

Response to Comments
2007 Filtration Avoidance Determination
New York City's Catskill/Delaware Water Supply
Prepared by USEPA in consultation with NYSDOH

General Information

This Response to Comments document is provided in conjunction with issuance of the final 2007 New York City Filtration Avoidance Determination for the Catskill/Delaware water supply.

The draft 2007 New York City Filtration Avoidance Determination (FAD) was released for public review on April 12, 2007. The U.S. Environmental Protection Agency (EPA) mailed notice of the availability of the draft FAD to key watershed stakeholders, posted the draft FAD on its website, and provided public notice in area newspapers. The comment period closed on May 31, 2007.

Comments were received from 58 organizations and individuals, in addition to 388 form letters. The final FAD includes certain changes which are responsive to the comments received. The New York City Department of Environmental Protection (NYCDEP) has committed to the program enhancements that have been added to the FAD through this process. Below is an overview of the most significant changes that have been made to the final 2007 FAD:

- a) Revision to the Septic Remediation and Replacement Program to expand eligibility to small businesses, and commitment of \$4 million for this purpose
- b) Commitment to implement Community Wastewater Management Program projects for the remaining five communities included in Paragraph 122 of the NYC Watershed Memorandum of Agreement (MOA)
- c) Establishment of process to ensure timely transfer of City funds to the Catskill Watershed Corporation for community wastewater projects
- d) Allocation of \$1 million in additional funding for the State Pollutant Discharge Elimination System (SPDES) Upgrade Program
- e) Commitment to fund one engineering position at the Catskill Watershed Corporation for compliance assistance activities
- f) Allocation of \$500,000 for Sand and Salt Storage facility construction at watershed institutions such as schools and hospitals
- g) Commitment to implement a \$6 million forestry easement pilot program, to be administered by the Watershed Agricultural Council

- h) Additional \$500,000 for local consultation on proposed land acquisitions, with the existing limit for each community raised to \$30,000
- i) Addition of narrative language acknowledging the partner agencies involved in the Watershed Agricultural Program
- j) Commitment to review and evaluate the future report on Delaware County's Precision Feed Management program and to provide recommendations on which elements of such a program may merit implementation in the watershed
- k) Additional \$250,000 of funding to the Watershed Agricultural Council for stewardship of existing agricultural easements, and commitment of \$8,000 for each newly acquired easement
- l) Commitment to continuation of the existing Nutrient Management Credit Program
- m) Commitment to meet and discuss, with watershed representatives, the proposed changes to watershed stormwater regulations, following a planned meeting between NYCDEP and regulatory agencies
- n) Commitment to develop a new stormwater guidance document, in consultation with technical advisory group
- o) Provision for EPA and the New York State Department of Health (NYSDOH) to consider allocation of some portion of the \$4.5 million east-of-Hudson stormwater grant funds toward establishment and start-up of a public benefit corporation (or similar entity) that would assist with MS4 permit compliance
- p) Revision of one interim milestone date for the UV Disinfection Facilities project (no change to the completion date)
- q) Revision of milestone dates for stormwater remediation projects in East-of-Hudson Non-Point Source Pollution Control Program due to contract issues
- r) Extension of milestone date for the Grand Gorge sewer extension project due to contract issues
- s) Minor adjustments to certain reporting requirements

EPA's Response to Comments

FAD – General:

1. Comment: Various environmental/conservation groups, both upstate and downstate, have voiced strong support for a ten-year FAD, specifically recommending a continuation of the City's efforts to acquire land within the Catskill/Delaware watershed and to better coordinate with land trusts.

Response: Support for the ten-year FAD, for the land acquisition program, and for the use of land trusts, is acknowledged. The final FAD maintains all these provisions.

2. Comment: The New York State Department of Environmental Conservation (NYSDEC) supports the draft FAD, including the ten-year term and the ten-year land acquisition commitments.

Response: NYSDEC's support is acknowledged.

3. Comment: A number of west-of-Hudson municipalities, agencies, and residents raised concerns about the draft FAD, noting the following: the FAD should not be issued for a ten-year term; a review of the FAD every five years would promote a balanced relationship between the City and watershed municipalities; the draft FAD lacks adequate commitments for programs other than land acquisition; the provisions of the draft FAD are inadequate to offset the local impacts of land acquisition and proposed program changes, which impact the local economy; the local watershed voice is not given appropriate partner status and consideration.

Response: Subsequent to issuance of the draft FAD, EPA and the City agreed on certain additional provisions that are responsive to the request for additional commitments in programs other than land acquisition. As noted above, the final FAD includes a number of new funding/programmatic commitments. Additional details are provided in responses below, organized by FAD section.

With regard to the term of the FAD, it is being issued for a ten-year term. With nearly fifteen years of experience with the New York City filtration avoidance program, and with much program implementation completed or underway, EPA is comfortable with the issuance of a longer term FAD. In addition, the City's long-term commitment to its land acquisition program helps to justify the longer term of the FAD.

Finally, EPA notes that an additional round of review and negotiations will occur in the 2011/2012 time period, at which time the regulatory agencies and the City will establish commitments for those new or enhanced FAD programs which will be included in a mid-term revision to the FAD and apply during the second five years of the term of the FAD. Input from watershed stakeholders will be sought as part of this process.

4. Comment: The FAD should establish an independent local ombudsperson position to provide local input at FAD development and decision making meetings. This will ensure that local concerns are heard every step of the way.

Response: EPA and NYSDOH conducted extensive public outreach in 2006, concurrent with discussions with NYCDEP about the 2007 FAD. Four public meetings were conducted and special small group meetings were held with local officials and other watershed stakeholders. This process supported the City's development of its Long Term Watershed Protection Program and helped ensure that the City's plan was informed by public input.

Following receipt of the City's Long Term Watershed Protection Program, additional discussions among the City, EPA and the State resulted in substantive changes to the City's proposed program – namely, the extended term of the FAD, and the additional commitments to land acquisition activities.

Extensive public comments were received on the draft FAD, and, in particular, on those elements of the program that were not included in the City's Long Term Watershed Protection Program submittal. These comments led to further discussions among the City, EPA and the State, and resulted in a number of newly added program enhancements. EPA believes that the extensive pre-FAD public outreach and the numerous FAD enhancements that were made in response to public comments demonstrate a strong commitment by the City, EPA and State to be responsive to the recommendations of watershed stakeholders.

Looking ahead, the FAD includes opportunities for public input, and EPA and the State remain committed to considering local needs.

5. Comment: EPA should conduct an environmental impact analysis on the 2007 FAD. The impact of the land acquisition program and the watershed regulations on the local economy and community character should be looked at closely.

Response: The EPA regulatory process for implementing the Safe Drinking Water Act is considered functionally equivalent to the National Environmental Policy Act (NEPA). Accordingly, the FAD does not require a federal Environmental Impact Statement (EIS) or other NEPA documentation. However, in some cases specific actions taken to implement the FAD may be subject to NEPA and require appropriate NEPA documentation. Decisions as to the applicability of NEPA for individual actions would be made on a case-by-case basis. Similarly, NYCDEP is undertaking review under the State Environmental Quality Review Act (SEQRA) of many activities taken to implement the FAD.

6. Comment: Filtration avoidance criteria in federal regulations provide, in part, that the public water system operator “must demonstrate through ownership and/or written agreements with landowners within the watershed that it can control all human activities which may have an adverse impact on the microbiological quality of the water source.”

The Coalition of Watershed Towns argues that the FAD does not meet this test. With regard to the watershed control program for the second five years of the 10-year FAD, the Coalition is concerned that the FAD empowers the primacy agency to make determinations about the adequacy of the programs, and the Coalition argues that its approval of the programs is required. Further, the Coalition argues that the proposed watershed control program is not sufficient to obtain the cooperation and partnership of the local communities and municipal governments, and that such cooperation is required to meet the filtration avoidance criterion noted above.

