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October 9, 2012

VIA ELECTRONIC MAIL

Ms. Sheri Jewhurst
New York Watershed Management Section
Watershed Management Branch
Environmental Protection Agency, Region 2
290 Broadway
New York, New York 10007-1866

Re: Riverkeeper Comments in support of EPA's Partial Disapproval of the New York State 2012 Section 303(d) List of Impaired/TMDL Waters, based on its Determination that the Lower Esopus Creek is an Impaired Water Requiring a TMDL

Dear Ms. Jewhurst:

We write on behalf of our client, Riverkeeper, Inc. ("Riverkeeper"), in support of the United States Environmental Protection Agency's ("EPA") August 16, 2012 determination to partially disapprove the New York State 2012 Section 303(d) List of Impaired/TMDL Waters ("2012 Section 303(d) List"), as published in the Federal Register on September 6, 2012, based on New York State Department of Environmental Conservation's ("NYSDEC") proposed decision to exclude the Lower Esopus Creek.¹

Riverkeeper commends EPA for its determination that the Creek is an impaired waterbody, which should be included on NYSDEC's 2012 Section 303(d) List. EPA clearly made this decision only after carefully considering all existing and readily available data and information,² including submissions provided by Riverkeeper.³ It is undeniable that the Lower

¹ See 74 Fed. Reg. 54,909 (Sept. 6, 2012).

² See ENVTL. PROT. AGENCY, FACT SHEET ON NEW YORK STATE'S 2012 IMPAIRED WATERS LIST 4 (Aug. 2012), available at http://www.epa.gov/region02/water/waterbodies/impaired_waters2_ws_final_updated.pdf.

³ Relevant Riverkeeper submissions are attached as Appendices A and B to this Comment.

Esopus Creek is impaired based on its regular violation of the applicable narrative water quality standard for turbidity.⁴ This impairment is a direct result of the City of New York's and the New York City Department of Environmental Protection's (collectively, the "City") discharges of highly turbid water from the Ashokan Reservoir. Riverkeeper provided evidence of this impairment first in a data submission to NYSDEC dated September 29, 2011 ("Data Submission to NYSDEC"),⁵ second in comments submitted to NYSDEC on March 2, 2012 in response to a public notice published in the Environmental Notice Bulletin ("Comments to NYSDEC"),⁶ and finally in a letter submitted to EPA on June 14, 2012 ("Letter to EPA").⁷ Also clear is that the impairment is not temporary and will not be addressed within a reasonable period of time. As Riverkeeper demonstrated in each of its aforementioned submissions to NYSDEC and EPA, appended hereto and incorporated by reference into this Comment, NYSDEC and the City have failed to implement any pollution control measure to address the acknowledged impairment of the Lower Esopus Creek.

As a result, the Lower Esopus Creek is, and will continue to be, impaired. The Clean Water Act ("CWA") § 303(d)(1)(A) explicitly states, "[e]ach State shall identify those waters within its boundaries for which the effluent limitations . . . are not stringent enough to implement any water quality standard applicable to such waters."⁸ EPA correctly concluded that the Lower Esopus Creek is an impaired waterbody that does not meet New York State water quality standards for turbidity, does not satisfy any regulatory exception to the express language of CWA § 303(d),⁹ and therefore must be listed as an impaired waterbody on New York State's 2012 Section 303(d) List. EPA's decision is consistent with both the explicit requirements and the underlying intent of the CWA, to protect waters like the Lower Esopus Creek to ensure that they will be swimmable, fishable and drinkable for the communities that rely on them.

I. The Lower Esopus Creek Is Impaired Due to the City's Continued Discharge of Up to 600 Million Gallons Per Day of Highly Turbid Water and Such Discharges Will Continue for the Foreseeable Future.

In its September 2012 Response to Comments on its draft 2012 Section 303(d) List ("Response to Comments"), issued after EPA's determination that NYSDEC's listing of the Lower Esopus Creek as a Category 4b waterbody did not meet EPA's standard for a Category 4b

⁴ New York State's narrative water quality standard for turbidity, for all classes of water, allows "[n]o increase that will cause a substantial visible contrast to natural conditions." N.Y. COMP. CODES R. & REGS. tit. 6, § 703.2.

⁵ The Data Submission to NYSDEC is attached in Appendix A of this Comment.

⁶ The Comments to NYSDEC are attached as Appendix A to this Comment.

⁷ This Letter to EPA is attached as Appendix B to this Comment.

⁸ 33 U.S.C. § 1313(d)(1)(A) (2006).

⁹ "Each State shall identify those waters within its boundaries for which the effluent limitations . . . are not stringent enough to implement any water quality standard applicable to such waters." 33 U.S.C. § 1313(d)(1)(A) (2006).

classification,¹⁰ NYSDEC advances a new *post hoc* rationalization for its continuing efforts to exclude the Lower Esopus from its 2012 Section 303(d) List.¹¹ NYSDEC now argues for the first time that an intense set of storms in 2010 and 2011, including Tropical Storm Lee and Hurricane Irene, are responsible for the Lower Esopus Creek's impairment. Specifically, NYSDEC's Response to Comments states that "the photos, data and other documentation of water quality impacts provided by [Riverkeeper] reflect conditions in the [Lower Esopus Creek] during the aftermath of significant storms that flooded the Northeastern States in September-October 2010 and September 2011."¹² NYSDEC then argues that since the storms have abated, the Lower Esopus Creek "is meeting standards and is reasonably expected to continue to meet standards in the foreseeable future."¹³

NYSDEC's prediction of the declining influence of storms on the Lower Esopus Creek's impaired status contradicts its own precipitation forecasts. NYSDEC's Climate Action Panel not only recognizes that "[i]ntense precipitation events are occurring more often,"¹⁴ but also predicts that "[i]ntense precipitation events are expected to become more frequent [in the 21st century]," a prediction both EPA and the City agree with.¹⁵ NYSDEC continues, "[s]ummertime rain is expected to fall more often as heavy downpours, leading to more flooding."¹⁶ Intense rainfall events are expected to increase turbidity in the Ashokan Reservoir, leading to a corresponding increase in turbid Waste Channel releases. After two consecutive fall seasons with heavy storms, it is reasonable to assume such storms will continue to occur in the future, especially in light of NYSDEC's own precipitation forecasts above. Contrary to NYSDEC's argument that absent storms of record, the Lower Esopus will improve and remain unimpaired, seasonal precipitation, coupled with the continued operation of the Waste Channel by the City, will result in continued discharges of highly turbid water into the Lower Esopus Creek and continued impairment of the resource.

¹⁰ See Letter from Jeff Gratz, Deputy Director, Clean Water Division, U.S. Env'tl. Prot. Agency Region 2 to Mark Klotz, Dir., Div. of Water, N.Y. State Dept. of Env'tl. Conserv. (Aug. 16, 2012), available at http://www.dec.ny.gov/docs/water_pdf/303dapprtraug2012.pdf.

¹¹ NYSDEC's Response to Comments is attached as Appendix C to this Comment.

¹² See Appendix C.

¹³ See Appendix C.

¹⁴ N.Y. STATE DEP'T OF ENVTL CONSERV., Climate Change, <http://www.dec.ny.gov/energy/44992.html> (last visited Oct. 4, 2012).

¹⁵ N.Y. STATE DEP'T OF ENVTL CONSERV., NEW YORK STATE CLIMATE ACTION COUNCIL, INTERIM REPORT 2-13 (Nov. 9, 2010), available at http://www.dec.ny.gov/docs/administration_pdf/irchap2.pdf; EPA has also recently stated with regard to the Catskill Region, "severe weather conditions . . . may occur with more frequency." See Letter from Jeff Gratz, Deputy Director, Clean Water Division, U.S. Env'tl. Prot. Agency Region 2 to N.Y. State Dept. of Env'tl. Conserv., at 2 (July 11, 2012). NYCDEP concurs with DEC's and EPA's predictions, stating, "[a]s climate change increases the intensity and frequency of rain events that can impair water quality, it is essential to maintain maximum flexibility in the choice of source waters that can be tapped to meet the city's drinking water needs." N.Y. CITY DEP'T OF ENVTL. PROT., PLANYC: A GREENER GREATER NEW YORK 83 (2011) available at http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/planyc_2011_water_supply.pdf.

¹⁶ N.Y. STATE DEP'T OF ENVTL CONSERV., NEW YORK STATE CLIMATE ACTION COUNCIL, INTERIM REPORT OV-7 (Nov. 9, 2010), available at http://www.dec.ny.gov/docs/administration_pdf/irchap2.pdf.

NYSDEC's attempt to place the blame for the Lower Esopus Creek's impairment solely on these storm events instead of the City's commencement of Waste Channel releases lacks merit. This revisionist history ignores the fact that the city commenced its turbid Waste Channel releases in January 2010, eight months before the occurrence of any significant storm event referenced by NYSDEC. Although the storm events likely added significant amounts of silt/sediment to the Upper Esopus Creek, the many months of increased turbidity in the Lower Esopus Creek was a direct result of the City's operation of the Waste Channel that dumped up to 600 million gallons per day (MGD) of turbid water out of the Ashokan Reservoir and into the Lower Esopus. In contrast to natural conditions, under which the silt/sediment would have washed out of the creek within days or weeks after the storms, as it did in the Upper Esopus Creek, the City's Waste Channel operations continued to release large volumes of highly turbid water from the reservoir over the course of many months, leaving the creek inundated with silt/sediment and the resulting turbidity over a significantly extended period of time.

NYSDEC also presents the fact that it "had not received any requests to consider the Lower Esopus Creek for listing as an impaired water"¹⁷ prior to the most recent storms as evidence that the stream is not impaired and will not be impaired in the future. Of course, the lack of prior formal requests to NYSDEC to list the Lower Esopus Creek as impaired is not determinative of its current impaired status, and NYSDEC's argument ignores the fact that the City had not regularly operated the Waste Channel prior to January 2010. The commencement date of Waste Channel discharges came after NYSDEC's Data Submission deadline for its 2010 303(d) List, which was September 30, 2009, over three months before the Waste Channel discharges and their resulting adverse impacts to the Lower Esopus began.¹⁸

Contrary to NYSDEC's assertion, the Creek currently is not meeting standards, nor can it reasonably be expected to improve, especially in light of the predictions made by EPA, NYSDEC, and the City, that such heavy storms will continue to occur in the future.

II. NYSDEC May Not Rely on the Cause of Impairment to Exclude an Impaired Waterbody from Its 303(d) List.

In its Response to Comments, NYSDEC argues, "deviations from this narrative water quality standard for turbidity would have occurred under such conditions in the absence of any human-induced discharges" and that pollution caused by natural events "does not meet the criteria for inclusion on the Section 303(d) List."¹⁹ In fact, the deviations from the water quality standard happened primarily because the City is operating the Waste Channel. Without the manmade Reservoir, any storm-related turbid water would have washed out within several weeks, like it did in other streams, such as Catskill Creek, which was perhaps the hardest hit during the referenced storm events. Instead, the Ashokan Reservoir effectively stored the turbid

¹⁷ See Appendix C.

¹⁸ See N.Y. State Dept. of Env'tl. Conserv., *New York State Environmental Notice Bulletin* (Sept. 16, 2009), available at http://www.dec.ny.gov/enb/20090916_not0.html.

¹⁹ See Appendix C.

water and the City discharged it into the Lower Esopus at a rate of up to 600 MGD for months at a time, causing long-term impairment and damaging the Creek's ecosystems and surrounding communities.

Yet, even if the cause were "natural," NYSDEC acknowledges in its Response to Comments that "the CWA does not provide a natural-conditions exception."²⁰ Moreover, NYSDEC routinely lists waterbodies as impaired purportedly due to natural conditions. For example, NYSDEC lists the Upper Esopus and the Ashokan Reservoir as impaired due to "[s]ilt/[s]ediment" caused by "[s]treambank [e]rosion."²¹

At least one circuit has determined that the source of pollution, whether man-made or natural, has no bearing on the impaired status of waterbodies. The Ninth Circuit in *Pronsolino v. Marcus*, found:

[n]o substandard river or water was immune [to impairment] by reason of its sources of pollution. The process was made just as mandatory for wild but ruined rivers as it was for urban-blighted waters. . . . [A]s to whether TMDLs were authorized in the first place for all substandard rivers and waters, there is no doubt. They plainly were and remain so today—without regard to the sources of pollution.²²

In sum, NYSDEC's attempt to rely upon the cause of the impairment as the basis for refusing to list the Lower Esopus on its Impaired Waters list fails as a matter of law and fact, and should be rejected.

III. It Is Not Premature to List the Lower Esopus Creek as Impaired.

NYSDEC also asserts that a determination that the Creek is impaired would be "premature," citing an "on-going [Environmental Impact Statement ("EIS")] process pursuant to an enforcement Order to evaluate any potential impacts of all releases."²³ This statement is incorrect on its face. First, there is no requirement for such on-going EIS process since no "enforcement Order" has been finalized; rather NYSDEC released for comment only a draft enforcement order ("Draft Administrative Consent Order" or "Draft ACO"), which includes the possibility of a future EIS process. Second, both NYSDEC and EPA have analyzed of all available data and determined that the Creek is impaired. No study of the potential impacts of future turbid discharges will alter this conclusion. There is no doubt that the Creek was impaired

²⁰ See Appendix C.

²¹ N.Y. STATE DEP'T OF ENVTL. CONSERV., THE FINAL NEW YORK STATE 2012 SECTION 303(D) LIST OF IMPAIRED WATERS REQUIRING A TMDL/OTHER STRATEGY 5 (July 2012), available at http://www.dec.ny.gov/docs/water_pdf/303dlistpropfnl2012.pdf.

²² *Pronsolino v. Marcus*, 91 F. Supp. 2d 1337, 1356 (N.D. Cal. 2000) *aff'd sub nom. Pronsolino v. Nastri*, 291 F.3d 1123 (9th Cir. 2002), *cert. denied*, 539 U.S. 926 (2003).

²³ See Appendix C.

when NYSDEC and EPA made their respective determinations, and it still is. Once a state and EPA determine that a waterbody is impaired, a 303(d) listing cannot possibly be deemed “premature.”²⁴

IV. The Lower Esopus Creek Does Not Meet the Criteria for a Category 4b Waterbody.

As explained in Riverkeeper’s Comments to NYSDEC and Letter to EPA, NYSDEC’s current enforcement action and Draft ACO do not meet EPA’s requisite criteria for a 4b categorization of the Lower Esopus Creek.²⁵ As a result, the CWA and applicable EPA regulations require the Lower Esopus Creek be included on the 2012 Section 303(d) List. As Riverkeeper stated in its Letter to EPA:

[a] detailed review of the Draft ACO . . . only strengthens Riverkeeper’s argument that the proposed resolution of this administrative enforcement action concerning the City’s violations of its Kensico Catalum SPDES permit cannot possibly satisfy USEPA’s Category 4b criteria. The Draft ACO confirms that the enforcement action was not brought by NYCDEC to abate the impairment of water quality in the Lower Esopus, and its proposed resolution (the Draft ACO) does not even refer to the attainment of water quality standards in the Lower Esopus, much less purport to assure such attainment within a “reasonable period of time.

. . .

Moreover, the Interim Ashokan Release Protocol (“Interim Protocol”),²⁶ which NYSDEC proposes to make binding upon the City by incorporating it as Appendix B to the Draft ACO, not only fails to assure compliance with state water quality standards; it also purports to expressly authorize unpermitted discharges of pollutants to waters of the United States²⁷

Riverkeeper agrees with EPA’s conclusion that NYSDEC has provided no justification for classifying the Lower Esopus as a 4b waterbody and commends EPA for upholding New York State’s legal obligations under the CWA for the protection of the Lower Esopus Creek.

²⁴ If NYSDEC can demonstrate within the next two years that the Lower Esopus is no longer impaired, then it can be removed from the list in 2014.

²⁵ EPA guidance designates “Category 4b” only for waterbodies that have in place “alternative pollution control requirements” that obviate the need for the State to list the waterbody as impaired and subsequently the need for the State to develop a TMDL for that waterbody. ENVTL. PROT. AGENCY, INFORMATION CONCERNING 2008 CLEAN WATER ACT SECTIONS 303(D), 305(B) AND 314 INTEGRATED REPORTING AND LISTING DECISIONS 7 (Oct. 12, 2006) available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2008_ir_memoandum.cfm.

²⁶ See Draft ACO, NYSDEC Case No. D007-0001-11 (June 13, 2012), available at http://www.dec.ny.gov/docs/water_pdf/ashcatalum.pdf.

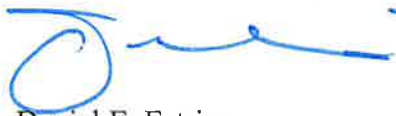
²⁷ *Id.*

V. Conclusion

For all of these reasons, and those contained in the above-referenced and incorporated Data Submission to NYSDEC, Comments to NYSDEC, and Letter to EPA, EPA has correctly decided to disapprove NYSDEC's decision to exclude the Lower Esopus Creek from 2012 Section 303(d) List. Once again, we applaud and fully support EPA for formally recognizing the Lower Esopus Creek's impairment. EPA's decision is truly a victory for the health of the Creek and the communities that depend on it.

Thank you for your consideration of these comments. We look forward to working with EPA and NYSDEC on an ongoing basis to restore the Lower Esopus Creek to the unique natural and community resource it once was.

Respectfully submitted,



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Appendix A

Riverkeeper, Inc. Comments on the Draft New York State 2012
Section 303(d) List of Impaired/TMDL Waters and Consolidated
Assessment and Listing Methodologies

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VIA ELECTRONIC MAIL (jamyers@gw.dec.state.ny.us) & UPS

Mr. Jeff Myers
New York State Department of Environmental Conservation
Division of Water
Bureau of Watershed Assessment and Management
625 Broadway, 4th Floor
Albany, New York 12233-3502

Re: **Riverkeeper, Inc. Comments on the Draft New York State 2012 Section 303(d) List of Impaired/TMDL Waters and Consolidated Assessment and Listing Methodologies**

Dear Mr. Myers:

On behalf of our client, Riverkeeper, Inc., (“Riverkeeper”),¹ the Pace Environmental Litigation Clinic, Inc. (“PELC”) respectfully submits the following Comments in response to the Draft New York State 2012 Section 303(d) List of Impaired/TMDL Waters (“2012 Section 303(d) List”) and Consolidated Assessment and Listing Methodologies (“CALM”).

In its Response to Proposed Listings for the 2012 Section 303(d) List (“2012 DEC Response”) dated January 12, 2012, the New York State Department of Environmental Conservation (“DEC”) determined that the Lower Esopus Creek is impaired: “[DEC] believes that impairment of the creek is evident” and finds that “conditions in the creek have been poor for an extended period of time.”² However, DEC proposes not to include the Lower Esopus Creek on the 2012 Section 303(d) List based on its assertion that there are “other required regulatory controls outside of a TMDL [that] will address the impairment.”³ This proposal is based on an Environmental Protection Agency (“EPA”) guidance which purports to remove a state’s obligation

¹ Riverkeeper is a member-supported, not-for-profit organization, dedicated to protecting the Hudson River and its tributaries, and to safeguarding the drinking water supply of nine million New York City and Hudson Valley residents.

² *Appendix C* to this Comment. *Response to Proposed Listings to the 2012 Section 303(d) List*, N.Y. STATE DEP’T OF ENVTL. CONSERV., <http://www.dec.ny.gov/chemical/79581.html> (last visited Mar. 1, 2012, 11:17 AM) [hereinafter 2012 DEC Response].

