activities and achievements of NYC's FAD programs for the reporting period, and, in general, demonstrates NYCDEP's compliance with FAD requirements. Compliance with specific one-time FAD requirements may be reported separately. NYSDOH/USEPA comments are provided for individual FAD program areas below. (Note: section numbers refer to numbers in the Annual Report, not to FAD sections/programs. To assist the reader, NYSDOH suggests for future reports that report section numbers correspond to or cross reference FAD section/program numbers.)

DEP Response:

Comment noted.

2. SWTR Filtration Avoidance Criteria Requirements

Monitoring and reporting have been completed as required for the reporting period. All Surface Water Treatment Rule (SWTR) filtration avoidance water quality requirements were met. Notably, raw water fecal coliform concentrations were well below the criterion for filtration avoidance; the six-month running percentage of samples that had equal to or less than 20 fecal coliform in 100 milliliters never fell below 99.5% (SWTR limit is 90%). In addition, raw water turbidity was well below the 5 NTU limit, measuring 2.2 NTU or less in samples collected every 4 hours. The highest monthly percentage of positive total coliform samples collected in NYC's distribution system was 0.94%, well within the 5% limit.

DEP Response:

Comment noted.

3.1 Septic Programs

3.1.1. Septic Rehabilitation and Replacement Program

The report describes the implementation of this program as required, including that there was no activity in the Cluster Septic System Program in 2013. The text states that CWC funded the repair or replacement of 273 septic systems, and that the total since inception is 4,359. However, this total is an increase of 278 systems over what was given in the 2012 FAD Annual report. Please verify the reported numbers.

DEP Response:

Please note that the text in the report indicated that 273 were repaired or replaced under the subprograms referenced in Section 3.1.1. The 4,359 total provided by CWC includes all work done since the inception of the program and includes systems repaired, replaced, or managed in all the programs, including the Small

Business Program. In 2013, there were two managed repairs under the Priority Area Program and three systems repaired/replaced under the Small Business Program. With all the programs included the total since inception is 4,359.

3.1.2 Septic Maintenance Program

The report describes the implementation of this program as required. This important program continues to see rising use, with a 16% increase in the number of septic tank pump-outs from 2012 to 2013.

DEP Response:

Comment noted.

3.3 Sewer Extension Program

NYSDOH acknowledges progress on the projects in the towns of Shandaken (Pine Hill Sewer System) and Hunter (Tannersville Sewer System). NYSDOH also notes the extra steps taken by NYCDEP to achieve a successful resolution for the Hard Hack Drive sewer main project. Working with the Town of Middletown, NYCDEP obtained cooperation from property owners so that the necessary easement was obtained and residences along the road could be included in the project.

DEP Response:

Comment noted.

3.4 Stormwater Programs

The report describes activity on Future Stormwater Controls projects, stormwater retrofit projects, and planning and assessment projects as required. NYSDOH notes that no change in status has occurred with the Hunter Foundation project in the Village of Tannersville. NYSDOH commends NYCDEP for promoting the coordination of stormwater retrofit installation and community wastewater projects by waiving the "local share" requirement when funding such projects.

DEP Response:

Comment noted.

4.2 Land Acquisition

As required, the report describes the status and activities of the Land Acquisition Program, including efforts to involve land trusts in the protection of watershed lands. In accordance with the draft Revised 2007 FAD, NYCDEP worked to develop a Pilot Riparian Buffer Acquisition Program and an Enhanced Land Trust Program; partnered with watershed communities to acquire flood-damaged properties under FEMA's flood buy-out program; and executed a contract with WAC to provide \$23 million to support acquisition of farm conservation easements (CE) and \$6 million for a pilot Forest Easement Program. The report notes that funding for the farm CE program was budgeted in 2008 and negotiations on the pilot Forest Easement Program began in 2007. The report should include some background on why a contract for these programs was not executed until 2013.

DEP Response:

Between 2007 and 2012, DEP and WAC engaged in good-faith negotiations on the vast majority of program operations, but reached an impasse on one issue (funding of perpetual stewardship) that could have halted the program as of 2013. DEP and WAC reached a conceptual agreement which allowed the processing and registration of the \$29 million acquisition contract. As of mid-2014, ongoing negotiations have resulted in significant progress toward a final stewardship contract, and remaining issues are being resolved.