Response: Since the inception of the New York City filtration avoidance program in 1993, EPA has supported the City's approach to watershed protection, which is based upon a strong regulatory program, coupled with active implementation of protection programs. It is EPA's view that the City's Watershed Rules and Regulations (which, pursuant to State law, the City is authorized to issue and enforce) provide the City with ample authority to control human activities which might adversely impact the microbiological quality of Catskill/Delaware waters. These regulations, which have been fully reviewed by EPA and approved by NYSDOH, adequately protect water quality. In addition, the totality of the City's watershed programs provide an additional level of assurance that helps the City control all human activities which may have an adverse impact on water quality.

In addition to enforcing the Watershed Rules and Regulations, the City ensures active implementation of various protection and remediation programs, by implementing its own programs (such as monitoring, modeling, land acquisition, waterfowl management, and the East-of-Hudson Non-Point Source Pollution Control Program) and through partnership programs implemented by the Catskill Watershed Corporation, the Watershed Agricultural Council and other partners (such as wastewater control efforts; agricultural programs; farm easement program, stream management and riparian buffer protection activities).

Finally, EPA notes that decision-making for filtration avoidance is properly reserved for the primacy agency, and that no local governmental approval is necessary. Based on all the above, EPA disagrees with the arguments presented in the comment.

7. Comment: Some commenters state that EPA should retain primacy for the Catskill/Delaware water supply system, while the Coalition of Watershed Towns argues that EPA's recent action to delay the primacy transfer date to NYSDOH is harmful because the State Environmental Quality Review Act (SEQRA) would provide for broader opportunities to participate in a FAD determination issued by NYSDOH.

Response: In a recent letter to the NYSDOH, EPA explained that transfer of primacy was being delayed pending resolution of legal authority issues related to State administrative penalty authority. Beginning after issuance of the NYC Watershed MOA, and extending through May 10, 2007, EPA's retention of primacy was based upon the MOA provision regarding EPA's retention of primacy as well as Safe Drinking Water Act programmatic requirements; subsequent to May 10, 2007, and through the present,

EPA's retention of primacy is based upon applicable Safe Drinking Water Act programmatic requirements.

8. Comment: NYSDEC recommends that the City expand recreational use opportunities on City-owned lands. In addition, other commenters argue that the FAD should not be renewed without first bringing to resolution the existing disagreement over the extent of allowable recreational uses.

Response: The 2007 FAD includes a Land Management section which identifies recreational use as an appropriate program objective. However, the FAD does not mandate specific steps that the City should take to meet this objective. EPA does not agree that issuance of the FAD should be held up pending resolution of this issue. However, a strong partnership is important to the success of many FAD programs. EPA recognizes that this issue is important to watershed residents, and we encourage the City to continue the ongoing dialogue and seek to satisfy the needs of residents within the context of the watershed protection program.

9. Comment: In order for the public to assess the adequacy of the City's funding commitment toward existing and new FAD programs, funding levels for specific programs should be included in the 2007 FAD.

Response: The FAD is performance-driven, and the City has committed to providing the resources necessary to meet the milestones required by the FAD. Monetary commitments are included for selected FAD programs, some of which are specifically responsive to comments provided on the draft FAD.

10. Comment: The FAD should include funding for, and coordination with, Local Watershed Programs such as Cooperative Extension, Soil and Water Conservation Districts, and Delaware County. The FAD should stress the need to have local agencies implement the watershed control programs.

Response: The FAD recognizes the contributions of various local/partnership entities, and the City is planning to continue to coordinate with, and deliver programs through, such entities. However, since the City is accountable for performance, it is appropriate that it retain flexibility in its administration of the overall program.

11. Comment: The City should provide an additional \$1 million for the administrative/operating costs of the Catskill Watershed Corporation.

Response: Based on discussions with NYCDEP officials and others, EPA understands that the City would be willing to consider a limited amount of additional funding for the Catskill Watershed Corporation, during the next few years of its operations. EPA encourages the City to review the Catskill Watershed Corporation's operations and provide funding as appropriate.

12. Comment: The City should provide \$500,000 for a sand and salt storage program for businesses and institutions, to be administered by the Catskill Watershed Corporation.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to add \$500,000 in funding for design and construction of new/upgraded sand and salt storage facilities at certain institutions (i.e., public schools, colleges, hospitals), in order to comply with the City's Watershed Rules and Regulations. The Catskill Watershed Corporation will administer this program. This commitment is included in the final 2007 FAD.

13. Comment: Litigation related to New York City's challenges to municipal tax assessments is burdensome to watershed municipalities. NYCDEP should replenish the Tax Consulting Fund and the Local Consultation Fund which were included in the NYC Watershed MOA.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to provide additional funds, and to raise the existing cap on funding for each municipality, for the Local Consultation Fund, and the final 2007 FAD has been revised to incorporate this commitment. EPA considers the Tax Consulting Fund to be not directly related to water quality, and therefore has determined not to address this issue in the FAD.

14. Comment: The 2007 FAD should devote attention to other important drinking water and watershed priorities such as flood control and dam safety.

Response: In general, flood control and dam safety issues are beyond the scope of the FAD. However, EPA and NYSDOH seek to keep informed about the City's activities in these areas. NYCDEP is implementing a system-wide rehabilitation program to upgrade all watershed dams to New York State standards for dam safety. Upgrades are complete for seven Croton system dams, and work is ongoing for four others. Construction for the Gilboa Dam is scheduled to begin in 2008, which will be followed by Ashokan Reservoir facilities. Finally, Delaware system dams will progress into the design phase in 2008 and construction work is scheduled to begin in 2012. In addition, a critical interim rehabilitation project for the Gilboa Dam was completed in 2006.

With respect to flood control, the City has an interim Spill Reduction Program for managing releases from the City's reservoirs during periods of exceptionally wet hydrologic conditions. Under this program, the City will increase reservoir releases from its Neversink, Pepacton, and Cannonsville reservoirs between July 1 and March 31 during periods of above normal hydrological conditions. This will allow greater reserve capacity in the reservoirs during the Atlantic hurricane season. The City also attempts to maintain reservoir voids, based on snowpack conditions during the November 1 through March 31 period, thereby reducing the potential volume of water spilled from these reservoirs during spring flood conditions.

15. Comment: NYCDEP commented that the milestone set forth in the 2007 FAD for issuance of a notice to proceed on the ultraviolet light (UV) Disinfection Facilities structures contract should be extended from October 31, 2007 to December 31, 2007.

Response: In a letter dated June 12, 2007, EPA approved NYCDEP's request for a modification of the notice to proceed date of October 31, 2007 in the Administrative Order on Consent, which establishes an enforceable schedule for construction of the UV Disinfection Facilities. The revised date of December 31, 2007 is included in the final FAD.

16. Comment: The biennial updates to the Catskill/Delaware filtration facility should also include an assessment of membrane filtration technology as a design option.

Response: As a general principle, neither EPA nor NYSDOH dictate particular treatment technologies when there are multiple available technologies that will meet regulatory standards. EPA cannot accommodate this request.

17. Comment: The existing National Research Council (NRC) report should be reviewed for its lessons on watershed management.

Response: EPA and NYSDOH are familiar with the NRC report and believe that many of its recommendations have been incorporated into the City's overall watershed protection program. The NRC report recommended and prioritized four areas that should be the focus of the City's watershed management program: microbial pathogens, organic precursors of disinfection byproducts, phosphorus, and turbidity.

With respect to microbial pathogens, an aggressive wastewater treatment plant upgrade program was developed and successfully implemented, which requires microfiltration (or its equivalent) to effectively remove *Giardia* cysts and *Cryptosporidium* oocysts from wastewater effluent. The 2007 FAD also requires the reactivation of the Pathogen Working Group which is tasked with discussing and evaluating the latest research on pathogen sources, transport and fate in the environment. This group will also evaluate the effectiveness of current pathogen management practices and the need for additional monitoring and/or research in this area. Further, the City has begun construction of UV Disinfection Facilities which will act as an additional barrier to effectively inactivate microbial pathogens which may have entered the Catskill/Delaware source water.

