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## New York City Submits Five-Year Plan And Filtration Avoidance Application To U.S. Environmental Protection Agency

Commissioner Joel A. Miele Sr., P.E., of the New York City Department of Environmental Protection (DEP) announced today that the City has submitted to the U.S. Environmental Protection Agency (EPA) New York City's 2001 Watershed Protection Program Summary, Assessment and Long-term Plan," which includes DEP's "2002-2007 Filtration Avoidance Proposal." The submission satisfies a requirement of the "1997 New York City Watershed Memorandum of Agreement" (MOA) to provide an evaluation of DEP's implementation of the MOA, as well as recommendations for improvements. It also satisfies a requirement of the Filtration Avoidance Determination (FAD), issued by the EPA in May 1997, that the City develop a long-term plan for watershed protection for the purpose of extending the filtration waiver.

"This report is the single most comprehensive evaluation of the City's watershed protection efforts to date," said Commissioner Miele. "The report details the significant achievements made by DEP and its partners in designing and implementing the overall watershed protection program. Further, it uses information from DEP's comprehensive water quality monitoring and modeling programs to confirm that the quality of water in the Catskill/Delaware supplies remains high and that specific watershed protection programs are beginning to yield benefits. The report demonstrates that the City's supply continues to meet all objective water quality criteria of the federal Surface Water Treatment Rule and that specific efforts - waterfowl management, Kensico stormwater controls, wastewater treatment plant upgrades and inspections - are showing quantifiable improvements."

Commissioner Miele continued, "The signing of the MOA in 1997 ushered in a new era of watershed protection and partnership with many watershed stakeholders - the State, EPA, certain environmental and public interest groups, and the watershed counties, towns and villages. This unique coalition came together with the dual goals of protecting water quality and the economic viability of watershed communities for generations to come. This report confirms that the partnerships have made meeting those goals possible, and that long-term plans are not only feasible but

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desirable for all concerned."

Based on the information in the report and the success of the many programs delineated in the MOA and the FAD, the City has crafted a proposal to extend the watershed protection efforts and the filtration waiver from the EPA. The proposal commits the City to continue and, in some cases, significantly expand certain programs that target key potential pollution sources. Among them are: the Watershed Agricultural Program, including the Watershed Forestry Program; the Waterfowl Management Program; the New Infrastructure Program for seven West-of-Hudson communities; the Wastewater Treatment Plant Upgrade Program; the Stream Management Program; the Kensico Reservoir protection programs; plus two programs administered by the Catskill Watershed Corporation (CWC) - the Septic Remediation and Replacement Program and the Stormwater Retrofit Program.

In addition, the City will undertake a number of new initiatives, including the Community Wastewater Management Program to address wastewater problems in certain smaller hamlets and villages; a Septic Operation and Maintenance Program that will support proper operation and maintenance of septic systems in the West-of-Hudson watershed; a house-to-house survey of septic systems in the West Branch and Boyds Corner Reservoir basins to identify failing septic systems; funding for CWC and county staff throughout the West-of-Hudson watershed to undertake comprehensive watershed planning efforts and to identify and prioritize community stormwater needs; a study to evaluate engineering options for reducing levels of turbidity leaving the Schoharie Reservoir; certain efforts to control nonpoint source pollution in those Catskill/Delaware reservoir basins that are east of the Hudson; and a commitment to design and construct an enhanced disinfection facility, utilizing ultra-violet technology, for Catskill/Delaware water if such a facility is deemed feasible by the EPA.

"We are proud of the work DEP and its partners have done for watershed protection," said Commissioner Miele. "This report demonstrates that continuation and enhancement of the program is scientifically supported, comprehensive and will provide continuing protection for the nine million New Yorkers who count on the City's water supply every day."

