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June 16, 2021

Kristen Cady-Poulin, Environmental Analyst
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Re: Comment on Catalum SPDES Permit Modification and DEIS
DEC #3-9909-00023/00006

Dear Ms. Cady-Poulin:

This office represents Catskill Mountainkeeper, a regional environmental organization whose mission is to protect the Catskills' wild lands, natural resources and heritage, and support smart development for sustainable economic growth in the region. We write to comment on the above captioned Draft Environmental Impact Statement ("DEIS") and the draft modified SPDES permit for the discharges of alum and associated pollutants from the Catskill aqueduct into the Kensico Reservoir ("Catalum" discharges) and associated releases into the Lower Esopus Creek based on the Interim Release Protocol ("IRP") as described in the DEIS, draft SPDES permit and associated documents.

Introduction

As described in more detail herein, the DEIS and draft SPDES permit represent a profound failure of DEP's responsibility to protect the reservoir's watershed, its agreement to cooperate with upstate municipalities, and DEC's role as SPDES permit administrator and SEQRA lead agency. To serve their constituents in the City, northern Ulster County and central Westchester around Kensico, and to comply with SEQRA, SPDES, the state's water quality standards, the Clean Water Act and longstanding principles of environmental management and justice, the agencies should supplement the DEIS with the reviews and actions described herein and amend the proposed SPDES permit accordingly.

In 1997 New York City entered into the Watershed Agreement with state agencies including DEC, numerous upstate municipalities including those impacted by the discharges at issue here, and several environmental organizations to better protect the water supply by cleaning up and protecting the watershed. Since that time the Watershed Agreement has served as a model of intergovernmental cooperation to preserve shared environmental resources. Among its most important guiding principles was the basic goal to address pollution at its source in the watershed and the need to work with upstate municipalities and residents. The DEIS and draft SPDES permit violate all of these commitments and principles.

Summary of SPDES violations

Under the DEC’s Uniform Procedure Act regulations, it must hold an adjudicatory public hearing on a draft permit “where any comments received from members of the public or other interested parties raise substantive and significant issues relating to the application, and resolution of any such issue may result in denial of the permit application, or the imposition of significant conditions thereon.”¹ An issue is substantive “if there is sufficient doubt about the applicant’s ability to meet statutory or regulatory criteria applicable to the project, such that a reasonable person would require further inquiry” and is significant if “it has the potential to result in the denial of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit.”²

Here, the primary legal criterion that the draft permit violates, and that would require denial, major modification or imposition of further conditions, is one of the most fundamental mandates of the SPDES program and the Clean Water Act: the prohibition on issuing a SPDES/NPDES permit that will contribute to a contravention of state water quality standards, or fail to ensure compliance with such standards. A host of federal and state regulations, and a section of the Environmental Conservation Law, all reflect this bedrock requirement of the program to preserve the integrity of its surface waters.³ “[T]here is no regulatory authority that allows for the inclusion of multiple exemptions from effluent limitations and state water quality standards in a SPDES permit.”⁴

The draft Catalum permit would continue to authorize discharges to the Kensico Reservoir and the Lower Esopus Creek that would violate the water quality standards in both these bodies. The Reservoir is classified AA, as befits a source of unfiltered drinking water. The applicable water quality standard for discharges of suspended, colloidal and settleable solids to Class AA waters is “None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.”⁵

¹ 6 NYCRR § 621.8(b).

² 6 NYCRR § 624.4(c).

³ See 40 CFR § 122.4(d) (no NPDES permit may be issued “[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States), made applicable to state programs by 40 CFR § 123.25(a)(1). New York state law recites the same requirement. See ECL § 17-0501, (“[i]t shall be unlawful for any person, directly or indirectly, to . . . discharge into such waters organic or inorganic matter that shall cause or contribute to a condition in contravention of [water quality] standards”). See also 6 NYCRR § 750-1.3 (“The following discharges into the waters of the State are hereby prohibited, and no SPDES or other permit shall be issued authorizing any such discharge: . . . (e) when the conditions of the permit do not provide for compliance with the applicable requirements of the act, or regulations promulgated under the act; and (f) when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States. See also 6 NYCRR § 750-1.11(a) (5) (i), (iii) (each issued SPDES permit must ensure compliance with, among other things, any more stringent limitations, necessary to meet water quality standards or any other State or Federal law or regulation).

