

New York State Department of Environmental Conservation

Office of General Counsel, 14th Floor

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Joe Martens
Acting Commissioner

February 14, 2010

SENT BY CERTIFIED MAIL AND PDF

Honorable Michael A. Cardoza
Corporation Counsel
New York City Law Department
100 Church Street
New York, NY 10007

Re: Ashokan Waste Channel: Notice of Hearing and Complaint

Dear Mr. Cardoza:

Enclosed please a Notice of Hearing and Complaint issued by the Department against the New York City Department of Environmental Protection regarding discharges from the Ashokan Waste Channel. Please note the Notice of Hearing and Complaint requires that an Answer be filed within twenty (20) days, and sets a March 24, 2011 date for a pre-hearing conference. Please feel free to contact me if you have any questions. Thank you.

Sincerely yours,

Scott Crisafulli, Chief
Water Bureau, OGC

Enclosure

cc: Paul Rush, NYCDEP
Robin Levine, NYCDEP
Hilary Meltzer, NYC Corp. Counsel
James Tierney, NYSDEC
Thomas Snow, NYSDEC
Kenneth Kosinski, NYSDEC
Mary von Wergers, NYSDEC

EDMS#392496

**STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**In the Matter of the Alleged Violations of Article 17 of the
Environmental Conservation Law of the State of New York,
Section 750 et seq. of the Official Compilation of Codes,
Rules and Regulations of the State of New York, and
SPDES Permit # NY 0264652**

NOTICE OF HEARING

**DEC CASE NO:
D007-0001-11**

- By -

**New York City Department of Environmental Protection
and the City of New York,**

Respondents.

PLEASE TAKE NOTICE THAT, pursuant to Article 3 of the State Administrative Procedure Act (hereinafter "SAPA"), Title 6, Part 622 of the Official Compilation of Codes, Rules and Regulations of the State of New York (hereinafter "NYCRR"), Article 17 of the Environmental Conservation Law of the State of New York (hereinafter "ECL") and its respective regulatory provisions found at 6 NYCRR Part 750.10(c), a public hearing shall be convened at the Region 3 offices of the New York State Department of Environmental Conservation, located at 200 White Plains Road, 5th Floor, Tarrytown, NY (telephone number 914-332-1835), to consider certain violations of ECL Article 17; and/or Part 750 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR"), and/or SPDES Permit No: 026 4652, as more specifically set forth in the Complaint attached hereto. A date and time for the hearing will be established by the Administrative Law Judge (hereinafter "ALJ") upon the filing of a Statement of Readiness for Adjudicatory Hearing, as set forth in 6 NYCRR Part 622.9. You will be notified in writing of the hearing date when it is established.

NATURE OF RELIEF SOUGHT: Commissioner's Order pursuant to 6 NYCRR Part 622:

- (A) remove alum flocc deposits that must be removed in order to meet the water quality standard for suspended, colloidal, and settleable solids in the Kensico Reservoir;
- (B) release water through the Waste Channel after the effective date of the Order only when the Department approves Waste Channel releases for the beneficial interest of the Little Beaver Kill and Lower Esopus Creek communities such as flood mitigation, or upon the Department's approval, with consultation from Ulster County and other interested downstream parties, of an operating plan with associated protocols including on-going monitoring of the Little Beaver Kill and Lower Esopus Creek for use of the Waste Channel;

- (C) fund an independent study and assessment of the impacts and damages from turbid water releases to the Lower Esopus and provide the results to DEC;
- (D) submit information that the Department requested in the letters dated July 17, 2009 and December 10, 2010;
- (E) comply with the terms of its SPDES permit by submitting the approvable reports and plans noted above, including implementation schedules;
- (F) complete the tasks identified in the implementation schedules in a timely manner;
- (G) incorporate the implementation schedules, operating plans, into an application for an amended Catalum SPDES Permit;
- (H) pay civil penalties in the amount of two million six hundred thousand dollars (\$2,600,000); and
- (I) for such other and further relief as the Court deems just and proper.

PLEASE BE ADVISED THAT within 20 days of receipt of the Complaint, you must serve the undersigned with your Answer to the Complaint at the address below. Any affirmative defenses, including exemptions to permit requirements, will be waived unless raised in the Answer. Failure to timely file an Answer will result in a default and a waiver of Respondents' right to a hearing.

PLEASE BE FURTHER ADVISED THAT you must appear at a pre-hearing conference, pursuant to 6 NYCRR §622.8, on March 24, 2011 at 10:00, at the Region 3 offices of the New York State Department of Environmental Conservation, located at 200 White Plains Road, 5th Floor, Tarrytown, NY, 914-332-1835. You may appear at the pre-hearing conference in person or by representative, with or without counsel. Failure to appear for this pre-hearing conference will constitute grounds for the entry of a default judgment against you, pursuant to 6 NYCRR §622.15, and an Order assessing Respondents penalties and/or directing other relief to be issued.

PLEASE BE FURTHER ADVISED THAT you may appear at the hearing in person or by representative, with or without counsel; that all witnesses will testify under oath; that a record of the proceeding will be made; that you may produce witnesses and evidence in your own behalf; that you may request issuance of subpoenas to compel attendance of witnesses and production of records relating to the matter under investigation; that you may cross-examine witnesses and examine evidence produced against you.

PLEASE TAKE FURTHER NOTICE THAT the hearing will convene at the time and place stated, whether or not Respondents appears, and a default judgment may be issued should Respondents be found to have committed any of the violations set out above and more specifically described in the attached Complaint, an Order may be issued assessing Respondents penalties and/or directing other relief.

PLEASE TAKE FURTHER NOTICE THAT any penalties assessed upon Respondents shall be in accordance with ECL §§71-1929, which provides, in pertinent part, that:


§71-1929: *"A person who violates any of the provisions of, or who fails to perform any duty imposed by, titles 1-11 inclusive and Title 19 of Article 17, or the rules, regulations promulgated thereto * * * or the terms of any permit issued thereunder, shall be liable to a penalty not to exceed thirty seven thousand five hundred dollars (\$37,500) per day for each violation, and, in addition thereto, such person may be enjoined from continuing such violation * * * ."*

Interpreter services will be made available to persons with hearing disabilities, at no charge, upon written request to the contact person named below within a reasonable time prior to the hearing(s), pursuant to SAPA Section 202(1). The above address is reasonably accessible to persons with a mobility impairment.

DATED: Albany, New York
February 14, 2011

Office of General Counsel:

by:



Scott Crisafulli
Water Compliance Counsel
Attorney for Department Staff
625 Broadway, 14th Floor
Albany, New York 12233-5500
Phone (518) 402-9507
Facsimile (518) 402-9019

EDMS#392099

**STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**In the Matter of the Alleged Violations of Article 17 of the
Environmental Conservation Law of the State of New York,
Section 750 et seq. of the Official Compilation of Codes,
Rules and Regulations of the State of New York, and
SPDES Permit # NY 0264652**

COMPLAINT

**DEC CASE NO:
D007-0001-11**

- By -

**New York City Department of Environmental Protection
and the City of New York,**

Respondents.

