

Response to Public Comments on the Draft Revised 2017 Filtration Avoidance Determination For the City of New York

Introduction

In December 2017, the New York State Department of Health (NYSDOH) issued a ten-year Filtration Avoidance Determination for New York City's ("the City's") Catskill/Delaware Water System ("2017 FAD"). NYSDOH has concluded that minor revisions to the 2017 FAD are required. This conclusion is based on our assessment of the City's compliance with the 2017 FAD, the 2020 findings of the National Academies of Science, Engineering, and Medicine (NASEM) Expert Panel on the City's Watershed Protection Program, updated commitments in the City's 2021 Long-Term Watershed Protection Plan (December 2021), and input solicited from Watershed stakeholders. The majority of programs will continue unaltered through the remainder of the period through 2027.

On April 20, 2022, the draft Revised 2017 FAD was released for public review. A 45-day period was provided for public comment on the draft. Notice of the availability of the FAD for review was made through emails to key Watershed stakeholders, the Environmental Notice Bulletin, and posting to the NYSDOH website. On May 20, 2022, in response to a request from the Coalition of Watershed Towns, NYSDOH extended the comment period by one month, ending on July 1, 2022.

This document summarizes the public comments received on the draft Revised 2017 FAD from 16 municipalities, organizations, and individuals, along with responses from NYSDOH.

Responses to these comments are being provided in conjunction with the issuance of the Final Revised 2017 FAD. This FAD includes several changes that have been made in response to comments received on the draft as well as in consideration of the recommendations from the NASEM Expert Panel on the City's Watershed Protection Program. Changes that have been included in the Final Revised 2017 FAD are detailed below. The City will revise its 2021 Long-Term Watershed Protection Plan to reflect the requirements of the Revised 2017 FAD.

Some due dates have been adjusted from when the draft Revised FAD was issued, to more accurately represent the date of issuance for the Final Revised 2017 FAD. Other differences between the draft and Final Revised 2017 FAD are described below (addition ~~deletion~~):

1. Page 22: The text describing the Septic System Maintenance Program was amended to remove language limiting participants. "The Septic System Maintenance Program is a voluntary program ~~open to eligible participants who constructed new septic systems after 1997 or participated in one of the septic repair programs that covers most residences,~~ small businesses, not-for-profit corporations, and governmental entities.
2. Page 22: "Through CWC, participants are reimbursed 50% a portion of eligible costs for pump-outs and maintenance."
3. Page 25: A new activity was added. "In cooperation with CWC, study the current and future septage disposal needs in the WOH Watershed." And "Due Date: 6/30/2024."

4. Page 25: “Submit a schedule to fund the necessary capital improvements needed at the selected non-City owned WWTPs to accept septage.” And “Due Date: 12/31/2025.”
5. Page 25: A new report was added. “Report on septage disposal needs in the WOH Watershed.” And “Due Date: 6/30/2024.”
6. Page 27: “The City approved issued the block grant amount for the Shokan project in August 2020. Through May 2021, the City had transferred to CWC \$25 million of the \$49 million block grant. In November 2021, NYSDOH directed the City to transfer the remaining amount by the issuance date of the Revised 2017 FAD. The City transferred the remaining funds to CWC in August 2022.”
7. Page 29: A new activity was added. “Execute and register a contract amendment to reimburse CWC for funds drawn from the Catskill Fund for the Future that were loaned to the Community Wastewater Management Program to cover project costs for the Halcottsville and New Kingston projects.” And “Due Date: Completed.”
8. Page 33: “Report on implementation of the Future Stormwater Controls Programs and the Stormwater Retrofit Program in the FAD Annual Report. Include descriptions of reviewed projects, approval status, and justification.”
9. Page 39: Funding for the WAC agricultural easement program was modified. “Extend the current Easement contract for 27 months and provide a minimum of \$4 million.” And “Due Date: 2/28/2023.”
10. Page 39: Funding for the WAC agricultural easement program was modified. “Execute and register a successor contract to provide the remainder of the \$11 million.” And “Due Date: 3/31/2025.”
11. Page 40: Requirements were added for a workgroup to explore the use of pre-emptive purchase rights in WAC conservation easements.
12. Page 40: Requirements were added for a workgroup to explore potential changes to conservation easement language to allow for certain activities, including public utilities and renewable energy infrastructure.
13. Page 41: A new activity was added under WAC Forest Conservation Easement. “Continue to fund and implement the pilot program.” And “Due Date: Ongoing.”
14. Page 41: A due date was incorrectly added in the draft under WAC Forest Conservation Easement. “Within 18 months from written determination Revised to 6/30/22.”
15. Page 43: A new activity was added: “Complete mechanism(s) to allow third parties to own land acquired through SAP. If a WSP modification is required to implement this new approach, submit a request to NYSDEC to modify the WSP.” And “Due Date: Upon issuance of a successor WSP”.
16. Page 43: Requirements were added for a workgroup to explore issues related to the expansion of SAP outside the Schoharie Basin.
17. Page 57: “The City will nominate three Ashokan watershed Stream Projects for construction during the next FAD period” and “Due Date: 11/30/2027”.
18. Page 60: “Execute and register a \$15 million LFHMP successor contract with CWC” and “Due Date: 6/30/2023”.
19. Page 77: “Perform an evaluation of unsewered areas of the Kensico drainage basin to prioritize parcel locations for connection to an existing centralized sewage collection system” and “Due Date: 12/31/2023”.
20. Page 77: “In cooperation with local communities, develop the prioritization of parcel connections, evaluate the feasibility of implementation, and submit a schedule for sewer extension construction” And “Due Date: 12/31/2026”.

Comments and Responses. NYSDOH received numerous comments on the Draft Revised 2017 FAD. We present comment summaries and responses below.

General FAD Comments

Comment: The draft Revised FAD fails to properly acknowledge the conclusions of the 2020 NASEM expert panel report. It should include a more comprehensive acknowledgement of the discussion and recommendations of the report.

Response: Additional text has been added to the introductory section which further describes the findings contained in the 2020 report.

Comment: Several comments noted that the City's Watershed Protection Program is a cost-effective means to achieving high water quality in place of building a filtration plant.

Response: Comment noted.

Comment: The COVID-19 pandemic had a large effect on the way Watershed partners communicate and negotiate. Virtual meetings were well attended but the format did not allow for effective dialog, and it limited the time for conversation. Future meetings should return to in-person format or at least a hybrid format.

Response: NYSDOH agrees that the pandemic has challenged the efficiency of stakeholder and agency engagement. We will use the lessons we have learned to adjust future engagement activities and ensure reasonable accommodations for all participants.

Comment: The Watershed Agricultural Council Easement Committee should end unanimous consent at its meetings. Use of a more democratic voting system will allow WAC to work more cohesively with the local communities to meet all of the demands for the limited amount of productive land within the agricultural community and remove the appearance of a veto power from any one partner.

Response: This is outside the scope of the FAD.

Comment: One commentator states the NYSDEC is in violation of the 1997 MOA due to proposed revisions NYSDEC has put forth for their Solid Waste Regulations (6 NYCRR Parts 360, 361 and 364). It is stated that the publication of the Revised 2017 FAD should be halted until this issue has been addressed as the proposed revisions have the potential to impact many FAD programs such as the Stream Management Program, Flood Buyout Program, and Local Flood Hazard Mitigation Program.

Response: The comment refers to NYSDEC's proposed revisions to 6 NYCRR Parts 360, 361, and 364, among other parts, which is a rulemaking process separate from the revisions to the 2017 FAD.

Comment: NYSDOH should develop a scaled violation system.

Response: The federal Safe Drinking Water Act, from which the Surface Water Treatment Rule and therefore Filtration Avoidance Determination originate, establishes requirements for public water systems. These requirements are promulgated in regulation by the United States Environmental Protection Agency in the Code of Federal

Regulations (CFR). In accordance with 40 CFR Part 141 Section 141.71 (Criteria for avoiding filtration), the remedy for an inadequate watershed protection program is filtration. However, with primacy for this rule enforcement having been transferred to NYSDOH, State Public Health Law Section 206(4)(d) does allow for the Commissioner's assessment of civil penalties of up to \$25,000 per day per day for each violation of the State Sanitary Code by a public water system serving 5,000 or more people. Additionally, a State or federal court action may be brought by the Attorney General on NYSDOH's behalf to compel the City to comply with the watershed control program, or, in the alternative, to compel the City to filter its Catskill/Delaware water supply.

Comment: The FAD should recognize the need to document, safeguard, and interpret these important archeological sites for current and future generations and provide for the inclusion of the resources necessary to do that within the Watershed Protection Program.

Response: This is outside the scope of the FAD

2. SWTR Filtration Avoidance Criteria Requirements

Comment: In the FAD Annual Report, local watershed partners should report on their area of program implementation instead of the City.

Response: The FAD Annual Report is the document in which the City details the implementation and accomplishments of its Watershed Protection Program, which is required under the Surface Water Treatment Rule. There is no restriction against local watershed partners providing more information on their areas of expertise in a separate document.

3. ENVIRONMENTAL INFRASTRUCTURE PROGRAMS

3.1 Septic and Sewer Programs

Comment: Catskill Watershed Corporation (CWC) requests that the text for the Septic Maintenance Program be changed to accurately reflect eligible participants to include non-compliant regulated activity septic systems and those that were built prior to 1997.