⁴ *Matter of Catskill Mountains Chapter of Trout Unlimited v Sheehan*, 71 AD3d 235, 240 (3d Dept 2010).

⁵ 6 NYCRR § 703.2.

There is no serious question that the application of alum to turbid water in the Catskill Aqueduct and its discharge in the Kensico Reservoir contains suspended and settleable solids that violate the water quality standard. Alum is a flocculant that is meant to, and will, cause solid particles suspended in the water column to agglomerate together into larger masses that will settle on the bottom of the reservoir. This same activity, as previously permitted by DEC, has resulted in precisely what it was designed to do: the settling and deposition of vast quantities of alum floc on the bottom of the reservoir. In its 2013 consent order addressing DEP's failure to dredge these accumulated deposits ("Consent Order"), DEC cited these same water quality standards to underlie its administrative complaint and underscore the severity of the violation.⁶

While the agencies may claim some level of future reduction in the amount or frequency of sufficient turbidity to require flocculation, there is no doubt that the activity authorized by the draft SPDES permit would include applications of alum, during periods of high turbidity, which are designed to cause settling of solids in the water column at the bottom of the reservoir. As DEC has itself found, this violates the narrative water quality standards for AA waters.

Similarly, the discharge of turbid waters to the Lower Esopus Creek pursuant to the Interim Release Protocol ("IRP") has caused, and will continue to cause, dramatic violations of the water quality standards in the Creek, a class B and B(T) waterbody in the affected area. For such waters, the standard for suspended solids is the same as noted above for the Kensico Reservoir, and the standard for turbidity is "No increase that will cause a substantial visible contrast to natural conditions."⁷ The release of hundreds of millions of gallons per day of water under the IRP operational discharges has caused dramatic degradation of the Creek due to turbidity and suspended solids, with attendant intermittent loss of recreational uses.

As with the Catalum discharges to the Kensico Reservoir, there is no serious question that the IRP operational discharges grossly violate the water quality standards in the Creek. The obvious divergence from visual background conditions which the discharges cause has been documented in photos sent to you by other commenters, including of events in 2021, and otherwise available on the internet. In 2013, the US Environmental Protection Agency required DEC to list the Lower Esopus Creek as water quality impaired under CWA § 303(d),⁸ due to excess turbidity over the amount allowed under the water quality standards. EPA found that "[h]uman activities, such as release channel operations associated with the Ashokan Reservoir, have increased the duration of turbidity in the Lower Esopus Creek."⁹ The Creek remains on the 303(d) list due to turbidity, and these discharges.

DEC is now considering approval of a Catalum permit modification that will perpetuate the underlying causes of the Lower Esopus Creek turbidity violations. The continued inclusion of operational releases in the IRP, and the SPDES permitting of the IRP, give no indication, let alone likelihood, of ensuring compliance with the turbidity standard for on the Lower Esopus.

⁶ Order on Consent, DEC Case No. 007-0001-11, October 4, 2013 ¶ 3.

⁷ *Id.*

⁸ 33 USA § 1313(d).

⁹ USEPA, *Listing the Lower Esopus Creek on New York State's 2012 303(d) List of Impaired Waters: Fact Sheet*, January 14, 2013, available at <https://loweresopus.org/wp-content/uploads/2013/01/Esopus-Listing-Fact-Sheet.pdf>.

The SPDES permit must include enforceable mechanisms to reduce this turbidity and restore the Lower Esopus Creek water quality to compliance with water quality standards.

Finally, there is no legal or equitable basis for relaxing the application of these water quality standards because the turbidity and sediments originate in facially natural processes. Whatever their origins, DEP's concentration of the sediments in the west basin of the Ashokan Reservoir to limit the turbidity in the east basin which is the primary source of the water entering the aqueduct, and its voluntary mechanical "operational" discharges of turbid water, confer on DEP the responsibility for the resulting prolonged water quality violations in the Lower Esopus.¹⁰ Accordingly, DEP bears responsibility for the necessary remediation.

SEQRA violations and need for a supplemental DEIS

DEP's "operational" discharges of water from the Ashokan Reservoir into the Lower Esopus Creek, when the water is too turbid for water supply purposes, impairs the uses of the Creek and damages the character and quality of life of its streamside communities. As a result, this practice has violated and outraged these communities and damaged the integrity of the City's watershed program. Those communities have publicly protested DEP's dumping hundreds of millions of gallons per day of muddy water down the Esopus for a decade.