The FAD attempts to address concern over phosphorus by establishing a robust Non-Point Source Pollution Control Program. This program includes rehabilitation and/or replacement of septic systems, and new stormwater remediation and retrofit projects throughout the watershed which are specifically designed to reduce phosphorus loading. Also, the City will develop a \$4.5 million challenge grant program to assist stormwater districts/municipalities with the implementation of projects designed to reduce stormwater pollutant loading to the Cross River and Croton Falls basins. Other watershed protection programs have also helped, and will continue to contribute to the City's phosphorus reduction efforts. They include the wastewater treatment plant

upgrade program, from the point source perspective, and the watershed agricultural program, from the non-point source perspective.

Although a number of FAD elements contribute directly to reduction of turbidity (e.g., stream management, riparian buffer, stormwater Best Management Practices (BMPs), agriculture and forestry programs) the FAD's primary means to address this problem is through the ongoing Catskill Turbidity Control Program. Under this program, the City is required to submit a report for the Ashokan Reservoir basin identifying any feasible, cost-effective measures for the reduction of turbidity.

The programs focused on turbidity and phosphorus reduction also contribute to the City's efforts in reducing the precursors to, and formation of, disinfection byproducts. In the 2007 FAD the City will also be submitting a report on their future activities related to disinfection byproduct rule compliance.

The NRC Report also recommended achieving a balance of implementation of the Watershed Rules and Regulations with targeted support of watershed communities through partnership programs established through the Watershed MOA, which has been accomplished.

18. Comment: Certain regional planning entities - the Southeast New York Intergovernmental Water Supply Advisory Committee, the Safe Drinking Water Advisory Committee to NYSDOH, the NYS Water Resources Planning Council, and the Federal Regional Council - have been dormant and should be revived.

Response: EPA recognizes the benefits of regional planning initiatives, but it is beyond the scope of the FAD to mandate re-invigoration of the identified planning entities.

19. Comment: The Center of Excellence at SUNY/Delhi should be better utilized as a training and research center.

Response: EPA is supportive of the recommendation, and encourages NYCDEP to explore this and other collaborative opportunities, although we do not believe that the FAD must be revised to mandate such actions.

20. Comment: NYCDEP should create a Citizen and/or Technical Advisory Committee on water supply policy.

Response: EPA acknowledges the comment, and we share our observation that there has been limited involvement of NYC residents in FAD matters over the last few years. NYCDEP is encouraged to evaluate options to better engage City residents in water supply policy matters.

21. Comment: The FAD should contain a requirement for a fully-funded watershed research agenda, which would be reviewed and re-set annually. Recommended research

topics include: technical basis for the 60-day travel time concept; incidence of waterborne disease in the City; and implications of global climate change.

Response: The 2007 FAD requires the City to provide a comprehensive discussion of, and update to, its ongoing research efforts as part of the annual Watershed Water Quality Report. The FAD also requires the City to convene on an annual basis a Technical Pathogen Working Group. This workgroup provides an open forum to consider and discuss the latest research being performed by the academic community in areas such as pathogen sources, pathogen fate and transport, emerging pathogens, and effective watershed management practices. Finally, the Annual Science and Technology Conference provides an excellent forum for discussion and collaboration on various research topics. EPA is satisfied with the level of effort that is being expended on research activities that support the watershed programs.

Septic, Sewer and Cluster Programs:

22. Comment: The Septic Rehabilitation and Replacement Program is inadequate since it fails to address small business/commercial and non-profit septic failures which also fall outside of the New Sewage Treatment Infrastructure and Community Wastewater Management Programs.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to provide \$4 million in additional funding to expand the Septic Rehabilitation and Replacement Program for the first five years of the 2007 FAD in order to address commercial septic systems for small businesses and non-profit organizations. NYCDEP and the Catskill Watershed Corporation will work out the details of this program, including eligibility and match requirements. The program will be extended into the second five years of the 2007 FAD, pending a review/evaluation. This program is included as a commitment in the final 2007 FAD.

23. Comment: The Coalition of Watershed Towns states that 14 additional population clusters located in environmentally sensitive areas not listed in Paragraph 122 of the NYC Watershed MOA are in need of a solution for their inadequate on-site systems. The City should fund a study which identifies the best solutions for each population cluster, and which addresses both households and non-households. This study should include a preliminary design assessment, cost analysis, and basic operation and maintenance requirements.

Response: Pursuant to the NYC Watershed MOA, one or two-family residences or home-business combinations using less than 1000 gallons per day are eligible to be funded under the Septic Rehabilitation and Replacement Program managed by the Catskill Watershed Corporation. The draft 2007 FAD included a new cluster system initiative intended to allow for adequate wastewater treatment in areas with multiple septic failures. Subsequent to release of the draft 2007 FAD, the City agreed to expand eligibility to include small businesses in the cluster system initiative. NYCDEP and the

Catskill Watershed Corporation will work out the details of this program. The final 2007 FAD will require the City to assess and report on where these opportunities exist and are deemed feasible. It is, however, premature to conclude that the 14 specific population clusters identified by the Coalition of Watershed Towns are in need of wastewater solutions or that they should be addressed by the program. The FAD also notes that discussions about potential additional program funding are planned for 2009/2010.

24. Comment: The Sewer Extension Program should be administered in the same manner as the Community Wastewater Management Program which is managed by the Catskill Watershed Corporation. The community would then be allowed to use its Sewer Extension Program funding as its local match for a stormwater retrofit project.

Response: The Sewer Extension Program is in its final stages, with all community connections to be completed by November 2010. Pursuant to the NYC Watershed MOA, this program funds sewer extension projects for communities served solely by City-owned and operated WWTPs, with the NYCDEP serving as program manager. NYCDEP prefers to continue as program manager, consistent with the MOA, which is acceptable to EPA.

New Sewage Infrastructure and Community Wastewater Management Programs:

25. Comment: The draft 2007 FAD states that Phoenicia has opted out of the program at this time and a wastewater project is pending. What does EPA intend to require in the final 2007 FAD regarding a wastewater solution for Phoenicia?

Response: Subsequent to release of the draft 2007 FAD, Phoenicia decided to continue discussions with the City on an appropriate wastewater solution. The City has agreed to continue these discussions until June 2008. EPA continues to support the preferred solution of a WWTP project for Phoenicia and will reflect this latest decision by the community in the final 2007 FAD. If the City and the community agree on a wastewater project, the project schedule will be incorporated into the FAD.

26. Comment: When block grants are agreed upon for each of the three new communities by NYCDEP and the Catskill Watershed Corporation, NYCDEP should be required to execute a change order within six months to fully fund the agreed upon block grant amount.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to new “performance expectation” FAD language that will ensure prompt transfer of funds to the Catskill Watershed Corporation for all new projects. Upon receipt of approved final design for each project, the City shall transfer the remainder of block grant funding needed to complete construction for such project, based upon submittal of an invoice from the Catskill Watershed Corporation.

27. Comment: The FAD must prohibit the utilization of excess capacity contained within a community septic system to support growth or new development.

Response: In general, community wastewater projects are designed and built to meet existing wastewater needs, and EPA supports this approach. However, if excess capacity exists, EPA would not object to use of the excess capacity to accommodate new wastewater needs contained within the community's established sewer district.

28. Comment: The 2007 FAD should require that the City adequately fund all New Sewage Treatment Infrastructure and Community Wastewater Management projects contained in the draft 2007 FAD, and should include construction schedules with adequate funding commitments for all of the remaining communities listed in Paragraph 122 of the NYC Watershed MOA to be completed by the end of this FAD period.

Response: The draft 2007 FAD included project-specific schedules for a number of ongoing projects, and for three additional community wastewater projects, and the City is committed to funding these projects. Subsequent to release of the draft 2007 FAD, the City committed to fund, during the second five years of the FAD, the remaining five communities included on the NYC Watershed MOA list of communities with wastewater needs. Schedules for these five new projects will be developed as part of a mid-FAD review process.