Response: As agreed to by the City and CWC, the Revised 2017 FAD has been amended to remove language under the Septic Maintenance Program limiting participants to septic systems constructed after 1997 or those who participated in a CWC septic repair program.

Comment: The stated FAD goal for the Septic Maintenance Program should not be the "continue[d] funding of 50% reimbursement of eligible costs for pump-outs and maintenance." CWC reimburses at a cost share consistent with CWC's Program Rules. The Agreement between CWC and NYCDEP does not limit the cost share to 50%, leaving this determination to the reasonable discretion of the CWC Board. CWC believes a more appropriate stated goal of the Septic System Maintenance Program should be "to provide reimbursement to homeowners at a rate that incentivizes septic system maintenance and upkeep to enhance the functioning, and reduce the incidence of failures, of septic systems throughout the WOH Watershed".

Response: Historically, the Septic Maintenance Program rules included language specifying the reimbursement of 50% of Eligible Costs to the applicant for septic maintenance:

10:01:01 Applicant Reimbursable Costs

2. Upon application and approval by CWC staff, CWC shall pay 50% of Eligible Costs to the applicant for Septic Maintenance. No reimbursement shall be made for disallowed costs. Disallowed costs are expenses not appropriately documented; interest and late fees; fines penalties or payment of sales tax. No costs of enzymes or system additives are permitted.

While additional provisions have been added to 10:01:01 “Applicant Reimbursable Costs”, the language above has remained largely unchanged and can be found in the most recent program rules approved on August 4, 2020. NYSDOH added the language under the Revised 2007 FAD published in 2012 to reflect the 2011 Long Term Plan submitted by NYCDEP. The text of the Revised 2017 FAD has been amended to require the City to be responsible for reimbursement of “a portion of eligible” pumpout costs and maintenance. In accordance with the Program Rules and the Contract Agreement between CWC and the City, the final determination is at the discretion of the CWC Board.

Comment: CWC and NYCDEP have started discussions regarding a potential program and funding for improved management and disposal of septage wastes within the WOH Watershed. The study would allow for an evaluation of costs and priority areas for additional septage accepting capabilities throughout the Watershed to ensure that continued repair and maintenance of septic systems is achieved without incident. CWC anticipates our renewal Septic Maintenance Contract with the City will be the tool utilized to reimburse the CWC CFF upon registration. CWC requests the FAD include language obligating the City to refund any and all costs incurred by CWC for a septage study program. Several comments support this study and suggest that the City should provide funds for capital improvements to existing Watershed facilities in interested communities.

Response: The Revised 2017 FAD will reflect the nature of the agreement between the City and CWC to cooperatively evaluate septage disposal needs in the West of Hudson Watershed. The FAD has been updated to include the City’s obligation to fund the evaluation and the potential capital improvements at interested non-City owned wastewater treatment plants. The survey conducted by CWC indicated that Prattsville and Windham were interested in accepting septage at their wastewater treatment facilities.

Comment: The FAD should add language mandating the City to accept 71,000 gallons of septage per week at the City-owned wastewater treatment plants and the specific weekly volumes at each of plant as agreed in the 2018 Side Agreement. The acceptance of waste is a mutually beneficial act that fits the goal of both protecting the water supply and enhancing economic vitality of the watershed communities. Another commentor suggested the City be responsible for handling all septage from pump outs without any limit.

Response: The Revised 2017 FAD will reflect the conditions of the 1997 Memorandum of Agreement and the City's conditional acceptance of septage at City-owned wastewater treatment plants, which is detailed in the 2018 Side Agreement.

Comment: Several comments were received that requested additional funding for the CWC Septic Maintenance Program to allow for an increased level of program activity as well as expanded eligibility to all of the estimated 23,000 septic systems in the West of Hudson watershed. Funding should also be sufficient to cover additional eligible repairs to certain components of individual septic systems. One comment requested the FAD be amended to require the City to provide sufficient funding for 33% of eligible systems instead of 20%, and the commentor referenced NYSDOH's standard per Appendix 75A as indicating septic systems should be pumped every three years.

Response: The frequency of pumping the septic tank depends on the tank size, number of people in the household, habits of water use, and the amount of solids accumulated in the tank. Title 10 NYCRR Part 75, Appendix 75-A contains the wastewater treatment standards for residential onsite systems. Appendix 75-A does not contain a requirement for the frequency of system pumpouts. The Department's companion document to the appendix is the Residential Onsite Wastewater Treatment Systems Design Handbook. Section 6.11.1 of this handbook contains recommendations for the operation and maintenance of septic tanks and states the following:

Septic tanks should be inspected annually to determine scum and sludge accumulation. Most tanks should be pumped out every two (2) to three (3) years. Septic tanks need to be pumped out whenever the bottom of the scum layer is within three (3) inches of the bottom of the outlet baffle or sanitary tee, the top of the scum layer is close to the top of the outlet baffle or sanitary tee, or the top of the sludge accumulation is within ten (10) inches of the bottom of the outlet baffle or sanitary tee. A NYSDEC permitted septage waste transporter (septic tank pumper) should be employed to perform inspections to determine if pumping is necessary utilizing equipment such as a "sludge judge". The pump-out clearances also apply to any chamber in multi-compartment tanks and to any tanks in-series; all tanks or chambers should be pumped out as soon as any one tank or chamber fails the minimum clearance.

In summary, a septic tank should be pumped out when a permitted septage waste transporter determines that the tank needs to be pumped out. USEPA (<https://www.epa.gov/septic/frequent-questions-septic-systems#maintaining>) generally recommends that a septic tank should be inspected every 1-3 years and pumped every 3-5 years.

Comment: Over recent years a number of wastewater lateral connections to municipal owned wastewater treatment plants have been identified as broken, damaged, and/or failing. During evaluation of repairs, numerous connections have been classified as "undocumented hookups" due to lack of documentation and uncertainty as to date of install. This classification prevents property owners from performing timely repairs and contributes to negative water quality impacts. The process for these existing properties is to apply for the ability to connect and ensure that these connections meet current standards. This takes time and funding that some property owners do not have. Delays will only exacerbate water quality impacts. CWC proposes

that properties that are within defined municipal sewer districts that have clearly been utilizing municipal wastewater plants for a long period of time be eligible to apply for CWC septic funding to complete compliant repairs when they are told they have an undocumented hookup. This new eligibility criteria can be negotiated with the City through a contract amendment and CWC program rules.

Response: All connections to the sewer system within a defined service area of a municipal sewer district are the responsibility of the municipality and governed by that municipality's Sewer Use Law. See 6 NYCRR 750-2.9(a)(4).

Comment: It is recommended that an evaluation of potential sewer failures be conducted to determine if extending the sewer districts in certain sections of the towns of Ashland and Hunter would be more effective than the individual systems currently servicing these areas.

Response: An initial review of data from the areas in question does not suggest that these are areas of high septic failure rates. NYSDOH notes that the City and CWC recently agreed on a contract amendment that allows reimbursement in the Septic Rehabilitation and Replacement Program and the Expanded Septic Program for sewer extensions and/or connection to sewer when repairing or replacing an eligible septic system, if it is determined to be the technologically preferred and/or least costly alternative.

Comment: There is a need to address the policies around the various sewer projects undertaken in the watershed where funding is generally limited to dealing with existing problem areas without room for growth. The FAD should revisit this practice and work collaboratively with the communities to allow smart growth to occur where sewer is provided. These are areas where affordable housing can be added, essential services provided, and hamlets re-established.

Response: NYSDOH has no objection to the City collaborating with local communities to allow smart growth to occur where existing sanitary sewer systems are in place, provided that these activities are conducted in such a way as to minimize impacts to water quality. The goal of these remediation programs, and the reason they are required by the FAD, is to mitigate or prevent microbiological impacts to water quality, as stated in 40 CFR 141.71(b)(2).

3.2 New Sewage Treatment Infrastructure Program

There were no comments received on this program, which was concluded under the Revised 2007 FAD.

3.3 Community Wastewater Management Program

Comment: CWC, as administrator for the Shokan project, recommended a block grant for the Shokan project, which NYCDEP has approved. However, NYCDEP has not yet issued the entirety of the block grant for the Shokan project. As a result, the [text on page 25 of the Draft FAD] is inaccurate and should be amended to reflect the current status of City funding.

Response: Page 25 of the Draft Revised 2017 FAD stated: “The City issued the block grant for the Shokan project in August 2020.” This has been revised to say “approved” the block grant amount. By May 7, 2021, the City had transferred \$25 million of the almost \$49 million project. In November 2021, NYSDOH directed the City to distribute the remaining block grant amount to CWC, which is reflected as a condition of the Revised 2017 FAD. The City transferred the remaining funds to CWC on August 17, 2022.

Comment: Through CWC’s Catskill Fund for the Future (CFF), CWC has awarded a \$5 million loan to the Community Wastewater Management Program due to the bids for the Halcottsville and New Kingston projects coming in roughly 50% over budget. NYCDEP has agreed to a contract amendment and is working through the process of appropriating the additional funds to cover project costs and reimburse the loan. CWC believes it should be an obligation under the FAD to refund the CFF for any funds utilized for the Halcottsville and New Kingston projects, and requests this obligation include a deadline for CWC to receive a refund.