Given the serious impacts of the discharges, the disparagement they cause to the City and State's administration of their respective water programs, and the clear difficulty in achieving a SPDES permit that complies with water quality standards, the DEIS should have served as a true investigation of alternatives and mitigation measures. Just one year ago, DEC itself alluded to this role for the SEQRA review when it committed to "fully explore other allowable regulatory mechanisms and TMDL alternatives, such as *environmental reviews to evaluate any potential significant impacts and optimize future operations among sometimes competing uses and interests*, in order to address these issues."¹¹ The DEIS falls far short of this goal.

SEQRA requires agencies to "act and choose alternatives which, consistent with social, economic and other essential considerations, to the maximum extent practicable, minimize or avoid adverse environmental effects, including effects revealed in the environmental impact statement process."¹² The DEIS fails to identify such alternatives, and as reflected in the draft SPDES permit, indicates an intent to choose a continuation of the *status quo*, despite the clear

¹⁰ "[B]ecause the operation of the release channel is an anthropogenic activity impacting the water, conditions in the [Lower Esopus] Creek cannot be assumed to be natural." USEPA, *Response Summary for EPA's Proposed Listing of the Lower Esopus Creek on New York's 2012 303(d) List*, available at <https://www.riverkeeper.org/wp-content/uploads/2013/01/Esopus-Listing-Response-Summary.pdf> ["USEPA 303(d) Listing Response Summary"] at 3. See also 40 CFR § 122.3(i) (confirming application of CWA over discharges where transferred water has been subjected to "intervening industrial, municipal, or commercial use").

¹¹ DEC, *Proposed Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy*, June 2020, available at https://www.dec.ny.gov/docs/water_pdf/section303d2018.pdf, n. 17 (emphasis added).

¹² ECL § 8-0109(1).

ongoing violation of water quality standards and intermittent loss of designated uses of the Lower Esopus.

Numerous comments by dissatisfied public servants and private citizens and groups have described in detail the need for a supplemental DEIS to truly analyze the opportunities to reduce the impacts of releases into the Lower Esopus. Catskill Mountainkeeper joins its partners in supporting a full accounting of the environmental impacts, immediate action to mitigate them, and deeper consideration of alternatives and combinations of alternatives. We add the following additional remarks to the record.

A. Impacts

The root of the insufficiency of the DEIS is its failure to recognize the impacts of turbid releases on the Lower Esopus. As described above, the Lower Esopus has been placed on the 303(d) list by EPA because of the impacts of sediment and turbidity. Especially considering the destructive stream of mud Ulster County communities have endured in 2021, it is incumbent on DEC and DEP to take an honest look at the impacts of the releases the IRP creates.

The structure of the DEIS is set up to camouflage the impacts by looking at the IRP as a whole, combining the sediment-laden “operational” releases with the “spill mitigation” and “community” releases. In so doing, the DEIS creates a false dichotomy between a future with all three types of releases or a future with no releases. This structure conceals the damage of the sediment-laden “operational” releases by aggregating them with the beneficial “community” releases. It also uses the specter of no releases at all to make the IRP appear beneficial. For example, the DEIS claims that use of the IRP provides “sustained flow to lower Esopus Creek from Ashokan Reservoir which would have the potential to benefit fish.”¹³ Again, it is the “community” releases that create that benefit. By aggregating the releases, the IRP appears beneficial, and the damage of the “operational” releases is hidden.

The DEIS must be revised to provide a true accounting of the impacts, considering current data. We suggest removing the “community” releases from the analysis, since their provision of minimum water for the creek should be required by fundamental fairness and environmental stewardship given DEP’s construction and operation of the Ashokan Dam on the Esopus. They should also be required based on modern and rational regulation. DEC should update its reservoir release regulations to recognize DEP’s obvious ability to supply water from the Ashokan to the Esopus downstream,¹⁴ and both agencies should stop pretending that such 25 mgd “community” releases compensate in any way for the massive 600 mgd blast of mud into the creek they authorize in the draft permit and DEIS.