Wastewater Treatment Plant Upgrade Program:

29. Comment: The \$5.0 million SPDES Upgrade Fund allocated by the City through the NYC Watershed MOA has been exhausted. The 2007 FAD should require the City to allocate an additional \$2.5 million of SPDES Upgrade Funds over the next five years to correct infiltration/inflow (I/I) problems at existing public and private sewage treatment systems.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to provide an additional \$1 million to the SPDES Upgrade Fund for the first five years of the FAD. EPA believes this substantive allocation by the City will assist wastewater treatment system owners with funding that would normally be the responsibility of the owners. This funding commitment is included in the final 2007 FAD.

30. Comment: There is a fundamental disagreement (including ongoing litigation) among the NYC Watershed MOA parties as to the City's funding obligations to non-public facilities pursuant to Paragraph 141 of the MOA. Prior to the renewal of the FAD, it is critical that the City confirm that existing non-public facilities will be afforded the same benefit with respect to regulatory upgrades as public facilities.

Response: The disagreement referred to in this comment is the subject of ongoing litigation. NYSDEC, NYSDOH and the New York State Department of State (NYS DOS) are on record, through a September 22, 2003 letter to the City, as supporting

an interpretation of the NYC Watershed MOA, Paragraph 141, which would require the City to pay for the incremental operation & maintenance costs required solely by the City's Watershed Rules and Regulations at non-public facilities, for so long as those costs are required solely by such Rules and Regulations. The City disagrees with this interpretation. While EPA concurs that this is an important issue of MOA interpretation, we do not believe the issue must be resolved as a condition of FAD renewal. EPA does agree it is essential that the City's substantial investments in wastewater treatment infrastructure be protected through assurance of adequate funding for maintenance and the costs of further upgrades, if any, required solely by subsequent revisions to such Rules and Regulations. It is also important that the partnerships on which the success of many of the watershed protection programs depend continue to be strengthened. EPA has therefore encouraged the City to reconsider its current position or develop an appropriate compromise that is acceptable to all of the parties in interest.

Stormwater Programs:

31. Comment: Since there still remain serious stormwater control problems within the Catskill and Delaware watersheds, the 2007 FAD must sustain continued stormwater BMP construction and maintenance.

Response: The FAD requires continuation of existing programs, and further requires the City to explore ways of expanding the program. Construction of new stormwater BMPs will continue.

32. Comment: The FAD does not provide additional funding in support of the Stormwater Cost Sharing or Stormwater Retrofit Programs.

Response: The funding obligations for the Future Stormwater programs imposed in the NYC Watershed MOA, combined with FAD provisions which require continued funding for the Stormwater Retrofit program, are adequate to fund current and future needs.

33. Comment: The City should fund a program to allow for the hiring of storm water professionals at the County Soil and Water Conservation Districts.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to fund one storm water professional, at the Catskill Watershed Corporation, to provide assistance to applicants during the first five years of the 2007 FAD. Funding will be provided expeditiously, which should allow filling of this position early in 2008. This commitment is contained in the final 2007 FAD document.

34. Comment: Very often the costs of the stormwater control measures are excessive in comparison to the value of the project. More cost-effective solutions exist outside of the watershed. A solution to this dilemma should be in the FAD.

Response: EPA believes that the combination of appropriate changes to the City’s stormwater regulations, the establishment of a stormwater professional position to provide assistance to applicants, and development of a stormwater guidance manual through the technical advisory committee, will help promote implementation of a fair and efficient stormwater regulatory program.

Waterfowl Management:

35. Comment: Gasoline powered motorboats should not be used in any of the City’s reservoirs nor used for avian harassment.

Response: It is important to note that the public may not use gasoline powered boats on any City reservoirs. While NYCDEP and its contractors may use gasoline powered boats for monitoring activities or for avian harassment, NYCDEP policies direct that all new or replacement engines must be four-stroke, which are considered to be low pollution engines compared with traditional two-stroke engines. In addition, as a matter of practice, airboats rather than motorboats are commonly used for avian harassment.

Land Acquisition Program:

36. Comment: Divergent views were expressed about the scope of the proposed land acquisition program. Many west-of-Hudson municipalities object to the proposed increase in program funding, while many east-of-Hudson and New York City residents praise the “robust” program.

Response: EPA has long supported an active land acquisition program as one of the most effective mechanisms to permanently protect the watershed, and we are pleased that the FAD includes a ten-year commitment to this program.

37. Comment: Divergent views were expressed about the expected increased reliance on land trusts to assist with the land acquisition program. A number of individuals and some environmental/conservation organizations praise the proposal, while the Coalition of Watershed Towns asserts that use of private land trusts would violate the NYC Watershed Memorandum of Agreement.

Response: EPA continues to support this FAD provision. In its development of a programmatic strategy to implement this provision, the City is obligated to demonstrate how it will use land trusts in conformance with the terms and conditions of the NYC Watershed MOA and the NYSDEC Water Supply Permit.

38. Comment: The NYC Watershed MOA included a finite land acquisition program that had a beginning and an end.

Response: Although the MOA includes certain detailed provisions for the land acquisition program which extend out ten to fifteen years, there is no provision in the MOA which restricts the City's ability to extend this program beyond 2007 or 2012.

39. Comment: The 2007 FAD should commit more funding for securing agricultural and forestry easements.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to provide \$6 million, from its land acquisition allocation, to fund a pilot forest easement program administered by the Watershed Agricultural Council. In addition, the FAD establishes processes (such as the programmatic strategy for land trusts due in 2007, and the long-term strategy and plan due in 2009) which will be used to establish future program approaches and priorities, including whether additional emphasis should be given to the use of easements.

40. Comment: The 2007 FAD should require that the City fund long-term stewardship of both agricultural and forestry easements.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to additional funding for the Watershed Agricultural Council's (WAC) easement stewardship activities. Prospectively, the City will provide \$8,000 to WAC for each new agricultural easement signed. In addition, as a supplement to funds previously provided by the City for WAC's stewardship of existing easements, the City will provide a one-time payment of \$250,000, to capitalize WAC's endowment fund. WAC will continue to seek additional sources of funding in order to fully fund its stewardship needs.

41. Comment: There is no scientific validity to land acquisition as a means of water quality protection. The land acquisition goals in the FAD should insure that any land acquisition program be scientifically and technically justified.

Response: Scientific research organizations have expressed strong support for land preservation as a protection strategy. In 1991, the American Water Works Association (AWWA) published results of a watershed management study in the *AWWA Journal* which stated that "[t]he most effective way to ensure long-term protection of water supplies is through land ownership." In 1997, the Trust for Public Land (TPL) released a report entitled *Protecting the Source* which discussed the strong interrelationships that exist between land and water resources in watershed management. A second study co-published in 2004 by AWWA and the TPL entitled *Protecting the Source: Land Conservation and the Future of America's Drinking Water*, built on TPL's first edition of *Protecting the Source* and provided further evidence in support of AWWA's original statement from the 1991 study. The National Academy of Sciences 1999 report entitled *Watershed Management for Potable Water Supply: Assessing New York City's Approach* also stated support for this concept.

NYCDEP, in its 2006 *Watershed Protection Program Summary and Assessment*, used its modeling program to evaluate the effects of land acquisition on phosphorus loading in the

Horse Pound Brook watershed. The model simulations showed a 39% increase in dissolved phosphorus loads in the development scenario, compared with the land acquisition scenario.

EPA maintains its position that land acquisition is one of the most effective and important mechanisms to permanently protect the watershed and preserve high quality source water.

42. Comment: Development of the programmatic strategy for augmenting land acquisition efforts through the increased participation of land trusts and other non-governmental organizations should include input from local planning and economic development departments.

Response: Although the FAD does not require such outreach, EPA will make the programmatic strategy available to any entity upon request, and will consider any input provided.

43. Comment: The FAD should make clear that City money will not be used to fund the purchase of land by a not-for-profit that would remove the land from the local property tax rolls.

Response: EPA agrees that the land acquisition program must continue to be structured so as to ensure that applicable local property taxes are paid (or that payments in lieu of taxes are made). The FAD requires that the City, in developing the programmatic strategy for the increased participation of land trusts, must describe the procedures to be used so that the terms and conditions of the NYC Watershed MOA and NYSDEC Water Supply Permit are adhered to. The City's programmatic strategy must address this tax matter.