Response: The City had previously approved Block Grants in the amount of \$8,954,000 for the Halcottsville project and \$5.2 million for the New Kingston project. As noted in the comment above, the total funding needed to complete both projects has increased. On June 21, 2022, the City notified CWC that the approved Block Grants for the projects had been increased, to a total of \$11,454,000 for Halcottsville and a total of \$7,700,000 for New Kingston. The City Comptroller registered the \$5,000,000 contract amendment for these additional costs in June 2022 and the City transferred the funds to CWC in August 2022. A requirement has been added to the Revised 2017 FAD to memorialize the City’s obligation to reimburse CWC any funds drawn from the CFF to cover project costs for the Halcottsville and New Kingston projects.

3.4 Wastewater Treatment Plant Upgrade Program

Comment: CWC suggests the continuation of the Wastewater Treatment Plant Upgrade Program to pursue studies regarding retrofitting existing wastewater treatment plants for septage acceptance. Given NYCDEPs recent attempt to ignore their obligation to accept septage at their Wastewater Treatment Facilities, CWC believes that the continuation of the Wastewater Treatment Plant Upgrade Program could be used to more thoughtfully address purported environmental concerns relating to the City’s acceptance of septage in the future. CWC and NYCDEP have started discussions about septage burden sharing throughout the Watershed. CWC has agreed in concept to front funds for municipalities to evaluate what would be required to retrofit existing non-City-owned plants to accept septage by truck. CWC believes the FAD should ensure CWC is reimbursed by the City for costs of the study. The FAD should also provide that the City provide the capital costs required to retrofit the municipal plants for septage acceptance as a way to ensure capacity levels in the Watershed are adequate for growing demand of septic repairs and maintenance pump outs. This again provides the dual benefits of water quality protection and economic viability of the Watershed communities.

Response: As noted above in Section 3.1, the Revised 2017 FAD will reflect the nature of the agreement between the City and CWC to cooperatively evaluate septage disposal needs in the West of Hudson Watershed. The FAD has been updated to include the

City's obligation to fund the evaluation and the potential capital improvements at interested non-City owned wastewater treatment plants.

3.5 Stormwater Programs

Comment: The City has been reluctant to identify or approve potential Stormwater projects for design grants without partial designs submitted with the application. The City regularly describes projects as a “conveyance issue” as opposed to a “water quality issue” as a way to deny funding projects. The Stormwater Retrofit Program is one of two programs where the City must approve every project and the City makes achieving their approval too difficult. The FAD should include an annual report on potential projects and justification as to why a project was not deemed approvable.

Response: Requesting additional items during a design review to meet the requirements of the Watershed Rules and Regulations, State or Federal law, or to ease maintenance of a stormwater project is typical in all fields of engineering and construction. This would include any information or analysis relevant to the review. To provide greater transparency on project evaluation, the Revised 2017 FAD has been updated to include an additional reporting requirement for the City to describe activities related to these potential projects.

Comment: The City has failed to notify watershed partners of pre-application meetings for stormwater pollution prevention plans despite partners requesting to be included. The City has been questioning methods and justifications for reimbursement after the meetings take place and project plans have been approved. The FAD should include stronger requirements for the City to coordinate and invite watershed partners to all pre-application and preconstruction meetings for stormwater projects. A publication or digital calendar should be made available to alert of upcoming and ongoing meetings and program activities.

Response: NYSDOH encourages the City to maintain open lines of communication with watershed partners, including meeting notifications and invitations for their respective programs. The existing program goal in the Revised 2017 FAD has been updated to reflect this.

4. PROTECTION AND REMEDIATION PROGRAMS

4.1 Waterfowl Management Program

There were no comments received on this program.

4.2 Land Acquisition Program

Comment: Several commentors requested the end of Land Acquisition Program (LAP) as presently configured. One commentor said open space land acquisition is detrimental to the health and welfare of Delaware County residents and West of Hudson communities. There is no threat to the New York City water supply as a result of development pressure. Another commentor stated that the Core LAP should cease activity in the WOH until the 2023-2033 Long Term Acquisition Plan (LTAP) and new Water Supply Permit (WSP) have been developed and

vetted through public comment processes. They stated that the program has already acquired a significant amount of land, and when combined with New York State land holdings in the Catskill Park, it is limiting the land available for community development. It has also increased property prices thereby affecting the affordability of housing to the local workforce. Other comments suggested LAP funding should be shifted from the West of Hudson (WOH) Watershed to East of Hudson (EOH) Watershed, or toward the Streamside Acquisition Program. Another suggested funding should be shifted to other programs with a more direct water quality benefit, including the Watershed Agricultural Program, the Septic Repair Program, and the Watershed Forestry Program.

Response: NYSDOH agrees that changes to core LAP are necessary in the West of Hudson watershed, as guided by the recommendations of the NASEM expert panel. The program should be focused on the most sensitive areas for water quality protection, including floodplains, riparian areas, wetlands, and steep slopes. NYSDOH agrees that both the Long-Term Land Acquisition Plan and the successor Water Supply Permit should be shaped by the NASEM Expert Panel recommendations and stakeholder input. In the EOH Watershed, the City continues to evaluate compelling ecologically-sensitive properties for acquisition, though these properties come at a substantial cost compared to WOH properties.

Comment: The LAP has matured and continues to evolve. The focus has been narrowly targeted to lands of the highest water quality protection value. Fee simple acquisition must remain a tool to be used strategically and in carefully defined circumstances.

Response: NYSDOH agrees that strategic, well-reasoned acquisition of water quality-protective parcels should be the focus of the LAP, while allowing future community growth to occur in a manner that is consistent with the existing character and planning goals of each of the Watershed communities.

Comment: One commentator supports reducing the LAP solicitation goal from 350,000 acres to 200,000 acres, while another supports returning the goal to 350,000 acres. Another comment states that LAP solicitation should continue beyond 2024 or until the end of the Water Supply Permit.

Response: The reduction in LAP solicitation goal from 300,000 acres to 200,000 acres through 2024 is based on recommendations of the NASEM Expert Panel as well as stakeholder input. Solicitation beyond 2024 is contingent upon re-issuance of a WSP authorizing continuation of the LAP beyond 2025.

Comment: One commentator said the City should be required to make a \$23 million deposit to core LAP as directed by the 2017 FAD. Another commentator stated that if the \$23 million is not deposited for LAP, it should be redirected funding other programs such as the Flood Buyout Program and the Streamside Acquisition Program.

Response: The City's LAP segregated account currently has nearly \$75 million available. Based on pre-2020 program activity levels, this funding is sufficient for the remaining period of the Revised 2017 FAD. Provisions are included in the Revised 2017 FAD for funding the expansion of SAP if NYSDEC issues a written determination, in consultation with NYSDOH, NYCDEP, and other agencies or local governments as described in the 2010 WSP. Redirecting the \$23 million in funding to other programs

such as SMP project maintenance, EOH acquisition, or FBO may be considered in response to the recommendations of the NASEM Expert Panel. NYSDOH notes that there is currently adequate funding (approximately \$7 million) for the City-Funded FBO program and the sufficiency of this funding is evaluated annually during the FAD budget meeting held between the City, NYSDOH, USEPA, and NYSDEC.

Comment: The LAP should include a hard target for acquisition of acres of the most hydrologically valuable lands. The LAP should also include a reporting metric for tabulation of the highest quality lands acquired.

Response: The use of solicitation goals, rather than acquisition requirements, is rooted in the 1997 MOA “willing seller/willing buyer” concept. Updated reporting requirements for the LAP semi-annual reports in the Revised 2017 FAD include: acres protected for the categories of riparian buffers, floodplains, wetlands, and forest lands; miles of streambank protected; average surface water criteria for fee and conservation easement parcels acquired through the core LAP and SAP; acres subdivided out of solicited parcels; and number of solicited acres that result in accepted offers and closed deals.

Comment: The Revised FAD should provide for acquisition of sensitive upland parcels with steep slopes or soils particularly prone to erosion, especially those parcels containing special resource areas such as wetlands, streams, ponds, lakes, and unique woodlands.

Response: Both steep slopes and water features are considered in planning land solicitations. While the importance of stream buffers and surface water criteria has been emphasized by the City in recent years regarding which lands should be solicited, the provisions of Special Condition (SC) 9(a)(3) of the WSP regarding the presence of steep slopes on at least 50% of a property would continue to qualify a property for acquisition, regardless of the percent SWC. Refinements to the solicitation criteria are designed to address community concerns regarding the availability of developable land while still targeting control of the lands most protective of water quality.

Comment: The Revised FAD should include a recognition that changes are necessary to the City’s Water Supply Permit (WSP) to make it consistent with the 2020 NASEM report. The City should make every effort to obtain a renewed and modified WSP significantly before the current permit expires.

Response: Section 4.2 of the Revised FAD has been updated to note that some revisions to the WSP may be necessary in light of the NASEM expert panel recommendations. The existing WSP runs through 2025 and, to ensure no gap between the current and future permits, the City submitted the new permit application to NYSDEC in June 2022, allowing a full three years to negotiate the terms of the new permit.

Comment: Several comments requested the expansion of the Streamside Acquisition Program (SAP). Another comment said the FAD should mandate that the City continue funding for SAP until DEC determines whether to extend the program. Other comments requested that a contract extension for SAP be registered by the end of 2022, and that the FAD should incorporate a deadline for contract registration for the Watershed-wide expansion of SAP.