The New York State Department of Environmental Conservation ("DEC" or "Department") by
its Staff, alleges as follows:

Nature of the Action

1. DEC brings this action to compel Respondents to halt the unauthorized operation of the Waste Channel of the Ashokan Reservoir in Ulster County, New York to: optimize operations of the multi-level intake structures at that facility; establish an approved plan for operating the Waste Channel; remove alum floc deposits in order to meet the water quality standard for suspended, colloidal, and settleable solids in the Kensico Reservoir; implement enhanced structural and non-structural landscape scale and operational measures to reduce turbidity in all waters released or drawn from the Ashkan Reservoir; and comply with its State Pollutant Discharge Elimination System ("SPDES") permit No: 026 4652 which requires efforts to minimize turbidity and limit impacts to connected water resources as part of any periodic

addition of aluminum sulfate (alum) and sodium hydroxide to reduce turbidity in the waters flowing through the Catskill Aqueduct ("Catalum SPDES Permit") and into the unfiltered New York City drinking water supply. The Ashokan Reservoir, the Waste Channel, the Catskill Aqueduct, and the Kensico Reservoir are integral parts of the unfiltered City of New York's Water Supply System, which provides more than 1 billion gallons of water each day to more than 9 million residents, including 8 million in New York City.

2. Respondents enjoy the benefit of the State's authorization to add a pollutant (alum) to the Catskill Aqueduct portion of its Water Supply System to reduce turbidity to meet federal and state requirements for unfiltered drinking water, but - in violation of Article 17 of the New York Environmental Conservation Law ("ECL") and the Catalum SPDES Permit - Respondents fail to shoulder the burden of what is required by the State in exchange for that privilege. Specifically, Respondents: (i) failed to address violations of the State's narrative water quality standards by removing alum floc deposits from the Kensico Reservoir; (ii) implemented a measure to reduce turbidity in the waters entering the Catskill Aqueduct which consisted of diverting water from the Ashokan Reservoir through the Waste Channel to the Lower Esopus Creek in an unprecedented manner and duration, that continually released a flow of turbid water from the Ashokan Reservoir toward the Lower Esopus Creek, in quantities up to 600 million gallons a day, without obtaining the Department's prior approval and without providing the Department with crucial information that the Department requested concerning conditions which would warrant the use of the Waste Channel, potential impacts to the Lower Esopus Creek, ramping rates, maximum releases, and duration; (iii) failed to undertake non-structural measures to reduce the delivery of

turbid water to the Ashokan Reservoir; (iv) failed to submit an approvable report which analyzes alternatives and chooses an alternative to be implemented to minimize the area of alum floc deposition in the Kensico Reservoir; (v) failed to submit an approvable Bathymetric/Benthic Report for the purpose of establishing a scientific basis for the quantity of alum floc deposits that must be removed from the receiving water in order to meet the narrative water quality standard for suspended, colloidal and settleable solids in the Kensico Reservoir; and (vi) failed to submit an approvable report detailing the actions to be taken with respect to its evaluation of the potential benefits of the heightened or more expansive implementation within the Ashokan Reservoir drainage basin of program activities to reduce turbidity beyond those established under the 1997 New York City Watershed Memorandum of Agreement, the 2002 Filtration Avoidance Determination (“FAD”), and subsequently issued FADs.

3. In this action, DEC seeks an Order directing Respondents to: (i) remove alum floc deposits in response to violations of the water quality standard for suspended, colloidal, and settleable solids in the Kensico Reservoir; (ii) release water through the Waste Channel after the effective date of the Order only when the Department approves Waste Channel releases for the beneficial interest of the Little Beaver Kill and Lower Esopus Creek communities such as flood mitigation, or upon the Department’s approval, with consultation from Ulster County and other interested downstream parties, of an operating plan with associated protocols including on-going monitoring of the Little Beaver Kill and Lower Esopus Creek for use of the Waste Channel; (iii) fund an independent study and assessment of the impacts and damages from turbid water releases to the Lower Esopus and provide the results to DEC; (iv) submit information that the Department

requested in letters dated July 17, 2009 and December 10, 2010; (v) comply with the terms of its SPDES permit by submitting approvable reports and plans including implementation schedules; (vi) complete the tasks identified in the implementation schedules in a timely manner; (vii) incorporate the implementation schedules, operating plans, and request for a variance if appropriate and necessary into an application for an amended Catalum SPDES Permit; and (viii) pay civil penalties and damages for its illegal conduct.

Parties

4. DEC is an executive agency of the State of New York, authorized to administer and enforce the provisions of Article 17 of the New York State Environmental Conservation Law ("ECL"), and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("NYCRR"), including regulating the discharge of pollutants to surface and groundwaters by means of SPDES permits upon condition that such discharges will conform to and meet or exceed all applicable requirements of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.), ("the Clean Water Act") and rules, regulations, guidelines, criteria, standards and limitations adopted pursuant thereto related to effluent limitations, new source performance standards, toxic and pretreatment effluent limitations, ocean discharge criteria, and monitoring.

5. New York City Department of Environmental Protection ("NYCDEP" or "Respondent") is a municipal agency with offices located at 59-17 Junction Boulevard, Queens, New York 11368. NYCDEP operates and has responsibility for the infrastructure that supplies the City of New York's drinking water supply. The City of New York is the municipal corporation that

owns the aforesaid infrastructure. These entities are collectively referred to herein as "Respondents".

6. Respondents are a "person" as defined in ECL §17-0105(1) and at 6 NYCRR 750-1.2(64).

7. Respondents own and operate the Ashokan Reservoir in Ulster County, and the Catskill Aqueduct and Kensico Reservoir in Westchester County.

8. Unfiltered drinking water from the Ashokan Reservoir is conveyed via the Catskill Aqueduct below the Hudson River to the Kensico Reservoir.

9. Respondents own and operate the Waste Channel, a structure through which NYCDEP releases water from the Ashokan Reservoir to the Little Beaver Kill, and then to the Lower Esopus Creek.

FACTS COMMON TO ALL CAUSES OF ACTION

A. Legal Framework

10. Article 17 of the ECL, entitled "Water Pollution Control," declares that the public policy of the State is to "require the use of all known available and reasonable methods to prevent and control the pollution of the waters of the state of New York." ECL §17-0101; see ECL §17-0103 (purpose of Article 17 is "to safeguard the waters of the state from pollution by preventing any new pollution and abating [existing] pollution").

11. DEC has promulgated standards for the "quality and purity of the waters" of the State, commonly referred to as "water quality standards." ECL § 17-0301. Under ECL § 17-0501, "(i)t shall be unlawful for any person, directly or indirectly, to throw, drain, run or otherwise

discharge into such waters organic or inorganic matter that shall cause or contribute to a condition in contravention” of water quality standards for the receiving water. See section 703.2 of Title 6 of NYCRR (narrative water quality standard for discharges of suspended, colloidal and settleable solids to Class AA waters is “None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.”)

12. In addition, ECL § 17-0511 prohibits the use of point sources unless in compliance with all standards, criteria, rules and regulations, and limitations promulgated or approved by the Department. 6 NYCRR 750-1.4 (a) provides that: “... no person shall discharge or cause a discharge of any pollutant without a SPDES permit having been issued to such person pursuant to this Article and ECL Article 17, title 7 or 8, with respect to such discharge; and no person shall discharge or cause a discharge of any pollutant in a manner other than as prescribed by such permit.”

13. It is illegal for any “person to discharge pollutants to the waters of the state from any outlet or point source” without a SPDES permit, or in violation of any term or condition of such a permit. ECL § 17-0803.

14. Section 750-1.14 of 6 NYCRR requires a SPDES permittee to comply with “requirements to implement best management practices, pollution prevention plans, studies of the effects of the permitted discharge on the receiving water, studies of the treatability of the permitted discharge and studies of the discharge to determine usable analytical procedures and analytical capabilities ...” 6 NYCRR 750-2.1 (e) provides that “(t)he permittee must comply with all terms and conditions of the permit. Any permit noncompliance constitutes a violation of the

Environmental Conservation Law and the Clean Water Act and is grounds for: enforcement action; permit suspension, revocation or modification; and denial of a permit renewal application.”