44. Comment: The preferred land protection approach on farmland must be conservation easements that allow for future agricultural and forestry uses. NYCDEP should not purchase agricultural land in fee, or conserve through easements, so as to prohibit or to restrict the economically viable agricultural use of these lands.

Response: Through its support of the Watershed Agricultural Council's easement program, the City has helped to support the long-term preservation of farming in the watershed. In addition, the City has allowed agricultural use of some lands that it has acquired. EPA does not support restrictions in the land acquisition program that would prevent the City from acquiring agricultural lands.

45. Comment: Farmland and housing affordability has become a very real problem in the region, and the millions that the City spends on land acquisition serves to drive up the "fair market value" beyond what anyone can afford locally. The land acquisition program should be revised to mitigate impacts on affordability. The FAD should include funding for two new initiatives: a farmland affordability program, and a home affordability program for first-time buyers. Agricultural easements should be combined with an additional "affordability easement," which is a bonus amount of money given to

the farmer, who, if s/he wishes to retire, would have to sell to another farmer at agricultural value. The home affordability program would help subsidize the purchase of homes by first time buyers who work in the watershed. More generally, the City should establish an economic mitigation fund to support new and emerging economic opportunities that are consistent with effective watershed management.

Response: Although economic assistance is part of the NYC Watershed MOA, such matters are beyond the scope of EPA's FAD, which is focused on water quality and watershed protection.

46. Comment: NYCDEP should be required to pay its full share of property taxes after the original 20 years outlined in the NYC Watershed MOA.

Response: The MOA includes a provision which restricts the City's ability to challenge assessments (for 20 years) for parcels acquired under the City's watershed land acquisition program. Upon the expiration of this requirement, any assessment disputes would be handled through State courts. More generally, State law requires that the City pay property taxes on lands acquired (or for conservation easements obtained) in the watershed.

47. Comment: NYCDEP must commit to a more streamlined process of contracting with the Watershed Agricultural Council to fund the purchase of easements.

Response: EPA encourages the City and the Watershed Agricultural Council to work cooperatively and efficiently to streamline the contracting process.

48. Comment: Hamlet extension areas with easements should be given the opportunity to include additional lands in extension areas.

Response: The NYC Watershed MOA includes specific provisions about exclusion of hamlet areas from acquisition in fee, but not from acquisition by easement. The FAD is not the appropriate means to seek revision to MOA provisions.

49. Comment: Since the Watershed Agricultural Council has agreed to comply with the local review process set forth by the NYC Watershed MOA, funding for the local consultation process for agricultural easements should be provided for within the proposed FAD.

Response: The MOA includes specific provisions about local consultation, but it excludes agricultural easements from these requirements, and it does not provide for local consultation funding for review of agricultural easements. The FAD is not the appropriate means to seek revision to such MOA provisions.

50. Comment: New York City and any land trust which purchases property or easements using City funds should be required to notify the local planning boards before a contract is finalized. This gives the local government an opportunity to advise the

landowner, and allows them to better plan for the long-term impact of this permanent change to the land title.

Response: EPA is satisfied that the current practice, in which the City enters into an agreement with a willing seller, and then provides notice in accordance with the local consultation provisions of the MOA, strikes the appropriate balance between the concepts of private/confidential negotiations and local review.

51. Comment: NYCDEP should include local leadership in its “Strategic Review of the Land Acquisition Program.”

Response: The FAD requires the City to seek input from interested parties in its strategic review of the land acquisition program, which is due on 9/30/09. If local governments and agencies identify themselves as interested parties, the City must consider their input.

52. Comment: The overwhelming information illustrated through GIS analysis indicates that the amount of developable land in the NYC Watershed in Delaware County is low; +/- 60,000 acres or approximately 5%. This needs to be taken into account when EPA finalizes the land acquisition program in the final FAD.

Response: The NYC Watershed MOA includes specific provisions about exclusion of hamlet areas from acquisition, which has provided opportunities for watershed municipalities to identify lands that are not eligible for acquisition in fee by NYCDEP.

53. Comment: The City should fund a Cumulative Impact Study to determine the impacts of the City’s land acquisition program on local economics.

Response: The City has the authority to implement its land acquisition program, pursuant to the NYSDEC Water Supply Permit, through January 2012, without the need for such a study. However, the City will be developing a long-term land acquisition strategy and plan (by 9/30/09), and the City is obligated to request/apply for a new Water Supply Permit. Review of environmental and economic matters may be addressed in the context of the new Water Supply Permit and any SEQRA process that is completed as part of this permit action.

Land Management Program:

54. Comment: A long-term management plan needs to be developed. NYCDEP should address local economic concerns regarding recreational, forestry, and agricultural uses of its lands, by developing and implementing a plan for standardizing and publicizing the lands that may be rented for forestry or agricultural purposes, and by making its land available for recreational uses, according to the same standards and guidelines used by NYSDEC.

Response: The Land Management section of the FAD describes the City's efforts to establish and maintain a planning process for land protection with a focus on water quality, while acknowledging multiple objectives including infrastructure protection, forest and soil health, and community benefits such as recreational uses. Although a formal "long-term management plan" is not required, the City is obligated to develop a forest management plan, and must provide regulatory agencies with an opportunity to review and comment on any modifications to land management plans (such as agricultural use of City lands). Land Management is a new FAD program, and EPA/NYSDOH will look for opportunities to enhance oversight of this program as the City and the agencies gain experience and the program is more fully developed.

Watershed Agricultural Program:

55. Comment: The watershed agricultural program is successful because of the working partnerships. These partnerships should be mentioned in the narrative of Section 4.4.

Response: EPA agrees with this recommendation. Section 4.4 of the FAD has been modified to include additional narrative language to highlight the agricultural partnerships that contribute to the success of the program.

56. Comment: Whole Farm Plans should be considered to be substantially implemented when all the current environmental issues related to pathogens and nutrients are addressed as per the Environmental Review Problem Diagnosis.

Response: Whole Farm Plans (WFPs) are considered substantially implemented when seven of the nine highest priority pollutant categories have been addressed and the remaining two categories are scheduled to be addressed within two years. Pathogen and nutrient issues are the highest pollutant category. Furthermore, each farm receives an annual status review. If the review concludes that existing BMPs are no longer functional and / or the farm has new pollutant categories that need to be addressed, a farm may fall out of the substantially implemented category. The 2007 FAD requires the City to continue implementing WFPs so 90% of all large farms in the west-of-Hudson watershed are substantially implemented.

57. Comment: Watershed farmers currently cost share a portion of the BMPs implemented on their farms by committing to continue the operation and maintenance of each BMP. The capital cost of replacing aging/failing BMPs should be paid by the City.

Response: NYCDEP proposed, and EPA accepted for inclusion in the FAD, a commitment to develop a programmatic strategy for the replacement of aging/failing BMPs. In developing this strategy, NYCDEP may consider a range of options, including selective, prioritized, and cost-shared approaches. EPA believes that it is fair to allow the City an opportunity to explore various approaches. The selected approach must ensure that farmers remain fully engaged and committed to the watershed agricultural program,

so that compliance with the 90% substantially implemented metric can be achieved and maintained.

58. Comment: There are many “small” farms in the watershed without Whole Farm Plans (WFPs). The FAD should require that WFPs be developed on up to fifteen, with a minimum of ten, new “small” farms per year.

Response: The FAD requires development of Whole Farm Plans on ten small farms each year, and includes an additional requirement for the preparation of a Small Farms Assessment report by 7/31/09 to determine the number, extent and potential impact of small farms on water quality in the west-of-Hudson watershed. Following receipt of this report, EPA and NYSDOH will engage in discussions with the City about the appropriate future level of effort for this program. EPA is satisfied with the level of effort included in the FAD, and with the proposed process for future program evaluation.

59. Comment: There are more than twelve large farms in the watershed not enrolled in the Watershed Agricultural Program. The FAD should state that WFPs should be pursued on up to twenty new “large” farms but no less than twelve “large” farms not currently enrolled in the program.