Response: As noted in Section 4.2 of the FAD, expansion of SAP is subject to a written determination from NYSDEC, in consultation with NYSDOH, the City, and other obligated agencies or local governments, in accordance with the City’s 2010 Water

Supply Permit. On August 11, 2022, the City registered a two-year extension to the Pilot SAP contract, extending it until the end of 2024. As with the 2017 FAD, the Revised 2017 FAD maintains the requirement for the City, within 18 months of a NYSDEC determination to expand SAP, to execute and register a contract to make a minimum of \$8 million available to Catskill Center to continue to implement SAP. Additionally, should that determination take place, the Revised 2017 FAD will commit the City to transferring any remaining funds in the Pilot SAP contract to a future contract.

Comment: Several comments stated that SAP should not yet be expanded outside of the Schoharie Reservoir basin into the remainder of the WOH watershed, and if it is, it should only operate in towns and villages that decide to opt-in to participation. Others stated that SAP as presently configured should be modified before expansion beyond the Schoharie basin, and that it is not being implemented as it was originally conceived. One concern is the lack of coordination and communication with local municipalities and Soil and Water Conservation Districts, and how the program can integrate with other programs like Local Flood Hazard Mitigation and NYCFFBO. The original intent of the program was for parcel solicitation and priorities to complement local stream management plans, which has not occurred. Other concerns included prioritization of water courses, design of acquired parcels, municipal ownership, the value of purchased land, loss of community/recreational access, and lack of stewardship compensation.

Response: NYSDOH understands that there are several areas of interest that stakeholders have regarding the current and future implementation of SAP. NYSDOH encourages stakeholders to engage in productive discussions with the City and CCCD to integrate common-sense program modifications which will position SAP to operate with wide-spread municipal support in the future. To encourage the resolution of these issues, the Revised 2017 FAD now includes a requirement for a dedicated SAP workgroup and a specific reporting requirement on the workgroup's recommendations. While the determination for the expansion of the Pilot SAP to the remainder of the WOH watershed has not yet been made by NYSDEC, as described in Special Condition 29 paragraph (f), NYSDOH notes that paragraph (f) states that "Such written determination shall include addressing NYCDEP recommendations."

Comment: The City should be required to continue conversations with MOA stakeholders to finalize model subdivision ordinance language that allows for protection of streamside lands while reserving lands that are more developable for community use. The Revised 2017 FAD should also require the City to put in place by January 1, 2024 mechanisms by which municipalities and land trusts can hold lands and conservation easements acquired via SAP. Another comment supports the option for municipal ownership of SAP parcels, similar to what exists in the NYCFBO Program.

Response: NYSDOH agrees that the model subdivision language should be available for use, although it is the decision of each town whether to adopt such language. Neither NYSDOH nor the City are aware that any have done so to date. It has recently been identified that most towns in the Schoharie Basin have ordinances that prohibit any purchase contracts to be signed unless the landowner has first applied for the subdivision. Regarding third party ownership of SAP-acquired properties, stakeholder agreement on several issues remains unresolved, including the stewardship obligations to be required of third party owners and potential funding sources for that stewardship.

To address this, the Revised 2017 FAD has been amended to include an activity for the resolution of mechanisms allowing SAP-acquired land holdings by third parties.

Comment: Several comments expressed concern over the restrictions and perpetuity of conservation easements placed on lands acquired under core LAP and SAP. There is a desire to ensure restrictions do not limit potential future community upgrades involving utilities, stream and crossing projects under the Stream Management Program, and flood mitigation projects. One commentor stated that the conservation easement the City is required to grant to NYSDEC prohibits the land purchased by the City from being used for electric transmission lines or solar farms, which increases the competition for other farmland, forest land, and developable land in Delaware County.

Response: NYSDOH and the City acknowledge the existing conservation easement language may need to be revised in light of some recent conflicts with public benefit projects. The City agrees to work with the communities to explore potential language changes to future conservation easements which would allow for such activities to take place. The Revised 2017 FAD has been updated to reflect this new activity.

Comment: The City should be required to authorize the Catskill Center for Conservation and Development or any other entity acting as an agent for SAP to use conservation easements.

Response: NYSDOH notes that the City and CCCD are already capable of using conservation easements as a tool for SAP. However, the City explains that it has not directed these to be pursued to date because CEs on small properties have a disproportionately high per-acre cost in terms of negotiations, soft costs, and perpetual stewardship obligations.

Comment: Several comments suggested that more activity is needed under the City-Funded Flood Buyout Program (FBO), and requested specific benchmarks and implementation schedules be created for the program. Another comment expressed support for the FBO, as entry into the program originates with the local municipalities. The program reduces flood threats to our communities and directly involved the municipal governments in project identification.

Response: Activity under the City-Funded FBO is driven primarily by the interest of property owners and the municipalities in which the properties are located. The City does not pursue projects unless (1) there is a resolution by the local town; (2) the landowner is a willing seller; and (3) the City is either a willing buyer or a facilitator for municipal ownership. As such, the creation of benchmarks or implementation schedules is inappropriate and not in keeping with the program's design. Since the program's start, the City has encouraged municipalities to own properties acquired under the program, and more than half of all accepted property offers have led to municipal ownership. In its 2021 evaluation report of the FBO, the City stated (page 18) that they are "committed to working with its NYCFFBO partners to identify opportunities to increase participation in the full range of flood hazard mitigation programs available to watershed communities."

Comment: Several comments suggested that a program be explored that allows landowners to enter into temporary license or rental agreements for their property, in addition to the currently available options of fee ownership and permanent conservation easements. License agreements have been successful in the Conservation Reserve Enhancement Program

(CREP). The lease would be renewable after a certain period allowing for potential changes to the lease agreement, buffer area, or acceptable uses. This concept would enhance buffer protection by allowing renting and stewarding of lands not eligible or not funded through CREP or the Catskill Streams Buffer Initiative. Funding is requested for a pilot program that would allow the alternative buffer program to be initiated and funds to be allocated to study the impacts to communities based on watershed programming.

Response: Under the Conservation Reserve Enhancement Program (CREP), administered by the US Department of Agriculture's Farm Service Agency and the Watershed Agricultural Council, farmers can receive annual rental payments in exchange for removing environmentally-sensitive land from production and installing conservation practices like vegetated streamside buffers, exclusion fencing, and animal crossings. These rental agreements usually run for 10-15 years, unlike watershed conservation easements which run in perpetuity. The commentors are suggesting a similar program be explored as an option for owners of non-agricultural land. This potential program should be explored in the context of the streamside acquisition workgroup.

Comment: Preemptive Purchase Rights, farmer ownership and affordability provisions, are currently utilized by other New York State land trusts in agricultural conservation easements. Additionally, neighboring states have a proven track record of keeping protected land in farmer ownership through the similar "Option to Purchase at Agricultural Value (OPAV)." Under a working farm easement with a preemptive purchase right, the landowner must sell the farm to a qualified farmer at the time of sale. If no farmer is found, or if the sale is proposed at above the agricultural use value of the property, the easement holder, typically a land trust [WA], has the right to step in and purchase the land at its agricultural use value or assign the purchase to a qualified farmer buyer. Farmland remaining actively farmed speaks to community vitality, and because of the language of WAC's model Deed of Conservation Easement that mandates the use of Whole Farm Plans, it also specifically addresses source water concerns. It is requested that the option to include Preemptive Purchase Rights provisions within its Agricultural Deed of Conservation Easements be explored.

Response: The Working Farm Protection Act, which was signed into law in 2018, revised Chapter 69, Article 25-AAA, Section 322 of the Agriculture & Markets law to include in subdivision 6 the new definition of "farmer-purchaser farmland protection agreement" and, in Section 325, subdivision 2, allow these agreements to be eligible for state assistance payments under the NYS Department of Agriculture and Markets Farmland Protection Implementation Grants Program. "Farmer-purchaser farmland protection agreement" means preemptive purchase rights or other provisions that are part of or linked to a farmland protection conservation easement providing the easement holder the preferential right to purchase protected farmland at its agricultural use value in the event the landowner intends to sell such farmland to a purchaser who does not intend to maintain the land in commercial agricultural production and who does not have the requisite farming experience and farming income to demonstrate, in a manner acceptable to the [Department of Agriculture and Markets], a good faith plan to maintain the land in commercial agricultural production. The purpose of such provisions is to ensure that farmer-purchasers who would maintain protected farmland in commercial

agricultural production can afford such farmland that might otherwise be sold at a higher price to other purchasers.

To explore the suitability of including pre-emptive purchase rights within WAC conservation easements, a new workgroup activity and reporting requirement have been added to Section 4.2 of the Revised 2017 FAD.

Comment: WAC is willing to assist, participate, and make recommendations in association with the Long-Term Land Acquisition Plan for the 2023-2033 period.

Response: NYSDOH and the City agree that WAC's input will be important for the development of the Long-Term Land Acquisition Plan.

Comment: The Revised 2017 FAD should set forth the broad framework that the City's LAP is expected to comply with during the remaining FAD period. Another commentor said the Revised 2017 FAD should require that the City's 2023-2033 Long-Term Land Acquisition Plan (LTAP) include an objective that at least 75% of new properties acquired by LAP contain a minimum of 30% Surface Water Criteria at closing. It should also be informed by data trends and predictive modeling relating to both water quality and community vitality, and demonstrate how such data and modeling have informed the LTAP. It should address how the newly-required LAP metrics (page 42 of draft Revised FAD) will inform future land acquisition.