15. The term “waters of the state” includes all “bodies of surface or underground waters...which are wholly or partially within or bordering the state or within its jurisdiction,” and the term “point source” means “any discernible, confined and discrete conveyance, but not limited to pipes.” ECL §§17-0105(2), 17-0105(11), 17-0105(16).

16. The term “pollutants” is defined broadly, and includes “...chemical wastes, biological materials, rock...sand....” ECL §17-0105(17).

17. The Filtration Avoidance Determination (“FAD”) is an agreement between Respondents and the United States Environmental Protection Agency (USEPA), in consultation with the New York State Department of Health (DOH), in which Respondents commit through a watershed protection program to provide the safest and purest drinking water possible which, at a minimum, meets the requirements of the Surface Water Treatment Rule for unfiltered water supply systems. EPA granted “primacy” for this regulatory authority to the DOH in September 2007.

18. A State Pollutant Discharge Elimination System (“SPDES”) Permit is a DEC authorization to discharge a pollutant to waters of the State which is subject to requirements designed to safeguard the waters from pollution to “maintain reasonable standards of purity of the waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of fish and wild life, including birds, mammals and other terrestrial and aquatic life...”. ECL §§17-0101, 17-0103, 17-0801.

20. Unpermitted discharges and other acts that violate ECL Article 17, or regulations promulgated under that statute, subject a violator to civil liability of up to \$37,500 per day for each violation and such person may be enjoined from continuing such action. ECL §71-1929(1).

B. The New York City Water Supply System

21. At more than 150 years old, with an average daily demand of approximately 1.2 billion gallons, New York City has one of the oldest and largest water systems in the world. New York City's Water Supply is delivered by three systems.

22. Approximately 40% of the City's average demand is provided by the Catskill System (comprised of the Schoharie Reservoir, Shandaken Tunnel, and Ashokan Reservoir). The Delaware and Croton Systems supply the balance of the City's demand.

23. Schoharie Reservoir is fed by a 314 square mile watershed, and delivers up to 615 mgd to the Catskill System via the Shandaken Tunnel, which releases into Esopus Creek. Esopus Creek drains a watershed of 200 square miles, and flows into the West Basin of the Ashokan Reservoir. Water from the Ashokan Reservoir is conveyed via the Catskill Aqueduct to the Kensico Reservoir, where it typically mixes with water from the Delaware system before being disinfected with chlorine and conveyed to the City.

24. Preventing pathogens from contaminating the water is of particular concern for the New York City Water Supply because of the risks pathogens pose to public health.

25. Pathogens include viruses and bacteria, such as Giardia lamblia, cryptosporidium, and E.coli 0157:H7, which can cause serious illness or death, especially among the very young, elderly, and immune-compromised.

26. Turbid water can shelter pathogens from exposure to attack by chlorine, a commonly used disinfectant in the New York City Watershed.
27. Periodic storm events erode naturally occurring silt and clay deposits in stream banks and channels in the Schoharie and Ashokan watersheds, and can lead to elevated turbidity levels in the Schoharie Reservoir, the Shandaken Tunnel Diversion, Esopus Creek, the Ashokan Reservoir, and in the Catskill Aqueduct diversions to the Kensico Reservoir.
28. Elevated turbidity is of concern primarily due to its potential impact on the disinfection process and the overall quality of New York City's unfiltered drinking water supply.
29. The Safe Drinking Water Act Amendments of 1986 required the United States Environmental Protection Agency ("USEPA") to develop criteria under which filtration would be required for public surface water supplies.
30. In 1989, USEPA promulgated the Surface Water Treatment Rule which requires Respondents to either provide filtration or meet objective water quality criteria levels which must include turbidity at no time exceeding 5 Nephelometric Turbidity Units (NTU) "ensuring that the system is not a source of waterborne disease outbreak." 40 C.F.R. 141.71.
31. USEPA issued to Respondents a five year FAD in 1997, which was a waiver from an obligation to build and operate a costly filtration plant to filter water from the New York City Water Supply System in exchange for a commitment by Respondents to acquire environmentally-sensitive land in the watershed, adopt strong watershed rules and regulations, and institute and maintain a comprehensive watershed protection program. USEPA issued

another 5-year FAD in 2002, and another ten year FAD in 2007, which continues to allow Respondents to not filter drinking water from the Catskill/Delaware system.

32. Pursuant to the 2007 FAD, USEPA/DOH/DEC approved Respondents' Catskill Turbidity Control Phase III Implementation Plan by letter dated November 26, 2010, subject to Respondents' satisfaction of additional requirements including, among other items, a requirement to provide a description/discussion on how the Ashokan Waste Channel was being used for turbidity control, how maximum release and flow ramping rates are determined and implemented, and how duration of use is determined. Exhibit A. Letter from R. Sokol to D. Warne November 26, 2010.

C. Respondents' SPDES Permit

33. The FAD and the DEC-issued SPDES Permit No: 026 4652, which is attached hereto and incorporated herein as Appendix A, for the periodic addition of aluminum sulfate (alum) and sodium hydroxide to reduce turbidity in the Catskill Aqueduct ("Catalum SPDES Permit"), are different regulatory instruments, issued by different regulatory agencies for different purposes.

34. In the November 26, 2010 letter cited in paragraph 32 above, DEC/DOH/USEPA noted that approval of the Catskill Turbidity Control Phase III Implementation Plan was given in reference to Respondents' satisfaction of the FAD requirements, and not with respect to Respondents' satisfaction of its obligations to comply with the terms of DEC's Catalum SPDES Permit. Exhibit A. Letter from R. Sokol to D. Warne November 26, 2010.

35. Even though the FAD requires Respondents to maintain a turbidity level no higher than 5 NTU in the Kensico Reservoir, and Respondents use alum to accomplish that goal, the FAD does

not authorize Respondents to discharge alum to waters of New York State, and does not shield Respondents from the obligation to obtain and comply with all of the terms of a SPDES permit.

36. Alum begins to be a waste product and pollutant at the moment it is injected into the water in the Catskill Aqueduct which is flowing from the Ashokan Reservoir into the Kensico Reservoir.

37. Alum in water forms aluminum hydroxide and comes into contact with the natural suspended solids in the water flowing from the Ashokan Reservoir to the Kensico Reservoir.

38. As the water containing aluminum hydroxide and the naturally occurring suspended solids are mixed and come in contact with other particles, larger, more settleable particles are created ("alum sludge" or "alum floc").

39. Alum floc is a chemical waste when it arrives in the reservoir.

40. The alum floc particles settle out of the water column in the Kensico Reservoir.

41. Using alum to reduce turbidity in the water column can cause the user to violate narrative water quality standards for settleable solids. See Hudson River Fishermen's Association v. City of New York, 751 F. Supp. 1088 (1990) (alum sludge or floc is a pollutant; alum begins to be a waste product and pollutant when injected into the water and the floc is a chemical waste and a pollutant when it arrives in the reservoir).

42. In April, October and November 2005 and throughout 2006, Respondents added alum to the Catskill Aqueduct to control turbidity in the Kensico Reservoir.

43. DEC issued the Catalum SPDES Permit to Respondents effective January 1, 2007, for the periodic addition of alum and sodium hydroxide to reduce turbidity in the Catskill Aqueduct.