4.3 Land Management

As required, the report describes the activities of the Land Management Program. NYSDOH notes the continued increase in watershed acres that have been opened to the public for recreational uses. While management of these lands for recreational purposes requires additional effort on the part of NYCDEP, these efforts are rewarded by increasing the involvement of the public with the watershed. We commend NYCDEP for working to achieve the balance between providing public access City lands and maintaining watershed protection.

DEP Response:

Comment noted.

Under "Agricultural Use" on page 31, the report states that: "In 2013, DEP approved 18 new projects covering 313 acres for a total of 92 projects in 25 different towns covering 2,216 acres." Please provide some clarification regarding the nature of these "new projects".

DEP Response:

Of the 18 projects, eight were for harvesting hay, five were for an initial planting/harvesting of corn with subsequent hay harvesting, one was for row crops and four were for animal pastures.

Please provide clarification on what "FITT" refers to on page 32. NYCDEP may consider providing a list of acronyms used for future reports.

DEP Response:

FITT refers to the Forest Interdisciplinary Technical Team, an internal DEP team of resource professionals that review and provide comments on forestry projects. The team is made up of individuals with expertise in silviculture, stormwater, recreation, wetlands, wildlife and threatened and endangered species, fisheries, property management, SEQRA and planning. All forestry projects conducted on watershed lands must be reviewed by the FITT. DEP will provide a list of acronyms.

4.4 Watershed Agricultural Program

Activities and achievements of the Watershed Agricultural Program have been reported in accordance with the draft Revised 2007 FAD. In addition, specific FAD metrics for this program have been met or exceeded: >90% of active large farms participate in the program (92%); Whole Farm Plans (WFPs) continue to be developed on watershed farms; annual status reviews were conducted on >90% of active WFPs; current nutrient management plans were maintained on >90% of participating farms (99%); the Nutrient Management Credit Program

was made available to watershed farmers; new BMPs were implemented and existing BMPs were repaired and replaced; farmers were enrolled and re-enrolled in CREP; and the Farmer Education and Farm-to-Market programs were very active. The program continues to demonstrate excellent farmer participation in the multiple watershed and water quality protection initiatives that the program promotes.

DEP Response:

Comment noted.

4.5 Watershed Forestry Program

The report includes the status and accomplishments of this program, as defined by the draft Revised 2007 FAD. It is apparent from the report that the Watershed Forestry Program is very active in protecting forest resources as a beneficial land use in the watershed. The program provides numerous training opportunities, which are well attended by loggers and foresters. Surveys of landowners who have WAC forest management plans indicate satisfaction with the program and demonstrate substantial use of beneficial management practices. At the same time, the forestry program has sought ways to be more effective and cost-efficient.

DEP Response:

Comment noted.

NYSDOH notes that no activities were conducted at the Lennox Model Forest pending renewal of a partnership agreement between WAC and Cornell Cooperative Extension of Delaware County. We encourage NYCDEP to facilitate, to the extent possible, a resolution to this agreement so that the Lennox Model Forest may also contribute to the education/outreach benefits provided by the other model forest facilities in the watershed.

DEP Response:

Comment noted.

4.6 Stream Management Program

As required by the 2007 FAD, the report describes the progress made by the program in implementing stream management plans (SMPs) and the status of stream projects. In accordance with the FAD: the Rondout and Neversink SMPs have been adopted, and implementation has been initiated; numerous training and educational activities were conducted; and preliminary Flood Insurance Rate Maps (FIRM) were substantially completed. Data collected for the FIRM project will be a valuable tool for flood hazard mitigation planning. NYSDOH acknowledges the substantial increase in output for the Stream Management Program, with more projects (47) partially or fully funded in the last two years than during the previous 14-year period combined (37 projects). The stream project descriptions and accompanying pre- and post-construction photographs very clearly portray the scope, complexity, and erosion control benefits of these projects. NYSDOH would be interested in receiving updates in future reports on the resiliency of these projects.