³ *Id.*

to list a waterbody found to be impaired on the Section 303(d) List when other pollution control requirements are stringent enough for an impaired waterbody to meet applicable water quality standards within a reasonable period of time, termed a Category 4b waterbody.⁴

The Lower Esopus Creek is an impaired waterbody for turbidity, flow, and color. This condition violates the Federal Clean Water Act, 33 U.S.C. § 1313(d) (2006) (“CWA § 303(d)”), and New York State Narrative Water Quality Standards, N.Y. COMP. CODES R. & REGS. tit. 6, § 703.2. In spite of this, according to 2012 DEC Response, DEC proposes to categorize the Lower Esopus Creek as a Category 4b waterbody.⁵ Setting aside whether EPA’s creation of a Category 4b exemption from the Section 303(d) Listing obligations violates the spirit, if not the letter of the Clean Water Act, DEC’s proposal to designate the Lower Esopus Creek a Category 4b waterbody is irrational and inappropriate. The “other pollution control requirement”⁶ relied upon by DEC, an enforcement action against the New York City for failure to comply with the requirements of the State Pollution Discharge Elimination System (“SPDES”) Permit No.: NY-0264652 (“Catalum SPDES Permit”), does not and cannot assure attainment of water quality standards in the Lower Esopus Creek at all, much less in a reasonable period of time. Accordingly, and as discussed in further detail below, DEC is required to list the Lower Esopus Creek (water index number H-171 (portion 1 and portion 2)) as impaired on DEC’s Final 2012 NYS Section 303(d) List of Impaired/TMDL Waters.

I. The Lower Esopus Creek is an Impaired Waterbody.

During the last several years, the Lower Esopus Creek has experienced significant environmental degradation. Much of the degradation is a direct result of the large volume of highly turbid wastewater releases from the Ashokan Reservoir through the Ashokan Waste Channel (“Waste Channel”) by the New York City Department of Environmental Protection (“DEP”).

The Waste Channel is a concrete channel that carries water from the Ashokan Reservoir into the Lower Esopus Creek through the Little Beaver Kill. The DEP operates the Waste Channel for the purpose of diverting large quantities of highly turbid, sediment-laden water in the West Basin of the Ashokan Reservoir away from New York City’s (“the City”) drinking water supply, and specifically away from the Catskill Aqueduct, which carries drinking water from the Ashokan Reservoir to the Kensico Reservoir in Westchester County. The City benefits from the release of turbid water through the Waste Channel and into the Lower Esopus Creek because it removes unusable water from the City’s water supply system, but this benefit comes at the expense of impaired water quality and degradation of the Lower Esopus Creek.

⁴ ENVTL. PROT. AGENCY, INFORMATION CONCERNING 2008 CLEAN WATER ACT SECTIONS 303(D), 305(B) AND 314 INTEGRATED REPORTING AND LISTING DECISIONS 7 (Oct. 12, 2006) [hereinafter 2008 EPA INTEGRATED REPORTING GUIDANCE], *available at* http://water.epa.gov/lawsregs/lawguidance/cwa/tmdl/2008_ir_memorandum.cfm.

⁵ 2012 DEC Response, *supra* note 2.

⁶ 2008 EPA INTEGRATED REPORTING GUIDANCE, *supra* note 4.

The threshold for determining impairment hinges on “whether water quality standards are, or are not, being met.”⁷ The applicable water quality standards for the Lower Esopus Creek are New York State’s narrative water quality standards.⁸ New York State’s narrative water quality standard for turbidity, for all classes of water, allows “[n]o increase that will cause a substantial visible contrast to natural conditions.”⁹ New York State’s narrative water quality standard for flow allows “[n]o alteration that impair the waters their best usages.”¹⁰ Finally, New York State’s narrative water quality standard for color allows “[n]one in amounts that affect the taste, thereof, or impair their best usages.”¹¹ The turbidity, flow, and color of the wastewater discharged from the Waste Channel into the Lower Esopus Creek result in the violation of these New York State water quality standards. In addition, due to this degradation, the Lower Esopus Creek does not meet its use classifications, Class B and B(T) for primary and secondary contact recreation, and fish, shellfish and wildlife propagation in the Lower Esopus Creek.¹² EPA defines an impaired waterbody as a “body of water that does not meet water quality standards even after pollution controls have been put in place,”¹³ while DEC defines “impaired waters” as those waters “where [water quality standards] are not being met and/or uses are not supported”¹⁴ Thus, the Lower Esopus Creek meets both EPA’s and DEC’s definition of an impaired waterbody. To support this assertion, Riverkeeper incorporates into these Comments the information discussed below and contained in the appendixes hereto, in addition to all of the Lower Esopus Creek water quality data currently in possession of DEC.

A. DEC acknowledges the Lower Esopus Creek’s “evident impairment.”

In its 2012 DEC Response to Riverkeeper’s September 29, 2011 Waterbody Inventory/Priority Waterbodies List Assessment Data Submission (“Riverkeeper Data Submission”), found in *Appendix C* to these Comments, DEC itself acknowledged that the Lower Esopus Creek is an impaired waterbody. DEC explicitly stated that, “[the] impairment of the [Lower Esopus Creek] is evident,” and that the “conditions in the [Lower Esopus Creek] have been poor for an extended period of time.”¹⁵ Taking into consideration the degradation of the Lower

⁷ N.Y. STATE DEP’T OF ENVTL. CONSERV., RESPONSE TO COMMENTS: THE 2010 NYS SECTION 303(D) LIST OF IMPAIRED WATERS REQUIRING A TMDL 2 (June 2010) [hereinafter 2010 DEC Response], *available at* http://www.dec.ny.gov/docs/water_pdf/303drespsumm10.pdf.

⁸ N.Y. COMP. CODES R. & REGS. tit. 6, § 703.2.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² The Lower Esopus is a primary and secondary contact recreation and fishing waterbody, where the waters must be suitable for fish, shellfish, and wildlife propagation and survival. N.Y. COMP. CODES R. & REGS. tit. 6, §§ 701.7, 861.4 (2012).

¹³ ENVTL. PROT. AGENCY, FACT SHEET ON NEW YORK STATE’S 2010 IMPAIRED WATERS LIST 1 (2010), *available at* http://www.epa.gov/region2/water/waterbodies/impaired_waters2_ws_final_updated.pdf.

¹⁴ N.Y. STATE DEP’T OF ENVTL. CONSERV., CONSOLIDATED ASSESSMENT AND LISTING METHODOLOGY 3 (May 2009) [hereinafter CALM], *available at* http://www.dec.ny.gov/docs/water_pdf/listmeth09.pdf.

¹⁵ 2012 DEC Response, *supra* note 2.

Esopus Creek due to the increased use of the Waste Channel, particularly after the October 2010 flooding events, DEC correctly considers the Lower Esopus Creek to be an impaired waterbody. Having acknowledged the Lower Esopus Creek's evident impairment, DEC must list the Lower Esopus Creek on the Final 2012 Section 303(d) List.

B. Riverkeeper's September 29, 2011 Waterbody Inventory/Priority Waterbodies List Assessment Data Submission demonstrates the Lower Esopus Creek is an impaired waterbody.

The Riverkeeper Data Submission, dated September 29, 2011 and included as *Appendix A* to these Comments, offers substantial proof of the Lower Esopus Creek's obvious impairment. The Riverkeeper Data Submission highlights the Lower Esopus Creek's impairment through:

- 1) a completed Water Body Inventory and Priority Waterbodies List (PWL) Worksheet;
- 2) an Issue Brief from Ulster County Executive Hein on the DEP actions on the Lower Esopus Creek;
- 3) photographs taken by Patrick Landewe on January 4, 2011 at approximately 12:30 P.M. from the Saugerties Lighthouse, showing the highly turbid condition of the Lower Esopus Creek flowing into the Hudson River at 168 Lighthouse Drive, Saugerties, NY; and
- 4) photographs taken by Nicholas Curtiss-Rowlands on September 28, 2011 at approximately 4:18 P.M. from the Washington Ave. Bridge overlooking the Lower Esopus Creek, showing the severe turbidity and high flow levels of the Lower Esopus Creek at Washington Ave., Kingston, NY.

The attached photographs of the Lower Esopus Creek demonstrate the evident impairment of the Lower Esopus Creek. The photographs clearly show the highly turbid conditions in the Lower Esopus Creek, resulting in a "substantial visible contrast to its natural conditions," and an "alteration that impairs the [Lower Esopus Creek's] best usage" for "primary and secondary contact recreation" and "fish propagation," as defined by the Lower Esopus Creek's applicable water quality standards and use classifications.¹⁶ Accordingly, the Lower Esopus Creek is an impaired waterbody as defined by both DEC and EPA.

C. Lower Esopus Creek sampling data demonstrate the Lower Esopus Creek does not meet applicable water quality standards for its B and B(t) use classifications.

Appendix B to these Comments, DEP Data for Turbidity and Temperature for the Lower Esopus Creek from October 1, 2006 – September 26, 2011, offers substantial proof of the Lower Esopus Creek's impairment. As previously stated, the Lower Esopus Creek is a primary and secondary contact recreation and fishing waterbody, or class B and B(T) waterbody, where the waters must be suitable for fish, shellfish, and wildlife propagation and survival. As a class B and B(T) waterbody, the Lower Esopus Creek must meet New York State's narrative water quality

¹⁶ See N.Y. COMP. CODES R. & REGS. tit. 6, § 703.2.

standard for turbidity, for all classes of water, allowing “[n]o increase that will cause a substantial visible contrast to natural conditions.”¹⁷

DEP data demonstrate that water in the Lower Esopus Creek has had measured turbidity as high as 1100.0 Nephelometric Turbidity Units (“NTU”), as recorded as recently as September 2, 2011.¹⁸ Moreover, these extreme turbidity measurements are more than just occasional spikes in turbidity. DEP data indicate that the Lower Esopus Creek is tending to become more turbid, with samples regularly rising above 100 NTUs. To put the Lower Esopus Creek’s impairment into perspective, as the result of extensive litigation, and agreed upon by Administrative Law Judge Goldberger and DEC Commissioner Denise Sheehan,¹⁹ the SPDES permit for the Shandaken Tunnel outfall, which discharges into the Upper Esopus Creek has a “[t]urbidity [i]ncrease”²⁰ limit of 15 NTUs to avoid turbidity resulting in a substantial visible contrast that would constitute a violation of water quality standards. In comparison, the Lower Esopus Creek has recorded turbidity of more than seventy times the turbidity increase limit DEC set for the Upper Esopus Creek. Pursuant to DEC’s definition of impairment, “where [water quality standards] are not being met and/or uses are not supported,” the Lower Esopus Creek is obviously impaired.

II. The Plain Meaning of CWA § 303(d), EPA Supporting Regulations, and New York State Section 303(d) Listing Methodology Require DEC to List the Lower Esopus Creek as an Impaired Waterbody on the 2012 Section 303(d) List.

A. The plain meaning of the CWA § 303(d)(1)(A) requires DEC to list the Lower Esopus Creek as an impaired waterbody on the 2012 Section 303(d) List.

The CWA § 303(d)(1)(A) explicitly states, “[e]ach State shall identify those waters within its boundaries for which the effluent limitations . . . are not stringent enough to implement any water quality standard applicable to such waters.”²¹ Pursuant to § 303(d), DEC is required to identify waters for which the effluent limitations are not stringent enough to achieve any water quality standards applicable to those waters. Even in the absence of effluent limitations, the obligation to list all waterbodies not meeting applicable water quality standards remains.²² Since the Lower Esopus Creek does not meet applicable narrative water quality standards for turbidity, flow, and color, DEC has a non-discretionary statutory duty under federal law to include the Lower

¹⁷ *Id.*

¹⁸ *Appendix B*, DEC Sampling Data for Turbidity and Temperature, demonstrates turbidity maximums ranging from 1100.0 to 450.0 NTUs at multiple sampling sites in the Lower Esopus Creek.

¹⁹ *See Catskills Mtns. Ch. of Trout Ultd. v. City of New York*, 244 F.Supp. 2d 41 (N.D.N.Y. 2003) *aff’d in part and remanded*, 451 F.3d 77 (2d Cir. 2006) (finding that DEC must issue a SPDES permit for the unlawful discharge of turbid water by DEP from the Shandaken Tunnel into the Upper Esopus Creek).

²⁰ *See* N.Y. State Dep’t of Env’tl. Conserv., SPDES Permit No: NY – 026 8151, Shandaken Tunnel Outlet (2006).

²¹ 33 U.S.C. § 1313(d)(1)(A) (2006).

²² *See Pronsolino v. Nastri*, 291 F.3d 1123, 1137 (9th Cir. 2002) (requiring States to list all waterbodies not meeting applicable water quality standards on a State’s CWA § 303(d) List even if no effluent limitations are in place or the waterbody is only impacted by nonpoint source runoff).

Esopus Creek on the 2012 Section 303(d) List. Any other action or listing for the Lower Esopus Creek by DEC is contrary to, and in violation of, the clear language of CWA § 303(d).

B. 40 C.F.R. § 130.7 additionally requires DEC to identify and list the Lower Esopus Creek as an impaired water quality-limited segment on the 2012 Section 303(d) List.

EPA regulations also make plain that DEC has a nondiscretionary duty to list the Lower Esopus Creek pursuant to CWA § 303(d).²³ Those regulations clearly identify the waters that must be included on the CWA § 303(d) List as “water quality limited segment[s],” which are defined as “[a]ny segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards.”²⁴

Moreover, EPA incorporates the clear definition of a “water quality limited segment,” those waters that must be included on the CWA § 303(d) List, into its regulation codified at 40 C.F.R. § 130.7(b)(1)(iii). The regulation explicitly requires each state to “identify those *water quality-limited segments* still requiring TMDLs within its boundaries for which: . . . [o]ther pollution control requirements (e.g. best management practices) required by local, State, or Federal authority are not stringent enough to implement any water quality standard applicable to such waters.”²⁵

Based on DEC’s finding of “evident impairment,”²⁶ it is clear that the Lower Esopus Creek does not meet applicable water quality standards, and thus satisfies the definition of a “water quality-limited segment.”²⁷ Accordingly, DEC must list the Lower Esopus Creek on the 2012 Section 303(d) List pursuant to the plain language of the CWA and 40 C.F.R. § 130.7(b)(1)(iii).

III. The Lower Esopus Creek Does Not Meet the Criteria for a Category 4b Waterbody.

A. The Lower Esopus Creek must be placed on the 2012 Section 303(d) List because DEC’s current enforcement action is not a replacement for TMDLs nor can it be expected to result in the achievement of water quality standards.

In its 2012 DEC Response, DEC claims that it is more appropriate to categorize the Lower Esopus Creek as a Category 4b waterbody. DEC bases its proposed determination solely upon “nuances”²⁸ in CWA § 303(d) regulations. In those regulations, EPA purports to recognize that “alternative pollution control requirements” may preclude the need for an impaired waterbody to be listed on a State’s 303(d) list, and subsequently preclude the need for a State to develop a TMDL for

²³ See *id.* at 1128.

²⁴ 40 C.F.R. § 130.2(j) (2012).

²⁵ 40 C.F.R. § 130.7(b)(1)(iii) (2012).

²⁶ 2012 DEC Response, *supra* note 2.

²⁷ 40 C.F.R. § 130.2(j) (2012).

²⁸ 2012 DEC Response, *supra* note 2.

that waterbody.²⁹ As outlined in EPA's most recent guidance regarding Integrated Reporting and Listing Decisions, and as incorporated into DEC's CALM,³⁰ EPA takes the position that a TMDL (or 303(d) Listing) is not necessary if "other actions required by federal, state and/or local agencies are more appropriate than a TMDL and are expected to result in water quality improvement"³¹ within a reasonable period of time. Following this guidance, DEC attempts to justify its proposed Category 4b determination for the Lower Esopus Creek on the basis that it is "pursuing enforcement actions" against New York City.³² However, the only applicable enforcement action of which Riverkeeper is aware, brought against the City on February 14, 2011 and still ongoing, concerns the use of alum in the Kensico Reservoir.³³ DEC offers no demonstration that its current enforcement action against the City is a more appropriate pollution control measure in order to justify its Category 4b determination.

Although Riverkeeper questions the validity of EPA's Integrated Reporting Use Attainment Categories proposed to be utilized by DEC in their Section 303(d) Listing Methodology (see Section IV below), regardless of their validity they are plainly not applicable to the Lower Esopus Creek.³⁴ The enforcement action does not meet the requirements and criteria for a Category 4b determination pursuant to EPA regulation 40 C.F.R. § 130.7, EPA Integrated Reporting and Listing Decisions Guidances, or DEC's own CALM. DEC's current enforcement action against the City cannot be considered a more appropriate pollution control measure expected to result in the attainment of water quality standards in Lower Esopus Creek. Moreover, the action cannot possibly ensure attainment of water quality standards for turbidity, flow, or color in a reasonable period of time.

B. To the extent that DEC relies on its current enforcement action against New York City, DEC offers no basis to show it is a more appropriate pollution control measure than establishing TMDLs in the Lower Esopus Creek, or can be expected to achieve water quality standards in a reasonable time.

DEC's administrative enforcement action, initiated by a February 14, 2011 Notice of Hearing and Complaint against DEP, does not even mention violations of water quality standards in the Lower Esopus Creek.³⁵ The Complaint is an action to compel DEP to halt its unauthorized operation of the Waste Channel in order to comply with the Catalum SPDES Permit for the Kensico Reservoir, not to protect the water quality of the Lower Esopus Creek. "DEC brings this action to compel [DEP] to . . . establish an approved plan for operating the Waste Channel; remove alum floc

²⁹ See 2008 EPA INTEGRATED REPORTING GUIDANCE, *supra* note 4.

³⁰ See CALM, *supra* note 5, at 1.

³¹ See CALM, *supra* note 5, at 3.

³² 2012 DEC Response, *supra* note 2.

³³ See Complaint, DEC Case No: D007-001-11 (Feb. 14, 2011).

³⁴ In response to Riverkeeper's Data Submission for the 2012 Section 303(d) List, DEC notes, "it is [their] opinion that it is more appropriate to categorize [the Lower Esopus Creek] as a 4b water, where a TMDL (and 303(d) Listing) is not necessary due to other required control measures. 2012 DEC Response, *supra* note 2.

³⁵ See Complaint, DEC Case No: D007-001-11 (Feb. 14, 2011).

deposits in order to meet the water quality standard for suspended, colloidal, and settleable solids in the Kensico Reservoir”³⁶ Without addressing, acknowledging, or so much as mentioning any violations of water quality standards in the Lower Esopus Creek, DEC’s current enforcement action cannot be considered an appropriate pollution control measure to address the impairment of the Lower Esopus Creek. Simply put, a pending, unresolved enforcement action that on its face is not intended to address water quality violations in the Lower Esopus Creek cannot be expected to result in the achievement of water quality standards in that waterbody.

Moreover, it cannot be expected that any enforcement action or eventual Consent Order will result in water quality improvements in the Lower Esopus Creek within a reasonable period of time. It has been over one year since DEC first filed its Administrative Complaint on February 14, 2011.³⁷ Since that time, no legally binding control measure, or draft SPDES permit addressing water quality in the Lower Esopus Creek has been issued. Although DEC states there will be an “eventual Consent Order,”³⁸ DEC has not identified any date or timeframe within which such Consent Order will be finalized. Given the past delays and the lack of any projected date for resolution of the enforcement action, it is clear that DEC’s enforcement action has not addressed and cannot address the water quality impairment of the Lower Esopus Creek in a reasonable period of time. As a result, DEC has not shown that its current enforcement action, or any other pollution control measure, can be expected to meet the 4(b) requirement that it will result in the attainment of water quality standards in the Lower Esopus Creek within a reasonable period of time.