44. DEC is authorized to issue SPDES permits regulating the discharges of pollutants from point sources to the waters of New York State upon condition that such discharges will conform to and meet all applicable requirements of the Clean Water Act ("CWA") and New York State law. If a permittee "is unable to comply with the effluent limitations adopted by NYDEC, CWA provisions and implementing regulations still provide means of enabling the NYDEC to issue a valid permit to the City. The permit may include a schedule of compliance, allowing the permittee to achieve compliance over time. 33 U.S.C. § 1362 (17); 40 CFR § 122.47" See Catskill Mts. Chapter of Trout Unlimited, Inc. v. City of New York, 451 F.3d 77 (2d Cir. N.Y. 2006) ECL §§ 17-0811, 17-0813.

45. DEC tied its permit authorization allowing Respondents to discharge alum into waters of the State, namely the Kensico Reservoir, – and Respondents' resulting violation of the State's narrative water quality standard for settleable solids - to Respondents' obligation to drive toward an end where it no longer resorts to the chemical addition of alum to remedy its problem of meeting the Surface Water Treatment Rule limit of no turbidity in excess of 5 NTU. When Respondents satisfy the obligations established in the Schedule of Compliance, Respondents will attain compliance with the narrative water quality standard for settleable solids through the use of all known available and reasonable methods within the shortest reasonable time. ECL§ 17-0101. 6 NYCRR 750-1.14.

46. The Catalum SPDES Permit Schedule of Compliance Item (c) requires Respondents to remove alum floc deposits from the Kensico Reservoir by complying with the following steps: Respondents must submit on or before July 1, 2007 an approvable report for the purpose of

establishing a scientific basis for the quantity of alum floc deposits that must be removed from the receiving water in order to meet the narrative water quality standard for suspended, colloidal and settleable solids in the Kensico Reservoir; and then remove those deposits in accordance with an ECL Article 15 dredging permit. Appendix A. p.9.

47. The Catalum SPDES Permit Schedule of Compliance Item (b) requires Respondents to minimize the area of floc that is, and may be, deposited in the Kensico Reservoir by submitting on or before July 1, 2007 an approvable report which analyzes alternatives and proposes an implementation plan to minimize the area of floc deposition resulting from addition of alum and sodium hydrozide;

48. The Catalum SPDES Permit Schedule of Compliance Item (d) requires Respondents to reduce the amount and duration of alum use by implementing structural measures, including potential improvement of the Waste Channel so that water may be diverted from the West Basin of the Ashokan Reservoir to create a void that can absorb storms, or to remove turbid water that would otherwise enter the Catskill Aqueduct Intake Chamber and need to be treated with alum before entering the Kensico Reservoir, among other alternatives. Respondents are directed to satisfy this step in the Schedule of Compliance by complying with the following: "Respondents must submit on or before April 30, 2008 an approvable report detailing the short and long term structural modifications evaluated and proposed for implementation in the Phase III Catskill Turbidity Control Study", along with a schedule for implementation with specific information about how the Waste Channel is proposed to be used, the potential impacts to biota, residents and

property, the duration, frequency, volume, timing and temperature considerations; and then Respondents must implement the approved structural alternatives.

49. The Catalum SPDES Permit Schedule of Compliance Item (e) requires Respondents to reduce the amount and duration of alum use by evaluating and implementing non-structural measures, including actions to be taken with respect to an heightened or more expansive implementation within the Ashokan Reservoir basin of program activities established under the 1997 New York City Watershed Memorandum of Agreement, the 2002 FAD, and subsequently issued FADs, including an investigation of potential stream management and erosion control projects, projected turbidity reductions, and recommended actions to be taken along with a schedule for implementation. Respondents are directed to satisfy this step in the Schedule of Compliance by complying with the following: Respondents must submit on or before July 1, 2008 an approvable report which analyzes non-structural measures to reduce turbidity, an investigation of alternatives, projected turbidity reductions, and recommended actions to be taken, along with a schedule for implementation; and then implement the approved non-structural alternatives. Appendix A. p.11

50. DEC reviewed the Catskill Turbidity Control Phase III Implementation Plan and a number of other reports Respondent submitted for compliance with Respondents' Catalum SPDES Permit and wrote to Respondents on July 19, 2009. The letter informs Respondents that they failed to submit an approvable plan to determine the extent of alum floc deposits to be removed from the Kensico Reservoir; an approvable plan which chooses an alternative to be implemented to minimize the area of alum floc deposition in Kensico Reservoir; an approvable

plan for implementing turbidity reduction measures above and beyond the FAD; and if Respondents intend to make high releases through the Waste Channel to the Lower Esopus “for the purpose of creating a void in Ashokan Reservoir...[that] should be avoided and only allowed after approval from DEC.” Further, DEC informed Respondents that an approvable plan for using the Waste Channel has not been submitted and must be submitted no later than September 16, 2009. Exhibit B. Letter from J. Tierney to D. Warne July 17, 2009.

51. DEC repeated its request for additional information concerning Respondents’ plans in a letter dated December 15, 2010. Exhibit C. Letter from K. Kosinski to D. Warne.

AS A FIRST CAUSE OF ACTION

52. Respondents implemented a measure to reduce turbidity in the waters entering the Catskill Aqueduct which consisted of diverting water from the Ashokan Reservoir through the Waste Channel to the Lower Esopus Creek releasing a flow of turbid water from the Ashokan Reservoir in quantities up to 600 million gallons a day from October 9, 2010 through February 01, 2011, without obtaining the Department’s prior approval and without providing the Department with crucial information that the Department repeatedly requested concerning conditions which would warrant the use of the Waste Channel, potential impacts to the Lower Esopus Creek, ramping rates, maximum releases, and duration in violation of ECL § 17-0803 and 6 NYCRR 750-2.1.

53. Respondents have failed and continue to fail to provide DEC with the necessary information to determine how Respondents propose to use the Waste Channel, “potential negative impacts to biota, residents and property from periodic, and/or poor quality releases to

the Lower Esopus Creek, ... potential benefits that could be realized by partially restoring the pre-reservoir flow regime to the Lower Esopus Creek, the very specific details of the conditions which would warrant the use of the diversion channel...(t)he upper limit of turbidity that is anticipated to be released.”

54. Respondents have failed and continue to fail to provide DEC with a proposed operating plan with associated protocols for the diversion of water through the Waste Channel as required by the terms of Item (d) in the Catalum SPDES Permit Schedule of Compliance. DEC would expect Respondents to address in the plan the Respondents’ ability to commit to ecosystem-based releases for downstream habitat, maximum limits of turbidity that would be released, ramping rates, maximum quantity releases, duration, and contingency plans.

55. Pursuant to ECL §17-1929, DEC is entitled to an Order determining that Respondents have violated the terms of the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each discharge into the Little Beaver Kill and Lower Esopus Creek, and may also be enjoined from such action.

AS A SECOND CAUSE OF ACTION

56. On January 31, 2011 Respondents commenced adding alum to the Catskill Aqueduct.

57. Upon information and belief, Respondents are continuing to add alum to the water flowing through the Catskill Aqueduct into the Kensico Reservoir, without providing an approvable plan for removal of the alum they deposit.

58. In violation of ECL §17-0501, Respondents discharged alum floc into the Kensico Reservoir which has caused and contributed to the contravention of water quality standards for settleable solids for Class AA receiving waters set forth at 6 NYCRR 701.5 and 703.2.

