

*New York City Department of Environmental Protection
Bureau of Water Supply*

**2011 Long-Term Watershed Protection Plan
Addendum**

May 1, 2014

*Prepared in accordance with Section 5.1 of the July 2007 United States
Environmental Protection Agency Filtration Avoidance Determination*



Prepared by:
Watershed Protection Programs
Bureau of Water Supply

A.1 Introduction

This document provides an update to the 2011 Long-Term Watershed Protection Plan (Long Term Plan), which memorializes New York City's long-running source water protection program. The New York City Department of Environmental Protection (DEP) is the City agency charged with primary responsibility for overseeing the operation, maintenance, and management of the water supply infrastructure and the protection of the 1,972 square-mile watershed. Since its first filtration waiver was issued over 20 years ago, DEP has sustained a wide variety of watershed protection programs which has ensured the continued high quality of the Catskill/Delaware supply.

The 2007 Filtration Avoidance Determination (FAD) requires the City to continue to implement a number of distinct programs that form the core of the overall source water protection program. Through periodic assessments, DEP has demonstrated the ongoing effectiveness of the overall program in preserving the existing high quality of the Catskill/Delaware waters. The City's most recent assessment, issued in March 2011, confirms that water quality status and trends continue to point to a safe, reliable supply of drinking water for half the population of New York State. In December 2011, DEP submitted the 2011 Long Term Plan to the New York State Department of Health (NYSDOH) for continuation of the 2007-2017 filtration waiver for the Catskill/Delaware Systems. Unlike previous FADs, the 2007 FAD covered a full 10-year period and called for a midterm assessment of the City's programs and commitments.

This addendum describes the modifications to DEP's 2011 Long-Term Plan as a result of the mid-term revisions to the 2007 Filtration Avoidance Determination (Revised 2007 FAD). During the period between the issuance of the Long Term Plan and the Revised 2007 FAD, DEP continued the watershed programs and reporting requirements contained in the 2007 FAD without interruption. In general, the changes between the LTP and Revised 2007 FAD are minor. Due to the time lag between the two documents, program milestone dates were updated as needed. Additionally, some activities/milestones already included in the LTP but not listed as reporting milestones are now explicitly listed as deliverables in the Revised 2007 FAD. These changes do not reflect additions to the watershed programs but simply a change in terminology. Substantive changes to the watershed programs are identified below. Please refer to the Revised 2007 FAD for a complete description of the programmatic requirements.

A.2 SWTR Filtration Avoidance Criteria Requirements

Watershed Protection Program Review. The Revised 2007 FAD anticipates an updated independent, comprehensive review of the City's watershed protection plan by the National Academy of Sciences, or a similar organization, to be completed in time to inform the midterm review of the next FAD. Accordingly, the Revised 2007 FAD requires the City to begin the contracting process so that an expert panel can be ready to commence work at the start of the next FAD period.

A.3 Environmental Infrastructure Programs

Community Wastewater Management Program. The Revised 2007 FAD requires a new study to evaluate the need for a community wastewater system for the Hamlet of Shokan. The new requirements include a study proposal to be submitted for review and approval, and the completed study within two years of NYSDOH's approval of the study proposal.

A.4 Protection and Remediation Programs

Land Acquisition Program. The Land Acquisition Program has a few funding and programmatic modifications. First, the solicitation requirement is changed to 300,000 acres over six years rather than the previous annual targets. Second, a new City Flood Buyout Program will be developed and implemented to supplement the existing FEMA/SOEM's Flood Buyout Program. Finally, funding is increased to include an additional \$50 million for the base program, \$15 million for the new City Flood Buyout Program and a commitment to provide funding to the Watershed Agricultural Council (WAC) for stewardship of WAC conservation easements.

Watershed Agricultural Program. DEP is now required to fund and support the implementation of Precision Feed Management (PFM) on 60 eligible farms in the NYC watershed, with an opportunity to do fewer if it is demonstrated that PFM will provide only minimal water quality benefit. Previously PFM was one of the nutrient management techniques utilized in Whole Farm Plans, but explicit targets did not exist. Additionally, while the overall requirement for 50 Whole Farm Plans has not changed, DEP now has the option to provide justification for developing fewer than 50 WFPs.

Watershed Forestry Program. DEP is now required to fund and support a riparian buffer restoration program (e.g., Trees for Tribes) at a level of 5 projects per year. Previously, this was a component of the program but explicit targets did not exist.

Stream Management Program. There are several additions and modifications to the Stream Management Program. The program additions include: a Local Flood Hazard Mitigation Program (LFHMP) with \$10.1 million in funding; a Catskill Watershed Corporation LFHMP with \$17 million in funding; seven stream restoration projects in the Ashokan basin; water quality monitoring project at a stream restoration site to evaluate efficacy in reducing turbidity; an additional \$500,000 for Emergency Watershed Protection Projects and an additional \$10.5 million in baseline program funding.

East-of-Hudson Nonpoint Source Control. The Revised 2007 FAD requires a new septic repair program for the West Branch and Boyd Corners basins as well as a proposal to expand the program to the Cross River and Croton Falls basins.

Kensico Water Quality Control. The Revised 2007 FAD requires DEP to initiate and complete design of a project to stabilize a section of the Kensico Reservoir shoreline in the vicinity of Shaft 18. The goal of the project is to minimize erosion of the shoreline, which can result from wind and wave action, and associated water quality impacts.

Catskill Turbidity Control. The Revised 2007 FAD contains several new requirements related to Catskill turbidity control. First, the City is required to fund an independent review of the effectiveness of the City's use of OST. The City and NYSDOH have requested that the National Research Council convene a panel of experts in reservoir

water quality and quantity modeling to conduct this assessment. The Expert Panel will review: the effectiveness of the City's use of OST; the performance measures the City uses to assess the efficacy of the Catskill Turbidity Control Program; the planned use of OST in evaluating the proposed modifications to the Catalum SPDES Permit (NY-0264652), including the alternatives to be considered in the associated environmental review; and DEP's existing studies of potential effects of climate change on the City's water supply to help identify and better understand areas of potential future concern in regard to the use of OST.

Additionally, the Revised 2007 FAD requires several new reports: a report on the final performance measures/criteria for evaluating the efficacy of the Catskill Turbidity Control program; a Catskill Turbidity Control RWBT Shutdown Management Plan, including consideration of maintaining water quality during the Delaware tunnel repair and shutdown; a summary of Catskill turbidity control measures, including measures that have previously been considered and those that are under consideration in the Catalum environmental review; and a modification of the Phase III Catskill Turbidity Control Implementation Plan if the findings of the Catalum environmental review require any revisions.

A.5 Conclusion

Over the last 20 years, DEP and its partner agencies and organizations have developed and implemented an aggressive and comprehensive source water monitoring and protection program that has not only maintained but has enhanced the high quality of Catskill/Delaware water. This program has been recognized internationally as a model for watershed protection and has enabled the City to secure a series of waivers from the filtration requirements of the SWTR and the Interim Enhanced Surface Water Treatment Rule. The current plan, as amended here, represents DEP's continued commitment to long-term watershed protection.

DEP has established a track record of successful program implementation, along with a demonstrated commitment to providing the resources necessary to ensure continued protection of the water supply. DEP expects that with continued implementation of these programs in accordance with the Revised 2007 FAD, the City will continue to comply with the requirements of the SWTR. Accordingly, DEP expects to seek to have NYSDOH issue the 2017 FAD to cover a 10-year period, like the 2007 FAD. Such longer term filtration waivers provide certainty and stability for water consumers, watershed partners and stakeholders, and regulators alike.