Response: The City's 2023-2033 LTAP will be submitted by May 31, 2023 and is subject to approval by NYSDOH. It will be developed through a careful evaluation of past program activity, regional land use and economic trends, as well as input from stakeholders. Factors considered when evaluating properties for protection include Priority Area, parcel size, natural features criteria (including percent surface water and land slope), the amount of existing City-controlled lands within certain towns, proximity to City properties, and water travel time to reservoirs. The City uses a Parcel Ranking Tool in combination with the 2018 Solicitation Modifications to assist in the identification of those properties with the best combination of features for watershed protection under core LAP.

Comment: WAC affirms its commitment to Forest Conservation Easements. The program's uncertainty, as WAC waits for the written determination from NYSDEC, as referenced on page 39 of the Draft Revised 2017 FAD, is certainly a disappointment. WAC eagerly anticipates [the Pilot Forest Conservation Easement Program's] continued funding and the continued conservation of working forest lands.

Response: The Pilot Forest Conservation Easement Program will continue under the Revised 2017 FAD.

Comment: One commentor stated that there is difficulty relocating residents and businesses after a NYC-Funded Flood Buyout due to much of the vacant upland areas being State- or City-owned. Consider implementing a land swap program to make municipal planning and relocations feasible. Another commentor said resources (funding and staff) are needed to guide communities through the complicated visioning and planning process so that the impacts of relocations can be adequately addressed. Another suggested that the City should be required to work with local stakeholders to identify at least five properties per year they would be willing to swap for privately-owned parcels that are more protective of water quality.

Response: NYSDOH strongly supports the exploration of the feasibility of relocations to certain City-owned parcels. The Revised 2017 FAD continues the requirement for the City to participate in stakeholder-convened workgroups to assess opportunities to use certain potentially developable LAP-acquired lands that have lower water quality protection value to facilitate relocation of development out of floodplains. Due to the numerous complexities involved with the disposition of City-owned land, NYSDOH suggests exploring this process through a case study using an existing municipal property that should be moved out of the floodplain or other location of high importance to water quality protection to an alternate City-owned parcel. This effort should be stakeholder initiated and must include the exploration of parcel reciprocity for the City.

4.3 Land Management Program

Comment: City lands are an important economic component of the local communities, especially in Greene County where tourism is heavily driven by outdoor recreation involving public and private land. The Revised 2017 FAD should include a deliverable that the City develop a comprehensive watershed-wide plan that involves local communities, NYSDEC, and public involvement in expanding recreation uses.

Response: In 2020, the Greater Catskill Region Comprehensive Recreation Plan was published through a collaborative effort by NYSDEC, NYCDEP, Catskill Center, and the Catskill Watershed Corporation. The Plan serves as a reference document for public officials, staff, advisory committees, partner agencies, and interested parties to help guide future recreation decisions. It can be located at the following link: <https://cwconline.org/catskill-recreation-plan/>. NYSDOH does not believe a new FAD requirement for this activity is appropriate at this time.

Comment: NYCDEP should review its policy restricting mountain biking as an allowable use unless on pre-existing abandoned railroad beds or hardened surfaces with treatments for stormwater runoff. This policy, along with restrictions on horseback riding, needs to be re-evaluated building in flexibility where proper erosion and sediment control measures can be implemented to prevent water quality concerns.

Response: NYSDOH supports the recreational use of protected land in the Catskill/Delaware Watershed where such use does not threaten to have an adverse impact on NYC water quality. Paragraph 72 of the 1997 Memorandum of Agreement included mountain bicycling as a recreational activity not likely to be allowed on City land. The City has opened over 135,000 acres of watershed lands to other recreational opportunities, where it can be demonstrated that recreational use will not harm water quality. The City may consider requests to open specific City-owned parcels to connect existing or planned trail networks where municipal and organizational partners have the capacity to effectively steward the activities and ensure no threats to water quality.

Comment: In October 2019, through a partnership between Ulster County and NYCDEP, over eleven miles of the former U&D rail corridor along the Ashokan Reservoir was converted to a trail (the Ashokan Rail Trail) and opened to the public. Ulster County completed a feasibility study to develop an additional five miles of the U&D corridor in Shandaken. It is requested that support for this project be included in the FAD.

Response: NYSDOH supports the recreational use of protected land in the Catskill/Delaware Watershed where such use does not threaten to have an adverse impact on NYC water quality. However, this request is outside the scope of the FAD.

4.4 Watershed Agricultural Program

Comment: A strong Watershed Agricultural Program (WAP), including a permanent farm conservation easement program, should be continued. This program is an asset to water quality protection and economic sustainability. Safeguarding and supporting the Catskill Region's working farms is vital for preserving communities' rural heritage and scenic beauty, and the agricultural and tourism economies that depend on them.

Response: The Revised 2017 FAD maintains existing WAP activities and adds several reporting requirements to help strengthen and position WAP moving forward, including the development of a Long-Term Management Plan for the program in consultation with the Watershed Agricultural Council (WAC).

Comment: Included within the Draft Revised 2017 FAD's Watershed Agricultural Program milestones is: "continue to implement a Farmer Education Program," and "continue to implement an Economic Viability Program," yet the absence of expectations, goals or metrics in the FAD for either program presents challenges to identify essential program elements and required funding for successful implementation. A more detailed description of FAD requirements for these programs would allow NYCDEP and WAC to set expectations and define success.

Response: NYSDOH agrees that the programs would benefit from well-defined expectations of activity and specific goals. The Revised 2017 FAD provides an opportunity for development of these through the Watershed Agricultural Program (WAP) Metrics Assessment and Recommendations Report, which is due by June 30, 2024. Through that effort, the City will work with WAC to assess the adequacy of current WAP metrics and submit a report that recommends the continuation of current metrics and/or the consideration of potential new metrics.

Comment: The Watershed Agricultural Council (WAC) should be directly involved in the development of the Long-Term Management Plan for the Watershed Agricultural Program. WAC is willing to assist, participate and make recommendations, as may be requested of DEP. The City and WAC should make it a priority to routinely meet and discuss long before the revised due date of June 20, 2024 so as to ensure meaningful dialogue and outcomes. Additionally, WAC should be included in the discussion of the future BMP implementation milestones for 2025 and beyond. Work on this important item should begin 18-24 months prior to the target completion date.

Response: NYSDOH agrees that WAC will be involved in the development of the WAP Long-Term Management Plan. The City is committed to working with local stakeholders to explore the potential options for future agricultural land protection and have stakeholder input to develop milestones.

Comment: The Draft Revised 2017 FAD, "extends the due date for new BMPs to be designed, allocated funding, and scheduled for implementation from 2022 to 2023, and the date for

implementation . . . from 2024 to 2025.” This extension was requested by NYCDEP without prior consultation with WAC to establish Agricultural Program needs, timelines, or requests. WAC agrees the metric for designing at least 50% of the new backlog BMPs proposed extension of one year to 2023 is fair and attainable. The metric to “implement all viable BMPs that were designed and scheduled through calendar year 2023” by December 31, 2025 is insufficient due to inflation of construction costs and delays in receipt of contract funding. FAD BMP metric deliverables were developed and agreed upon in 2016 based on estimates at that time. This goal is likely unattainable due to the inflation of construction costs and delays in receiving contract funding. BMP funding should be based solely on current engineer’s estimates and not stale estimates from 2017.

Response: NYSDOH recognizes that the COVID-19 pandemic, increased construction costs, and various delays have altered the timeline of FAD BMP deliverables. NYSDOH is aware that WAC has recently updated cost estimates for BMP projects currently in the workload to account for increased materials prices. If additional program funding is necessary, the City will be directed to execute a contract amendment to provide funds sufficient to achieve the implementation metric.

Comment: The Draft Revised 2017 FAD includes “In consultation with WAC, assess the adequacy of current [Agricultural Program] metrics and submit a report that recommends the continuation of current metrics and/or the consideration of potential new metrics. This report shall also assess the efficacy, cost-effectiveness and contributions of the WAP’s in-house field crew towards reducing the BMP backlog and recommend modifications if needed,” as an Activity and Reporting Requirements milestone. The Watershed Investigation and Repair Crew (WIRC) should be expanded and provided with additional funding. The WIRC provides timely and efficient implementation of repairs to maintain BMP functionality and prevent water quality degradation, thus minimizing the creation of additional BMP workloads.

Response: As part of the Watershed Agricultural Program (WAP) Metrics Assessment and Recommendations Report (due June 30, 2024), the City and WAC will assess the efficacy, cost-effectiveness, and contributions of the WIRC toward reducing the Repair and Replacement BMP backlog and recommend modifications if needed.

Comment: There is an opportunity to expand the Precision Feed Management (PFM) program as it has consistently demonstrated phosphorus and nitrogen reductions on current participating farms.

Response: NYSDOH agrees that PFM has shown reduced concentrations of phosphorus and nitrogen on participating dairy farms. WAC and the City are encouraged to ensure eligible dairy farms are prioritized, while adjusting for evolving trends in watershed dairy and beef operations, and evolving science on whole farm mass nutrient dynamics.

Comment: One commentor strongly disagrees with ending the Farm Transition workgroup, stating that it is an important stewardship tool needed to help agricultural lands remain in agriculture over time. A viable Farm Transition program can work diligently to help current farmers and potential future farmers meet, encouraging and assisting with purchase, lease, or rent-to-own opportunities to help with the continuation of agricultural practices on these lands. Another commentor also supports continued efforts toward a transitioning farm program.