For the above reasons, among others, DEC has failed to provide the required basis for classifying the Lower Esopus Creek as a Category 4b waterbody. Accordingly, DEC must list the Lower Esopus Creek on the 2012 Section 303(d) List.

C. To the extent DEC might attempt to rely on the Interim Ashokan Release Protocol as a “more appropriate pollution control measure,” the Interim Protocol does not require compliance with water quality standards, and cannot be expected to achieve water quality standards in a reasonable period of time.

Although not referenced by DEC in its 2012 Response, DEC’s Interim Ashokan Release Protocol (“Interim Protocol”), dated October 18, 2011,³⁹ also cannot be considered a reasonable pollution control measure sufficient to justify a Category 4b Listing. As described in Riverkeeper’s December 16, 2011 Petition to DEC to require a SPDES permit to regulate discharges from the Ashokan Reservoir Waste Channel, the Interim Protocol purports to authorize DEP’s on-going, unpermitted releases of polluted water from the Waste Channel. As such, the legal basis is

³⁶ *Id.*

³⁷ The Complaint contains typographical errors that appear to indicate the Complaint was filed more than two years ago, on February 14, 2010, when in fact it was filed on February 14, 2011. The typographical errors are on both the Cover Letter for the “Ashokan Waste Channel: Notice of Hearing and Complaint,” and on page 22 of the actual Complaint. Complaint, DEC Case No: D007-001-11 (Feb. 14, 2011).

³⁸ 2012 DEC Response, *supra* note 2.

³⁹ See DEC/DEP INTERIM ASHOKAN RELEASE PROTOCOL (Oct. 18, 2011) [hereinafter INTERIM PROTOCOL], *available at* http://www.nyc.gov/html/dep/pdf/ashokan_interim_release_protocol_from_dec_10-18-11.pdf.

questionable, and the agreement itself, entered into by DEC and DEP on a “voluntary basis,”⁴⁰ does not even purport to impose water quality based effluent limitations or other legally binding requirement on DEP.

In addition, the Interim Protocol does not meet the standard of a “reasonable control measure” as outlined in EPA’s most recent guidance and as incorporated into DEC’s CALM. The DEC, through the Interim Protocol, has approved “control measures” that are in fact intended to address the water supply needs of the City, and not the requirements necessary for releases authorized by the protocol to meet water quality standards for the Lower Esopus Creek. In doing so, the Interim Protocol prioritizes the City’s water supply interests over any environmental, recreational, or economic uses or benefits that the Lower Esopus Creek would provide if it was not impaired.⁴¹ The Interim Protocol does not enact control measures to restore the Lower Esopus Creek in a reasonable period of time, and therefore does not provide DEC with a basis to contravene its duty to list the Lower Esopus Creek as an impaired waterbody. Consequently, DEC must list the Lower Esopus on the 2012 Section 303(d) List.

IV. Riverkeeper Questions the Validity of a Category 4b Listing in Light of the Plain Meaning of the CWA.

In light of the plain meaning of the CWA and EPA regulations promulgated thereunder, Riverkeeper questions the validity and legality of a Category 4b Listing as an acceptable alternative to a CWA § 303(d) Impaired Waterbody Listing. The CWA § 303(d)(1)(A) explicitly states, “[e]ach State shall identify those waters within its boundaries for which the effluent limitations . . . are not stringent enough to implement any water quality standard applicable to such waters.”⁴² The CWA and supporting EPA regulations unconditionally and unambiguously require a State’s 303(d) List to identify which waters have failed, and will continue to fail, to attain applicable water quality standards. As the Court in *Anacostia Riverkeeper v. Jackson* recently stated, “[a] return to basic grammar is instructive . . . [CWA §303(d)(1)(A)] is a single independent clause that includes a subject, a verb, and a direct object. Here the clause directs the ‘State’ to ‘identify’ those ‘waters’ [T]he clause classifies a waterbody as impaired if any water quality standard is violated . . . whether one, some, or all of the water quality standards are not met, the waterbody is impaired and therefore must be listed.”⁴³

V. Conclusion

Central to water quality standards, TMDLs, and the Section 303(d) Impaired Waterbody Listing process are the identification and listing of *all* waterbodies that do not meet applicable water

⁴⁰ *Id* at 1.

⁴¹ *See Id.*

⁴² 33 U.S.C. § 1313(d)(1)(A) (2006).

⁴³ *Anacostia Riverkeeper v. Jackson*, 798 F.Supp.2d 210, 226 (D.D.C. 2011).

quality standards. DEC's role in the Section 303(d) Listing process is vital to the integrity and health of the rivers, lakes and streams in New York State. DEC itself recognizes that "[t]he 303(d) List is reserved for those specific waterbodies where NYS water quality standards are currently being exceeded and/or where uses are not being supported."⁴⁴ As the agency in charge of protecting the waters of the State of New York, DEC must strictly adhere to its obligations under the CWA, as well as other federal and state laws and regulations, and list the Lower Esopus Creek as an impaired waterbody on the 2012 NYS Section 303(d) List.

Thank you for your consideration of these Comments. Please do not hesitate to contact the undersigned, Professor Daniel E. Estrin at the PELC (914-422-4343), or Katherine Hudson, Esq. at Riverkeeper (914-422-4410), to discuss any of these issues further.

Respectfully submitted,

/s/

Daniel E. Estrin
Supervising Attorney
Pace Environmental Litigation Clinic, Inc.

/s/

Benjamin Lowenthal
Legal Intern
Pace Environmental Litigation Clinic, Inc.

cc: Katherine Hudson, Esq.
Mackenzie Schoonmaker, Esq.
Michael Dulong, Esq.
Anne Marie Garti, Legal Intern

⁴⁴ 2012 DEC Response, *supra* note 2.

Appendix A

Riverkeeper Waterbody Inventory/Priority Waterbodies List Data Submission, September 29, 2011

Appendix A consists of Riverkeeper's Data Submission for DEC's Waterbody Inventory/Priority Waterbodies List Assessments for the Lower Esopus Creek submitted on September 29, 2011 illustrating the Lower Esopus Creek's evident impairment for turbidity and flow.

- Page 13: Riverkeeper Data Submission cover letter submitted by Nicholas Curtiss-Rowlands on September 29, 2012.
- Pages 14-15: Riverkeeper Data Submission email receipt from Jeff Myers, Director, Bureau of Water Assessment and Management, DEC for Riverkeeper's Data Submission submitted by Nicholas Curtiss-Rowlands on September 29, 2012.
- Pages 16-18: Completed Waterbody Inventory and Priority Waterbodies List (PWL) Worksheet for the Lower Esopus Creek submitted by Nicholas Curtiss-Rowlands on September 29, 2012.
- Pages 19-22: Issue Brief from Ulster County Executive Hein on the NYC DEP Pollution of the Lower Esopus.
- Pages 23-26: Photographs taken by Patrick Landewe on January 4, 2011 at approximately 12:30 P.M. from the Saugerties Lighthouse, showing the highly turbid condition of the Lower Esopus Creek where it enters the Hudson River at 168 Lighthouse Drive, Saugerties, NY. The photographs illustrate the turbidity of the Lower Esopus Creek in contrast to the less turbid water of the Hudson River. New York State's narrative water quality standard for turbidity, for all classes of water, allows "[n]o increase that will cause a substantial visible contrast to natural conditions."⁴⁵
- Pages 27-35: Photographs taken by Nicholas Curtiss-Rowlands on September 28, 2011 at approximately 4:18 P.M. from the Washington Ave. Bridge over looking the Lower Esopus Creek, Washington Ave., Kingston, New York. The photograph on page 28 shows the Esopus Creek, Hudson River Estuary Watershed sign located next to the Washington Ave. Bridge, Washington Ave., Kingston, New York. The photographs on pages 29-36 illustrate the severe turbidity and high flow levels of the Lower Esopus Creek. The photographs demonstrate the Lower Esopus Creek's evident impairment for turbidity and flow. New York State's narrative water quality standard for turbidity, for all classes of water, allows "[n]o increase that will cause

⁴⁵ N.Y. COMP. CODES R. & REGS. tit. 6, § 703.2.

a substantial visible contrast to natural conditions.”⁴⁶ New York State’s narrative water quality standard for flow allows “[n]o alteration that impair the waters their best usages.”⁴⁷

⁴⁶ *Id.*

⁴⁷ *Id.*

September 29, 2011

VIA ELECTRONIC MAIL

NYSDEC Bureau of Watershed Assessment and Management
625 Broadway
4th Floor, Albany, NY 12233 3502

Re: Waterbody Inventory/Priority Waterbodies List Assessments

To Whom It May Concern,

Water quality in the Lower Esopus Creek has significantly degraded over the last several years. Due to this degradation, the New York State Department of Environmental Conservation ("DEC") should list the waterbody, listing water quality index number H-171 (portion 1 and portion 2), as impaired for turbidity, flow, and color, pursuant to 33 U.S.C. § 1313(d) [CWA §303(d)].

In order to support the listing of the lower Esopus Creek as an impaired waterbody, we respectfully incorporate into this submission all of the lower Esopus water quality data currently in the possession of the DEC and the following enclosures:

1. A completed Water Body Inventory and Priority Waterbody List Worksheet;
2. Issue Brief from Ulster County Executive Hein on the NYC Department of Environmental Protection actions on the Lower Esopus; Creek;
3. Photographs taken by Patrick Landewe on "January 4, 2011 around 12:30 pm from the Saugerties Lighthouse overlooking the mouth of Lower Esopus Creek, showing the contrast of the turbid Esopus Creek meeting the Hudson River. This was during the prolonged turbid releases from the Ashokan Reservoir;"
4. Photograph taken by Patrick Landewe on September 28, 2011 from the Saugerties Lighthouse.
5. Photographs taken by Nicholas Curtiss-Rowlands, September 28, 2011 at approximately 4:18 pm from the bridge over the Lower Esopus Creek at Washington Ave, Kingston, NY.

I can be reached ncurtissrowlands@law.pace.edu or at 914-422-4343 to answer any questions regarding this submission. We sincerely appreciate your assistance with this matter.

Very truly yours,
Nicholas Curtiss-Rowlands, Legal Intern
Pace Environmental Litigation Clinic, Inc.
78 North Broadway
White Plains, NY 10603
914.422.4343 (tel)
914.422.4437 (fax)

CC: Daniel Estrin,
Nicholas Tapert
Kate Hudson

Re: FW: Waterbody Inventory/Priority Waterbodies List Assessments

Jeff Myers [jamyers@gw.dec.state.ny.us]

Sent: Friday, September 30, 2011 2:47 PM

To: Curtiss-Rowlands, Nicholas

Mr Curtiss-Rowlands -

Thank you for the submission regarding consideration of Lower Esopus Cr for addition to the 2012 Section 303(d) List. Over the next few months, we will be compiling data for the preparation of a Draft List. We expect the Draft List to be available for public review and comment in/about Jan-Feb of 2012.

Again, Thanks.

JAM

Jeff Myers, Director

Bureau of Water Assessment and Management
625 Broadway, 4th Floor, Albany, NY 12233-3502

(518) 402-8179

(518) 402-9029 (fax)

jamyers@gw.dec.state.ny.us>>> "Curtiss-Rowlands, Nicholas" <ncurtissrowlands@law.pace.edu> 9/30/2011 1:44 PM >>>

To Whom It May Concern,

Water quality in the Lower Esopus Creek has significantly degraded over the last several years. Due to this degradation, the New York State Department of Environmental Conservation ("DEC") should list the waterbody, listing water quality index number II-171 (portion 1 and portion 2), as impaired for turbidity, flow, and color, pursuant to 33 U.S.C. § 1313(d) [CWA §303(d)].

In order to support the listing of the lower Esopus Creek as an impaired waterbody, we respectfully incorporate into this submission all of the lower Esopus water quality data currently in the possession of the DEC and the following enclosures:

1. A completed Water Body Inventory and Priority Waterbody List Worksheet;
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5. Photographs taken by Nicholas Curtiss-Rowlands, September 28, 2011 at approximately 4:18 pm from the bridge over the Lower Esopus Creek at Washington Ave, Kingston, NY.

I can be reached ncurtissrowlands@law.pace.edu or at 914-422-4343 to answer any questions regarding this submission. We sincerely appreciate your assistance with this matter.

Very truly yours,

Nicholas Curtiss-Rowlands, Legal Intern

Pace Environmental Litigation Clinic, Inc.

78 North Broadway

White Plains, NY 10603

914.422.4343 (tel)

914.422.4437 (fax)

CC: Daniel Estrin,

Nicholas Tapert

Kate Hudson

NYSDEC - DIVISION OF WATER
**WATERBODY INVENTORY and
PRIORITY WATERBODIES LIST (PWL)
WORKSHEET**

September 29, 2011
Date

WATERBODY LOCATION INFORMATION Segment ID_ H-171 (portion 1 and 2)
1. Waterbody Name- Lower Esopus Creek 9. Waterbody Classification-portion 1- B, portion 2- B(T)
2. Waterbody Type - River 10. County (primary)- Ulster
3. Water Index Number (WIN) _ H-171 (portion 1 and 2) 10a. Additional Counties- N/A
4. Drainage Basin and Sub-basin- Lower Hudson River drainage basin; lower Esopus Creek basin.
5. Hydrologic (Watershed) Unit Code _____ / _____ 11. NYSDEC Region- 3
6. Flow Category (if river segment) _____ 12. Quad Map _____
7. Affected Length/Area- about 102 miles 12a. Quad Num _ - _ - _ More Quads? _
8. Describe Waterbody Segment _ From the Ashokan Waste channel to the Hudson River _____ (see
Waterbody Inventory, if available)

WATER QUALITY PROBLEM INFORMATION

13. Water Uses Impacted/Severity of Water Quality Problem *Select all that apply*
Waterbody Uses Problem Documentation
Indicate precluded, impaired, stressed or threatened (P,I,S,T) Known Suspected Possible
Water Supply (Class A, AA, GA) _____
Shellfishing (Class SA) _____
Public Bathing (Class B, SB or above)- Stressed _____
Fishing Consumption _____
Aquatic Life (Class C, SC or above)- Impaired _____
Recreation - Impaired _____
Natural Resources Habitat/Hydrology Impaired _____
Aesthetics Impaired _____
14. Type of Pollutant(s) *Select all that apply. Indicate as known (K), suspected (S), or possible (P). Circle Major pollutant types (i.e., those contributing to most severe use impacts/impairment); others are considered Minor.*
CHEMICAL CAUSES
P Nutrients _____ Metals _____ P Pesticides _____
Ammonia _____ Acid/Base (pH) _____ Priority Organics _____
Chlorine _____ Salts _____ Non-Priority Organics _____
Unknown Toxic _____ Other Inorganics _____ P Oil and Grease _____
BIOLOGICAL CAUSES
P Pathogens _____ Problem Species _____ Species Alteration _____
PHYSICAL CAUSES
P D.O./Oxygen Demand _____ P Thermal Changes _____ Restricted Passage _____
K- Siltation/Sediment _____ K- Water Level/Flow _____ K- Aesthetics (float, odor, etc) _____
OTHER CAUSES _____

15. Source(s) of Pollutant(s) *Select all that apply. Indicate as known (K), suspected (S), or possible (P). Circle Major source types (i.e., those contributing to most severe use impacts/impairment); others are considered Minor.*

POINT SOURCES
Industrial _____ Private/Commercial/Institution _____ Comb Sewer Overflows (CSOs) _____
K- Municipal _____ Power Generating Facilities _____ Other Sanitary Discharges _____
NONPOINT SOURCES
P Agriculture _____ Habitat Modification _____ Atmospheric Deposition _____
Urban/Storm Runoff _____ P Hydrologic Modification _____ Contaminated/Toxic Sediments _____
On-site Septic Systems _____ K- Streambank Erosion _____ Chemical (Petroleum) Leaks/Spills _____
Silviculture _____ S Roadbank Erosion _____ Landfills/Land Disposal _____
P Construction _____ De-icing (Storage/Application) _____ Resource Extraction(Drilling/Mining) _____
OTHER SOURCES _____

_____ Unknown Source _____ Other Source

16. Waterbody Problem Description/Documentation/History/Notes Attach additional pages as necessary.

The narrative description should contain any and all information about the waterbody segment and its water quality problem/impairment including 1) examples/ instances of *specific* water use impairments, 2) details regarding the specific pollutant/source of pollutant and relationship to the impairment, 3) references for specific reports, studies, monitoring data and/or other documentation, 4) any activities currently underway or planned, and 5) description of the waterbody and surrounding watershed area, if pertinent. (see worksheet instructions for further guidance)

During the last several years, the Lower Esopus Creek has experienced significant environmental degradation, which is suspected to be a result of the large volume of highly turbid releases from the Ashokan waste channel. Turbidity in the lower Esopus has become significantly worse over the last several years has negatively effected local kayakers, fisherman, swimmers, and farmers who rely on the Lower Esopus as a source of irrigation. Additionally, the Town of Esopus, which draws much of its drinking water from the Hudson River just downstream of the Esopus confluence, has experienced elevated turbidity readings resulting in violations to the NYS safe drinking water standards. Finally, the large increases in turbidity and the huge flow increases in the Lower Esopus Creek are suspected to be having significant negative impacts to the local flora and fauna. The DEC filed a complaint against the NYC Department of Environmental Protection for the its operation of the waste channel on February 14, 2011. Ulster County Executive Hein filed an issue brief on the derogation of the lower Esopus; this brief is attached to this submission.

Next Update: _____

17. Waterbody Nominated/Form Completed By:

Name: Nicholas Curtiss-Rowlands

Affiliation: Legal Intern at the Pace Law School Environmental Litigation Clinic

Address: 78 North Broadway

White Plains, NY 10603

Phone: 914.422.4343

RESOLUTION/MANAGEMENT INFORMATION Private citizens need not complete.

18. Resolvability Select one

_____ Needs Verification/Study (see *Status of Problem Verification/Study*)

_____ Strategy Exists, Funding/Resources Needed

_____ Strategy Being Implemented

_____ Problem Not Resolvable (technical/economic)

_____ Problem Not Resolvable (natural condition)

_____ Problem Thought to be Abated

Problem Abated, Waterbody Deleted from PWL
 No Known Use Impairment

19. Status of Problem Verification/Study Select one

Waterbody Nominated, but Problem Not Verified
 Problem Verified/Documented, Cause Unknown
 Cause of Problem Identified, Source Unknown
 Source of Problem Identified, Management Strategy Needed
 Management Strategy has been Developed

20. Lead Agency/Office: _____ **21. Resolution Potential** (High, Med, Low):

22. TMDL Note

Impaired Waterbody, TMDL Development Required
 High Priority for TMDL Development
 Multiple Segment/Categorical TMDL Waters
 Acid Rain Waters
 Fish Consumption Waters
 Restricted Shellfishing Waters.
 Water Requiring Re-evaluation
 Impaired Waterbody, TMDL Development NOT Required
 TMDL Complete, being Implemented
 Impairment Due to *Pollution*, Not *Pollutant(s)*
 Other Controls More Appropriate than

Issue Brief from Ulster County Executive Hein on the NYC DEP Pollution of the Lower Esopus

Ulster County, PO Box 1800, 244 Fair Street, Kingston NY 12402
January 18, 2011



Dear Concerned Ulster County Citizens,

According to U.S. Supreme Court Justice Oliver Wendell Holmes, "A river is more than an amenity, it is a treasure." By dumping unprecedented amounts of polluted water down the Lower Esopus with a blatant disregard for the people of Ulster County, the New York City Department of Environmental Protection (DEP) is harming our farmers and private property owners, our environment and our drinking water. To be clear, this is not just regular muddy water. The type of concentrated muddy water being sent into the Lower Esopus is considered "pollution" by both NYS and Federal laws. After exhausting all other efforts to end this unpermitted discharge, we have no choice but to take the first steps toward filing a lawsuit against the New York City DEP. It is my hope that this Issue Brief will thoroughly explain what is happening right now in Ulster County and why it must stop.