59. Upon information and belief, Respondents continue to violate the State's water quality standards in the Kensico Reservoir.

60. Pursuant to ECL §71-1929, the State is entitled to an Order finding that Respondents have violated the terms of the ECL §17-0501 and the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each violation.

AS A THIRD CAUSE OF ACTION

61. In October 2007, Respondents estimated that the alum sludge or floc that Respondents have discharged into the Kensico Reservoir covers approximately 60 acres of the reservoir bottom in settlement depths that range from less than 0.5 feet to as much as 5 feet.

62. In violation of § 17-0803 and 6 NYCRR 750-2.1, Respondents have failed to comply with the conditions of its Catalum SPDES Permit which require Respondents to submit by July 1, 2007 an approvable report for the purpose of establishing a scientific basis for the quantity of alum floc deposits that must be removed from the receiving water in order to meet the narrative water quality standard for suspended, colloidal and settleable solids in the Kensico Reservoir, and then remove those deposits in accordance with an ECL Article 15 dredging permit.

63. Respondent has failed and continues to fail to remove alum from the Kensico Reservoir.

64. Respondents' failure to submit an approvable report and implementation schedule, and failure to remove the deposits pursuant to Item (c) of the Schedule of Compliance of the SPDES

permit is a violation of the SPDES permit, and ECL §17-0511, ECL §17-0803, and 6 NYCRR Part 750-2.1.

65. Pursuant to ECL §71-1929, the State is entitled to an Order finding that Respondents have violated the terms of the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each violation, and may also be enjoined from such action.

AS A FOURTH CAUSE OF ACTION

66. In violation of §17-0803 and 6 NYCRR 750-2.1, Respondents have failed to comply with the conditions of its Catalum SPDES Permit which require Respondents to submit by July 1, 2007 an approvable report which analyzes alternatives to minimize the area of floc deposition resulting from addition of alum and sodium hydrozide.

67. Respondents have failed and continue to fail to provide DEC with the information needed to approve Respondents' plans for structural measures for floc minimization in the Kensico Reservoir.

68. Respondents' failure to submit an approvable report and implementation schedule pursuant to Item (b) in the Schedule of Compliance of the SPDES permit is a violation of the SPDES permit and ECL §17-0511, ECL § 17-0803, and 6 NYCRR Part 750-2.1.

69. Pursuant to ECL §71-1929, the State is entitled to an Order finding that Respondents have violated the terms of the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each violation.

AS A FIFTH CAUSE OF ACTION

70. In violation of §17-0803 and 6 NYCRR 750-2.1, Respondents have failed to comply with the conditions of the Catalum SPDES Permit which require Respondents to submit by April 30, 2008 an approvable report detailing the short and long term structural modifications evaluated and proposed for implementation in the Phase III Catskill Turbidity Control Study”, along with a schedule for implementation, and which report includes an investigation of alternatives, projected turbidity reductions, and recommended alternatives with specific information about how the Waste Channel is proposed to be used, the potential impacts to biota, residents and property, the duration, frequency, volume, timing and temperature considerations,

71. Respondents’ failure to submit an approvable report and implementation schedule pursuant to Item (d) of the Schedule of Compliance of the SPDES permit, especially in consideration of the unprecedented nature of Respondents’ prolonged discharge of turbid water in a significant quantity, and DEC’s repeated requests for information concerning the conditions under which turbid water would be released and potential impacts upon the environment and communities of the Little Beaver Kill and Lower Esopus Creek, without DEC’s approval of an operating plan with associated protocols for the use of the Waste Channel, is a violation of the SPDES permit and ECL §17-0511, ECL §17-0803, and 6 NYCRR Part 750-2.1.

72. Pursuant to ECL §71-1929, the State is entitled to an Order finding that Respondents have violated the terms of the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each violation.

AS A SIXTH CAUSE OF ACTION

73. In violation of §17-0803 and 6 NYCRR 750-2.1, Respondents have failed to comply with the conditions of its Catalum SPDES Permit, which require Respondents to submit by July 1, 2008 an approvable report which analyzes non-structural measures to reduce turbidity, an investigation of alternatives, projected turbidity reductions, and recommended actions to be taken, along with a schedule for implementation.

74. Respondents' failure to submit an approvable report and implementation schedule pursuant to Item (e) of the Schedule of Compliance of the SPDES permit is a violation of the SPDES permit and ECL §17-0511, ECL §17-0803, and 6 NYCRR Part 750-2.1.

75. Respondents have failed and continue to fail to provide DEC with the information needed to approve Respondents' plans for non-structural measures including an investigation of potential stream management and erosion control projects, with respect to a heightened or more expansive implementation within the Ashokan Reservoir basin of program activities established under the 1997 New York City Watershed Memorandum of Agreement, and the 2002 FAD, the 2007 FAD, and any subsequently issued FADs.

76 Pursuant to ECL § 71-1929, the State is entitled to an Order finding that Respondents have violated the terms of the Catalum SPDES Permit, and Respondents are liable to the State for a civil penalty of up to \$37,500 per day for each violation.

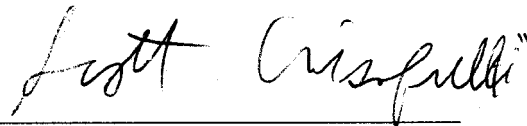
WHEREFORE, the Department respectfully requests an Order finding Respondents in violation of the cited Statutes, Regulations, and SPDES Permit; and directing Respondents to:

- (A) remove alum floc deposits that must be removed in order to meet the water quality standard for suspended, colloidal, and settleable solids in the Kensico Reservoir;
- (B) release water through the Waste Channel after the effective date of the Order only when the Department approves Waste Channel releases for the beneficial interest of the Little Beaver Kill and Lower Esopus Creek communities such as flood mitigation, or upon the Department's approval, with consultation from Ulster County and other interested downstream parties, of an operating plan with associated protocols including on-going monitoring of the Little Beaver Kill and Lower Esopus Creek for use of the Waste Channel;
- (C) fund an independent study and assessment of the impacts and damages from turbid water releases to the Lower Esopus and provide the results to DEC;
- (D) submit information that the Department requested in the letters dated July 17, 2009 and December 10, 2010;
- (E) comply with the terms of its SPDES permit by submitting the approvable reports and plans noted above, including implementation schedules;
- (F) complete the tasks identified in the implementation schedules in a timely manner;
- (G) incorporate the implementation schedules, operating plans, into an application for an amended Catalum SPDES Permit;
- (H) pay civil penalties in the amount of two million six hundred thousand dollars (\$2,600,000); and
- (I) for such other and further relief as the Court deems just and proper.

Dated: Albany, New York
February 15, 2010

Office of General Counsel:

by:



Scott Crisafulli
Water Compliance Counsel
Attorney for Department Staff
625 Broadway, 14th Floor
Albany, New York 12233-5500
Phone (518) 402-9507
Facsimile (518) 402-9019

TO:

Michael A. Cardozo, Esq.
NYC Law Department
Corporate Counsel's Office
100 Church Street
New York, NY 10007

EDMS#392100

EXHIBIT A



STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

James W. Clyne, Jr.
Executive Deputy Commissioner

November 26, 2010

David S. Warne
Assistant Commissioner
NYC Department of Environmental Protection
Bureau of Water Supply
465 Columbus Avenue
Valhalla, NY 10595-1336

Re: FAD Approval of the Catskill Turbidity Control Phase III Implementation Plan

Dear Mr. Warne:

We have completed our review of the Catskill Turbidity Control Studies Phase III Implementation Plan (the Plan), submitted by the NYC Department of Environmental Protection (DEP) on July 31, 2008. This Plan is part of a series of reports in conjunction with the analysis of engineering and structural alternatives for turbidity control within the Catskill system. Pursuant to the 2007 Filtration Avoidance Determination (FAD), the Plan is subject to review and approval by the New York State Department of Health (DOH), the United States Environmental Protection Agency (EPA), and the New York State Department of Environmental Conservation (DEC).