Response: The FAD states that there are “approximately” twelve large farms in the watershed not enrolled in the program, and EPA notes that the farm universe is fluid. The important point to emphasize is that the NYCDEP is committed to pursue all non-participating large farms for inclusion in the program.

60. Comment: The Precision Feed Management program should be offered to 100 dairy farms in the Watershed.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to an additional FAD requirement regarding Precision Feed Management. The City will review and evaluate the future Delaware County report on this program, and will provide recommendations on which elements of the Precision Feed Management program may merit implementation in the watershed. The final 2007 FAD includes this new requirement.

61. Comment: Farming is the preferred land use in the watershed region. Economic support of agricultural businesses helps to maintain the working landscape and makes the investment in conservation practices more effective. The Farm to Market program, which implements economic initiatives and provides educational opportunities that support farmers, should be continued.

Response: NYCDEP has provided financial support for this program in the past, and recently indicated that continued support for the program will be considered.

62. Comment: The City should continue to offer the Nutrient Management Credit and expand the credit to all livestock farms in the NYC Watershed.

Response: Subsequent to release of the draft 2007 FAD, the City agreed to continue, but not expand, this program. EPA is satisfied with this commitment. The final 2007 FAD includes this commitment.

63. Comment: Decisions made by the WAC Easement Review Committee should not have to be unanimous.

Response: EPA is hesitant to dictate, at this level of detail, how the City and WAC should administer programs. EPA cannot accommodate this recommendation.

64. Comment: To insure adequate funding, the FAD should require that the program budget be included.

Response: The FAD is performance-driven, and the City must provide resources necessary to meet the milestones included in the FAD. In this program, key performance measures include compliance with the “substantially implemented” metric, and development of specified numbers of new Whole Farm Plans for small farms and east-of-Hudson farms.

65. Comment: The FAD should clarify whether the Catskill/Delaware basins east-of-Hudson are included in the 2009 Small Farm Report.

Response: The Catskill/Delaware basins east-of-Hudson will *not* be included in the 2009 Small Farms Assessment Report. The agricultural program is structured with separate initiatives and commitments for farms located both east- and west-of Hudson. For the east-of-Hudson region, the FAD requires development of between six to ten new WFPs per year, with priority for plan development in the West Branch, Boyds Corner, Kensico, Cross River, and Croton Falls basins.

66. Comment: The FAD should require the City to draft agricultural regulations to control activities of landowners that do not qualify for agricultural program participation.

Response: If water quality is adversely impacted as a result of landowners’ agricultural actions, NYCDEP encourages WAC to work with those landowners even if they do not meet the agricultural program income thresholds. Similar to the previous FAD, the 2007 FAD will require the City to publish draft agricultural regulations if the primacy agency determines that the existing agricultural program is inadequate. In light of the success of this program to date and the additional progress expected over the next few years, EPA believes that this provision is sufficient.

67. Comment: EPA should not approve the final 2007 FAD until it receives notification that the City has completed the delayed \$20 million transfer of funds for WAC easements which was directed by EPA in January 2006.

Response: The City and the Watershed Agricultural Council are now finalizing a contract which includes provisions for transfer of the \$20 million of additional funds for agricultural easements. Although EPA had hoped that this task would have been completed earlier, we understand that the contract negotiations included a number of challenging issues which took time to resolve. EPA does not believe it is appropriate to hold up issuance of 2007 FAD pending final resolution of this contract.

68. Comment: As a BMP enhancement, the FAD should require that the five-year plan for the agricultural program (due in early 2008) include a requirement for 25 foot watercourse buffers on all farms in the Watershed Agricultural Program.

Response: As a general requirement for new farm easements, the Watershed Agricultural Council has tentatively accepted an EPA/NYCDEP recommendation for expanded watercourse buffers to 25 feet. EPA supports efforts to enhance watercourse buffers in all Whole Farm Plans, based on water quality protection and the professional judgment of conservation planners, although an absolute requirement for 25 foot buffers might adversely affect farmer participation rates. Also, it is important to note that the Conservation Reserve Enhancement Program, which provides for rental payments for buffer lands taken out of production, is a key tool in the overall program effort to protect watercourse buffers.

69. Comment: NYCDEP commented that, on page 43 of the draft FAD, there appears to be an inconsistency between the due dates for the 90% substantial implementation metric set forth for the Watershed Agricultural Program. NYCDEP believes that the correct date should be September 30, 2010.

Response: EPA agrees. The FAD has been revised to correct this error.

Forestry Program:

70. Comment: Water quality benefits, in an already heavily developed watershed, are best achieved by not disturbing the lands natural vegetated state. Therefore, City-owned land in the east-of-Hudson watershed should not be subjected to the requirement for development of a model forest.

Response: EPA understands that there has been public opposition to the proposed Nimham Model Forest on State-owned land in the east-of-Hudson watershed. The model forests in the west-of-Hudson watershed have helped demonstrate how a well managed forest landscape can contribute to water quality protection. Given the unique differences between the two watersheds, EPA supports establishment of a model forest east-of-Hudson which will provide for the integration of research, monitoring, demonstration, education and public outreach. EPA recommends continued dialogue among the City, regulatory agencies, the Watershed Agricultural Council, forestry interests, environmental organizations and the public to explore opportunities and to discuss concerns.

Stream Management Program:

71. Comment: Support was expressed for the draft FAD provisions for seven additional stream restoration projects, two new stream management plans, and a commitment of \$2 million to implement the plan recommendations.

Response: Support for this program is acknowledged.

72. Comment: Continuation of the City's effort to contract with local agencies for the development and implementation of stream management plans is encouraged.

Response: The FAD specifically recognizes the importance of community participation and the role played by local Soil and Water Conservation Districts (and other partners) in program implementation. The 2007 FAD requires the City to meet annually with its local contracting partners to re-evaluate stream management plan recommendations and to establish implementation schedules for near term actions.

73. Comment: With the exception of the \$2 million allocated to the Ashokan basin, the 2007 FAD does not specify funding levels for other basins.

Response: The \$2 million allocation to the Ashokan Basin is included in the FAD consistent with an existing mandate contained in the SPDES permit for the Shandaken Tunnel discharge to the Esopus Creek which is a main tributary to the Ashokan Reservoir. Generally, the FAD does not include specific funding requirements. The FAD is performance-driven, and the City must provide resources necessary to meet the milestones included in the FAD.

74. Comment: The funding source for carrying forth stream management planning and implementation is vague. The word "local" should be removed from the first sentence in row three in the Milestone/Reporting Requirements on page 49 of the draft 2007 FAD.

Response: EPA clarifies that this is a City-funded program to be used for local initiatives.

75. Comment: A more meaningful matrix to gauge the City's progress in implementing the Stream Management Program should be established (e.g., number of stream bank miles or percentage of streams restored in a basin).

Response: The Stream Management Program provides for studies of stream conditions, and implementation of projects and programs designed to address the identified problems and needs. This program is not meant to restore all stream bank miles, or some particular percentage of stream bank miles, for each watercourse in the watershed. EPA is satisfied with the high level of activity in the FAD, as well as the processes established in the FAD to plan for and execute projects and programs.

Riparian Buffer Program:

76. Comment: A number of commenters expressed support for this new program.

Response: Support for this program is acknowledged.

77. Comment: Protection of stream corridors should be through an effective riparian buffer program and should not rely on the purchase of large tracts of land under the land acquisition program.

Response: EPA believes that riparian buffers are best protected by a combination of protection and remedial programs, including stream management, agricultural programs, the Conservation Reserve Enhancement Program, land acquisition, and the new riparian buffer program. The key substantive element of this new program is streamside assistance, which provides technical assistance to streamside landowners for activities such as streambank stabilization and riparian planting.

78. Comment: Providing education and technical assistance for the streamside landowner is of the utmost importance. This program should be expanded to include landowners of wetland buffer areas.

Response: Education and technical assistance efforts are the foundation of this new program. The FAD requires that the City provide a program description document by 12/31/08, which will include prioritization of potential areas for program activity. EPA recommends that the City consider inclusion of wetland buffer areas in this program.