Please join me in telling DEP, NYS Department of Environmental Conservation (NYS DEC), the U.S. Environmental Protection Agency and all of your elected officials that this continued pollution is illegal and unacceptable.

Very truly yours, Michael P. Hein, County Executive

What's Wrong with this Picture?

These are photos of the same creek, at the same time of year.

The reason for the difference between the natural blue water (right) and muddy brown water (below) is that for the past 3 1/2 months DEP has been releasing polluted water from the Ashokan Reservoir to the Lower Esopus Creek.



The problem is obvious. The Lower Esopus is "turbid" or "excessively muddy" because of DEP's release. Turbidity is a pollutant and is regulated by both NYS and Federal laws. **DEP is acting as if environmental laws don't apply to them.** Meanwhile, Ulster County's environment, recreational opportunities, agriculture, and drinking water are being damaged. **This is wrong!**

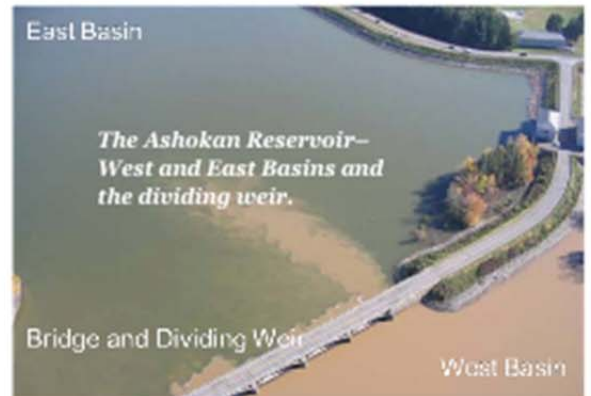
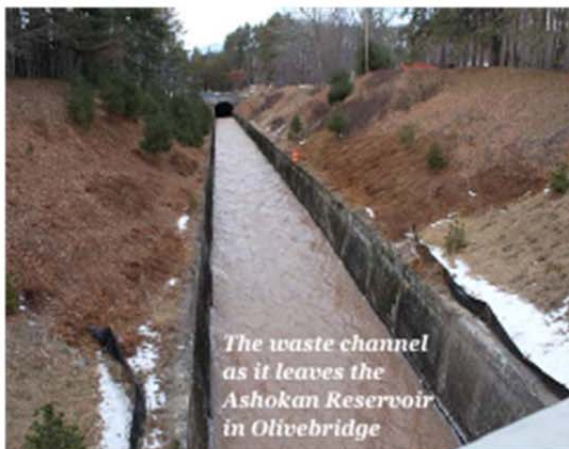
Issue Brief from Ulster County Executive Hein

The Esopus Creek is located in northern Ulster County where it travels sixty eight miles from the mountains of the Catskills to the Hudson River. In 1915, the City of New York completed construction of the Ashokan Reservoir by damming the Esopus Creek in Olivebridge. The Lower Esopus– the Esopus creek downstream of the dam- runs through the towns of Olive, Marletown, Hurley, Ulster, and Saugerties as well as the City of Kingston and the Village of Saugerties.

Although the Ashokan was constructed with a “waste channel” designed to release water from the reservoir to the Lower Esopus, it was not used except for a short period in 2006 because of an emergency. In 2010, DEP instituted new operating procedures that called for releasing exceptionally turbid water from the reservoir into the Lower Esopus, as it alone deems “necessary.”

Why is DEP releasing this water? Elevated turbidity after storms is a long standing problem in the Ashokan. The designers knew this and constructed the Reservoir with two basins: the west basin which serves as a settling basin for the turbidity and the east basin which is used for drinking water.

In the past, whenever the Reservoir got especially turbid, the DEP treated the water with a chemical (Alum) to meet drinking water standards. Recently, DEP was required by NYS and the federal



Source: NYC Department of Environmental Protection

What is Turbidity? Turbidity refers to the amount of suspended solids in water and results in the water looking muddy or murky. It is a regulated pollutant under the Federal Clean Water Act and the New York State water quality standards. In the Ashokan, turbidity is specifically caused by clay deposits found in and near the streams in the Esopus watershed. Rushing water associated with storms mixes the clay sediments into surface water. The turbid surface water then flows into the Ashokan Reservoir.

government to reduce the amount of Alum used. **DEP then made a major change to its operations, behind closed doors and without community input, environmental review or rules regarding the waste channel's operating parameters** to release turbid water from the west basin into the Lower Esopus before it could spill into the east basin, potentially harming NYC's water quality and requiring treatment.

Why now? Two storms (October 1st and December 1st) resulted in elevated turbidity in the Ashokan. Since October 7, 2010, when releases started, over 47 billion gallons of turbid or polluted water have been sent by DEP to the Lower Esopus (and eventually to the Hudson River). That's more than a third of the total capacity of the Ashokan Reservoir.

Issue Brief from Ulster County Executive Hein



Negative Impacts of Turbid Releases to the Lower Esopus

Harm to Agriculture: The Lower Esopus valley has extensive agricultural production that depends on the creek for clean irrigation water throughout the year. Turbid water can clog irrigation equipment and potentially impair the quality of the irrigation water to the point where crops cannot be sold at market.

Harm to Recreation: DEP's actions have already impaired use and enjoyment of the creek for kayaking and ice fishing. Continuing to pollute the Lower Esopus in the summer could also affect bathing beaches along the creek which must meet water clarity standards for safety.

Harm to our Water Supply: The sediment plume from the Esopus is clearly visible in the



Source: Times Herald Record

Hudson River. The Town of Esopus in Ulster County draws municipal drinking water from the Hudson River downstream of where the Esopus empties into it. During the releases, the water plant has experienced elevated turbidity readings resulting in a violation of NYS safe drinking water standards.

Harm caused by Increased Sediment Load: When a stream is turbid, the levels of light and oxygen within the water are reduced. This negatively affects everything living in the stream, from microscopic

organisms and submerged plants to aquatic insects and fish. In particular, it stresses fish and impacts their ability to feed and see their food. Fine sediment also physically impacts the stream channel by filling in the natural voids and spaces in the stream bottom. This reduces habitat for aquatic insects and smothers fish eggs and larvae.

Harm caused by Increased Water Quantity: The increased amount of water sent by DEP into the Lower Esopus represents the single largest change to the creek's hydrologic regime (flow) since the completion of the reservoir. Unfortunately, the specific impacts of the current releases to the lower Esopus are unknown, because DEP has not provided the county with a baseline assessment prior to the release. A scientific study was needed *before* the initiation of releases.



Source: Ulster Publishing

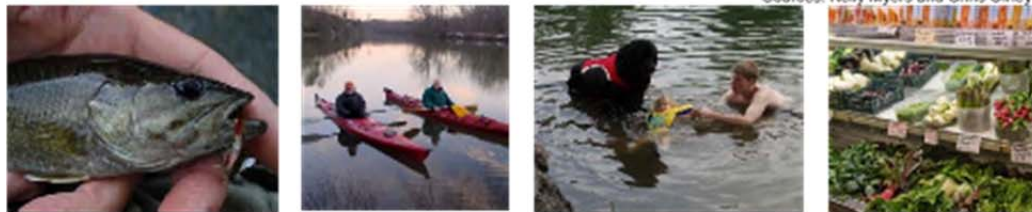
Issue Brief from Ulster County Executive Hein

What's at Stake?

"The Esopus Creek is one of the jewels of the Catskill Mountains and Hudson Valley. A tributary to the mighty Hudson River, it provides drinking water, recreation, habitat and important ecological functions for the entire region." - A Journey Through Lower Esopus Creek



Sources: Kelly Myers and Chris Olney



Harm to our ecosystem, recreation, drinking water and food safety are some of the many negative impacts caused by DEP's pollution of the Lower Esopus.

What must DEP do?

The Lower Esopus is an important contributor to the quality of life for the people and places along it. It should not be the solution to NYC's turbid water problems. NYC must:

- Stop releases immediately.
- Develop clear water flood mitigation strategies.
- Rescind all decisions that led to the strategy of sending polluted water down the Esopus.
- Conduct studies involving *all parties* and consider *all alternatives*.
- Institute low-flow releases in accordance with New York State law.

What can you do?

- ◆ Write to your federal, state and local officials and tell them to demand that DEP stop sending polluted water to the Lower Esopus.
- ◆ Write to your local newspaper and tell them you support Ulster County suing DEP to stop the pollution.
- ◆ Visit our website at ulstercountyny.gov to voice your concerns to our elected officials.
- ◆ File a complaint with your insurance company if you live along the Esopus and are being harmed.
- ◆ File a complaint with the State Attorney General's Office (oag.state.ny.us) if you are being harmed by DEP's practices.

Ulster County
Box 1800
244 Fair Street
Kingston, NY, 12402
Phone: (845) 340-3800
exec@co.ulster.ny.us







Mr. Jeff Myers, NYSDEC
March 2, 2012
Page 25 of 52























Appendix B

DEP Data for Turbidity and Temperature for the Lower Esopus Creek from October 1, 2006 – September 26, 2011

Appendix B consists of DEP data received by Riverkeeper and PELC on September 28, 2011 for turbidity and temperature from various monitoring sites along the Lower Esopus Creek. Riverkeeper and PELC acquired the data through a Freedom of Information Law (FOIL)⁴⁸ request to the Bureau of Water Supply, DEP.

- Page 37: FOIL email receipt from Kelly Seelbach, Upstate WQ Data Coordinator, DEP, for all temperature and turbidity data for the Lower Esopus Creek.
- Pages 38-43: Lower Esopus Creek Sampling Data for turbidity and temperature, with highest recorded turbidity measure of 1100 NTUs. The sampling and monitoring sites include ASP (Ashokan Reservoir Spillway, Rt 28A), ASP M-1 Conf (Ashokan Spill and Release Channel Confluence), LEC AS (Lower Esopus Creek above Sawkill), Lynch Marina (Lower Esopus Creek at Lynch Marina), M-1 (Release Channel), Saugerties Beach (Lower Esopus Creek upstream of Saugerties Dam), SV WWTP Above (Lower Esopus Creek downstream of Saugerties Dam).
- Page 44: DEP Comments.
- Page 45: DEP Sampling Methods.
- Page 46: Sampling Sites Key for DEP turbidity and temperature sampling data for the Lower Esopus Creek.

⁴⁸ 2011 N.Y. Pub. Off. Law §§ 84-90 (McKinney).



Carter H. Strickland, Jr.
Commissioner

Paul V. Rush, P.E.
Deputy Commissioner
Bureau of Water Supply
prush@dep.nyc.gov

71 Smith Avenue
Kingston, NY 12401
T: (845) 340-7800
F: (845) 334-7175

September 28, 2011

TO: James Broderick, Deputy Chief of Watershed Compliance
FROM: Kelly Seelbach, Upstate WQ Data Coordinator
SUBJECT: Requested Data

Request Number: O11-23

Requested By: Nicholas Curtiss-Rowlands
Pace Environmental Litigation Clinic, Inc.
78 North Broadway
White Plains, NY 10603

Data Requested: A printout of all temperature and turbidity data for the lower Esopus Creek, 10/1/06 to present.

Date Needed By: September 30, 2011

Date Request Received: September 21, 2011

Date Request Completed: September 28, 2011

Reason for Request: FOIL

Files have been e-mailed containing the information requested by Mr. Curtiss-Rowlands. Also included are laboratory methods tables, comments tables, and a key to sampling locations. All data have been checked and corrected. If there are any questions regarding the information he will need to speak with Karen Hacker, Director, Ben Nesin Laboratory, 71 Smith Avenue, Kingston, NY 12401, 845-340-7715 or Michelle Rodden, Director, Kingston Laboratory, 71 Smith Avenue, Kingston, NY 12401, 845-340-7714.

This request contains 1 page and 4 Adobe Reader file.

Enc. via e-mail

KCS:kcs

xc:B. O'Malley (w/o enc.)
L. Emery (w/o enc.)
K. Hacker (w/o enc.)
M. Rodden (w/o enc.)
A. Bennett (w/o enc.)

K. Askildsen (w/o enc.)
A. Bader (w/o enc.)
N. Curtiss-Rowlands (w/o enc.)
file

NYC-DEP Bureau of Water Supply
Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
October 2006 - 2011 Catskill District Stream Data

1

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number |
|------|----------------|-----------|-------------------------|-----------------|-------------|---------------|
| ASP | 01NOV2006 | 9:00 | 12.6 | 2.6 | | 063910 |
| | 04DEC2006 | 8:50 | 7.5 | 4.4 | | 064421 |
| | 02JAN2007 | 8:58 | 4.5 | 2.4 | | 070018 |
| | 07MAY2007 | 9:13 | 12.0 | 6.4 | | 071436 |
| | 07APR2008 | 9:40 | 4.6 | 3.2 | | 081430 |
| | 05MAY2008 | 9:52 | 12.4 | 1.5 | | 082186 |
| | 03AUG2009 | 12:48 | 24.3 | 1.6 | | 094117 |
| | 01FEB2010 | 13:59 | 2.8 | 1.0 | | 100530 |
| | 05APR2010 | 13:21 | 7.7 | 17.0 | | 101759 |
| | 16MAR2011 | 10:29 | 1.8 | 36.0 | | 111482 |
| | 18MAR2011 | 9:00 | 2.5 | 36.0 | | 111530 |
| | 24MAR2011 | 10:13 | 2.6 | 36.0 | | 111627 |
| | 25MAR2011 | 11:01 | 2.7 | 34.0 | | 111635 |
| | 28MAR2011 | 10:37 | 2.4 | 29.0 | | 111650 |
| | 19APR2011 | 10:18 | 6.0 | 27.0 | | 112227 |
| | 02MAY2011 | 13:19 | 10.4 | 19.0 | | 112446 |
| | 02SEP2011 | 10:16 | 21.7 | 2.9 | | K00016948002 |
| | 06SEP2011 | 10:35 | 21.4 | 13.0 | | K00016952005 |
| | 13SEP2011 | 13:39 | 21.8 | 45.0 | | K00016969009 |
| | 16SEP2011 | 10:30 | 17.7 | 60.0 | | K00017026005 |

DATA CODE: F.E. = Field Error

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the comments and methods tables.

NYC-DEP Bureau of Water Supply
Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
October 2006 - 2011 Catskill District Special Investigation Data

2

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number | |
|--------------|----------------|-----------|-------------------------|-----------------|-------------|---------------|--------------|
| ASP M-1 CONF | 24MAR2011 | 10:23 | 2.2 | 45.0 | | 111628 | |
| | 25MAR2011 | 11:33 | 2.6 | 50.0 | | 111636 | |
| | 28MAR2011 | 11:05 | 2.3 | 60.0 | | 111651 | |
| | 30MAR2011 | 10:08 | 3.3 | 50.0 | | 111729 | |
| | 05APR2011 | 9:48 | 4.1 | 60.0 | | 111872 | |
| | 07APR2011 | 9:46 | 4.3 | 50.0 | | 111966 | |
| | 19APR2011 | 10:41 | 6.4 | 32.0 | | 112228 | |
| | 02SEP2011 | 10:35 | 21.4 | 4.1 | | K00016948003 | |
| | 06SEP2011 | 11:23 | 19.0 | 90.0 | | K00016952006 | |
| | 16SEP2011 | 10:45 | 14.7 | 400.0 | | K00017026006 | |
| | LEC AS | 28MAR2011 | 12:10 | 3.3 | 45.0 | | 111653 |
| | | 05APR2011 | 10:55 | 5.7 | 50.0 | | 111874 |
| | | 19APR2011 | 11:53 | 6.8 | 37.0 | | 112230 |
| | | 26JUL2011 | 9:28 | 22.0 | 9.5 | | K00016807004 |
| 02AUG2011 | | 10:39 | 24.2 | 2.5 | | K00016833004 | |
| 09AUG2011 | | 10:56 | 24.2 | 3.3 | | K00016855002 | |
| 15AUG2011 | | 11:50 | 20.9 | 4.0 | | K00016866002 | |
| 22AUG2011 | | 11:16 | 20.9 | 6.1 | | K00016889002 | |
| 26AUG2011 | | 13:51 | 21.0 | 3.5 | | K00016905004 | |
| 02SEP2011 | | 11:39 | 20.7 | 12.0 | | K00016947001 | |
| 06SEP2011 | | 12:26 | 17.6 | 290.0 | | K00016952001 | |
| 16SEP2011 | | 11:43 | 14.6 | 300.0 | | K00017026002 | |
| 20SEP2011 | | 10:44 | 15.1 | 370.0 | | K00017036002 | |
| 26SEP2011 | | 11:28 | 16.8 | 310.0 | | K00017062002 | |
| LYNCH MARINA | 31JAN2011 | 12:29 | -0.1 | 17.0 | | 110529 | |
| | 01FEB2011 | 13:16 | -0.2 | 11.0 | | 110558 | |
| | 02MAR2011 | 11:54 | 0.5 | 10.0 | | 111072 | |
| | 07MAR2011 | 15:16 | 1.4 | 70.0 | | 111162 | |
| | 10MAR2011 | 11:43 | 2.4 | 8.4 | | 111296 | |
| | 11MAR2011 | 15:48 | F.E. | 140.0 | | 111310 | |
| | 16MAR2011 | 11:45 | 4.5 | 7.7 | | 111481 | |
| | 18MAR2011 | 10:36 | 5.1 | 29.0 | | 111533 | |
| | 24MAR2011 | 12:04 | 2.7 | 30.0 | | 111631 | |
| | 28MAR2011 | 12:48 | 3.6 | 38.0 | | 111655 | |
| | 05APR2011 | 11:52 | 7.4 | 30.0 | | 111876 | |
| | 07APR2011 | 10:05 | 6.0 | 34.0 | | 111972 | |
| | 19APR2011 | 12:40 | 7.5 | 36.0 | | 112232 | |
| | 26JUL2011 | 10:20 | 26.6 | 1.8 | | K00016807007 | |
| | M-1 | 06NOV2006 | 9:20 | . | 9.9 | | 063966 |
| 08NOV2006 | | 9:40 | . | 11.0 | | 063998 | |
| 15NOV2006 | | 8:00 | . | 10.0 | | 064117 | |
| 16NOV2006 | | 9:20 | . | 9.2 | | 064134 | |
| 17NOV2006 | | 9:17 | 11.0 | 6.0 | | 064153 | |
| 22NOV2006 | | 15:16 | 9.5 | 12.0 | | 064246 | |
| 24NOV2006 | | 8:11 | . | 10.0 | | 064248 | |
| 27NOV2006 | | 7:50 | . | 9.5 | | 064253 | |
| 28NOV2006 | | 9:25 | . | 9.8 | | 064279 | |
| 29NOV2006 | | 8:45 | . | 9.7 | | 064282 | |

DATA CODE: F.E. = Field Error

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NYC-DEP Bureau of Water Supply
Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
October 2006 - 2011 Catskill District Special Investigation Data