## Outline of 2002-2007 Filtration Avoidance Proposal

### Septic Systems

DEP has implemented a number of initiatives to target failing or likely-to-fail septs in the watershed. DEP proposes to

- ▶ extend funding for the CWC Septic Rehabilitation and Replacement Program to pay for approximately 300 septic system repairs per year.
- ▶ fund a new CWC program to support proper operation and maintenance of septic systems WOH.
- ▶ complete the house-to-house septic survey underway in the Kensico basin and conduct a similar survey in the West Branch and Boyds Corner basins.
- ▶ complete design and construction of extension of sewers from five City-owned WWTPs, as agreed to in the MOA. (previously funded under MOA)

### **New Wastewater Treatment Infrastructure**

Under the MOA, the New Sewage Treatment Infrastructure Program was established to address failing and likely to fail septic systems in 22 identified older hamlets and villages by funding the construction of WWTPs or community septic systems, or the creation of septic maintenance districts. The program was funded at a maximum of \$75 million, and the first five communities have signed contracts to proceed with design and construction. DEP proposes to

- ▶ provide additional funding to construct WWTPs in Phoenicia and Prattsville (communities 6 and 7 in the New Infrastructure Program).
- ▶ fund establishment of the Community Wastewater Management Program through CWC to provide wastewater solutions for certain smaller, lower priority communities, drawn from communities listed as 8-22 on the original New Infrastructure Program list.

### **Stormwater Programs**

The MOA Stormwater Retrofit Program funds stormwater best management practices for existing sites throughout the watershed, thereby reducing the input of suspended solids, pathogens and excessive nutrients into reservoir systems. DEP proposes to

- ▶ continue financial support for the CWC Stormwater Retrofit Program.
- ▶ provide certain new funding for CWC and county staff throughout the watershed to identify and prioritize community stormwater needs.

### **Catskill Turbidity Control**

Due to the nature of the underlying geology, the Catskill system is prone to elevated levels of turbidity in streams and reservoirs, mostly associated with high flow events. Under normal circumstances the extended detention time in the reservoirs is sufficient to allow turbidity to settle out, and the system easily meets turbidity standards at the Kensico effluents. Periodically, however, the City has had to use chemical treatment (alum) to control high turbidities. DEP proposes to

- ▶ undertake a consultant study of potential measures to reduce turbidity entering and leaving the Schoharie Reservoir. The analysis will assess a range of options, including, at a minimum, construction of a multi-level intake, relocation of the intake, removal of the cofferdam in the reservoir, utilization of a turbidity curtain in the reservoir and reservoir dredging. The analysis will evaluate the cost effectiveness of the options studied and identify the expected benefit of each alternative, if any.
- ▶ work with DEC on a turbidity model for the parts of the Catskill system, and a release management strategy from the Schoharie Reservoir to Esopus Creek that will meet water quality and quantitative objectives..

### **Watershed Agricultural Program**

The Watershed Agricultural Program strives to maintain and protect the existing high quality of the water supply from agricultural nonpoint source pollution through the planning

and implementation of structural and non-structural Best Management Practices (BMPs) on farms.

- ▶ In October 2001, DEP extended for three years a contract to support the Watershed Agricultural Program. Included in the next phase of the program are new initiatives that target small farms watershed-wide, farms in the Croton watershed, farmer education and scientific research.
- ▶ DEP will continue implementation of the Watershed Forestry Program.

#### **Stream Management Program**

The Stream Management Program (SMP) works to address chronic and pervasive stream system degradation from improper land use practices and adverse development that contribute to streambank and bed erosion and loss of riparian buffer systems. DEP proposes to

- ▶ expand the Stream Management Program to continue developing stream management plans and construct demonstration projects. By 2007, basins covering 65% of the Catskill/Delaware watershed will have completed stream management plans. At least ten new problem stream reaches are intended to be restored in the next five years.