DEP Response:

The Stream Management Program staff will be scheduling the annual project (office) meeting with NYSDOH for the month of August, and will follow up with a

field meeting to view projects in October. The SMP will discuss project resiliency in the August meeting.

4.6.2 Flood Recovery and Hazard Mitigation.

NYSDOH commends NYCDEP for assuming the costs associated with design and stabilization work of hill slope failures, which was deemed ineligible for cost-sharing by Natural Resources Conservation Service (NRCS) under the Emergency Watershed Protection (EWP) Program. This likely contributed to a more robust long-term solution for chronic suspended sediment sources at these locations. At the same time, NYCDEP and its partners are working with NRCS so that the EWP program might benefit from the comprehensive approach to stream projects used by the Stream Management Program.

DEP Response:

Comment noted.

4.6.3 Stream Projects

NYSDOH notes the first use of toe wood as part of a stream bank stabilization project in Delhi. This innovative Rosgen technique, which is not currently used in the Watershed, may provide the same stabilization benefits as a rock, while providing a more natural bank appearance in a more cost-effective structure.

DEP Response:

Comment noted.

NYCDEP and its Stream Management Program partners are commended for working with the Watershed Agricultural Program to stabilize stream banks in two sites so that these riparian areas would be eligible for enrollment in the Conservation Reserve Enhancement Program (CREP). This collaboration of programs protects water quality from streambank erosion and potential agricultural inputs while helping to leverage federal funds.

DEP Response:

Comment noted.

NYSDOH notes the completion of the demonstration stream restoration project on the Neversink River, which was a specific requirement of the 2007 FAD. The project was originally due by February 28, 2012. The project was delayed due to site damage during Tropical Storm Irene in August 2011, and the expected completion was pushed back to October 2012. Substantial completion of the project was achieved in August 2012. However, the project was again delayed due to site damage from a 50-year storm in September 2012, which occurred prior to vegetation planting of the bankfull stage bench. This project demonstrated the benefit of the use of a "Stinger" tool to interplant rip-rap with live willow stakes.

DEP Response:

Comment noted.

Also notable was the response of the Rondout/Neversink Stream Program staff following storm damage to a road that had been repaired after a previous storm. Program staff reached out to county engineers to offer a design for a more sustainable channel restoration and support for an application for FEMA funds. This effort has yielded multiple benefits: extending the expertise

data. The baseline data collected within each monitoring plot includes plant height, stem diameter, vigor, predation, and overall survivability. It is our hope that the collection of data from monitoring plots over multiple years can allow for statistical comparisons to be drawn from plant growth by project as well as individual species. A successful project would be one at which the installed vegetation shows a high percentage of survivability over the course of the 5-year monitoring period, and also indicates a positive growth rate on the majority of installed vegetation.

4.8 Wetlands Protection Program

Program activities are reported as required, including information on permit reviews, wetlands protected through land acquisition, wetlands mapping and monitoring, and wetlands protection conducted in conjunction with other program activities.

DEP Response:

Comment noted.

4.9 East of Hudson Non-Point Source Pollution Control Program

Implementation of the program was reported on as required. Notably, in accordance with specific 2007 FAD requirements, stormwater projects at Michael Brook, Sycamore Park, and the Nemarest Club were reported to be substantially completed in 2013. NYSDOH notes that, in accordance with the draft Revised 2007 FAD, NYCDEP has submitted a proposal for a Septic System Rehabilitation Reimbursement Program for West Branch and Boyd Corners Reservoir watersheds. Also in accordance with the 2007 FAD and the draft Revised FAD, NYCDEP made \$4.5 million and \$15.5 million available for East-of-Hudson communities to construct stormwater retrofits.

DEP Response:

Comment noted.

4.9.2 Stormwater-Related NPS Pollution Management Programs

The annual report does not address whether the stormwater pollution prevention plan (SWPPP) for the Drewville Road project was received by NYCDEP. The July 2013 semi-annual report for this program stated that NYCDEP was anticipating receipt of the SWPPP approval in the second half of 2013. Please provide the status of that document.