Response: The 2017 FAD included a requirement for the City to “continue to work with stakeholders to explore the feasibility of a program that will protect the majority of each transitioning farm (agricultural land that is at risk of foreclosure or farms with retiring farmers).” The City submitted a report on the findings of the workgroup in 2018, which found little to no consensus on program need or direction. Additionally, the Delaware County Board of Supervisors passed a resolution in 2018 stating the lack of support for a stand-alone funded program, though it did support continued efforts on the issue. In 2019, NYSDOH determined that it had not been demonstrated that a farm transition program would be feasible, compatible with community goals, or beneficial to Watershed protection. However, due to renewed interest in this topic, the Revised 2017 FAD will include a workgroup to explore a stakeholder-proposed alternative opportunity to evaluate the use of Pre-emptive Purchase Agreements in conservation easements.

4.5 Watershed Forestry Program

Comment: The following activity should be added to the Activity and Reporting Requirements in the Draft Revised 2017 FAD: Continue to use the Planning Analysis in Timber Harvesting (PATH) system, academic research and any other appropriate tool or technique to monitor the economic viability of logging businesses in the watershed in order to maintain or increase their economic viability and maximize the voluntary implementation of forestry water quality BMPs.

Response: NYSDOH supports activities that both protect water quality and advance economic viability of watershed businesses. The Revised 2017 FAD has been updated to include the referenced activities as goals for the Watershed Forestry Program.

4.6 Stream Management Program

Comment: The successor contract for the Local Flood Hazard Mitigation Program may face a funding gap due to delays caused by the City’s failure to complete the successor funding agreement in a timely manner. The City is fully committed to ensuring the funding is spread throughout the proposed 5 year term of the contract and are unwilling to provide payments annually. This conflicts with the stated program goal to reduce impacts of flooding that negatively impact both water quality and community vitality by removing flexibility to implement projects before the next big storm or flood event. The FAD should commit the City to making \$15 million in funds available in at least annual payments based on annual anticipated budget submission with the option to invoice for additional fund as needed.

Response: To date, the City has committed \$42.1 million to Watershed partners under the Local Flood Hazard Mitigation Program. NYSDOH notes that the comment above refers to negotiations on a successor contract between the City and CWC which was not required by the 2017 FAD. However, as the City and CWC have made substantial progress toward this successor contract, to ensure its completion, the Revised 2017 FAD will include now include a requirement for the City to register and execute the \$15 million successor contract by June 30, 2023.

Comment: The City should coordinate efforts with State and federal agencies for funding flood hazard mitigation projects, and their efforts should be reported annually.

Response: Efforts to fund flood hazard mitigation efforts in the NYC Watershed are not the sole responsibility of the City. However, NYSDOH agrees that coordination between the City and local municipalities could benefit these efforts.

Comment: Most of the required 24 stream projects called for in the 2017 FAD should be completed in within the next three years. Due to increases in costs related to the coronavirus pandemic and other causes, total funding of greater than the originally estimated “minimum of \$90 million” may be required. The Final Revised FAD should require submission of a new schedule of project initiation and completion by November 2022.

Response: The Stream Management Program and its local partners have successfully implemented streambank stabilization projects with demonstrated benefits in reducing local turbidity at less than bankfull flows. However, the implementation timelines can be affected by the availability of local construction contractors to implement projects, the construction season window, high streamflow and flooding, as well as landowner cooperation. Accelerating the program would do little to reduce the need for release channel operations and/or alum due to the importance of streambed turbidity loading and the overall geology. The City is in the process of negotiating new contracts with the SMP partners which will include funding to cover increased construction costs.

Comment: One comment requested that the FAD include dedicated funding for maintenance of restored stream projects in addition to base funding for priority stream projects, as well as funding for repair and maintenance on stream projects and with community input. Another comment suggested the need for stewardship upon stream project completion.

Response: Each of the City’s Stream Management Program contracts with the county Soil and Water Conservation Districts allows the use of existing line item funding for project maintenance or repair, if there are funds remaining in the contract. This also applies to CSBI projects. Stream project contractor agreements include extra time following the completion of a project to ensure its success and future stability. For sites that may require substantial repair, the City would ensure additional funding through either a contract amendment or successor contract.

Comment: Several commentors noted that turbidity has been a known issue in Ashokan Reservoir basin since before the reservoir was constructed and suggest that turbidity above and below the reservoir should be addressed by rapidly increasing the installations of stream restoration projects.

Response: Numerous stream restoration and turbidity management projects have been completed in the Ashokan Reservoir basin and more are planned. The Ashokan Reservoir basin has the highest percentage of City- and State-owned lands in the City’s watershed. Significant turbidity events are generally related to extreme precipitation and runoff events. While restoration projects have been successful in reducing local turbidity during low to moderate flow events, there are constraints on the pace of implementation for new projects, including contractor availability and the construction season. To provide assistance with future projects, the Revised 2017 FAD has been updated to require the City to nominate three stream restoration projects in the Ashokan Reservoir basin for construction during the next FAD period.

4.7 Riparian Buffer Protection Program

No comments were received on this program.

4.8 Ecosystems Protection Program

No comments were received on this program.

4.9 East of Hudson Nonpoint Source Pollution Control

Comment: The FAD should require that the City fund development of a calibrated and verified New York City Watershed-specific stormwater quality modeling tool using WinSLAMM or some other recognized stormwater model. The model would be used by developers and regulators to quantify phosphorus loadings reflecting site conditions and proposed stormwater management options in a stormwater pollution prevention plan.

Response: The potential utility of a watershed-specific stormwater model will be discussed between the City, NYSDOH, NYSDEC, the East of Hudson Watershed Corporation, and other interested stakeholders.

Comment: There is a concern about phosphorus loading from the use of bioretention stormwater practices. The FAD should require a pilot study during the 2023 growing season to evaluate the use of chemical soil amendments, such as iron filings or activated alumina, in bioretention practices to remove dissolved phosphorus.

Response: NYSDOH is aware of research indicating certain stormwater practices can leach nutrients. NYSDOH supports evaluations of the effectiveness of stormwater practices, including bioretention, in controlling phosphorus, dissolved organic carbon, and other constituents that may influence the quality of receiving waterbodies. The use of chemical soil amendments or other chemical stormwater controls should be considered. However, designing and implementing a study for the 2023 season is unrealistic. The City's Stormwater Program is largely administered according to federal and State regulations, and the DEC's 2015 Stormwater Management Design Manual does not include chemical stormwater methods, but the forthcoming manual may include this topic.

Comment: A "no net increase" policy for phosphorus is needed to prevent development in the Croton Watershed from violating the Clean Water Act and is also needed to protect the quality of Catskill-Delaware water. NYCDEP stormwater permits should require that in the Watershed stormwater controls be employed to ensure that new development will result in no net increase in phosphorus discharges.

Response: The City's stormwater programs operate in accordance with the USEPA Phase II Stormwater Rule and the NYSDEC General Permit for Stormwater Discharges. The proposed "no net increase" for phosphorus would be a significant deviation from these existing regulations, and none of the regularly used FAD basins have ever been deemed phosphorus-restricted. The City provides funding to address non-point source pollution for the filtered Croton System through activities conducted under FAD Section 4.9 (East-of-Hudson Nonpoint Source Pollution Control Program).

4.10 Kensico Water Quality Control Program

Comment: The Revised FAD should include specific directives to the City and financial incentives to property owners in the Kensico basin to facilitate accelerated septic system replacement or installation of centralized wastewater treatment, consistent with the recommendations of the NASEM expert panel.

Response: In the Kensico Reservoir basin, owners of failing septic systems serving single family or two-family residences, with a design flow of less than 1000 gallons per day per family, are eligible for funding of up to 50% of the costs to rehabilitate the failing septic systems or to connect the systems to an existing sewage collection system. In 2021, a program reminder letter was mailed to all eligible residents, and three septic reimbursements were issued. To determine if there are specific areas in the Kensico basin that would benefit from connection to an existing centralized sewage collection system, the Revised 2017 FAD now includes requirements for the City to perform such an evaluation and work with local communities to determine the feasibility of implementation and a construction schedule.

4.11 Catskill Turbidity Control

Comment: The Final Revised 2017 FAD should continue the requirement for the City to report and meet with regulators on the Environmental Impact Statement (EIS) being completed in relation to the proposed modifications to the City's CATALUM SPDES permit. The Final Revised 2017 FAD should place a time frame on the City's submission of additional analyses and preparation of a supplemental Draft EIS.

Response: The timeline for the Supplemental Draft Environmental Impact Statement (SDEIS) for the CATALUM SPDES permit will be determined by NYSDEC and the City and is not a FAD requirement. However, the Revised 2017 FAD does continue the requirement for the City to meet annually with NYSDOH, USEPA, NYSDEC, and the Watershed Inspector General to discuss activities related to the proposed modifications to the CATALUM SPDES permit.

Comment: Several commentors advocated for inclusion of engineering and construction alterations at the Ashokan Reservoir to reduce turbidity and potential downstream flooding. One commentor said the alternative analysis provided in the DEIS is inadequate in terms of its analysis of structural modifications to the Ashokan Reservoir and that these structural modifications should be used to reduce turbidity and downstream flooding. Another commentor said the FAD should require the City to submit a report detailing structural and non-structural alternatives to mitigate the impacts of high-volume releases on the Lower Esopus and with an assessment each alternative in respect to climate change. Commentor acknowledges these activities may be covered in the Supplemental Draft Environmental Impact Statement.