#### **East of Hudson Non-point Pollution Control**

DEP is at the mid-point of a two-year contract to evaluate non-point sources of pollution in the East-of-Hudson watershed. DEP proposes to

- ▶ take results from that study and implement certain non-point source controls in Catskill/Delaware basins east of the Hudson.
- ▶ implement an EOH small projects stormwater program to address localized areas of stormwater-related erosion.
- ▶ implement certain other existing DEP programs - Farm Program, Forestry Program, stormwater control efforts - in EOH Catskill/Delaware basins to help control non-point pollution.

#### **Wetlands Protection**

Wetlands are an important part of the natural features of the New York City watershed and are in part responsible for maintaining the high quality of surface waters in the water supply system. In 2001, DEP revised its Wetlands Protection Strategy. DEP proposes to

- ▶ continue to protect wetlands through existing regulatory and non-regulatory programs, including Land Acquisition; the Stream Management Program; the Farm and Forestry Programs; and through enforcement of City, State and federal wetlands regulations.
- ▶ continue research efforts to better understand the roles wetlands play in protecting water quality and to guide protection and remediation efforts.

#### **Waterfowl Management**

Studies show that the Waterfowl Management Program at Kensico is perhaps the single most effective, and cost-

effective, watershed protection program ever implemented by DEP. DEP proposes to

- ▶ continue existing Waterfowl Management Program at the Kensico Reservoir.
- ▶ expand Program to upstream source water reservoirs, including West Branch, Rondout and Ashokan.

#### **Monitoring, Modeling & GIS**

DEP's watershed monitoring, modeling and science programs form the basis for the City's ongoing assessment of watershed conditions, changes in water quality and ultimately any modifications to the strategies and management of the watershed protection program. DEP proposes to

- ▶ undertake a review of each of the major elements of the monitoring program and redesign programs as necessary to support data collection objectives.
- ▶ prepare an annual watershed water quality report to summarize water quality data and provide analysis of trends.
- ▶ continue to enhance and refine terrestrial and reservoir models to support watershed protection and operational efforts.
- ▶ maintain a comprehensive GIS database to support DEP's regulatory and non-regulatory programs.

#### **Kensico Reservoir Programs**

New York City developed a multi-faceted program to protect and improve water quality in the Kensico Reservoir. Major elements of the program include land acquisition, aggressive stormwater and waterfowl management programs, installation and maintenance of a turbidity curtain, maintenance dredging, and design and installation of hazardous spill containment facilities. DEP proposes to

- ▶ continue efforts to acquire lands in the Kensico basin.
- ▶ complete installation of stormwater BMPs.
- ▶ replace the turbidity curtain at the mouth of Malcolm and Young Brooks.
- ▶ implement enhanced spill protection measures in certain parts of the Kensico basin.
- ▶ map stormwater infrastructure in the basin and complete video inspection of certain sections of storm sewer.
- ▶ continue to participate in KWIC and seek expansion of the group to other appropriate facilities in the Kensico basin.

#### **Disease Surveillance**

The Waterborne Disease Risk Assessment Program seeks to track incidence of certain types of illness in New York City and determine if there is any link between illness and consumption or use of New York City water. DEP proposes to

- ▶ continue implementation of the Disease Surveillance program at current levels.

#### **Enhanced Disinfection for Catskill/Delaware Water**

DEP has undertaken a study to determine the feasibility of treating Catskill/Delaware waters with enhanced ultraviolet

(UV) disinfection. Over the next few months, based on information provided by DEP, EPA will decide if DEP must proceed with design and construction of a UV facility. DEP proposes to

- ▶ initiate and complete design and construction of a UV facility in accordance with an agreed-upon schedule. The UV facility would go on line by August 2009.

**Public Education**

DEP's public education and outreach activities are built on the principle that an informed base of watershed residents and water consumers facilitates development and implementation of protection strategies. DEP proposes to

- ▶ if necessary, provide certain additional funding to CWC to support ongoing public education and outreach efforts.

**Other Ongoing Programs**

In addition to the above proposals, DEP anticipates continuing certain ongoing programs including Land Acquisition, the WWTP Upgrade Program and enforcement of the Watershed Rules and Regulations.