DEP Response:

DEP submitted the Drewville Road SWPPP to the Town of Carmel. The Town referred it to the Environmental Control Board on May 8, 2013. As noted in the 2013 Annual Report, the Town requested changes to the vegetation and the proximity of the basin to the reservoir. These further changes made it necessary for DEP to amend its contract with its engineering design consultant. When those contract change orders are in place, DEP's consultant can work to amend the designs and secure the remaining approvals, including the SWPPP.

The annual report states that the Sycamore Park project achieved "substantial completion" in September 2013. The July 2013 semi-annual report for this program stated that NYCDEP

anticipated “final closeout” in the second half of 2013. Please clarify the conclusion date for all project activities at this site.

DEP Response:

DEP issued Substantial Completion notification to the contractor for all three projects under this contract on September 18, 2013 (Sycamore Park, Michaels Brook, Nemarest Club). DEP issues Substantial Completion to the contractor as a contractual milestone that signals completion and start of the warranty period. Some minor punch-list items occurred after September 2013 but the project was functional in September 2013.

The annual report states that the Nemarest Club project achieved “substantial completion” in September 2013. However, the July 2013 semi-annual report for this program stated that construction was completed. Please describe the project-related activities that occurred at the site in the second half of 2013, after the reported completion of the project.

DEP Response:

The project at the Nemarest Club was functional in the first half of 2013. DEP issued Substantial Completion notification to the contractor for all three projects under this contract on September 18, 2013 (Sycamore Park, Michaels Brook, Nemarest Club). DEP issues Substantial Completion to the contractor as a contractual milestone that signals completion and start of any warranty period. Substantial Completion notification did not occur for Nemarest Club until September 2013 due to work that was ongoing on other projects under the same contract.

4.10 Kensico Water Quality Control Program

As required by the FAD, the report describes implementation of the Kensico programs.

DEP Response:

Comment noted.

4.10.2 Kensico Action Plan

NYSDOH notes that the N7, N12, and Whipoorwill nonpoint source reduction projects, which were identified in the Kensico Action Plan, were completed or augmented in 2013. It appears that image C in Figure 4.31 and the image in Figure 4.32 are the same. Please confirm the correct caption for this image.

DEP Response:

USEPA Team Leader Philip Sweeney advised DEP about this error in an April 2, 2014 email. DEP made the correction and posted the corrected FAD Annual Report on the DEP FAD webpage. An explanation follows: the image found in Figure 4.32 should not have been duplicated in Figure 4.31. The caption in Figure 4.32 is correct. The image that should have been presented in Figure 4.31 showing the N7 site after completion of construction is below.



Significant blow down damage near the Whippoorwill site was noted in a site visit by regulators in November 2013. Please provide updates on the restoration of these areas.

DEP Response:

This area was the largest of four sites that suffered heavy tree damage in Hurricane Sandy. The site totaled approximately 27 acres of Norway spruce plantation. A significant portion of the trees on the site were completely blown down, and the remaining area suffered extensive damage. Work in this area consisted of removing all blown down trees, removing all Norway spruce still standing within 100 feet of public roads, and thinning the remaining patches of standing spruce more than 100 feet from the road. The project also removed obviously-destabilized hardwoods, all invasive Norway maple, and black birch infested with nectria canker to minimize the spread of invasive species and plant pathogens within the newly cleared area. Subsequent to the tree removal work, remaining woody debris was chipped and spread on site to provide temporary stabilization. The cleared area was seeded with a native seed mix to provide permanent stabilization. In the spring of 2015, approximately 11.5 acres of the area cleared will be replanted with 3,600 trees and 2,480 shrubs of more than 40 different native species. The new plantings will be protected from deer browse with either an 8' high exclusion fence or plastic tubes. The deer protection measures are expected to remain in place for 5-8 years until the plantings are large and vigorous enough to withstand deer pressure.

4.10.5 Septic Repair Program

The legend for Figure 4.33 is illegible. Please provide a copy in which this information is legible.

DEP Response:

Below is another copy of Figure 4.33. A printed copy is attached to this document.

The report states that construction on 4 septic systems was completed in 2013. Information on how many systems have been rehabilitated under the program since its inception would enhance the report.