Response: In February 2022, NYSDEC announced that the agency will require the City to undertake additional analyses and prepare a Supplemental DEIS. The scope of the SDEIS and the CATALUM SPDES permit are determined by NYSDEC and the City and are a separate process from the FAD. Ashokan Reservoir structural modifications were evaluated in detail under the 2002 and 2007 FADs to potentially address turbidity in the Catskill System. None of the proposed BMPs were found to substantially reduce

reservoir turbidity and/or reduce the need for alum use at Kensico Reservoir. However, based on previous analysis, it is unlikely that these structural modifications will be found to reduce reservoir turbidity.

Comment: The City is unable to meet the raw water turbidity requirement of 5.0 NTU for raw water. During turbid water events the City needs to add alum to increase particle settling, depositing alum sludge into Kensico reservoir, a protected water source.

Response: The most recent incidence of the City failing to meet the 5 NTU SWTR criteria for raw water occurred on October 29, 2012 as a direct result of Hurricane Sandy. The City does have the ability to dose the Catskill Aqueduct with alum at the Pleasantville Alum Facility, but this has only occurred sporadically since 2012, mainly following aqueduct biofilm removal activities in 2019, 2020, and 2021. Alum use requires notice to be made to NYSDOH and is further regulated under NYSDEC SPDES permit NY0264652. To minimize alum use, the City has implemented measures for controlling turbidity including: modification of reservoir operations using an Operations Support Tool (OST), interconnection of the Delaware and Catskill Aqueducts at Delaware Aqueduct Shaft 4, and improvements to stop shutters in the Catskill Aqueduct.

Comment: The filtration waiver for the City should end, to protect the health and safety of City residents when water has high turbidity, and advanced coagulation should be used to reduce organic matter to address DBPs. NYSDOH should require the City to build a filtration plant, and once it is complete, end the filtration avoidance.

Response: The City currently meets all requirements for filtration avoidance, including the objective water quality criteria, set by the USEPA in 40 CFR § 141.71 and the NYSDOH under the State Sanitary Code, 10 NYCRR § 5-1.30. There is no evidence to support a denial of filtration avoidance.

Comment: The FAD should prohibit major releases from the Ashokan Reservoir to the Lower Esopus.

Response: Releases to the Lower Esopus from the Ashokan Reservoir are not regulated by NYSDOH under the FAD. Releases are governed by the Interim Release Protocol, jointly developed by the City and NYSDEC. The Order on Consent issued by NYSDEC in 2013 includes modifications of the operating protocol for the Ashokan Reservoir, including both release and spill events. These modifications consider the potential environmental impacts, economic benefits, flood mitigation in the areas downstream of the reservoir, and mitigating impacts of turbidity diverted to Kensico. In May 2019, the City submitted a Draft Environmental Impact Statement (DEIS) to NYSDEC which analyzed the potential environmental and socioeconomic impacts resulting from the proposed modifications of the CATALUM SPDES permit. In February 2022, NYSDEC announced that the agency will require the City to undertake additional analyses and prepare a Supplemental DEIS.

Comment: The FAD should require the City to reconvene the NASEM panel that will be tasked with examining how the impacts of the Lower Esopus could be incorporated within the OST.

Response: The FAD requires the City to meet annually with NYSDOH, USEPA, NYSDEC, and the Watershed Inspector General to discuss implementation of the OST

Expert Panel recommendations, including the use of OST to reduce turbidity levels in Catskill System water entering Kensico Reservoir, while minimizing adverse environmental impacts and alum use.

Comment: The Revised FAD must account for climate change and its increased potential for turbidity loading.

Response: Turbidity in the Catskill System, and the City's operational responses to it, have been extensively evaluated, including in the 2018 final report from the NASEM Operations Support Tool (OST) Expert Panel. As part of those activities, a modeling "stress test" showed that filtration avoidance criteria could be maintained even following back-to-back storms equivalent to 2011 Tropical Storm Irene. The use of OST and watershed modeling to inform operational decisions are the main reasons for this success. The City's Water Quality Modeling group continues to produce high quality peer-reviewed publications and participates in numerous national and international work efforts related to water quality and climate. Additionally, there is an ongoing joint study between the City's Stream Management Program and USGS studying the effectiveness of stream restoration projects on turbidity reduction in the Ashokan basin. To date, these projects have demonstrated effectiveness in reducing local turbidity under low to moderate flows.

4.12 Sand and Salt Storage

No comments were received on this program.

5. WATERSHED MONITORING, MODELING, AND GIS PROGRAM

5.1 Watershed Monitoring Program

Comment: Section 5.1 of the Revised 2017 FAD requires the City to conduct testing for emerging contaminants at key watershed monitoring locations as informed by applicable contaminant candidate lists and/or monitoring rules for unregulated contaminants, with a due date of December 31, 2025. Given the sensitivity of the Kensico Reservoir, it is recommended that the FAD contain stronger and more specific requirements. The Revised FAD should require emerging contaminants monitoring of tributary streams flowing into Kensico Reservoir at least quarterly and a prompt investigation of potential sources of emerging contaminants within the watersheds of these tributaries.

Response: The City has conducted ongoing monitoring for emerging contaminants in Kensico Reservoir and its tributaries for several years. While low-level concentrations of some analytes have been detected in the tributaries, none have been detected at Delaware Aqueduct Shaft 18, which is where water leaves the reservoir. NYSDOH will work with the City to ensure an adequate study design is developed which advances our knowledge of the environmental occurrence of these compounds of interest and provides assurance on the safety of the water supply.

5.2 Multi-Tiered Water Quality Modeling Program

Comment: Several commentors said the FAD should require a Climate Action Plan for the watershed protection programs including agriculture, and that the development process should incorporate input from both regulators and stakeholders. Another commentor said the FAD should outline steps that the City should be taking to analyze the impacts of climate change, like the potential for increased turbidity loading arising from future extreme rainfall events. Another commentor said the City should also conduct predictive modelling to understand the impacts of storm/rainfall events over the next 30 years and beyond, and report findings of climate change impacts and planned responses for each subprogram of the watershed protection program to regulators by December 31, 2024.

Response: The City has been actively engaged in modeling and planning for future climate and weather scenarios over a range of conditions. They have initiated several studies examining potential impacts to facilities and lands. The City is a member of the Water Utility Climate Alliance, a group dedicated to enhancing climate change research and improving water management decision making to ensure water utilities are well positioned to protect their water supplies.

5.3 Geographic Information Systems

Comment: The City has vast resources within its Geographic Information Services division that can help illuminate and direct decisions that are watershed-wide while being sensitive to local needs and issues. The data is for the most part unknown to local decision makers and their consultants or if known not obtainable. The FAD should require a digital library (portal) that makes available GIS resources on the watershed from all sources and categorized and combines the documents from the various agencies and local governments in an easy to find source.

Response: The City is committed to sharing information generated through its watershed protection programs. Requests for specific GIS datasets can be directed to the City's Kingston Office. Other watershed and distribution system water quality data is available at NYC Open Data (<https://opendata.cityofnewyork.us/>). On the City's FAD web page (<https://www1.nyc.gov/site/dep/about/filtration-avoidance-determination.page>), users can access monthly and annual water quality reports, as well as all FAD deliverable reports. Section 5.1 of the Revised 2017 FAD includes goals for the City to make watershed water quality data publicly available and continue to implement a data request protocol for sharing data with government agencies, researchers, and community groups.

6. REGULATORY PROGRAMS

6.1 Watershed Rules and Regulations

No comments were received on this program.

6.2 Wastewater Treatment Plant Compliance and Inspection Program

No comments were received on this program.

7. Catskill/Delaware Filtration Plant Design

Comment: Several commenters suggested the City be required to build a filtration plant to solve turbidity issues and to address other contaminants including disinfection by-products, pathogens (e.g., *Giardia* and *Cryptosporidium*) and cyanotoxins.

Response: The City currently meets all requirements for filtration avoidance, including the objective water quality criteria, set by the USEPA in 40 CFR § 141.71 and the NYSDOH under the State Sanitary Code, 10 NYCRR § 5-1.30. There is no evidence to support a denial of filtration avoidance.

8. In-City Programs

8.1 Waterborne Disease Risk Assessment Program

No comments were received on this program.

8.2 Cross Connection Control Program

No comments were received on this program.

9. Administration

Comment: Several comments were received from stakeholder organizations implementing Watershed Protection Programs on the City's behalf regarding challenges with contract requirements. One commentator noted that in the "Third Supplement to the December 2010 Agreements Among West of Hudson Watershed Stakeholders: Commitments Relating to the 2017 FAD", the City "committed to managing its contracting, procurement and contract administration processes in a manner that minimizes delays and other impediments to efficient program administration consistent with applicable laws, rules and procedures." These issues continue to present challenges. Commentors note increases in documentation and forms, inconsistent paperwork requests, and evolving reporting mandates. One commentator states invoice submittals can number in the thousands of pages. Several comments suggested that many requirements are not applicable to the Watershed Programs or detailed in their agreements with the City, and that partner contracts should not be handled like ordinary City vendor contracts. One commentator stated the City justifies these new requirements solely upon claims that they are "City policy" or point to contract language stating such reporting must be in "a form acceptable to DEP." The FAD should be revised to improve the contracting process and ensure adequate timely funding of the Watershed Protection and Partnership Programs.