3

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number |
|------|----------------|-----------|-------------------------|-----------------|-------------|---------------|
| M-1 | 30NOV2006 | 8:15 | . | 9.6 | | 064376 |
| | 18DEC2006 | 9:00 | . | 5.6 | | 064580 |
| | 03MAY2007 | 8:45 | . | 17.0 | | 071371 |
| | 04MAY2007 | 8:51 | 9.0 | 16.0 | | 071412 |
| | 07MAY2007 | 10:24 | 8.0 | 14.0 | | 071426 |
| | 26FEB2008 | 16:25 | . | 5.4 | | 080473 |
| | 27FEB2008 | 12:17 | 0.0 | 4.2 | | 080483 |
| | 28FEB2008 | 12:44 | 2.0 | 4.0 | | 080490 |
| | 29FEB2008 | 10:56 | 1.0 | 4.0 | | 080499 |
| | 03MAR2008 | 10:00 | 1.5 | 4.2 | | 080521 |
| | 04MAR2008 | 8:16 | 1.5 | 4.2 | | 080536 |
| | 14MAR2008 | 9:30 | 2.5 | 17.0 | | 080869 |
| | 17MAR2008 | 11:31 | 3.5 | 15.0 | | 080912 |
| | 18MAR2008 | 12:38 | 3.5 | 14.0 | | 080945 |
| | 21MAR2008 | 15:57 | 3.0 | 16.0 | | 081117 |
| | 24MAR2008 | 9:36 | 3.0 | 13.0 | | 081140 |
| | 25MAR2008 | 9:20 | 2.5 | 11.0 | | 081168 |
| | 26MAR2008 | 12:29 | 3.5 | 11.0 | | 081205 |
| | 27MAR2008 | 11:07 | 3.0 | 11.0 | | 081248 |
| | 28MAR2008 | 12:00 | 4.0 | 11.0 | | 081268 |
| | 31MAR2008 | 12:02 | 3.0 | 10.0 | | 081278 |
| | 01APR2008 | 12:22 | 3.0 | 11.0 | | 081311 |
| | 02APR2008 | 12:55 | 4.0 | 9.9 | | 081348 |
| | 03APR2008 | 10:44 | 3.0 | 10.0 | | 081380 |
| | 07APR2008 | 9:58 | . | 8.4 | | 081438 |
| | 09APR2008 | 10:01 | 4.5 | 8.3 | | 081614 |
| | 14APR2008 | 9:22 | 6.0 | 7.2 | | 080570 |
| | 03FEB2009 | 9:47 | 1.0 | 2.2 | | 090636 |
| | 12FEB2009 | 8:36 | 1.4 | 2.0 | | 090808 |
| | 19FEB2009 | 14:20 | 4.5 | 1.7 | | 090944 |
| | 07JAN2010 | 12:51 | 0.7 | 2.1 | | 100126 |
| | 08JAN2010 | 12:21 | 0.7 | 1.3 | | 100139 |
| | 11JAN2010 | 9:44 | 0.6 | 1.2 | | 100149 |
| | 19JAN2010 | 10:50 | . | 0.9 | | 100257 |
| | 27JAN2010 | 13:35 | 1.5 | 210.0 | | 100478 |
| | 28JAN2010 | 12:10 | . | 160.0 | | 100495 |
| | 29JAN2010 | 9:11 | 1.5 | 130.0 | | 100496 |
| | 01FEB2010 | 12:56 | . | 120.0 | | 100521 |
| | 02FEB2010 | 9:00 | 1.6 | 100.0 | | 100576 |
| | 03FEB2010 | 9:50 | 1.7 | 95.0 | | 100606 |
| | 04FEB2010 | 9:54 | 1.8 | 90.0 | | 100656 |
| | 05FEB2010 | 10:28 | 1.8 | 85.0 | | 100669 |
| | 08FEB2010 | 13:33 | . | 60.0 | | 100686 |
| | 09FEB2010 | 12:01 | . | 50.0 | | 100751 |
| | 10FEB2010 | 9:55 | . | 40.0 | | 100752 |
| | 11FEB2010 | 10:20 | 1.9 | 40.0 | | 100761 |
| | 12FEB2010 | 9:20 | 2.0 | 36.0 | | 100778 |
| | 16FEB2010 | 14:00 | . | 33.0 | | 100795 |
| | 17FEB2010 | 9:11 | 1.9 | 33.0 | | 100825 |
| | 22FEB2010 | 13:53 | . | 25.0 | | 100901 |
| | 01MAR2010 | 12:30 | . | 22.0 | | 100999 |
| | 08MAR2010 | 14:53 | 2.5 | 17.0 | | 101144 |
| | 15MAR2010 | 13:43 | . | 22.0 | | 101297 |

DATA CODE: F.E. = Field Error

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NYC-DEP Bureau of Water Supply
 Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
 October 2006 - 2011 Catskill District Special Investigation Data

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number |
|------|----------------|-----------|-------------------------|-----------------|-------------|---------------|
| M-1 | 22MAR2010 | 11:10 | . | 23.0 | | 101485 |
| | 07APR2010 | 13:25 | 6.7 | 37.0 | | 101890 |
| | 08APR2010 | 10:40 | 6.0 | 33.0 | | 101910 |
| | 09APR2010 | 16:05 | 7.2 | 32.0 | | 101913 |
| | 12APR2010 | 9:55 | 7.8 | 27.0 | | 101951 |
| | 19APR2010 | 10:53 | . | 23.0 | | 102103 |
| | 08OCT2010 | 9:24 | 14.0 | 230.0 | | 105376 |
| | 10OCT2010 | 7:56 | . | 110.0 | | 105390 |
| | 12OCT2010 | 13:22 | 14.5 | 140.0 | | 105417 |
| | 13OCT2010 | 9:17 | 14.5 | 90.0 | | 105501 |
| | 14OCT2010 | 8:16 | 14.5 | 95.0 | | 105520 |
| | 15OCT2010 | 9:20 | 14.2 | 95.0 | | 105564 |
| | 18OCT2010 | 9:49 | 13.8 | 80.0 | | 105628 |
| | 25OCT2010 | 10:57 | . | 65.0 | | 105783 |
| | 01NOV2010 | 9:58 | . | 50.0 | | 105885 |
| | 09NOV2010 | 12:45 | . | 40.0 | | 106168 |
| | 15NOV2010 | 14:55 | . | 34.0 | | 106288 |
| | 22NOV2010 | 10:55 | . | 25.0 | | 106411 |
| | 29NOV2010 | 11:25 | . | 22.0 | | 106591 |
| | 06DEC2010 | 9:24 | 6.1 | 65.0 | | 106770 |
| | 13DEC2010 | 9:31 | 4.6 | 90.0 | | 106921 |
| | 16DEC2010 | 11:00 | 3.4 | 85.0 | | 107045 |
| | 20DEC2010 | 9:50 | . | 80.0 | | 107057 |
| | 27DEC2010 | 12:16 | 1.0 | 70.0 | | 107139 |
| | 03JAN2011 | 9:40 | 0.6 | 60.0 | | 110012 |
| | 07JAN2011 | 9:31 | 0.9 | . | | 110170 |
| | 10JAN2011 | 10:40 | 0.9 | 60.0 | | 110190 |
| | 18JAN2011 | 10:44 | 1.0 | 55.0 | | 110303 |
| | 19JAN2011 | 11:42 | 0.9 | 50.0 | | 110368 |
| | 24JAN2011 | 11:10 | -0.1 | 50.0 | | 110414 |
| | 29JAN2011 | 10:01 | 1.4 | 4.8 | | 110514 |
| | 30JAN2011 | 9:22 | 1.4 | 4.1 | | 110515 |
| | 31JAN2011 | 9:57 | 1.3 | 5.6 | | 110526 |
| | 01FEB2011 | 11:02 | 0.9 | 4.8 | | 110555 |
| | 02MAR2011 | 9:27 | 1.8 | 8.2 | | 111069 |
| | 07MAR2011 | 13:47 | 4.8 | 7.2 | | 111159 |
| | 09MAR2011 | 13:50 | 1.8 | 55.0 | | 111267 |
| | 10MAR2011 | 10:11 | 1.6 | 55.0 | | 111293 |
| | 11MAR2011 | 14:23 | 4.5 | 16.0 | | 111307 |
| | 15MAR2011 | 10:46 | 1.9 | 150.0 | | 111435 |
| | 16MAR2011 | 10:08 | 1.9 | 150.0 | | 111478 |
| | 18MAR2011 | 8:40 | 5.4 | 28.0 | | 111529 |
| | 22MAR2011 | 15:13 | 2.5 | 110.0 | | 111596 |
| | 23MAR2011 | 8:04 | 2.4 | 110.0 | | 111610 |
| | 24MAR2011 | 9:56 | 2.4 | 95.0 | | 111626 |
| | 25MAR2011 | 10:46 | 2.4 | 85.0 | | 111634 |
| | 28MAR2011 | 10:22 | 2.5 | 60.0 | | 111649 |
| | 29MAR2011 | 7:59 | 2.7 | 60.0 | | 111684 |
| | 30MAR2011 | 9:43 | 3.3 | 60.0 | | 111728 |
| | 01APR2011 | 12:18 | 3.1 | 65.0 | | 111768 |
| | 04APR2011 | 9:35 | 3.6 | 60.0 | | 111795 |
| | 05APR2011 | 9:21 | 3.6 | 85.0 | | 111871 |
| | 06APR2011 | 9:37 | 3.5 | 60.0 | | 111928 |

DATA CODE: F.E. = Field Error

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the comments and methods tables.

NYC-DEP Bureau of Water Supply
Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
October 2006 - 2011 Catskill District Special Investigation Data

5

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number |
|----------------|----------------|-----------|-------------------------|-----------------|-------------|---------------|
| M-1 | 07APR2011 | 9:20 | 4.0 | 55.0 | | 111965 |
| | 08APR2011 | 8:22 | 4.4 | 55.0 | | 111973 |
| | 19APR2011 | 9:59 | 6.9 | 8.9 | | 112226 |
| | 29JUL2011 | 14:49 | 11.6 | 15.0 | | K00016825001 |
| | 02AUG2011 | 9:18 | 10.2 | 11.0 | | K00016833007 |
| | 09AUG2011 | 9:36 | 10.3 | 9.8 | | K00016855004 |
| | 15AUG2011 | 10:41 | 9.9 | 10.0 | | K00016866004 |
| | 16AUG2011 | 10:14 | 10.6 | 10.0 | | K00016879001 |
| | 17AUG2011 | 10:34 | 9.9 | 9.7 | | K00016882001 |
| | 18AUG2011 | 10:37 | 10.0 | 10.0 | | K00016883001 |
| | 19AUG2011 | 11:52 | . | 11.0 | | K00016884001 |
| | 22AUG2011 | 10:05 | 10.0 | 9.8 | | K00016889004 |
| | 24AUG2011 | 9:36 | 10.0 | 10.0 | | K00016899001 |
| | 26AUG2011 | 12:15 | 10.0 | 9.3 | | K00016905007 |
| | 01SEP2011 | 14:39 | 13.3 | 23.0 | | K00016943001 |
| | 01SEP2011 | 11:51 | 18.2 | . | | K00016943001A |
| | 02SEP2011 | 9:52 | 15.6 | 29.0 | | K00016947004 |
| | 02SEP2011 | 15:07 | 15.6 | 1100.0 | | K00016955001 |
| | 06SEP2011 | 10:56 | 17.1 | 80.0 | | K00016952004 |
| | 13SEP2011 | 13:16 | 13.9 | 800.0 | | K00016969011 |
| | 14SEP2011 | 13:14 | 14.3 | 700.0 | | K00017010001 |
| | 15SEP2011 | 15:09 | 14.1 | 600.0 | | K00017018001 |
| | 16SEP2011 | 10:07 | 14.4 | 600.0 | | K00017026004 |
| | 19SEP2011 | 14:22 | 14.9 | 450.0 | | K00017033001 |
| | 20SEP2011 | 9:40 | 14.2 | 600.0 | | K00017036004 |
| | 26SEP2011 | 10:16 | 14.8 | 340.0 | | K00017062004 |
| MARBLETOWN REC | 10JAN2011 | 11:35 | . | 55.0 | | 110191 |
| | 19JAN2011 | 12:23 | 1.1 | 45.0 | | 110369 |
| | 24JAN2011 | 11:52 | -0.1 | 45.0 | | 110415 |
| | 31JAN2011 | 11:07 | 0.2 | 5.5 | | 110527 |
| | 01FEB2011 | 11:45 | -0.2 | 9.4 | | 110556 |
| | 02MAR2011 | 10:10 | 0.4 | 5.5 | | 111070 |
| | 07MAR2011 | 14:21 | 2.7 | 13.0 | | 111160 |
| | 10MAR2011 | 10:44 | 1.6 | 33.0 | | 111294 |
| | 11MAR2011 | 14:58 | F.E. | 35.0 | | 111308 |
| | 16MAR2011 | 10:54 | 2.2 | 60.0 | | 111479 |
| | 18MAR2011 | 9:35 | 3.0 | 36.0 | | 111531 |
| | 24MAR2011 | 11:03 | 2.4 | 50.0 | | 111629 |
| | 28MAR2011 | 11:32 | 2.8 | 55.0 | | 111652 |
| | 05APR2011 | 10:21 | 4.3 | 55.0 | | 111873 |
| | 19APR2011 | 11:13 | 6.5 | 33.0 | | 112229 |
| | 26JUL2011 | 9:03 | 21.7 | 3.4 | | K00016807005 |
| | 02AUG2011 | 10:03 | 22.5 | 1.9 | | K00016833005 |
| | 09AUG2011 | 10:24 | 21.4 | 3.0 | | K00016855001 |
| | 15AUG2011 | 11:50 | 16.5 | 10.0 | | K00016866001A |
| | 22AUG2011 | 10:47 | 18.1 | 4.4 | | K00016889001 |
| | 26AUG2011 | 12:45 | 13.7 | 16.0 | | K00016905005 |
| | 02SEP2011 | 11:08 | 21.3 | 4.0 | | K00016947002 |
| | 06SEP2011 | 11:50 | 18.1 | 180.0 | | K00016952002 |
| | 16SEP2011 | 11:09 | 14.5 | 450.0 | | K00017026001 |

DATA CODE: F.E. = Field Error

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the comments and methods tables.

NYC-DEP Bureau of Water Supply
Ben Nesin/Kingston Laboratory, ELAP ID Number 10030
October 2006 - 2011 Catskill District Special Investigation Data

6

| SITE | Date Collected | Grab Time | Temperature (degrees C) | Turbidity (NTU) | Sample Type | Sample Number |
|------------------|----------------|-----------|-------------------------|-----------------|--------------|---------------|
| MARBLETOWN REC | 20SEP2011 | 10:13 | 14.3 | 550.0 | | K00017036001 |
| | 26SEP2011 | 10:46 | 15.5 | 350.0 | | K00017062001 |
| SAUGERTIES BEACH | 10JAN2011 | 12:23 | . | 45.0 | | 110192 |
| | 19JAN2011 | 13:21 | -0.1 | 40.0 | | 110370 |
| | 24JAN2011 | 12:54 | -0.1 | 33.0 | | 110416 |
| | 31JAN2011 | 12:13 | 0.0 | 11.0 | | 110528 |
| | 01FEB2011 | 13:03 | 0.0 | 6.5 | | 110557 |
| | 02MAR2011 | 11:31 | 0.7 | 9.8 | | 111071 |
| | 07MAR2011 | 15:07 | 1.5 | 65.0 | | 111161 |
| | 10MAR2011 | 11:31 | 2.7 | 7.6 | | 111295 |
| | 11MAR2011 | 15:37 | F.E. | 130.0 | | 111309 |
| | 16MAR2011 | 11:38 | 4.5 | 7.0 | | 111480 |
| | 18MAR2011 | 10:26 | 5.3 | 29.0 | | 111532 |
| | 24MAR2011 | 11:49 | 2.7 | 30.0 | | 111630 |
| | 28MAR2011 | 12:38 | 3.6 | 38.0 | | 111654 |
| | 05APR2011 | 11:42 | 7.4 | 29.0 | | 111875 |
| | 19APR2011 | 12:29 | 7.5 | 37.0 | | 112231 |
| | 26JUL2011 | 10:09 | 26.2 | 2.7 | | K00016807006 |
| | 02AUG2011 | 11:08 | 26.7 | 3.4 | | K00016833006 |
| | 09AUG2011 | 11:29 | 26 | 2.7 | | K00016855003 |
| | 15AUG2011 | 12:22 | 22.5 | 3.9 | | K00016866003 |
| | 22AUG2011 | 12:52 | 21.7 | 3.4 | | K00016889003 |
| | 26AUG2011 | 14:21 | 23.2 | 3.0 | | K00016905006 |
| | 02SEP2011 | 12:08 | 20.7 | 12.0 | | K00016947003 |
| | 06SEP2011 | 13:24 | 18.2 | 190.0 | | K00016952003 |
| 16SEP2011 | 12:15 | 16.2 | 230.0 | | K00017026003 | |
| 20SEP2011 | 11:15 | 15.4 | 280.0 | | K00017036003 | |
| 26SEP2011 | 12:00 | 17.4 | 200.0 | | K00017062003 | |
| SV WWTP ABOVE | 10JAN2011 | 12:50 | . | 45.0 | | 110193 |
| | 19JAN2011 | 13:48 | 0.0 | 45.0 | | 110371 |
| | 24JAN2011 | 13:36 | -0.1 | 50.0 | | 110417 |

DATA CODE: F.E. = Field Error

All results that fall within the scope of the NELAP program meet that program's requirements unless stated in the comments and methods tables.