DEP Response:

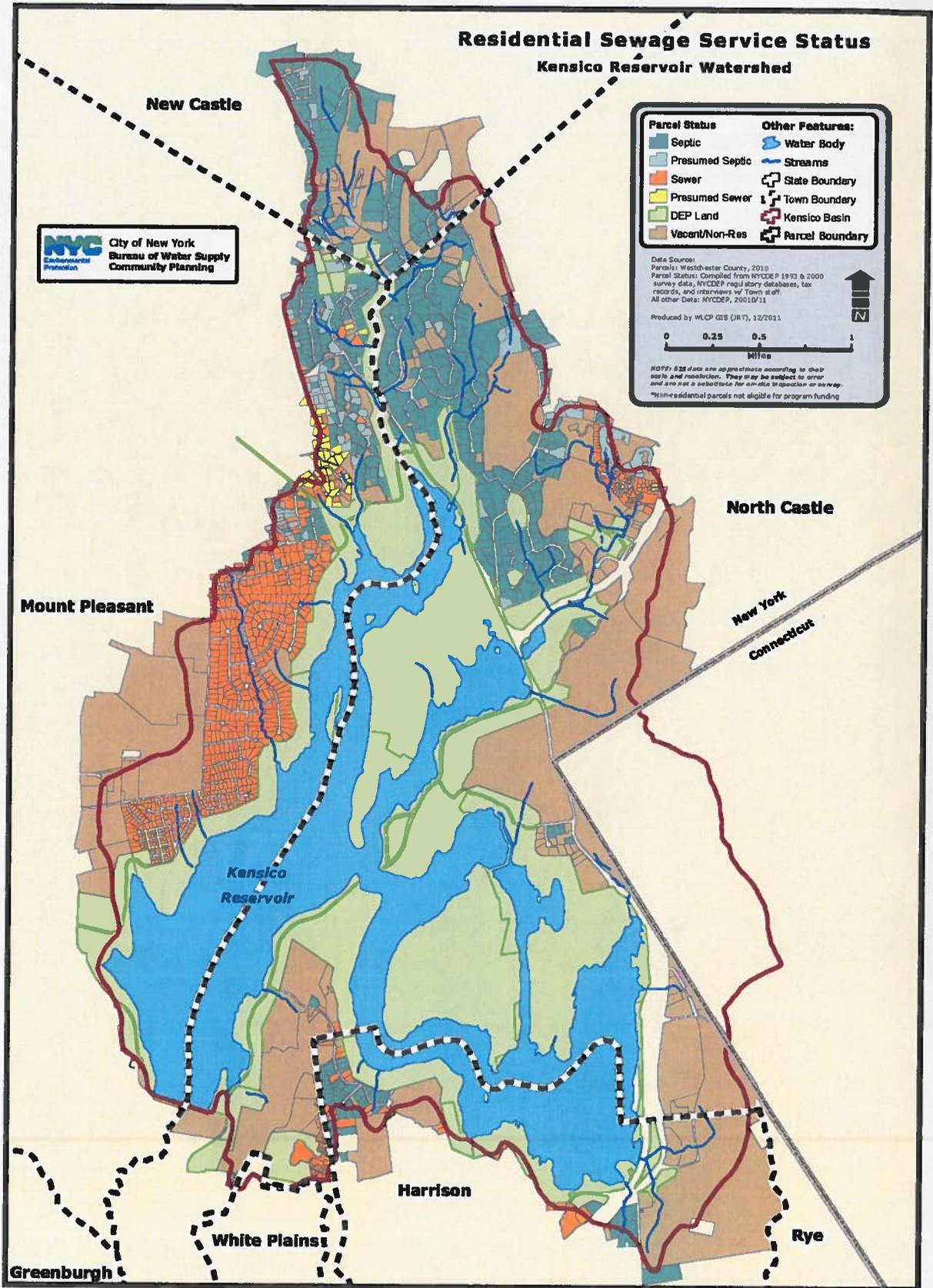
A total of 18 sites have been rehabilitated from Program inception through December 31, 2013. This includes nine repairs, four remediations, and five sewer connections.