As you know, in a letter dated August 26, 2008, this office provided conditional approval of the Phase II Implementation Plan which proposed to control turbidity and temperature in Schoharie Reservoir releases through a non-structural Modified Reservoir Operations (MRO) plan and development of an Operations Support Tool (OST). Subsequent to this Department's conditional approval letter, our offices met to discuss certain technical/modeling issues related to the MRO/OST approach, and we also met for a detailed discussion of the Ashokan Reservoir structural alternatives. During this process, DEP provided an updated Phase III Implementation Schedule.

The Phase III Implementation Plan includes a schedule for development and implementation of the OST, completion of revised waste channel operations, and design and construction of Catskill Aqueduct improvements which will allow DEP to better manage turbidity releases from Ashokan Reservoir. Through this letter, DOH, EPA and DEC approve the Phase III Implementation Plan and Schedule pursuant to the 2007 FAD. However, please note that this approval under the FAD does not diminish or in any way affect DEC's review and enforcement authority with respect to DEP's Catskill Aqueduct Influent Chamber SPDES Permit (#NY 026

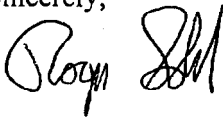
4652). DEP's compliance obligations as permittee for the Cat/Alum SPDES permit will be addressed separately by DEC.

This approval is also subject to the following additional FAD reporting requirements which are hereby established:

- By December 17, 2010 - DEP will provide a description / discussion on how the Ashokan Waste Channel is currently being used for turbidity control. While it is understood that the formal operating rules for the Waste Channel will be incorporated into the OST, a discussion of how the Waste Channel is currently being used is requested. This discussion should include: a description of conditions under which DEP would consider using the channel; how maximum release and flow ramping rates are determined and implemented; and how duration of use is determined.
- By January 7, 2011 - DEP will provide a status report detailing the progress made relative to all elements of the Catskill turbidity control effort. The report shall include a discussion of the milestones completed during the prior year and the milestones planned to be accomplished during the upcoming year. For any milestones which are missed or anticipated to be missed, DEP shall provide an explanation for the delay and actions taken or to be taken to mitigate the delay.
- By March 1, 2011 - DEP will develop, for review and approval, performance measures / criteria that can be used to evaluate the efficacy of the Catskill Turbidity Control Program once fully implemented. The performance measures should be developed to evaluate all aspects of the fully implemented program as to how it handles low, medium and high Esopus Creek inflow/ turbidity events.
- December 15, 2011 - As part of its Revised Long-Term Watershed Protection Program report, DEP will include a detailed plan regarding the ongoing and planned Catskill Turbidity Control program.
- Beginning in 2012 - DEP will convene, on an annual basis, a progress meeting with DOH, EPA and DEC, providing a forum for discussion of the status of the Catskill Turbidity Control program.

I look forward to the successful completion of all elements of the Catskill Turbidity Control program. If you have any questions regarding this letter, please do not hesitate to contact me or Dr. Pam Young at (518) 402-7650.

Sincerely,



Roger C. Sokol, Ph.D.
Acting Director
Bureau of Water Supply Protection

cc:

R. Chinery

V. Pisani

P. Young

I. Birman/I. Hyde

P. Sweeney - USEPA

T. Snow/K. Kosinski - NYSDEC

P. Bein - OAG

EXHIBIT B

New York State Department of Environmental Conservation

Assistant Commissioner

Office of Water Resources, 14th Floor

625 Broadway, Albany, New York 12233-1010

Phone: (518) 402-2794 • FAX: (518) 402-8541

Website: www.dec.ny.gov



Alexander B. Grannis
Commissioner

JUL 17 2009

Mr. David Warne
Assistant Commissioner
New York City Department of Environmental Protection
Bureau of Water Supply
465 Columbus Avenue
Valhalla, New York 10595

Ms. Tina Johnstone, P.E.
Operations Director
New York City Department of Environmental Protection
Bureau of Water Supply
P.O. Box 358, 7870 Route 42
Grahamsville, NY 12740

Re: Cat. Aqueduct Influent Chamber
SPDES Permit # NY 026 4652
Town of Mount Pleasant

Dear Ms. Johnstone and Mr. Warne:

This letter will serve as a follow up to recent conversations between the New York State Department of Environmental Conservation (NYSDEC) and the New York City Department of Environmental Protection (NYCDEP) regarding various reports NYCDEP submitted to NYSDEC pursuant to the above referenced SPDES permit (permit). Specifically, NYCDEP has submitted reports regarding dredging of alum floc material from the Kensico Reservoir, the Phase III implementation Plan for Catskill Turbidity Control in the Ashokan basin and an evaluation of turbidity reduction potential through watershed management in the Ashokan basin.

Kensico Dredging

This office has reviewed NYCDEP's September 2008 Supplemental Technical Report in response to NYSDEC's June 2, 2008 comments on NYCDEP's report entitled "Extent and Depth of Alum Floc in Kensico Reservoir," dated December 2007. The supplemental report indicates that NYCDEP recognizes that the permit conditions require removal of deposited alum solids and proposes

dredging an area totaling approximately 16 acres and removing approximately 80,000 cubic yards of sediment. As per NYSDEC comments on previous reports on this matter, NYSDEC staff concur that the investigations to date, namely the bathymetric survey, a sub-bottom sonar survey, sediment sampling, current velocity measurements, computational fluid dynamics modeling and benthic investigations, have identified the area of the majority of alum floc deposition as shown in Figure 1-1 of the supplemental report. The same area was also identified in the initial October 2007 technical report and encompasses approximately 60 acres. The technical reports identify this area as having from 0.5 to 5 feet of alum floc material and the sampling indicates that the aluminum levels in the material are at levels higher than what is considered background.

It is NYSDEC's position that alum floc that settles within the Kensico Reservoir is a violation of New York State's Water Quality Standards: 6 NYCRR Part 703.2, which indicates that for suspended, colloidal and settleable solids: "None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages." Furthermore, it is important to note that Hudson River Fishermen's Association v. City of New York, 751 F. Supp. 1088 (1990) determined that alum sludge or floc is a pollutant. Alum begins to be a waste product and pollutant at the moment it's injected into the water. The floc is a chemical waste and a pollutant when it arrives in the reservoir. Based on this, alum floc solids are clearly a waste and an appropriate amount must be removed from the Kensico Reservoir in order to be in compliance with water quality standards.

To move this issue forward, NYSDEC has determined that NYCDEP must begin dredging alum floc and shall commit to undertake a number of additional activities that will reduce alum use and floc deposition in the future. First, NYCDEP must commit to implementation of a floc minimization alternative. If there are future incidents that require the use of alum, the floc must be contained to minimize the area of impact within Kensico Reservoir to the greatest extent practicable. Upon evaluating the information in NYCDEP's own report, NYSDEC believes there is evidence that the alum deposits are contributing to changes in benthic community composition. As per previous NYSDEC comments on the October 2007 report "Feasibility of Minimizing the Area of Alum Floc Deposition in Kensico Reservoir", it is the NYSDEC's position that depending on the selected alternative to minimize the area of floc deposition, it may be prudent to wait until initial dredging is complete before implementing the recommended alternative. However, NYSDEC believes that the evaluation must be completed at this time and an alternative selected so that it can be implemented at the earliest opportunity upon completion of the initial dredging operation. Please note the SPDES permit required that an approvable report be submitted by July 1, 2007. To date, an approvable report has not been submitted. NYCDEP shall identify an alternative along with an implementation schedule and submit it to NYSDEC for approval by September 16, 2009.