Catekill District Comments Data
for STREAM Data

10

Year=2006

| Variable | Beginning Date | End Date | Comments |
|----------|----------------|-----------|---|
| ALL | 01JAN2006 | 31DEC2006 | Sample results of less than ten times the limit of detection may be associated with a blank that is more than one tenth the sample level. |

Year=2007

| Variable | Beginning Date | End Date | Comments |
|-----------|----------------|-----------|---|
| ALL | 01JAN2007 | 31DEC2007 | Sample results of less than ten times the limit of detection may be associated with a blank that is more than one tenth the sample level. |
| Turbidity | 12MAR2007 | 31DEC2007 | All samples are associated with calibration standards that have been identified by Mach as "potentially degrading outside the published accuracy specification." A worst case error in calibration of 1 % may have occurred (7/22/08, Thom Vell). |

Year=2008

| Variable | Beginning Date | End Date | Comments |
|-----------|----------------|-----------|---|
| ALL | 01JAN2008 | 31DEC2008 | Sample results of less than ten times the limit of detection may be associated with a blank that is more than one tenth the sample level. |
| Turbidity | 01JAN2008 | 27JUL2008 | All samples are associated with calibration standards that have been identified by Mach as "potentially degrading outside the published accuracy specification." A worst case error in calibration of 1 % may have occurred (7/22/08, Thom Vell). |

Year=2009

| Variable | Beginning Date | End Date | Comments |
|----------|----------------|-----------|---|
| ALL | 01JAN2009 | 27FEB2009 | Sample results of less than ten times the limit of detection may be associated with a blank that is more than one tenth the sample level. |
| ALL | 28FEB2009 | 31DEC2009 | Sample results between 10 and 20 times the limit of quantitation may be associated with a method blank that is greater than one-tenth the sample level. |

Year=2010

| Variable | Beginning Date | End Date | Comments |
|----------|----------------|-----------|---|
| ALL | 01JAN2010 | 31DEC2010 | Sample results between 10 and 20 times the limit of quantitation may be associated with a method blank that is greater than one-tenth the sample level. |

Year=2011

| Variable | Beginning Date | End Date | Comments |
|-------------|----------------|----------|---|
| ALL | 01JAN2011 | . | Sample results between 10 and 20 times the limit of quantitation may be associated with a method blank that is greater than one-tenth the sample level. |
| Temperature | 09/02/11 | | Sample ID K00016948002 - The release channel was not on when the samples were collected. |
| Temperature | 09/06/11 | | Sample ID K00016952005 - The release channel was shut off before samples were collected. |
| Turbidity | 09/02/11 | | Sample ID K00016948002 - The release channel was not on when the samples were collected. |
| Turbidity | 09/06/11 | | Sample ID K00016952005 - The release channel was shut off before samples were collected. |

LABORATORY METHODS: 2006 - 2008
 BEN NESIN LABORATORY, ELAP ID NO. 10030

| Variable | Date | Certification | Samples | Instrument / Procedure Change | Lab Reference / ELAP Certificate Reference | Method |
|-------------|---------|--|--------------------------|------------------------------------|--|----------------------|
| Temperature | 29SEP04 | Non-Potable NA Potable NA S & H Waste NP | Hydrology X Special | Hydrolab Surveyor III or YSI-600XL | SW18; 2550B | Measured in situ |
| Temperature | 08MAR05 | Non-Potable NA Potable NA S & H Waste NP | Hydrology Special X | YSI 600XL or Hydrolab Surveyor III | SW18-20; 2550B | |
| Turbidity | 27AUG01 | Non-Potable NA Potable NA S & H Waste NP | Hydrology X Special X | Hach 2100 AN Turbidimeter | SW19; 2130B | Nephelometric Method |
| Turbidity | 26SEP07 | Non-Potable Y Potable Y S & H Waste NP | Hydrology X Special X | Hach 2100 AN Turbidimeter | SW19; 2130B | Nephelometric Method |

Certification Codes: Y = Yes, N = No, NA = Not Available, NP = Not Performed



Key to Sampling Sites

Report Updated on 9/28/2011 - Report generated from WWQO STARLIMS

| Site Name | Description |
|------------------|---|
| ASP | Ashokan Reservoir Spillway, Rt 28A |
| ASP M-1 Conf | Ashokan Spill and Release Channel confluence |
| LEC AS | Lower Esopus Creek Above Sawkill |
| Lynch Marina | Lower Esopus at Lynch Marina |
| M-1 | Release Channel |
| Marbletown Rec | Lower Esopus |
| Saugerties Beach | Lower Esopus upstream of Saugerties Dam |
| SV WWTP Above | Lower Esopus Creek downstream of Saugerties Dam |

Appendix C

DEC's Response to the Proposed Listings to the 2012 Section 303(d) List⁴⁹

Appendix C consists of DEC's Response to the Proposed Listings to the 2012 Section 303(d) List as found on DEC's website. The 2012 DEC Response includes DEC's comments to specific suggested additions and considerations in the compiling of the 2012 Section 303(d) List received during the data solicitation period ending on September 30, 2011. Riverkeeper and PELC submitted substantial evidence, photographs, and data during DEC's data solicitation period demonstrating the Lower Esopus Creek's evident impairment, as found as Riverkeeper Data Submission, *Appendix A*.

- Pages 48-49: DEC's general comments in response to specific data submissions. DEC explicitly states that "[t]he 303(d) List is reserved for those specific waterbodies where NYS water quality standards are currently being exceeded and/or where uses are not being supported."⁵⁰
- Pages 49-50: DEC's response to Riverkeeper's and PELC's data submission (DEC lists PELC as "Pace Environ Law"). DEC explicitly states, "[it] believes that impairment of the creek is evident . . . [h]owever it is NYSDEC's opinion that it is more appropriate to categorize this waterbody as a 4b water, where a TMDL (and 303(d) Listing) is not necessary due to other required control measures. In this case, the department is pursuing enforcement actions against New York City, with an eventual Consent Order to include penalties, outline operating procedures, and fully address the impairment."
- Pages 50-52: DEC's response to additional data submissions by other interested parties, including Baykeeper (page 49), Super Law Group, Alliance for the Great Lakes, and Friends of Oyster Bay.

⁴⁹ *Response to Proposed Listings to the 2012 Section 303(d) List*, N.Y. STATE DEP'T OF ENVTL. CONSERV., <http://www.dec.ny.gov/chemical/79581.html> (last visited Mar. 1, 2012, 11:17 AM).

⁵⁰ *Id.*



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|--|
| Outdoor Activities |
| Animals, Plants, Aquatic Life |
| Chemical & Pollution Control |
| Water |
| Water Quality Monitoring, Assessment and Planning |
| Water Quality Assessments and Reporting |
| Response to Proposed Listings to the 2012 Section 303(d) List |
| Energy and Climate |
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Response to Proposed Listings to the 2012 Section 303(d) List


NYSDEC received a number of petitions advocating for the inclusion of specific waters as impaired in response to the data solicitation for the development 2012 NYS Section 303(d) List of Impaired/TMDL Waters. All of these petitions provide ample documentation of water quality issues that NYSDEC agrees warrant some level of attention. However the guidance and established practices used in considering waters for inclusion on the List are very specific and reflect a fairly high bar when determining whether the impacts to a waterbody meet the threshold of having impaired uses. In addition, there are a number of nuances in the Section 303(d) regulations regarding listing that result in waters that are impaired not being included on the 303(d) List. For example, impaired waters for which a TMDL has been complete, or where other required regulatory controls outside of a TMDL will address the impairment, are appropriate to exclude from the List.

Some of the petitions cite the need to protect a waterbody from becoming impaired as a justification for a listing. Past petitions have also noted that a listing would increase attention or opportunities for restoration funding for a specific waterbody. However, while these interpretations are not without merit, these reasons alone do not meet the threshold for listing. The 303(d) List is reserved for those specific waterbodies where NYS water quality standards are currently being exceeded and/or where uses are not

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Response to Proposed Listings to the 2012 Section 303(d) List - NYS Dept. of Environmental Conservation

being supported. Note that NYSDEC's water quality assessment program does include additional categories - such as *Stressed* and *Threatened* - that go beyond the 303(d) List designation of *Impaired*, and that are often more appropriate representations of a waterbody condition.

A discussion of some of the specific suggested additions to the Section 303(d) List received during the data solicitation is presented below.

Carmans River proposed for Nutrients

(submitted by Baykeeper, et al)

NYSDEC believes there is not sufficient evidence that water quality conditions in the Carmans River reach the threshold of impaired and that it is not appropriate to add the river to the 303(d) List. The petition cites the need to protect the waterbody, and while we do not disagree about that need, it is not sufficient justification for listing.

NYSDEC acknowledges significant invasive weed issues that impair uses in Lower Lake, but these are appropriately designated as a habitat (invasives) problem rather than a nutrient issue and, as such, would be more appropriately assigned to Category 4c as an impaired water, but one for which a TMDL is not appropriate. That being said, nutrient loadings from the Carmans River may very well be considered in the development of a TMDL for Great South Bay, which is included on the 303(d) List, and its watershed which includes the Carmans River.

Lower Esopus Creek proposed for Silt/Sediment, Turbidity

(submitted by Pace Environ Law)

NYSDEC believes that impairment of the creek is evident; in aftermath of the September 2011 flooding events, in particular, conditions in the creek have been poor for an extended period of time. However it is NYSDEC's opinion that it is more appropriate to categorize this waterbody as a 4b water, where a TMDL (and 303(d) Listing) is not necessary due to other required control measures. In this case, the department is pursuing enforcement actions against New York City, with an eventual Consent Order to include penalties, outline operating procedures, and fully

Response to Proposed Listings to the 2012 Section 303(d) List - NYS Dept. of Environmental Conservation

address the impairment.

Discrepancies between 303d List and MS4 Permit, Apdx 2

(submitted by Super Law Group)

That the the proposed 303(d) List and the list of waters included in the MS4 Permit appendix differ is due to the fact that neither is a complete list of all impaired waters in the state. As noted above the 303(d) List does not include every impaired water; for example, it does not include impaired waters for which there is a TMDL in place, or where an alternative means to address an impairment already exist (such waters may be included in the MS4 Appendix). As for the MS4 Permit Appendix 2, this list is limited to waters that are impaired by specific pollutants related to stormwater.

Newbridge Pond proposed for PAHs

(submitted by Super Law Group)

The suggestion to list this waterbody is the result of a USGS study that is based on sediment monitoring data collected in the pond in 1997. Subsequent to that time, the pond was dredged to remove contaminated sediments. The Nassau County Department of Public Works has indicated that additional dredging is planned. Given the age of the original data and the likelihood that - due to the subsequent dredging efforts - the data does not represent the current conditions in the pond, it is not appropriate to include this waterbody on the 2012 List. It is appropriate to include this information in an updated assessment of the waterbody and recommend follow-up monitoring to verify current conditions.

Additional Metals and PAH Monitoring is Requested

(submitted by Super Law Group)

This comment did not include any specific request for additional listings.

Bathing and Aquatic Life Impacts on Lake Erie Beaches

(submitted by Alliance for the Great Lakes)

The pathogen results submitted related to this issue are

Response to Proposed Listings to the 2012 Section 303(d) List - NYS Dept. of Environmental Conservation

consistent with other previously available data and information on these beaches and are reflected in Lake Erie Shoreline listings for pathogens in the 2010 303(d) List. These listings will be continued in the 2012 List. Regarding the finding of dead fish on the beach during some site visits, this does not necessarily translate into an impairment of aquatic life but DEC will continue to monitor aquatic life support in the lake.

Ocean Coastlines proposed for pH

(submitted by Center for Biological Diversity)

This proposal is largely unchanged from what the Center submitted for the 2010 List and our response largely still applies. Although EPA has since indicated that states can consider listing ocean waters where there is available data, the data submitted is not specific to New York nor does it show a specific impairment to New York waters. As noted in our previous response, "While not diminishing the threat of climate change or carbon dioxide pollution and the need for action, we do not believe water quality standards are being exceeded within New York State... [N]or do we believe that the development of a state TMDL would be an appropriate or more effective means of addressing the problem." The 2010 response also noted actions that the department were taking - and that continue - to address sources of ocean acidity.

Oyster Bay and Tribs, Cold Spring Harbor

(submitted by Friends of Oyster Bay)

NYSDEC notes that the information in the petitions for most of these waters is consistent with current DEC assessments and listings. Oyster Bay, Mill Neck Creek and Cold Spring Harbor are considered impaired due to pathogens; however, they are not included on the Section 303(d) List due to the completion of pathogens TMDL in 2003 (and the assignment of these waters to Category 4a in 2004). The petition regarding Beaver Lake is also largely consistent with the most recent DEC reassessment (2011) of this waterbody and the Lake is proposed for addition to the 2012 List for nutrients. The Friends of Oyster Bay petition cites silt/sediment as being a concern as well, however our assessment of available information

Mr. Jeff Myers, NYSDEC

March 2, 2012

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Response to Proposed Listings to the 2012 Section 303(d) List - NYS Dept. of Environmental Conservation

indicate that the appropriate pollutant to be listed for this waterbody is phosphorus. The petition also notes some occurrences low dissolved oxygen in estuary waters, but it does not appear that these represent a violation of marine water standards.

Little Fresh Pond

(submitted by Land Marks)

This submittal was more a request for information, rather than a petition for listing. However the most recent NYSDEC assessment (2011) suggests a listing for this waterbody due to phosphorus may be appropriate. The water is proposed to be added to Part 3a.

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Appendix B

Letter from Riverkeeper to EPA, NYSDEC's failure to list the Lower Esopus Creek as impaired on its Draft 2012 CWA § 303(d) List, and its proposal to instead categorize the Creek as a "4b" Waterbody

-

Appendix B does not include Comments and Petition referenced herein, as incorporated in original Letter

PACE ENVIRONMENTAL LITIGATION CLINIC, INC.

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June 14, 2012

VIA UPS COURIER & ELECTRONIC MAIL

Judith Enck, Regional Administrator
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, New York 10007-1866

Re: NYSDEC's failure to list the Lower Esopus Creek as impaired on its draft 2012 CWA § 303(d) list, and its proposal to instead categorize the creek as a "4b" waterbody.

Dear Regional Administrator Enck:

We write on behalf of our client, Riverkeeper, Inc. ("Riverkeeper"), to formally advise the U.S. Environmental Protection Agency ("USEPA") of Riverkeeper's continuing position with respect to the required inclusion of the Lower Esopus Creek on New York State's 2012 Clean Water Act ("CWA") § 303(d) list. Riverkeeper previously advised the New York State Department of Environmental Conservation ("NYSDEC") of its position on this issue in a data submission dated September 29, 2011 (in response to which NYSDEC expressly acknowledged the water quality impairment),¹ and in comments on NYSDEC's Draft CWA § 303(d) List submitted to NYSDEC on March 2, 2012 ("Comments"). USEPA representatives have previously been provided with copies of the Comments, which are also provided herewith and incorporated by reference herein.

¹ See Appendix A to Riverkeeper's Comments to NYSDEC. See also NYSDEC's Response to Proposed Listings to the 2012 Section 303(d) List, available at <http://www.dec.ny.gov/chemical/79581.html> (last viewed on June 13, 2012) ("*NYSDEC believes that impairment of the creek is evident*; in aftermath of the September 2011 flooding events, in particular, conditions in the creek have been poor for an extended period of time. However it is NYSDEC's opinion that it is more appropriate to categorize this waterbody as a 4b water, where a TMDL (and 303(d) Listing) is not necessary due to other required control measures. *In this case, the department is pursuing enforcement actions against New York City, with an eventual Consent Order to include penalties, outline operating procedures, and fully address the impairment.*") (emphasis added).

NYSDEC's May 23, 2012 issuance for public notice and comment of a draft administrative consent order ("Draft ACO") that would resolve a pending administrative enforcement action brought by NYSDEC against the New York City Department of Environmental Protection and the City of New York (collectively, the "City") is the catalyst for this letter.² The enforcement action principally involves alleged violations by the City of its SPDES Permit covering discharges of Alum into the Catskill Aqueduct shortly before it empties into the Kensico Reservoir.³ NYSDEC has pointed to this enforcement action against the City as the "other pollution control requirements . . . required by local, State, or Federal authority [that are] stringent enough to implement applicable water quality standards within a reasonable period of time,"⁴ which is the standard for a Category 4b waters classification according to a 2006 EPA guidance document.⁵

When Riverkeeper submitted its Comments on NYSDEC's Draft CWA § 303(d) list in early March, NYSDEC's enforcement action against the City had been pending for over one year and the Draft ACO had not yet been made public. Under those circumstances, Riverkeeper was forced to speculate in its Comments about the obvious unlikelihood that NYSDEC's enforcement action against the City would or could address the impairment of the Lower Esopus within a "reasonable period of time," if at all, and stated the following:

DEC's administrative enforcement action, initiated by a February 14, 2011 Notice of Hearing and Complaint against DEP, does not even mention violations of water quality standards in the Lower Esopus Creek. The Complaint is an action to compel DEP to halt its unauthorized operation of the Waste Channel in order to comply with the Catalum SPDES Permit for the Kensico Reservoir, not to protect the water quality of the Lower Esopus Creek. "DEC brings this action to compel [DEP] to . . . 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" Without addressing, acknowledging, or so much as mentioning any

² NYSDEC Case No. D007-0001-11. The Draft ACO is available for review at <http://www.dec.ny.gov/lands/79771.html> (last viewed on June 13, 2012).

³ NYSDEC SPDES Permit number NY-0264652 (the "Catalum SPDES Permit").

⁴ See note 1, *supra*.

⁵ USEPA, INFORMATION CONCERNING 2008 CLEAN WATER ACT SECTIONS 303(D), 305(B) AND 314 INTEGRATED REPORTING AND LISTING DECISIONS 7 (Oct. 12, 2006), available at http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2008_ir_memorandum.cfm (last viewed on June 13, 2012) (citations omitted). Riverkeeper doubts the legal legitimacy of the referenced USEPA guidance, but for purposes of this communication we will assume that the 4b criteria set forth in the guidance are valid and focus on whether those criteria are met with respect to the water quality impairment of Lower Esopus Creek. Riverkeeper reserves its right to challenge the legality of the 4b categorization as a legally acceptable alternative to a CWA § 303(d) Impaired Waterbody Listing for the Lower Esopus Creek.

violations of water quality standards in the Lower Esopus Creek, DEC's current enforcement action cannot be considered an appropriate pollution control measure to address the impairment of the Lower Esopus Creek. Simply put, a pending, unresolved enforcement action that on its face is not intended to address water quality violations in the Lower Esopus Creek cannot be expected to result in the achievement of water quality standards in that waterbody.⁶

A detailed review of the Draft ACO that has now been made available to the public only strengthens Riverkeeper's argument that the proposed resolution of this administrative enforcement action concerning the City's violations of its Kensico Catalum SPDES permit cannot possibly satisfy USEPA's Category 4b criteria. The Draft ACO confirms that the enforcement action was not brought by NYSDEC to abate the impairment of water quality in the Lower Esopus, and its proposed resolution (the Draft ACO) does not even refer to the attainment of water quality standards in the Lower Esopus, much less purport to assure such attainment within a "reasonable period of time." To the extent that the Draft ACO refers to water quality standards, all such references are to standards in the Kensico Reservoir in Westchester, not the Lower Esopus Creek in Ulster County. Given that the Draft ACO does not reference, let alone require that the City's discharges to the Lower Esopus ever comply with, State water quality standards, even assuming full compliance with a final ACO by the City, attempting to rationally predict when the Lower Esopus might meet water quality standards (if ever) for turbidity, flow and/or color is impossible.

Moreover, the Interim Ashokan Release Protocol ("Interim Protocol"),⁷ which NYSDEC proposes to make binding upon the City by incorporating it as Appendix B to the Draft ACO, not only fails to assure compliance with State water quality standards; it also purports to expressly authorize unpermitted discharges of pollutants to waters of the United States and waters of the State that have for months at a time over the past two years caused or contributed to serious violations of such standards, and will continue to do so.⁸ It is also noteworthy that despite the references in the Draft ACO to the required future modification of the Catalum SPDES permit, NYSDEC does not appear to intend to promulgate technology- or water quality-based effluent limitations for discharges of pollutants from the Ashokan Waste Channel in a modified Catalum SPDES permit. Rather, the Draft ACO appears to envision that a document similar to the Interim Protocol – which, again, does not contain any water quality-based effluent limitations whatsoever – will ultimately be incorporated into the modified Catalum SPDES permit.⁹ Again,

⁶ Riverkeeper Comments at 7-8 (citations omitted).

⁷ See Draft ACO, Appendix B, available at http://www.dec.ny.gov/docs/water_pdf/ashcatalum.pdf (page 24 of 32) (last viewed on June 13, 2012).

⁸ See Petition submitted by Riverkeeper to NYSDEC on December 16, 2011, a copy of which is provided herewith and incorporated by reference herein ("Petition"). As of the date of this letter, Riverkeeper has not received a response to the Petition from NYSDEC.

⁹ See Draft ACO ¶¶ 23 (p. 6), A(ii) (p. 7) & Appendix A (Schedule of Compliance) § VI, ¶¶ 5-7.

this begs the fundamental question of how these purported “pollution control requirements” can reasonably be expected to result in the attainment of water quality standards in the Lower Esopus at all, much less within a reasonable period of time.

For all of these reasons, and those contained in the incorporated Comments and Petition, it continues to be Riverkeeper’s position that the CWA and applicable EPA regulations require that the Lower Esopus Creek be included on the New York State 2012 CWA § 303(d) impaired water body list.¹⁰ In the event that NYSDEC declines to amend its Draft CWA § 303(d) list, we strongly urge USEPA to disapprove such draft list and issue its own CWA § 303(d) list classifying the Lower Esopus Creek as an impaired water body.

We sincerely appreciate the USEPA’s attention to these important issues. We remain available to answer any questions or to further discuss these matters at your convenience.

Respectfully yours,



Daniel E. Estrin
Natalie Zaremba, Legal Intern

cc: (all via email)
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¹⁰ See 33 U.S.C. § 1313(d); 40 C.F.R. § 130.7(b)(1).