79. Comment: Funding levels for this program should be included in the 2007 FAD.

Response: Generally, the FAD does not include funding levels for programs; instead, the FAD includes milestones and reporting requirements which are used to evaluate program activities. In addition, as this program matures, development of specific program measures will be considered.

80. Comment: With regard to the Conservation Reserve Enhancement Program (CREP), the City's submission of the evaluation (which will include recommendations for enhancements) should be accelerated from 12/31/09 to 12/31/08 and the FAD should clarify EPA's expectation that one product of this report will be to propose a mechanism or mechanisms for making CREP protections permanent.

Response: The FAD includes a requirement for the City to provide an evaluation report of the CREP program, by 12/31/09, including recommendations for enhancements and for the establishment of a permanent CREP program. EPA is satisfied that this FAD provision adequately establishes an obligation upon the City to make recommendations regarding the addition of a permanent CREP program.

81. Comment: NYCDEP noted that, on page 52 of the draft FAD, the submission date for the report on the implementation of all elements in the Riparian Buffer Protection Program is specified as “Annually, beginning 1/31/08.” NYCDEP requests that EPA change the date for submission of this report to March 31, which would bring the reporting cycle for this program in line with the annual cycle required for the vast majority of FAD initiatives.

Report: EPA agrees. The FAD has been revised to reflect this change.

Wetlands Protection Program:

82. Comment: In order to protect west-of-Hudson wetlands, the FAD should require that the City (1) amend their Watershed Rules and Regulations to implement more stringent wetland protections, (2) seek passage of State legislation that would lower the size threshold for State regulation from 12.4 acres to 1 acre as was done within the Adirondacks and (3) support designation of the west-of-Hudson watershed as a “Critical Resource Waters” by NYS Governor and the U.S. Army Corps of Engineers as was done for the east-of-Hudson watershed.

Response: The FAD requires the City to revise its Wetlands Protection Strategy by 12/31/07, and complete a west-of-Hudson Status and Trends Study by 12/31/08. The City is encouraged to evaluate the recommendations above as part of these two initiatives.

East-of-Hudson Non-Point Source Pollution Control Program:

83. Comment: The 2007 FAD does not provide for a coordinated oversight effort between NYSDEC, NYSDOH, the New York State Department of Transportation (NYSDOT) or the east-of-Hudson towns to address stormwater concerns.

Response: Significant coordination occurs in this program. The City stormwater infrastructure mapping effort involves much coordination with towns and the counties. With respect to stormwater enforcement, the NYSDEC and NYCDEP coordinate enforcement oversight of construction related stormwater concerns through an interagency Memorandum of Understanding (MOU). Appendix S of the MOU requires the agencies to meet at regular intervals to discuss and coordinate new and ongoing stormwater enforcement cases. In addition, a new FAD requirement calls for revision of Appendix S to expand NYSDEC/NYCDEP coordination on stormwater enforcement (see Section 6.1 of the final 2007 FAD for details.) Finally, the City also coordinates with NYSDOT through active involvement on proposed road improvement projects and has an MOU in place with NYSDOT.

84. Comment: The FAD should require that the City provide technical and financial assistance to comply with Phase II stormwater regulations and total maximum daily load (TMDL) regulations to all east-of-Hudson communities.

Response: The Phase II Stormwater Program, implemented through SPDES permits, establishes regulatory requirements for municipal dischargers, and the City of New York is not legally obligated to address these needs. However, the City implements a comprehensive stormwater control program in the West Branch, Boyds Corner, Croton Falls and Cross River reservoir basins, as described in Section 4.9 of the FAD (the East-of-Hudson Non-Point Source Pollution Control Program.) This program includes maintenance for previously constructed stormwater infrastructure; five new stormwater remediation projects; two stormwater retrofit projects; various small stormwater projects; and development of additional stormwater control actions for City-owned lands. The FAD also includes a new \$4.5 million grant program to reduce stormwater pollutant loadings to the Cross River and Croton Falls basins, which may be used by municipalities to comply with Phase II requirements.

85. Comment: The City should expand FAD programs to the east-of-Hudson watershed. The City has the ability to transfer much of the east-of-Hudson water into Catskill and Delaware aqueducts so these sources of water must receive the same protections and be eligible for the same protection programs available west-of-Hudson.

Response: The FAD includes provisions which could allow, under certain circumstances, and subject to approval by EPA and NYSDOH, for the transfer of Croton Falls and Cross River reservoir water into the Catskill/Delaware water supply. Protection of these basins begins with the implementation of the NYC Watershed Rules and Regulations, which apply evenly across the entire watershed. In addition, protection programs include the following: 1) the East-of-Hudson Non-Point Source Pollution Control Program noted above; 2) the WWTP upgrade program through which the City funds the incremental cost of upgrades to meet stringent discharge requirements; 3) the Putnam County Septic Rehabilitation Program; 4) agriculture and forestry programs; and 5) wetlands protection program in the Cross River/ Croton Falls basins.

86. Comment: The Stormwater Cost Sharing and Stormwater Retrofit Programs should be extended into the east-of-Hudson basins and all Croton System basins capable of feeding into the Catskill and Delaware systems.

Response: It is important to note that the City's infrastructure allows only for transfer of Cross River and Croton Falls reservoir water into the Catskill/Delaware water supply. As noted above, the City may only transfer water from these basins into the Catskill/Delaware supply system under certain circumstances, and subject to EPA and NYSDOH approval. Regarding the extension of the Stormwater Cost Sharing and Retrofit Programs to the east-of-Hudson basins, it is important to note that the City, under the NYC Watershed MOA, has already provided Water Quality Improvement Program funds that may be used, based primarily at the discretion of the Counties, for various water quality protection initiatives, including stormwater projects. In addition, the

previously described East-of-Hudson Non-Point Source Pollution Control Program serves to address many of the same issues as those addressed by the Stormwater Retrofit Program.

87. Comment: Numerous commenters expressed support for the proposed commitment of \$4.5 million to implement stormwater management programs in the east-of-Hudson basins of Cross River and Croton Falls reservoirs, which at times are part of the west-of-Hudson conveyance system.

Response: Support for this program is acknowledged. The final FAD includes this provision, which establishes a grant program for municipalities in these two basins, and upstream basins which are hydrologically connected.

88. Comment: NYCDEP reiterated its commitment to the \$4.5 million grant program included in the draft FAD, but also raised concerns about the timely promulgation, by NYSDEC, of heightened criteria for the east-of-Hudson watershed under its SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4). NYCDEP requests that a footnote be added to the FAD allowing for extension of the FAD due dates if promulgation is delayed.

Response: EPA agrees that, to be most effective, the implementation of grant projects should follow the timely issuance of State permit requirements. However, moving ahead with grant projects according to the existing schedule would provide for water quality benefits even if the State permit requirements are delayed. Therefore, the FAD has not been changed to provide for a tolling provision. EPA and NYSDOH have discussed this matter with NYCDEP, and the agencies are open to additional future discussions about potential program revision based on compelling circumstances. Any future decision by EPA/NYSDOH to adjust the program milestones would be communicated to watershed stakeholders.

Kensico Programs:

89. Comment: In order to preserve the water quality of this vital watershed, the 2007 FAD should require that the City be proactive and uniform in its actions regarding their involvement in new road and road widening projects.

Response: The FAD requires the City to continue ongoing Route 120 corridor coordination with the NYSDOT. More generally, the FAD requires that the City continue enhanced participation in reviewing projects under SEQRA.

Catskill Turbidity Control Program:

90. Comment: The objectives of the Catskill Turbidity Control Program should be advanced through partnerships with local agencies, such as Soil and Water Conservation Districts, Planning Departments and local Health Agencies.

Response: The FAD includes numerous provisions, in programs such as Stream Management, Riparian Buffer Protection, and Agriculture, which highlight the importance of partnerships and delivery of programs through local entities. However, as described in the FAD, the Catskill Turbidity Control Program appropriately focuses on the City's reservoir infrastructure and potential engineering solutions to turbidity problems, which are issues primarily controlled by the City, rather than by local agencies.