4.11 Catskill Turbidity Control

The report describes implementation of the program elements, as required. NYSDOH acknowledges progress on specific 2007 FAD and Revised 2007 FAD requirements in 2013: the 90% design for the Catskill Aqueduct stop shutter improvement project was finalized, construction commenced on the Shaft 4 Interconnection, and the final version of the Operation Support Tool (OST) was delivered to NYCDEP.

DEP Response:

Comment noted.



5.1 Watershed Monitoring Program

The report describes NYCDEP's routine monitoring, as well as special monitoring performed in response to unusual events in the watershed. NYSDOH commends NYCDEP for their multi-faceted storm event sampling efforts, which seek to enhance understanding of the source and transport of storm event inputs in the water supply. For future annual reports, NYSDOH requests that NYCDEP provide a summary of any events that required submission of an "after action report" during the reporting period.

DEP Response:

DEP will provide summary information for After-Action Reports in future Bureau Annual Reports, as requested. Notably, this information is routinely included in the Watershed Water Quality Annual Reports, which comprehensively describe the water quality events of each year.

5.4 Geographic Information System

Program elements are reported on as required. NYSDOH notes the importance of this program in providing critical and accurate information to many of the other FAD programs, as well as to other agencies and stakeholders. A major data upgrade performed during the reporting period has provided greater resolution in mapping watershed features. This should enhance NYCDEP's ability to monitor watershed changes and trends in the future.

DEP Response:

Comment noted.

6. Regulatory Programs

The report provides a summary of these programs; however primary reporting on these programs and review of these program deliverables are done separately from the Annual Report.

DEP Response:

Comment noted.

7. Catskill/Delaware Filtration/UV Disinfection Facilities

Designs for the Catskill/Delaware Ozone/Direct Filtration facility were reviewed, and updated as necessary, as required by the 2007 FAD.

DEP Response:

Comment noted.

8.1 Waterborne Disease Risk Assessment Program

The report includes a brief summary of the program activities. Greater detail has been provided in a separate report. Comments on this report have been provided under separate cover.

DEP Response:

Comment noted.

8.2 Cross Connection Control Program

NYSDOH notes that the reporting for this program has been modified to better align with 2007 FAD milestones. As a result, the report table no longer includes the category “NOVs issued for failure to (install)” BFP. While this information is not required by the 2007 FAD, if the data are readily available, their inclusion would enhance the report.

DEP Response:

Comment noted. NYSDOH acknowledges that the requested information is not required by the Revised 2007 FAD. DEP will give consideration to the request.

9. Education and Outreach

Activities of the program are reported as required by the FAD. NYSDOH notes the success of this program, through collaboration and partnerships, to disseminate to a large audience the value of source water protection, local stewardship, and public health protection, while maintaining focus on the preservation of community uniqueness and sustainability.

DEP Response:

Comment noted.

10. Miscellaneous Reporting Provisions

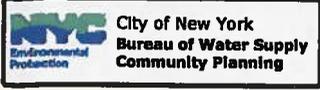
As described in Section 11 of the FAD, the report includes information on actions planned and taken by the City regarding water conservation, implementation or revisions to the Drought Maintenance Plan, and elimination of leaks in the Delaware Aqueduct. Water conservation is an important part of the equation for maintaining a sustainable water supply for NYC. NYCDEP’s role in continuing to reduce water demand while the population of water consumers continues to grow is commendable. NYCDEP’s efforts in this regard have been proactive and innovative, working in collaboration with other agencies and creating partnerships to broaden its ability to reduce water waste in the City.

DEP Response:

Comment noted.

Residential Sewage Service Status

Kensico Reservoir Watershed



Parcel Status	Other Features:
Septic	Water Body
Presumed Septic	Streams
Sewer	State Boundary
Presumed Sewer	Town Boundary
DEP Land	Kensico Basin
Vacant/Non-Res	Parcel Boundary

Data Source:
Parcels: Westchester County, 2010
Parcel Status: Compiled from NYCDEP 1993 & 2000 survey data, NYCDEP regulatory databases, tax records, and interviews w/ Town staff
All other Data: NYCDEP, 2001Q/11

Produced by WLCP GIS (JRT), 12/2011

NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.
*Non-residential parcels not eligible for program funding