Appendix C

New York State Department of Environmental Conservation
Response to Comments: The 2012 NYS Section 303(d) List of
Impaired Waters Requiring a TMDL

Response to Comments: The 2012 NYS Section 303(d) List of Impaired Waters Requiring a TMDL

A Draft 2012 New York State Section 303(d) List was made available for public comment for a 45 day period that ended on February 29, 2012. Prior to the development of the Draft List, a solicitation for available data also elicited a number of responses. Between these two opportunities the New York State Department of Environmental Conservation (NYSDEC) received comments from eight (8) organizations (Alliance for the Great Lakes, Bronx River Alliance, Center for Biological Diversity, Friends of Oyster Bay, Pace Environmental Litigation Clinic, Peconic Baykeeper, Super Law Group), four (4) municipalities/government agencies (Onondaga County Health Department/Council on Environmental Health, Genesee County Soil and Water Conservation District, Schuyler County Soil and Water Conservation District, Saint Regis Mohawk Tribe) and three (3) private parties/individuals.

The Draft Section 303(d) List was also reviewed by the US Environmental Protection Agency (USEPA), which has approval authority for state Section 303(d) Lists. During USEPA review of the List additional comments, discussions and agreements between USEPA and NYSDEC regarding listing decisions for a few specific waters resulted in additional revisions to the List. Those additional comments, discussions and agreements have also been incorporated into this Responsiveness Summary.

General Response to Comments on Section 303(d) List

A review of the comments received regarding the Section 303(d) List reveal that there is, in general, considerable agreement regarding the sources of pollution that impact New York State waters. Even in instances where those commenting on the List suggested the addition or removal of waterbodies and/or pollutants, NYSDEC and the commentors are in agreement that there are water quality impacts related to these waters/pollutants that require action. Disagreement typically revolves around whether it is appropriate – given the definitions and parameters of the Section 303(d) List – to include certain waters on the List, and/or the details of how the waters are listed. In developing the List NYSDEC may determine that some water quality problems do not rise to the level of an impairment and/or that some impaired waters are not appropriate to include on the Section 303(d) List for TMDL development.

The Threshold for Listing: Impairment

While there is typically considerable agreement on what waters experience water quality impacts and what is causing those impacts, a number of comments on the Draft List reflect disagreement with NYSDEC's assessment as to the magnitude of the impacts. Specifically at issue for Section 303(d) Listing is whether water quality impacts rise to the level of an impairment of uses. The thresholds used to make this determination are outlined in the NYSDEC Assessment Methodology (available at <http://www.dec.ny.gov/chemical/31296.html>). Typically the threshold for determining impairment hinges on whether water quality standards are, or are not, being met.

In reporting to USEPA on the status of its waters, New York State uses the federal USEPA assessment categories. These Integrated Reporting categories are used to identify waters that are impaired and not supporting uses (either impaired and needing a TMDL or impaired and not needing a TMDL), waters that are not impaired and fully supporting uses (fully supporting all uses, or fully supporting all uses for which they were assessed), and waters with insufficient data/information to make an impairment/listing decision. However NYSDEC's assessment program – the *Waterbody Inventory/Priority Waterbodies List (WI/PWL)* – expands on the federal fully supporting uses categories to include the identification of waters that are fully supporting of uses but that experience minor impacts and/or threats. The tracking of these *stressed* waters allows the state to identify waters where water quality protection efforts – as separate from restoration efforts – can be implemented to prevent impairments in waters before they occur. This approach supports a state water quality strategy that balances both the protection of *at-risk* resources and the often more task of difficult restoring impaired waters.

However the identification of stressed waters in the WI/PWL is occasionally misinterpreted. Specifically, a few commentors asked why waters that NYSDEC identified in the WI/PWL as having minor impacts are not included on the Section 303(d) List. NYSDEC's response is that these waters – though not pristine – do not meet the threshold of impaired waters, and are more appropriately captured in the USEPA Integrated Reporting (IR) categories of non-impaired waters that fully support designated uses. As noted above, the key distinction between stressed waters with minor impacts and impaired waters is whether or not water quality standards in the waterbody are being met.

NYSDEC and other states have previously commented to USEPA that the IR categories are somewhat limiting in that waters are required to be assessed as either being impaired or not impaired. However, such “black or white” assessments are at times difficult to apply in the real world. In reality, waters that do not reach the threshold of impaired fall across wide a spectrum of varying “shades of gray.”

Insufficient Data/Information to Make a Listing Decision

One instance where the USEPA assessment categories do recognize “shades of gray” is in the use of the *IR Category 3 – Waters with Insufficient Data to Make a Listing Determination*. This category recognizes that any assessment of a waterbody as being impaired should be supported by a minimum threshold of confidence and certainty that such a designation is appropriate. Maintaining that minimum threshold is all the more appropriate when one considers that the threshold for delisting waters once they are listed is quite high and requires significant documentation of water quality improvement. Therefore, it is NYSDEC's philosophy that the Section 303(d) List be reserved for those waterbodies where impairment of uses is clear. Waters where impairments are suggested but not confirmed are more appropriately characterized as IR Category 3. Additional monitoring and verification of conditions in these waterbodies will be conducted in accordance with New York State Monitoring Strategy (available at <http://www.dec.ny.gov/chemical/31296.html>). Meanwhile, resources for the development of a TMDL and other restoration strategies can be more effectively directed to those water quality problems where the need for and benefits of such actions are more certain.

Impaired Waters NOT on the Section 303(d) List

Some of the discussion and debate regarding the public comments on the Section 303(d) List revolve around the nature of the List – it is by definition a list of impaired waters requiring a Total Maximum Daily Load strategy – and whether a TMDL is appropriate to address specific waterbody problems. NYSDEC points out that the List is not defined as, nor intended to be, a comprehensive list of waters that meet the threshold of impaired. Rather the List is defined in the Clean Water Act as including only those impaired waters for which development of a Total Maximum Daily Load (TMDL) is necessary to address the impairment and restore the designated uses of the water. If a TMDL has already been developed or if a more effective means to address the impairment (other than a TMDL) is available, then inclusion on the List is not appropriate even if the water continues to be impaired. Consequently, NYSDEC typically refers to the list as the Section 303(d) Impaired/**TMDL** Waters List.

USEPA regulations and guidance concerning Section 303(d) Listing recognize three specific circumstances when a waterbody that meets the threshold of being impaired should not be included on the Section 303(d) List. These circumstances include:

- Waters where a TMDL has already been developed and approved by USEPA;
- Waters where other required control measures are expected to result in the attainment of applicable water quality standards in a reasonable period of time, and;
- Waters where the impairment is the result of pollution that is not the result of a specific pollutant (substance) and for which a loading (TMDL) cannot reasonably be developed.

While NYSDEC may agree with commentors that certain specific waters are impaired, these waters may not be included on the List based on a judgment that the situation regarding these waterbodies corresponds to one of the three (3) circumstances outlined above.

In principle, NYSDEC agrees with an opinion expressed by many that a more comprehensive list of impaired waters that includes all impaired waters – regardless of TMDL status – would be less confusing and perhaps more useful in characterizing the condition of the waters of the state. This is why New York State includes with its 2010 Section 303(d) List a separate supplemental listing of *Other Impaired Waterbody Segments Not Listed (on the 303(d) List) Because Development of a TMDL is Not Necessary*. The purpose of this supplement is to provide a more comprehensive inventory of waters of the state that do not fully support designated uses and that are considered to be impaired (irrespective of the development of a TMDL). The supplemental list includes the justification for not including each of these waters on the Section 303(d) List.

Other Measures More Appropriate than a TMDL

Related to the preceding discussion, another issue that emerged through public comment concerns the recognition of instances where TMDL development would be of little value in restoring a waterbody. As noted above, Section 303(d) allows for not listing impaired waters where other more appropriate required control measures will result in restoration in a reasonable period of time. However there are additional examples where there is no obvious alternative to a TMDL, or where the alternative would take a lengthy period of time to restore the waterbody.

Part 3 of this and previous Lists includes waterbodies where a determination has been made that TMDL development at the current time should be deferred due to other factors (i.e., need to

verify impairment or pollutant, implementation/evaluation of other efforts). This category of listed waters has been useful in prioritizing waters for TMDL development in the face of limited resources. However it also clear that there are still other cases of water impairment where TMDL development would be of little, if any, benefit to resolving the impairment. That fact does not change even if there are no other available alternative strategies. For example, the Section 303(d) List includes a large number of waters with fish consumption advisories that are the result of pollutants for which there are no remaining active sources and where in some cases the chemical has been banned (e.g., DDT in Keuka Lake). Although practical options to speed up the restoration of these waters are not available, development of a TMDL would provide no benefit while redirecting limited resources away from waters where a TMDL could actually be useful. In another example, one commentor noted that a TMDL would be of little benefit for Cayuta Lake, where the phosphorus loading is largely from in-lake recycling of existing nutrients. For the 2012 List, Cayuta Lake is included in Part 3a of the List as a waterbody for which TMDL development is deferred pending verification of impairment. However this is not an entirely accurate characterization of the waterbody since the need for additional verification is unclear. These examples illustrate the possible need for an additional listing option – *Impaired Waterbody for which TMDL Development is Deferred due to Limited Benefit*, or something comparable – that should be explored in future Section 303(d) Listing cycles.

2012 Delisted Waters

A separate list of Impaired/DeListed Waters that appeared in the previous (2010) List but have been removed in this listing cycle has also available. This listing was compiled in order to provide easier tracking of specific waters and changes from the 2010 List.

Dissolved Oxygen Listings

In previously Lists, the cause/pollutant for waters where the impairment is related to low dissolved oxygen in the waterbody was typically indicated as being “D.O./Oxygen Demand.” Although dissolved oxygen water quality standards are the metric used to determine whether or not a waterbody will be listed, dissolved oxygen is technically not a pollutant for which a loading can be developed. To address any possible confusion, the 2012 List as well as future Lists will more appropriately list the cause/pollutant for waters not meeting the dissolved oxygen standard as “Oxygen Demand.” In cases where the nature of the oxygen demand causing the impairment can be identified, the cause/pollutant may be indicated more specifically (e.g., phosphorus, nitrogen, organic sludge, etc).

Asterisks Indicating High Priority Waters for TMDL Development

The Section 303(d) List includes an asterisks (“*”) notation for waterbodies/pollutants that have been identified as being high priority for TMDL development. However a number of commentors have noted that the format of previous Lists make it difficult to determine whether the high priority designation applies to all or just some pollutants listed for a waterbody. To address this confusion the format of the 2012 List has been modified to include a full listing of waterbody information for each cause/pollutant. As a result the specific waterbody/pollutant combination to which the asterisk applies will be clear.

Response to Specific Comments on Section 303(d) Listed Waters

The public comments NYSDEC received regarding specific waterbody/pollutant listings on the Draft 2012 Section 303(d) List and the response regarding whether or not to include those listing on the Proposed Final List are presented below.

US Environmental Protection Agency comments regarding Chautauqua Lake (0202-0020, 0202-0072) for Phosphorus

USEPA commented that these two segments should not be delisted as proposed by NYSDEC, since the Chautauqua Lake phosphorus TMDL has not yet been approved.

NYSDEC concurs with this comment and these lake segments will remain on the 2012 List for phosphorus impairment. NYSDEC is in the process of developing a TMDL for the lake and its status on the List will be reviewed for possible delisting action during the next 303(d) listing cycle.

Genesee County Soil and Water Conservation District comments regarding Tonawanda Creek, Upper, and Minor Tribs (0102-0003) for silt/sediment

The Genesee County Soil & Water Conservation District commented that the proposed delisting of the Upper Tonawanda Creek segment (0102-0003) for silt/sediment be reconsidered. The District cites recreational uses that are limited by logjams and trash in the stream; some of these areas are located below the monitoring sites. Erosion and flooding of cropland is also noted as a concern.

NYSDEC responds that the delisting of the segment for silt/sediment is not inconsistent with the issues raised by the commenter. Monitoring data in the Tonawanda Creek Watershed has shown that silt and sediment, as measured by total dissolved solids, has been decreasing and water quality standards are currently being met in this segment. NYSDEC acknowledges that hydrologic impacts due to logjams and aesthetic impacts due to trash can restrict recreational uses and enjoyment. But these concerns are separate from the proposed delisting for the specific pollutant of silt/sediment. Additionally, hydrologic impacts – which DEC has noted in its current assessment – and trash impacts are not problems that would be reasonably addressed through a TMDL and as a result are not appropriate for a 303(d) Listing. NYSDEC will continue to note hydrologic concerns in its assessment for this segment, and will add the related concern about aesthetics (trash).

Alliance for the Great Lakes comments regarding Great Lakes Shoreline (multiple segments), various issues

The Alliance for the Great Lakes commented on the listings related to Great Lakes Shoreline segments. The issues raised by the commenter included 1) the impact of phosphorus on the Great Lakes and the need for more definitive (i.e., numeric) nutrient criteria, 2) the need for more clarity in the methodology used to assess public bathing and recreational use impacts and impairments, and 3) a request for timelines and target dates for TMDL development and implementation, as well as future assessment efforts. These comments did not suggest specific changes to the List as proposed in the draft, but rather offered numerous comments on the

criteria used to make water quality assessments and suggestions for improving the assessment methodologies as the program moves forward.

NYSDEC responds that the department is in agreement with many of the comments and suggestions for improving the assessment of New York State waters. In particular, NYSDEC is in the process of developing more specific numeric nutrient criteria, with a current emphasis on phosphorus levels in freshwaters. Nutrient enrichment from phosphorus is a widely acknowledged water quality problem in the state, and the nation. But developing criteria that are appropriate for the wide variety of New York State waters has been a challenge. NYSDEC has issued a Nutrient Standards Plan (http://www.dec.ny.gov/docs/water_pdf/nutrientstds2011.pdf) that anticipates establishing criteria in time for use in the next biennial Section 303(d) List.

NYSDEC also concurs that additional clarity regarding some of the criteria in the NYSDEC Assessment Methodology maybe appropriate. This is particularly true for bathing beach criteria and for the use of observational data and information. In conjunction with the work being conducted on nutrient criteria as well as the newly revised national guidance on bathing beach criteria from USEPA, NYSDEC is planning to review and update its Consolidated Assessment and Listing Methodology (CALM) during the next Section 303(d) listing cycle. The detailed comments provided by the Alliance for the Great Lakes will be useful in this effort. The revision of the CALM will also consider the five-year rotating basin schedule for the evaluation of the state's waters. This schedule of assessments has been difficult to maintain in the face of reduced resources. Similar issues also impact the schedule for the development and implementation of TMDL for the waters on the List. As a result it is difficult to project TMDLs beyond a single two-year listing cycle.

US Environmental Protection Agency comments regarding
Lake Ontario Shoreline, Western (0301-0071) for Pathogens

USEPA commented that this segment should include a listing for pathogens due to the frequency of public bathing beach closures that reach the threshold of impaired use.

NYSDEC concurs with this comment based on monitoring data and the resulting bathing beach closures at Kull Park Beach. A listing for this segment due to pathogen contamination has been added to Part 1 of the 2012 List.

Genesee County Soil and Water Conservation District comments regarding
LeRoy Reservoir (0402-0003) for Phosphorus

The Genesee County Soil and Water Conservation District commented that the Village of LeRoy no longer uses this reservoir as a water supply, as their public drinking water needs are now served by the Monroe County Water Authority. As a result the reservoir was sold by the Village of LeRoy to a local farm in 2009 and that the farm uses the reservoir for irrigation. The commentor questioned the justification for adding the waterbody to the Section 303(d) List.

NYSDEC responds that the assessment of water uses and determination of impairment is based on the waterbody classification and associated designated uses. Although the reservoir may no longer be used as a drinking water supply, it remains a Class A waterbody and, as such, it is assessed for a range of uses including water supply, primary and secondary contact recreation

and fishing. It was determined that high nutrients, poor water clarity and algal blooms impair these uses.

Private Individual comments regarding
Honeoye Lake (0402-0032) for Phosphorus, Oxygen Demand

A private individual commented that there are no agricultural sources that would contribute to the lake impairments. The current inclusion of agriculture on the List as a source of the impairments would appear to be incorrect.

NYSDEC responds that upon review by regional NYSDEC staff, we agree with the commentor the agriculture in the watershed is limited and not appropriate to include as a source in the listing. The List has been revised to show the source of this impairment to be “Unknown.”

Schuyler County Soil and Water Conservation District comments regarding
Cayuta Lake (0603-0005) for Phosphorus

The Schuyler County Soil and Water Conservation District commented that they disagree with inclusion of Cayuta Lake on the Section 303(d) List of Impaired/TMDL Waters since a TMDL would provide little if any additional benefit to restoring the lake. Available lake monitoring data cited by the SWCD shows that in-lake sediments are the primary contributor of phosphorus to the lake. As a result, they do not see what purpose a TMDL for the lake would achieve.

NYSDEC responds that the commentor makes valid points regarding the assessment of the problem and the questionable value of developing a lake-specific TMDL. As a result, the listing for Cayuta Lake has been moved to Part 3a of the List (*Waterbodies for which TMDL Development May be Deferred, Requiring Verification of Impairment*). In reality this is an appropriate categorization of the lake only in that TMDL development should be deferred; however as the commentor points out, the need for additional verification is questionable. This waterbody illustrates that perhaps an additional listing option – Impaired Water for which TMDL Development Provides No Benefit – should be explored during the next listing cycle.

Onondaga County Health Department comments regarding
Onondaga Lake Outlet (0702-0020) for Oxygen Demand

The Onondaga County Health Department Council for Environmental Health commented that a review of data collected by the Onondaga County Department of Water Environment Protection shows dissolved oxygen levels in the Onondaga Lake Outlet are now meeting water quality standards and, as a result, this waterbody should be delisted. The data provided by the County show increasing dissolved oxygen, largely attributable to Onondaga Lake Amended Consent Judgment actions including upgrades to the Syracuse Metro WWTP.

NYSDEC responds that the data provided by the County do support a delisting of this waterbody for Oxygen Demand. This waterbody/pollutant has been removed from the List.

US Environmental Protection Agency comments regarding
Onondaga Lake (0702-0003, 0702-0021) for Dissolved Oxygen

USEPA requested that the List include a listing to reflect that current water quality standards for dissolved oxygen are not being fully met in Onondaga Lake.

NYSDEC responded by including both the northern and southern ends of Onondaga Lake in Appendix B of the List as *Waterbodies Not Meeting Dissolved Oxygen Standards Pending Verification of Use Impairments/Pollutant/Sources*.

US Environmental Protection Agency forwarded a comment on behalf of the **Onondaga Nation** regarding

Onondaga Lake Tribs (multiple segments) for various pollutants

The Onondaga Nation commented that the reference to the Onondaga Lake Partnership and the Amended Consent Judgment in the footnote associated with these listings should be updated to better reflect the present impact of these programs on the waterbodies.

NYSDEC concurs and has changed the footnote to include a more accurate and comprehensive list of actions that have and will continue to positively affect these waters. Specifically, the revised language for the footnote is as follows:

The impairments to these waters are being addressed through a combination of measures 1) supported through the Onondaga Lake Partnership, 2) required by the Onondaga Amended Consent Judgment (ACJ), and/or 4) contained in Consent Orders and other agreements with municipalities and private entities to address industrial contamination, storm water, combined sewer overflows, and other urban sources. Monitoring through the Onondaga County Ambient Monitoring Program required by the ACJ, ongoing bacteria track down efforts and environmental sampling performed by others will be used to evaluate the results of these restoration measures, the water quality in these tributaries and the need for TMDL development.