Response: NYSDOH acknowledges the City's need for a rigorous contracting process to ensure the competent expenditure of rate payer funds. However, there have been several recent occasions when that rigor has led to delays in program implementation.

The Revised 2017 FAD adds a new requirement for the City to convene an annual meeting with FAD program partners to discuss administrative, contract, and funding issues. The goal is to facilitate communication between partners and City administrative/program staff, maintain continuity in the Watershed protection programs, and prevent the occurrence of funding gaps. As noted in the Side Agreement referenced above, "The Parties acknowledge that the City's contracting procedures are subject to a variety of complex requirements under State law, the New York City Charter, the Procurement Policy Board Rules, and other applicable legal requirements. Moreover, the Parties acknowledge that agencies and offices other than NYCDEP and the City Law Department control many elements of the City's contracting process." The City has expressed their continued commitment to address the specific concerns raised by the program partners.

Comment: CWC requests the Revised 2017 FAD include not only the requirement for NYCDEP to provide funding, execution and registration of contracts for programs, but also to incorporate language that allows for either up-front payments or, at a minimum, an annual payment structure to ensure funding is sufficient throughout the course of each year.

Response: All contracting partners are subject to City procurement regulations. The requirements for City invoicing are outside the scope of the FAD. The Revised 2017 FAD adds a new requirement for the City to convene an annual meeting with FAD program partners to discuss administrative, contract, and funding issues.

Comment: One commentor suggested that the City establish dedicated funding accounts for all of the FAD-required programs, modeled after the LAP segregated account. This could streamline program implementation and the distribution of funds that are required to maintain water quality and economic vitality. Program partners should not be asked or expected to cover funding gaps for the City.

Response: The Land Acquisition Program Segregated Account was established as part of the 1997 MOA. All contracting partners are subject to City procurement regulations. The requirements for City invoicing are outside the scope of the FAD. The Revised 2017 FAD adds a new requirement for the City to convene an annual meeting with FAD program partners to discuss administrative, contract, and funding issues.

Comment: CWC program contracts are specific to each program. Funds cannot be shared or transferred with limited exception. When there are delays or funding shortages, CWC is faced with the dilemma to slow down programs, shut down programs or potentially borrow funds from our Economic Development Fund, the Catskill Fund for the Future. The ability to borrow from the CFF is only allowed in certain contracts which removes that option completely in some cases. One option to alleviate funding gaps, delays in contracts, and other administrative issues with the City is the ability to enter into an "Omnibus" type contract. This contract would be all encompassing of CWC's numerous programs with a specific amount of capital and expense funds on hand and available for use. Accounting practices utilized by CWC and continually approved by the City would track and allow for full reimbursement to this contract when funds are made available in the specific program contract. This contract would be relatively easy to create and could reference all existing and renewal contracts for the various FAD mandated programs. CWC recommends that the FAD include the registration and funding of an omnibus contract with sufficient funding on hand to ensure that if and when any CWC program faces a

funding delay or shortfall, the omnibus contract can be utilized to cover program needs. CWC recommends a minimum of \$5 million in Capital funds and \$3 million in Expense funds be provided in a lump sum payment to cover future program shortfalls.

Response: All contracting partners are subject to City procurement regulations. How City contracts are structured and funded is outside of the scope of the FAD. The Revised 2017 FAD adds a new requirement for the City to convene an annual meeting with FAD program partners to discuss administrative, contract, and funding issues.

Comment: The City must maintain an adequate level of staffing at all of the City-owned Wastewater Treatment Facilities in the WOH Watershed. In a letter dated February 7, 2022 from NYCDEP to CWC regarding a reduction of septage acceptance, NYCDEP pointed to minimized staffing as a result of a COVID-19 hiring freeze, retirements, and resignations. This reduction was despite NYCDEP's obligation to accept WOH Septage in the Side Agreement to the 2017 FAD. Although the issue regarding septage acceptance has since been resolved, NYCDEP's admission of its failure to maintain adequate staffing at its wastewater treatment plants and operations division should be closely reviewed by FAD regulators.

Response: As noted in the comment, City staffing levels have been below average going back to the COVID-19 pandemic. Between Fiscal Years 2017 to 2019 (FY17 to FY19) NYCDEP's Bureau of Water Supply had an average vacancy rate of 7.7%. By the end of FY21, that vacancy rate had increased to 10.1%. Staffing levels at the City's Watershed wastewater treatment plants had 53 of 58 positions filled as of FY21 and 54 of 58 positions filled in FY22 with the remainder on track for fulfillment in FY23. NYSDOH, USEPA, and NYSDEC meet annually with the City to discuss staffing levels among the programs that implement the City's Watershed Protection Program.

Comment: Several comments were received supporting the inclusion of a community vitality study for the WOH watershed and a number of groups indicated that they wanted to participate in the planning process, while another suggested advancing the due date by one year to December 31, 2023. The CWC offered to undertake the study with City funding. One commentor suggested that the long-term benefits of the NYC-Funded Flood Buyout Program and its effects on West-of-Hudson communities should be studied, as town centers are becoming smaller (such as Boiceville) and community character is changing. Numerous comments requested that the scope and methodology of the study be determined by watershed stakeholders and not the City. Another commentor request that the scope be subject to review and comment prior to any Request for Proposals being released. Another comment requested that the FAD should direct the City to have funds to implement any recommendations given in the final report.

Response: The scope and methodology for the proposed study will be developed in coordination with Watershed Stakeholders to ensure that the assessment will be representative of as many perspectives as possible. The City has accepted CWC's offer to undertake the study and CWC will be reimbursed for study costs. The first meeting to discuss the study's scope and methodology took place on September 23, 2022. The due date of the final study report has been moved to December 2025 to ensure sufficient time for the study's completion.

Comment: As of January 2022, only 20 NYCDEP staff were located at the Arkville facility and only 5 of those staff have any working relationship with CWC. These employee assignments do

not fit with the intentions of the facility as previously agreed upon. CWC requests that NYCDEP immediately increase their staffing numbers to 26 staff at the Arkville facility to improve efficiencies and coordination of our partnership as what was previously planned.

Additionally, the FAD should mandate meaningful NYCDEP and City staff positions be located within the Arkville facility to ensure the stated goals of efficiency and coordination take place. CWC requests that the FAD provide that NYCDEP staff assigned to the Arkville facility fulfill the purpose of facilitating cooperation and partnership with WOH partners to contribute to economic development and water quality, not just staff to fill a quota. NYCDEP should relocate or hire certain staff from their OEA division, insurance division, legal division and an attorney employee of NYC Corp Counsel who works on NYCDEP watershed matters. Another commentor suggested this be done within the next two years.

Response: NYSDOH acknowledges the agreement between the City and CWC on staffing levels for the Arkville facility, which at the request of both parties was included as a condition of the 2017 FAD. In NYCDEP's March 2017 letter of intent to CWC regarding the shared office building, former Commissioner Sapienza wrote: "DEP is committed to fully occupying its space within the building through a combination of posting vacancies for positions in Arkville and the solicitation of voluntary reassignments." This letter was included as Exhibit I in the *Third Supplement to the December 2010 Agreements Among West of Hudson Watershed Stakeholders: Commitments Relating to the 2017 Filtration Avoidance Determination*. We encourage the City to continue its progress toward the December 2026 milestone of at least 40 NYCDEP staff assigned to the Arkville facility.

Comment: Recent challenges outside of NYCDEP's control in fulfilling FAD-mandated contracts have put NYCDEP at risk of incurring violations. NYSDOH should adjust the FAD to account for scenarios where compliance with the FAD is in direct conflict with compliance of the City's own procurement rules. Two options are offered. The first is to establish a protocol that NYCDEP can invoke when a major contracting, accounting, or similar issue arises that significantly delays a required action under the FAD. The protocol should include a requirement for third-party, independent arbitration to resolve the issues at hand, outside of the Watershed Protection and Partnership Council. To ensure that the funds designated for the FAD remain intact, NYSDOH may also consider a mechanism for NYCDEP to set aside payments in escrow. However such a process is designed, it is vital that NYCDEP not be unfairly subject to violations during the period that the protocol is invoked. The second option offered is to allow NYCDEP to choose alternative FAD partners in such cases when contracting, accounting, or other issues make it impossible to meet schedules with the two required partners named in the FAD.

Response: NYSDOH acknowledges that all City agencies, including NYCDEP, must follow City procurement rules, and that partners who contract with the City to implement the Watershed Protection Program on behalf of the City must also maintain compliance with these rules. However, these interactions must be conducted while maintaining the spirit of two historic documents: the 1991 "Ad Hoc Task Force on Agriculture and New York City Watershed Regulations – Policy Group Recommendations" (known as the Brown Book) and the 1997 "New York City Watershed Memorandum of Agreement" (MOA). The former led to the incorporation of the Watershed Agricultural Council (WAC) and the latter led to the incorporation of the Catskill Watershed Corporation (CWC). One may recall the statement from the 1997 MOA: "Whereas, the Parties have agreed to act

in good faith and to take all necessary and appropriate actions, in cooperation with one another, to effect the purposes of this Agreement.” Partners, including WAC and CWC, are named in the FAD based on this past precedent, and in fact the City played a direct role in forming these two organizations specifically to implement programs on the City’s behalf. NYSDOH does not support the commentor’s suggestion to deviate from these historic watershed partnerships.

10. Education and Outreach

There were no comments received on this section.

11. Reporting

There were no comments received on this section.