NYSDEC has determined that NYCDEP must initially dredge the area identified in Figure 2-4 "Extent and Depth of Alum Floc in Kensico Reservoir, Supplement to October 2007 Technical Report," dated December 2007. This will include an area of approximately 16 acres. For the remaining approximately 44 acres, NYCDEP must undertake an in-depth study to evaluate the benefits and risks associated with the long-term adverse impacts of the alum deposition on the reservoir. Due to the limited amount of pertinent aquatic ecosystem information available for Kensico Reservoir, in general, and the study area in particular, a comprehensive habitat evaluation/assessment analysis of the alum floc remaining after the initial dredging should be conducted. NYCDEP, along with NYSDEC shall undertake a jointly-designed habitat assessment/evaluation for that portion of the reservoir where the

alum remains including those areas immediately on the periphery of the material. The results of this assessment would assist with determining whether further dredging of alum is warranted, identify any heretofore unidentified potential impacts to fisheries, and provide additional insight on the status of the reservoir's aquatic ecosystem and factors which are affecting it. NYSDEC suggests that NYCDEP break down the area of deposition into a series of polygons based on common characteristics of perhaps 2-3 acres in size, and each polygon evaluated individually to determine whether or not this area should be dredged. For example, NYCDEP indicates that near shore areas should be exempted from dredging, as those areas represent good habitat. It is NYSDEC's position that most fish do not spawn in the light, fluffy sediment resulting from the deposition of alum floc, particularly when it is several feet in depth. Such areas might provide good habitat for fish spawning, macrophyte growth, and invertebrates *after* the alum sludge is removed, but the habitat quality at present, i.e. with the alum floc there, is questionable, even if it has been recolonized by benthic invertebrates. Regardless of the method used, clear assessment criteria should be jointly developed, and approved by NYSDEC.

Phase III Implementation Plan

This office has also reviewed the Catskill Turbidity Control Phase III Implementation Plan dated July 31, 2008 submitted pursuant to the referenced permit. It is acknowledged that the Implementation Plan must also be reviewed and approved pursuant to the Filtration Avoidance Determination (FAD). The Implementation Plan calls for alternatives consisting of three practices and associated structural improvements, namely: West Basin Drawdown, Waste Channel Operation and Catskill Aqueduct Improvements. The Implementation Plan indicates that development of formal operating rules for the alternatives will require the Operations Support Tool (OST) and that the OST is expected to be completed in 2012. In concept, this office supports the Implementation Plan's selected alternatives noted above and understands the final formal operating rules will be developed along with the OST. At this time, however, the NYSDEC has the following comments for consideration in the development of operating rules for the selected alternatives:

- Ability for ecosystem-based release for downstream habitat

The lower Esopus Creek has been significantly changed over the past 90 years since the construction of the Ashokan Reservoir, which has effectively truncated the upper half of its watershed. As discussed below, depending on how the diversion channel is used, there are also potential negative impacts to biota, residents and property from periodic, and/or poor water quality releases to the lower Esopus Creek. There are also, however, huge potential benefits that could be realized by partially restoring the pre-reservoir flow regime to the lower Esopus Creek. The ability to maintain ecosystem based releases should be discussed in any plans to routinely utilize the diversion channel. The volume and timing of releases should take into account the benefits that could be realized by the biota, residents and property downstream. The expected year round water quality conditions and water temperatures of the releases should be predicted. The volume and seasonal timing of varied releases could be set as experimental at first, with studies to follow and potential adjustments made in the future.

- Conditions which would warrant use

Very specific details of the conditions which would warrant the use of the diversion channel should be outlined. The upper limit of the turbidity that is anticipated to be released should be identified.

Impacts of releasing turbid water to the lower Esopus Creek should be considered. Simply transferring the problem of turbid, undesirable, water from the reservoir to the lower Esopus Creek needs to be avoided unless the benefits are clearly defined. "Making up" for this with consistent high water quality releases throughout the rest of the year could be used to mitigate the potential negative impacts of high turbidity releases. Weighing the environmental benefit of reduced alum treatments into Kensico Reservoir versus the negative environmental impacts of turbid water being released to the lower Esopus Creek should be used to help determine when releases above the minimum should be made.

If high releases are to be made for the purpose of creating a void in Ashokan Reservoir to attenuate turbid flows and/or for flood control downstream, true benefits of this should be clearly defined and explained. It is understood that reservoir already provides some protection from peak flood levels. Reservoir level reductions made to create a void and/or for flood control from Ashokan Reservoir should be applied to void level determinations effecting Part 670 regulations. Part 670 allows for maximum diversions from Schoharie Reservoir when more than a 5 billion gallon void exists in Ashokan Reservoir. In other words, purposefully creating a void in Ashokan Reservoir with the idea that this water could be made up from Schoharie Reservoir, especially during periods when coldwater conservation is of particular concern in Schoharie Reservoir, should be avoided and only allowed after approval from NYSDEC.

- Ramping Rates

Incremental flow increases and decreases ("ramping rates") should be established to prevent the sudden shifts in flow volume that downstream residents, recreational users of this resource and biota do not have time to react to. These rates should follow similar ramping rates that have been established for other releases within the NYC system.

- Maximum releases and duration

The Phase III Plan discusses increasing the possible maximum flow from the diversion channel to 1800 cfs. The impacts to the biota downstream need to be considered and addressed. Frequency, volume, timing, and temperature of these releases all can have differing impacts.

The impacts that this flow level may have to downstream uses should be addressed. For instance there is a swimming beach on the Esopus Creek 8.9 miles downstream at Tongore Park. Turbid high water conditions could potentially impact this form of recreation at this location.

Stream banks along the lower Esopus Creek before the reservoir was built obviously had to contend with much higher flows over a longer period of time than they have over the last 90 years. The duration of high releases from the diversion channel however could be unnaturally long and result in bank saturation. Stream bank saturation can result in potential bank failure and increased erosion. For example, bank failure is occurring near Hurley Mountain Road, and some believe the prolonged high releases during the Gilboa Dam emergency (2006 at rates up to 600 mgd) may have contributed to this erosion problem. This issue should be considered and possibly an upper limit on both flow and duration of flow should be established.

It should be noted that it is NYSDEC's intention to collaborate with NYCDEP on establishing operating protocols for implementation of the selected alternatives and ultimately incorporate them into the referenced SPDES permit. NYSDEC requires that NYCDEP submit to NYSDEC, for approval an operating plan with associated protocols for use of the diversion channel that addresses the specific issues identified above. This plan shall be submitted to NYSDEC by no later than September 16, 2009.