Onondaga County Health Department comments regarding

Limestone Creek, Lower, and minor tribs (0703-0008) for Oxygen Demand, Pathogens

The Onondaga County Health Department Council for Environmental Health commented that the listing for this waterbody and, in particular, the impact of the Meadowbrook-Limestone WWTP be reviewed in light of more recent data. The data they provided show dissolved oxygen standards to be met and additional pathogen sources to occur upstream of the WWTP.

NYSDEC responds that reviews of the data and the listing of this waterbody as suggested by the County are appropriate. However such reviews should include additional biological sampling since the original listing for oxygen demand and impairment to aquatic life was based on biological (macroinvertebrate) sampling conducted in 2001. This waterbody/pollutant listing will be moved to Part 3a of the List as a waterbody for which TMDL development may be deferred pending verification of impairment.

US Environmental Protection Agency forwarded comments on behalf of the **Saint Regis Mohawk Tribe** regarding

Saint Regis River for Pathogens

The Saint Regis Mohawk Tribe (SRMT) did not directly provide comment on the Draft Section 303(d) List, but rather had indicated in their 2012 Biennial Water Quality Report that pathogen contamination in the Saint Regis River was of some concern and the USEPA requested a review to determine if listing was appropriate.

NYSDEC responds that although the monitoring data included in the SRMT report shows periodic spikes (particularly during rain events), the data does not correspond to exceedences of applicable NYS Water Quality Standards. Specifically, the SRMT data is for e-coli, but the applicable standard NYSDEC applies to inland (non-coastal) freshwaters is for coliform. The federal e-coli standard of 126 cfu/100 ml used in the SRMT assessment applies only to coastal waters. Even if federal e-coli standard did apply to the St. Regis River, it should be applied as a geometric mean and applied on a seasonal basis (as is the case where it is currently applied in other New York coastal waters). In the assessment, it appears SRMT uses a monthly arithmetic average. Also pathogen sampling for purposes of 305(b) and 303(d) should be conducted in a manner that results in data that are representative of the waterbody being monitored. SRMT conducted additional targeted monitoring during post-rain events, which result in worse-case, rather than typical, sampling results. While there is certainly value in conducting such targeted monitoring to capture storm events, such an approach should not be used in 305(b) and 303(d) assessments.

NYSDEC's current assessment of this reach of the St. Regis River indicates *Minor Impacts*, and with recreational uses *Suspected* of being *Stressed* for recreational use. The results of the SRMT sampling suggest that the stresses to recreational uses could be changed from *Suspected* to *Known*. But for the reasons noted above, it does not appear that conditions in the river meet the threshold of an impaired water, nor does it appear appropriate to include this segment on the 303(d) List.

US Environmental Protection Agency comments regarding
Acid Rain-Impaired Lakes (multiple segments) for pH

USEPA requested additional information regarding the identification and location of lakes Listed as being impaired due to acid rain effects. The focus of the request was to align the listed lakes with the lakes for which acid rain TMDLs are currently being developed by USEPA.

NYSDEC provided the requested information.

Private Individual comments regarding
Hillside Lake (1304-0001) for Phosphorus

A private individual (resident of the Town of East Fishkill in Dutchess County) commented on the current state of Hillside Lake, various sources of pollutants to the lake, and concern regarding these issues and whether enough is being done to address them. The commentator also expressed concern that a TMDL has not yet been developed for the lake, which has been on the List since 2002, and that a TMDL would provide additional protections to the lake.

NYSDEC responds that with regard to concerns over stormwater runoff being directed to Hillside Lake, the Town of East Fishkill currently has coverage under the Department's SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). The MS4 general permit required the Town of East Fishkill to develop and implement a Stormwater Management Program (SWMP) by 2008. As part of the SWMP, the Town of East Fishkill is required to implement a number of measures that reduce and or prevent the discharge of pollutants to the Town's stormwater conveyance system (i.e. MS4) and ultimately to surface waters.

For discharges to impaired waters (i.e Hillside Lake), the general permit also requires the municipality to include provisions in their SWMP that specifically address the pollutant causing the impairment. In this case, Hillside Lake is impaired for phosphorus. Therefore, the Town of East Fishkill is required to evaluate their SWMP for effectiveness on a regular basis and, if required, make modifications to ensure no net increase in the pollutant of concern. They must continue to perform this evaluation and SWMP modification process until there is no impairment or the TMDL has been developed. So although the resources to develop TMDLs for all Section 303(d) List impaired waters are limited, other measures are designed to control pollutants in the absence of a TMDL. NYSDEC will continue to monitor whether these municipalities are meeting the requirements of their MS4 permits.

Riverkeeper/Pace Environmental Litigation Clinic comments regarding **Esopus Creek, Lower/Middle (multiple segments) for Silt/Sediment, other**

The Pace Environmental Litigation Clinic, on behalf of Riverkeeper, commented that the lower reaches of the Esopus Creek should be included in the List due to silt/sediment, turbidity and related parameters. The commentors also expressed disagreement with a proposal that this waterbody be characterized as a Category 4b Water, where a TMDL (and 303(d) Listing) is not necessary because other required control measures are expected to result in restoration in a reasonable period of time. In this case, the enforcement actions against New York City, with an eventual Consent Order to include penalties and outline operating procedures, combined with the recovery from the impacts of the storms are expected to return the waterbody to unimpaired conditions.

NYSDEC responds that the photos, data and other documentation of water quality impacts provided by the commentor reflect conditions in the creek during the aftermath of significant storms that flooded the Northeastern States in September-October 2010 and September 2011. The 2010 storms were assessed as one-in-100-year events. The 2011 storms (a combination of Hurricane Irene and Lee) were assessed as a one-in-500-year event that resulted in a degree of natural damage so extreme that the State waived for a period of time the requirements to obtain NYSDEC-issued Protection of Waters Permits associated with stream restoration and disturbance.

Because the CWA does not provide a natural-conditions exception, NYSDEC's earlier response to the commentor's data submission noted that the impact of the flooding events resulted in an impairment. This preliminary judgment was based on the New York State narrative water quality standard for turbidity which allows for "no increase that will cause a substantial visible contrast to natural conditions" (also cited by the commentor) which the Department applied to temporary, and natural, conditions in the Creek following the unusual combination of storms that hit the Northeastern States. However deviations from this narrative water quality standard for turbidity would have occurred under such conditions in the absence of any human-induced discharges or alterations to the water body. While the storm event was unusual, it is reasonable to consider the event and the resulting effects to be a natural event which does not meet the criteria for inclusion on the Section 303(d) List. As for the continued releases to provide enhanced flood mitigation after the Irene/Lee storms, DEC notes that there is an on-going EIS process pursuant to an enforcement Order to evaluate any potential impacts of all releases.

Therefore it is premature to indicate that the releases will cause an impairment that warrants a Section 303(d) listing.

NYSDEC also notes that conditions in the stream have more recently returned to what they were prior to the storm. The Department believes it would be inappropriate to list the Lower Esopus Creek as an impaired waterbody based on conditions that were the result of, and reaction to, highly unusual storm events that have since subsided. NYSDEC also notes that prior to the most recent storms, the Department had not received any requests to consider the Lower Esopus Creek for listing as an impaired water (note that the Upper Esopus Creek has been included on the Section 303(d) List since 1998). EPA guidance provides that a state is not required to include a waterbody on its impaired waters list if the "waterbody is meeting all applicable water quality standards . . . or is expected to meet these standards in a reasonable timeframe" or if "the original basis for listing is determined to be inaccurate."¹ Acting consistently with this guidance, NYSDEC may appropriately omit from its Section 303(d) List a waterbody such as the Lower Esopus Creek because it is meeting standards and is reasonably expected to continue to meet water quality standards in the foreseeable future.

NYSDEC may provide additional response to USEPA during the public comment period regarding the USEPA partial disapproval of the New York State Section 303(d) List related to the listing decision for Lower Esopus Creek.

Bronx River Alliance comments regarding

Bronx River (multiple segments) for Pathogens, Oxygen Demand

The Bronx River Alliance commented that the listings for the Bronx River within New York City should be retained and that a TMDL for this waterbody be developed. The comments note continuing water quality problems in the Bronx River, the focus of watershed restoration efforts on the river, the need to identify all significant pollution sources to the river, and the value a TMDL would have in meeting water quality goals. The comments from the Bronx River Alliance specifically state that *"It is essential that the entirety of the Bronx River remain on the New York State 303(d) List of Impaired Waterbodies until it has achieved the criteria for fishable and swimmable waters"* and that *"Reclassifying (delisting) the Bronx River suggests that all of the significant impairments result from CSO discharges within the New York City portion of the watershed, and no action is needed either in the upstream portion or to address runoff from separately sewered (or direct discharge) areas within New York City."*

NYSDEC responds that it is in agreement with commentor's assessment of water quality problems in the Bronx River, and notes that the segments in question will remain assessed as impaired. However as noted in the general comments, inclusion on the 303(d) List of Impaired/TMDL Waters is not appropriate for all impaired waters and this is particularly true for waters where a TMDL would be duplicative of other required restoration measures. Regarding the request that the river remain on the List until it is restored, NYSDEC notes that it is the nature of the 303(d) List that most waters are removed before impairments are resolved; specifically, it is appropriate to delist waters when either a TMDL completed or when other more appropriate restoration actions are being implemented.

¹ Guidance for 1994 Section 303(d) Lists, Nov. 26, 1993.

Regarding the comment that the delisting focuses on CSO impacts and suggests no action is needed in other areas, NYSDEC responds that while the delisting justification for these waters does focus on the NYC CSO Order, we agree that other sources do contribute to water quality problems in the Bronx River. However we also note that these sources are also being addressed by additional control measures and actions beyond the CSO Order. These other measures include 1) a 2007 settlement with the City of Yonkers to end its discharges of untreated sewage into the Bronx, 2) previous settlements with the Yonkers Raceway Corporation, the City of White Plains, the Village of Scarsdale, the City of Mt. Vernon and the Town of Greenburgh, all of which had also been polluting the river with raw sewage, and 3) the commitment of settlement and associated matching funds of nearly \$9M toward green infrastructure and other restoration projects to address stormwater runoff. The delisting justification will be expanded to include these control measures as well.

Because all the sources noted by the commentor are being addressed with very specific actions, we believe that a TMDL would be duplicative and not a worthwhile expenditure of limited resources. Nor do we believe that it would provide any additional value. The emphasis in the delisting on the CSO Order is due to the fact that the Order's adherence to the National CSO Control Policy secures any benefits that would result from a TMDL. For instance, the CSO Order requires the development of a long-term CSO control plans that will ultimately provide for full compliance with the Clean Water Act, including attainment of water quality standards to meet its fishable (dissolved oxygen) and swimmable (pathogens) goals. The CSO Control Policy also encourages municipalities to take advantage of the flexibility in the Policy, particularly where opportunities exist to evaluate water pollution control needs on a watershed management basis and to coordinate CSO control efforts with other point and nonpoint source control activities.² These last points in particular (a watershed management approach and coordination with other point and nonpoint source control activities) are what the Alliance cites as a need for a TMDL. However these aspects are already incorporated in the Order, which is why NYSDEC believes TMDL development for these waters is redundant and unnecessary.

Land Marks LLC comments regarding

Big/Little Fresh Ponds (1701-0125) for Phosphorus (Included in Part 3a)

Land Marks LLC had requested additional information regarding this listing and the process for review and making a listing decision. The commentor had also inquired about extending the public comment period until additional data is reviewed.

NYSDEC responds that the decision to list this segment was based on data from Little Fresh Pond that was collected from 2002 through 2010 showing high phosphorus values and associated high chlorophyll and algal blooms. Additional information was also collected in 2011 for both Little Fresh Pond, as well as Big Fresh Pond. This additional and more recent information is still being reviewed, but based on previously reviewed information a listing is considered to be appropriate. The decision to list the waterbody on Part 3a of the List is due to the pending availability of additional information for the second of the two ponds in this segment. Regarding

² From the USEPA Website on NPDES and CSO Control Policy at <http://cfpub.epa.gov/npdes/cso/cpolicy.cfm>

an extension of the public comment period, NYSDEC is under federal requirement to submit a Final List to USEPA by April 1, so an extension cannot be accommodated.

Center for Biological Diversity comments regarding
Atlantic Ocean Coastline (multiple listings) for pH (not listed)

The Center for Biological Diversity provided comments and data suggesting that the NYS Section 303(d) List include coastal waters threatened or impaired by ocean acidification. Specifically the commentor believes that the submitted articles provide information and data demonstrating non-attainment of the New York marine criteria for pH and aquatic life designated use. The commentor points to modeling results showing a reduction of ocean pH by 0.11 units since preindustrial times, compared to a New York State water quality standard specifying not more than a 0.1 deviation for natural pH. In addition they cite several laboratory studies that suggest changing ocean conditions could negatively impact plant and animal species.

NYSDEC responds that global climate change and its impacts – including ocean acidification – are an issue of considerable concern to New York State. New York has taken an active role in confronting the threats posed by climate change, by expanding renewable energy within the state and calling for reductions in state carbon emissions through the New York State Energy Plan. New York State has also been a national leader in the reduction of greenhouse gases through the Regional Greenhouse Gas Initiative (RGGI). While not diminishing the threat of climate change or carbon dioxide pollution and the need for action, DEC has concluded that the articles submitted do not sufficiently demonstrate non-attainment (or non-attainment within the next listing cycle which would constitute a threatened listing) of the New York marine pH and aquatic life water quality standards because they either do not contain information/data at the appropriate spatial scale or were based on laboratory studies. While global modeling and laboratory studies are useful in understanding global ocean pH trends or how changes in pH may affect aquatic life, they do not provide sufficient information on local pH trends and the condition of aquatic life within New York coastal waters to make a sound listing decision.

The commentor acknowledged the absence of site specific data for New York waters, but noted that EPA guidance emphasizes that listings can be based on other than site specific data. New York agrees that such listings are allowed and were in fact considered during the development of the list. However it was concluded that there was insufficient link between data from other waters (Chesapeake Bay, Puget Sound) and New York waters due to differing physical and hydrological processes to justify a listing on the New York State List. New York agrees that there is a need for additional coastal monitoring, however also noting that the likelihood of additional agency monitoring is hampered by limited and decreasing program funding. Regarding the web link provided for the Long Island Sound, no pH data was found that could be used to make a listing determination against the marine pH criteria.

The commentor draws parallels between DEC's use of Section 303(d) and TMDLs for other atmospheric pollutants (such as mercury and acid rain) and what could be done to address ocean acidification. However New York notes that one important distinction is that there is data that clearly documents impairment to New York State waters from both mercury and acid rain.

Regarding the modeling results cited by the commentor showing a reduction of ocean pH by 0.11 units since preindustrial times, this number was based on global modeling studies that used open ocean data which is not at the appropriate spatial scale to determine the condition of New York coastal waters.

Our assessment of the data submitted is that while there is clear evidence of global changes in the waters of the ocean and possible negative effects to certain species, there is not sufficient pH data at the appropriate spatial scale or observed biologic data to list New York coastal waters as threatened or impaired for these parameters at this time.

Responses to Data Solicitation

In addition to the public comments received in response to the Draft Section 303(d) List, NYSDEC also received a number of petitions advocating for the inclusion of specific waters as impaired in response to an earlier solicitation for data to support the development of the List. Most of these petitions provided documentation of water quality issues that NYSDEC agrees warrant some level of attention. However as discussed previously, the guidance and established practices used in considering waters for inclusion on the Section 303(d) List are very specific and reflect a fairly high bar when determining whether the impacts to a waterbody meet the threshold of having impaired uses. In addition, these are a number of nuances in the Section 303(d) regulations regarding listing that result in waters that are impaired justifiably not being included on the 303(d) List. For example, impaired waters for which a TMDL has been complete, or where other required regulatory controls outside of a TMDL will address the impairment, are appropriate to exclude from the List.

Some of the petitions cite the need to protect a waterbody from becoming impaired as a justification for a listing. Past petitions have also noted that a listing would increase attention or opportunities for restoration funding for a specific waterbody. However, while these interpretations are not without merit, these reasons alone do not meet the threshold for listing. The 303(d) List is reserved for those specific waterbodies where NYS water quality standards are currently being exceeded and/or where uses are not being supported. Note that NYSDEC's water quality assessment program does include additional categories – such as *Stressed* and *Threatened* – that go beyond the 303(d) List designation of *Impaired*, and that are often more appropriate representations of the waterbody condition.

Carmans River proposed for Nutrients (by Baykeeper, et al)

NYSDEC believes there is not sufficient evidence that water quality conditions in the Carmans River reach the threshold of impairment such that it would be appropriate to add the river to the 303(d) List. The petition cites the need to protect the waterbody, and while we do not disagree about that need, it is not sufficient justification for listing. NYSDEC acknowledges significant invasive weed issues that impair uses in Lower Lake, but these are appropriately designated as a habitat (invasives) problem rather than a nutrient issue and, as such, would be more appropriately assigned to Category 4c as an impaired water, but one for which a TMDL is not appropriate. That being said, nutrient loadings from the Carmans River may very well be considered in the development of a TMDL for Great South Bay, which is included on the 303(d) List and which is fed by the Carmans River.

Discrepancies between 303d List and MS4 Permit, Apdx 2 (by Super Law Group)

That these two lists of impaired waters differ is due to the fact that neither is a complete list of all impaired waters in the state. As noted above the 303(d) List does not include every impaired water; for example, it does not include impaired waters for which there is a TMDL in place, or where an alternative means to address an impairment already exist (such waters may be included in the MS4 Appendix). As for the MS4 Permit Appendix 2, this list is limited to waters that are impaired by specific pollutants related to stormwater.

Newbridge Pond proposed for PAHs (by Super Law Group)

The suggestion to list this waterbody is the result of a USGS study that is based on sediment monitoring data collected in the pond in 1997. Subsequent to that time, the pond was dredged to remove contaminated sediments. The Nassau County Department of Public Works has indicated that additional dredging is planned. Given the age of the original data and the likelihood that - due to the subsequent dredging efforts - the data does not represent the current conditions in the pond, it is not appropriate to include this waterbody on the 2012 List. It is appropriate to include this information in an updated assessment of the waterbody and recommend follow-up monitoring to verify current conditions.

Additional Metals and PAH Monitoring is Requested (by Super Law Group)

This comment did not include any specific request for additional listings.

Bathing and Aquatic Life Impacts on Lake Erie Beaches (Alliance for the Great Lakes)

The pathogen results submitted by the Alliance this group are consistent with other available data and information on these beaches and are reflected in Lake Erie Shoreline listings for pathogens in the 2010 303(d) List. These listings will be continued in the 2012 List. The finding of dead fish on the beach during some site visits does not necessarily translate into an impairment of aquatic life, but DEC will continue to monitor aquatic life support in the lake.

Oyster Bay and Tribes, Cold Spring Harbor (by Friends of Oyster Bay)

NYSDEC notes that the information in the petitions for most of these waters is consistent with current DEC assessments and listings. Oyster Bay, Mill Neck Creek and Cold Spring Harbor are considered impaired due to pathogens; however, they are not included on the Section 303(d) List due to the completion of pathogens TMDL in 2003 (and the assignment of these waters to Category 4a in 2004). The petition regarding Beaver Lake is also largely consistent with the most recent DEC reassessment (2011) of this waterbody and the Lake is proposed for addition to the 2012 List for nutrients. The Friends of Oyster Bay petition cites silt/sediment but nutrients would appear to be the more appropriate water quality pollutant. The petition also notes some occurrences low dissolved oxygen in estuary waters, but it does not appear that these represent a violation of marine water standards.