91. Comment: Continuation of the FAD should require the City to prevent, manage and control Catskill turbidity. The City's increasing reliance on the use of alum in the Catskill Aqueduct to control turbidity must not be permitted since it adversely impacts water quality and the aquatic biota of the Kensico Reservoir.

Response: EPA has identified turbidity events resulting from extreme weather conditions as the greatest threat to filtration avoidance, and views the Catskill Turbidity Control Program as a priority. Further, EPA has stated that the City should not rely extensively or exclusively on alum treatment to control turbidity, and the recently issued SPDES permit allows the use of alum to control turbidity only on an emergency basis, in order to help maintain compliance with drinking water standards and to protect public health. To mitigate impacts on aquatic biota in Kensico Reservoir, the SPDES permit mandates dredging to remove alum deposits.

92. Comment: The City's proposal to use reservoir operations to reduce turbidity to Esopus Creek is inadequate. The 2007 FAD must require a multi-level intake for the Schoharie Reservoir, since by the City's own admission it will provide better quality water during the summer months.

Response: The City has concluded, based on its Phase II Study, that use of a multi-level intake for the Schoharie Reservoir would only be marginally more effective at reducing downstream turbidity levels compared to the use of a reservoir operational tool. EPA has reserved judgment in this matter, pending further review of certain modeling issues and the results of the Phase III Study.

93. Comment: The draft 2007 FAD does not include specific dates for beginning implementation of Catskill turbidity control measures set forth in the Phase III study that EPA, NYSDOH and NYSDEC determine are feasible and cost-effective.

Response: The FAD requires the City to develop a plan with appropriate milestones, subject to EPA/NYSDOH/NYSDEC approval, for implementing the recommended alternative(s). EPA is satisfied that this provision allows for establishment of an appropriate implementation schedule.

94. Comment: To control turbidity system-wide, the City must invest and ensure adequate resources to continue a rigorous stream management program to stabilize streambanks and prevent erosion and sedimentation.

Response: In accordance with the FAD, the Stream Management Program will continue at an active pace, with seven new restoration projects scheduled, and with a new emphasis on implementation of recommendations from stream management plans. The City will provide \$2 million for implementation of stream management plan recommendations in the Ashokan Reservoir basin, with an emphasis on grants to local entities. A new Riparian Buffer Protection Program will be implemented, which includes enhanced technical assistance for streamside landowners who wish to protect riparian habitat.

Water Quality Monitoring:

95. Comment: In addition to the FAD requirement for submittal of “after-action reports following chemical treatments, or significant unusual incidents and/or monitoring” the City should also be directed to make these reports available to the public on-line.

Response: The City provides information on chemical treatment, monitoring, and their response to unusual incidents in their Watershed Water Quality Annual Report which is available on-line. Security concerns preclude commitment to the posting of the full after action report on-line.

96. Comment: The 2007 FAD should include increased monitoring and assessment of pharmaceuticals in public water supplies.

Response: The United States Geological Survey (USGS) and NYSDOH have undertaken studies to monitor and assess pharmaceuticals in the New York City water supply. Separate from the FAD, EPA has supported these efforts through federal Safe Drinking Water Act grant funding.

Modeling:

97. Comment: The City should provide access to its models; should provide model runs on request from watershed agencies; and should provide training about its models to County staff.

Response: Subsequent to release of the draft FAD, NYCDEP clarified its willingness to meet, upon request, with interested local government agencies, to present results and discuss the City's modeling program. The City also expressed their willingness to discuss potential collaborative efforts, with watershed agencies, to utilize the models where their application is relevant to advancing watershed protection efforts.

98. Comment: Results of the City’s modeling efforts should be made available to the public on-line.

Response: In each year’s FAD Annual Report, which is posted on the City’s website, modeling program developments are explained. In addition, the City’s March 2006 Watershed Protection Summary and Assessment, also available on the website, includes comprehensive results of various modeling efforts. The FAD requires the City to complete a similar Assessment Report by March 31, 2011.

Geographic Information System:

99. Comment: Results of the City’s GIS efforts should be made available to the public on-line.

Response: The City’s GIS efforts are important to support various watershed management applications and programs. Many products from GIS staff become part of City reports that are available to the public on-line. The FAD requires data dissemination to stakeholders and the public as appropriate, and EPA is satisfied with the current arrangements for such dissemination.

Regulatory Programs:

100. Comment: Implementation of the New York City Watershed Rules and Regulations (WR&Rs) represent a “command and control” approach rather than a preferred partnership approach in which common goals are developed and met.

Response: The NYC WR&Rs appropriately establish baseline, enforceable standards to protect water quality and public health. In addition, through the NYC Watershed MOA and the FAD, a multitude of protection and assistance programs have been developed which promote effective implementation and which employ partnership approaches. EPA understands the importance of groups working together toward the common goal of protecting water quality and supports the continued strengthening of partnerships. EPA believes that the watershed control program appropriately employs both regulatory and partnership approaches.

101. Comment: The WR&Rs are being misinterpreted, especially regarding the regulations for stormwater. The Coalition of Watershed Towns should be involved in the roundtable discussions to resolve any disputes among the parties prior to the FAD being renewed.

Response: The draft 2007 FAD included a provision for a roundtable discussion between the City and regulatory agencies regarding proposed changes to the stormwater regulations. The final 2007 FAD maintains this provision. In addition, subsequent to release of the draft FAD, the City agreed to host a follow-up meeting with watershed representatives to review and discuss the proposed changes. Further, the City committed

to a new requirement for development and issuance of a stormwater guidance manual, to be issued 18 months from the effective date of the revised stormwater regulations.

102. Comment: The City's current level of effort in the upstate EIS review process is proper and should be sustained for the duration of the 2007 FAD.

Response: The NYCDEP will continue its enhanced participation in reviewing projects under SEQRA. These efforts include early participation in the SEQRA process, identification of broader water quality concerns raised by such projects and encouraging consideration of appropriate alternatives. The City's 2006 Long-Term Watershed Protection Program and the final 2007 FAD require this effort to be sustained for the duration of the FAD.

103. Comment: SEQRA should not be used as a restrictive tool by NYCDEP as a means to prevent or reduce the size of a development project in the watershed. The Belleayre Resort Project should not be an issue addressed in the FAD and is best handled under the SEQRA process and the local permitting processes of the Towns.

Response: EPA believes that it is appropriate for the City to be engaged in project reviews under SEQRA. While the FAD does not contain any specific provisions related to the Belleayre Project, it does contain general narrative language which notes that decisions about this project will be made within the framework of the SEQRA process and applicable regulatory programs.

Waterborne Disease Risk Assessment Program:

104. Comment: The reporting of syndromic surveillance system information to EPA and NYSDOH should be made available to the public through the use of the City's website.

Response: The annual report for the Waterborne Disease Risk Assessment Program, which includes information from the syndromic surveillance system, is posted on-line by NYCDEP. Reports covering 1997 through 2006 are currently posted. If there is any increased risk of disease, for any reason, the public would be notified via the New York City Department of Health and Mental Hygiene.

Cross Connection Program:

105. Comment: The FAD should require the City to further prioritize the City's high risk premises and revise its strategy to advance inspections of the highest risk facilities in a more timely manner. In view of the recently reported backflow contamination problem, the City should also take whatever additional steps are warranted.

Response: The 2007 FAD continues emphasis of the Cross Connection Program on high risk facilities, requiring between 300 and 450 full inspections of potentially hazardous buildings per year.

Public Education and Outreach:

106. Comment: As part of the FAD program under which the NYCDEP will collaborate with, and provide training/education for, local and regional highway officials, there should be efforts to address the need for reduced road salt application and the availability of alternative chemical de-icing technologies.

Response: EPA encourages the NYCDEP to collaborate with local towns, counties, and the State to address over-use of road salt application where appropriate and continue to explore alternative chemical de-icing technologies or activities that would have low potential for impacts to streams and reservoirs.