Above and Beyond the FAD

This office has also reviewed the NYCDEP report entitled "Evaluation of Turbidity Reduction Potential through Watershed Management in the Ashokan Basin" dated November 15, 2008 prepared in response to previous NYSDEC comments to a submission by NYCDEP required by the permit. The purpose of the report was to evaluate the potential benefits of increased or focused funding and implementation, within the Ashokan Reservoir basin, of FAD programs including whole farm, forestry, willing seller land acquisition, stream restoration, stormwater retrofit, stream buffer and conservation easement programs. The report contains a number of activities identified as FAD and permit commitments as well as several additional commitments including: 1) an additional \$1.647 million to Cornell Cooperative Extension to support stream management education and outreach activities; 2) \$4.4 million for Ulster County Soil & Water for stream management planning and implementation; and (3) \$100,000 for a project with the New York State Geological Survey to remap the surficial geology of the Esopus Creek watershed. However, our office is also in receipt of the enclosed "2007 FAD Stream Management Program Funds Allocation and Relationship to Compliance Requirements of the FAD and SPDES Permits," dated March 5, 2009. In reviewing this document it would appear that the additional commitments noted within this document that are funded by the permit requirement include: (1) \$2,796,015 for personnel and OTPS; (2) \$255,246 for staff training, education and outreach; (3) \$286,000 for consultants; and (4) \$270,309 for equipment. While these commitments are noteworthy, the permit specifically requires NYCDEP to commit to additional measures above and beyond the FAD that will "achieve the goals of turbidity reduction and reduced alum usage within the Ashokan Reservoir basin." In NYCDEP's report entitled "Evaluation of Turbidity Reduction Potential through Watershed Management in the Ashokan Basin," dated July 1, 2008, the Stream Management Program was identified as having "the greatest possibility of producing an impact on reducing delivery of turbid water to Ashokan Reservoir by potentially reducing in-stream erosive contact with clay and silt sources." As previously stated in correspondence dated October 10, 2008, NYSDEC agreed with this approach and believes NYCDEP must commit to undertake additional turbidity reduction activities specifically identified and recommended within the stream management plans for the Ashokan Basin in order to comply with this SPDES permit requirement. Please note the permit required that an approvable report be submitted by July 1, 2008. To date, an approvable report has not been submitted. Therefore, NYCDEP must submit this report to NYSDEC by no later than September 16, 2009.

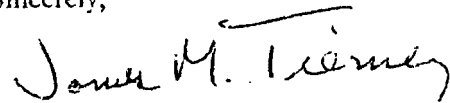
Order on Consent

Since NYCDEP has not submitted an approvable plan for implementing turbidity reduction measures above and beyond the FAD; nor submitted an approvable plan which chooses an alternative to be implemented to minimize the area of alum floc deposition in Kensico Reservoir; nor submitted an approvable plan to determine the extent of alum floc deposits to be removed from the Kensico Reservoir, NYSDEC requires that NYCDEP enter into an Order on Consent. The Order on Consent will include, but not necessarily be limited to, an enforceable implementation plan and associated

implementation schedule to complete the following: (1) dredging of initial 16 acres of deposition; (2) flocc minimization alternative; (3) development of a comprehensive habitat evaluation/assessment analysis program for the remaining 44 acres of alum flocc; (4) dredging of the remaining 44 acres depending on results of habitat evaluation/analysis; and (5) operating protocol(s) and/or procedure(s) for use of the Ashokan Reservoir diversion channel.

As always, NYSDEC staff is willing to meet to discuss these matters. Please contact Thomas R. Snow Jr., at (518) 402-9395 if you have any questions.

Sincerely,



James M. Tierney
Assistant Commissioner for Water
Resources

Enclosure

c: R. Sokol, NYSDOH
P. Sweeney, USEPA
T. Snow, NYSDEC
C. Spreitzer, NYSDEC
K. Kosinski, NYSDEC
D. Stang, NYSDEC
B. Rudge, NYSDEC R3
M. Flaherty, NYSDEC R3
T. Rudolph, NYSDEC R3

EXHIBIT C

**New York State Department of Environmental Conservation
Division of Water**

Bureau of Water Resource Management, 4th Floor
625 Broad way, Albany New York 12233-3508
Phone: (518) 402-8086 • Fax: (518) 402-9029
Website: www.dec.ny.gov



Peter M. Iwanowicz
Acting Commissioner

December 15, 2010

Mr. David Warne
Assistant Commissioner
New York City Department of Environmental Protection
Bureau of Water Supply
465 Columbus Avenue
Valhalla, New York 10595

Tina Johnstone, P.E.
Operations Director
New York City Department of Environmental Protection
Bureau of Water Supply
P.O Box 358, 7870 Route 42
Grahamsville, NY 12740

**Re: Cat. Aqueduct Influent Chamber
SPDES Permit # NY 026 4652
Town of Mount Pleasant**

Dear Ms. Johnstone and Mr. Warne:

In a letter dated July 17, 2009,(attached) the New York State Department of Environmental Conservation (Department) provided comments to the New York City Department of Environmental Protection (NYCDEP) on the Phase III Implementation Plan for Catskill Turbidity Control in the Ashokan basin submitted pursuant to the above referenced permit. The Implementation Plan called for several alternatives, one of which was utilization of the Ashokan Diversion Channel. The July 17, 2009 letter noted that it is the Department's intention to collaborate with NYCDEP on establishing operating protocols for implementation of the selected alternatives, including the diversion channel, and ultimately incorporate them into the above referenced SPDES permit. The Department further required that NYCDEP submit, for approval an operating plan with associated protocols for use of the diversion channel that addresses the specific issues identified in the July 17, 2009 letter.

To date, the NYCDEP has not provided the operating plan requested to the Department. Furthermore, NYCDEP continues to utilize the diversion channel. In 2010, the waste channel released water to the lower Esopus Creek for the majority of days in January, February and March. Again, this fall, NYCDEP has utilized the diversion channel to release turbid water nearly every day from October through the date of this letter. It is the Department's position that a comprehensive release strategy for releases from the Ashokan Reservoir is needed and required

pursuant to the above referenced permit. Depending on how the diversion channel is used, there are potential negative impacts to biota, residents and property from periodic, and/or poor water quality releases to the lower Esopus Creek. The duration, frequency, volume, timing, and temperature of these releases all can have differing impacts. In addition to the information required in our July 17, 2009 letter, the Department believes there is a need for additional data collection and analysis to characterize existing conditions and the conditions throughout the time period that the waste channel is utilized. Our goal is to establish a scientifically based release regime for the lower Esopus Creek. NYCDEP is also aware of other stakeholder interests in the diversion channel discharge. The Department copied NYCDEP on our December 13, 2010 letter to the Lower Esopus Watershed Partnership where we indicate that we will be looking to work with NYCDEP and all stakeholders to on these issues. At this time, the Department is requesting that NYCDEP develop and submit a sampling plan for review and approval by February 1, 2011. The sampling plan should include the following at a minimum: temperature, turbidity, total suspended solids, and flow data.

- Sites – upstream at Boiceville to characterize influent to West Basin
- Within Ashokan – I understand DEP may already have specific locations within the Reservoir with various locations/depths. Flow data would not be necessary.
- Diversion channel discharge

I understand that NYCDEP currently collects various water quality and flow data within and around the Ashokan reservoir. It is suggested that we meet to discuss to allow the Department to better understand the level of NYCDEP's existing monitoring efforts so that a mutually agreeable sampling plan can be developed and implemented. I will be contacting you in the near future to set up such a meeting. In the interim, please do not hesitate to call me at (518) 402-8110.

Sincerely,



Kenneth Kosinski, P.E.

cc R. Sokol/P. Young – NYSDOH
P. Sweeney – USEPA
W. Janeway – DEC R3
T. Rudolph – DEC R3
M. Flaherty – DEC R3
T. Snow – DEC CO
C. Spreitzer – DEC CO
LEWP