Furthermore, state SEQRA regulations require an agency to consider impacts due to the effects of climate change.¹⁵ Climate change is predicted to increase the frequency of severe storms in the Catskills, which will exacerbate turbidity problems. The events of 2021 have underscored

¹³ DEIS at ES-30.

¹⁴ See 6 NYCRR § 672-2.3(b).

¹⁵ 6 NYCRR § 617.9.

the real and present problem. The DEIS should be revised to thoroughly integrate current rainfall and climate data into the calculation of predicted turbid discharges.

B. Mitigation

The DEIS has a short section listing a few turbidity control measures as mitigation, but because the DEIS does not acknowledge that the operational releases will cause severe environmental impacts, it does not seriously attempt to mitigate them. This failure to mitigate the impacts of discharges to the maximum extent practicable violates SEQRA.¹⁶

As we describe below, an Intensive Stream Stabilization Program should be included as mitigation both in the SPDES permit and integrated into the DEIS as a mitigation measure. Stream stabilization work is not only good stewardship; it is a quantifiable means of reducing turbidity. DEC has committed to this strategy and must follow through by incorporating it into the SPDES modification.

C. Alternatives

The DEIS fails to seriously consider the potential to reduce turbidity through the proposed alternatives. The DEIS makes a short assessment of each potential alternative, deems each to have a minimal impact, and discards them. But it never considers that combinations of measures could produce substantial results. Each alternative may not be a complete solution, but in light of the patent violations of water quality standards, it is incumbent on DEP and DEC to explore combinations of alternatives to minimize the frequency and severity of turbid releases. These include diversion of turbid upstream water around or through the reservoir to the Lower Esopus, where it will naturally clear out in a matter of days, as well as releasing water to the Lower Esopus from the less turbid East Basin, not the west, until and unless substantial decreases in turbidity are achieved in the West Basin.

An alternative of adding an Intensive Stream Stabilization Program (described below) to the existing regime should also be evaluated. Because this alternative, unlike all the others, addresses the pollution problem at its source, it carries the potential to relieve each of the problematic and illegal environmental impacts, including both flocculation in the Kensico Reservoir and intensive discharges of sediment into the Lower Esopus. In turn it also carries the potential to limit the damage caused by the discharges on the affected communities, including loss of use and damage to the character and quality of life in Ulster County. The Intensive Stream Stabilization Program should also be analyzed in combination with structural alterations at the Ashokan to maximize turbidity reduction.

¹⁶ ECL § 8-0109 (EIS must include “mitigation measures proposed to minimize the environmental impact”). See also *Matter of Long Is. Pine Barrens Socy., Inc. v Town Bd. of Town of Riverhead*, 290 AD2d 448, 449 (2d Dept 2002) (Annulled SEQRA review for failure to “sufficiently consider mitigation measures”).

Need for an Intensive Stream Stabilization Program

In revising the SPDES permit and DEIS, DEP and DEC should add a robust program of stream stabilization projects in the Upper Esopus watershed, which we refer to here as an Intensive Stream Stabilization Program.

Fundamental to the New York City water supply protection program is its commitment to preserve and improve the sources of its water and its integration of watershed municipalities into this effort. Rather than rely on mechanical filtration systems, the City has harnessed natural systems and local stewardship to keep its water clean. The environmental approach to reduce the turbidity and suspended sediment in the Ashokan requires prevention at the source in watershed streams.

Over the past twenty years, the City and its local partners have invested over \$20 million in DEP's Ashokan Watershed Stream Management Program, which has mapped and studied the tributary streams to identify areas of destabilization, and has begun to implement stream restoration and stabilization projects to correct and prevent erosion hotspots.¹⁷ The Program also conducts extensive monitoring to inform its work and evaluate its projects' success.

The need is clear. The Upper Esopus Creek, a class A trout stream that is the primary tributary of the Ashokan, has been listed on the 303(d) list since 1998. The cause of impairment is silt/sediment pollution, with streambank erosion cited as the source. The Ashokan Reservoir, the second largest in the City system, is similarly impaired, as is the Lower Esopus.

DEC and DEP have long recognized the potential for stream stabilization measures in Upper Esopus basin to reduce the turbidity problem in the Ashokan Reservoir, and the need to develop such mitigation measures. In the 2007 Catalum SPDES permit, DEC demanded "erosion control measures to reduce turbidity" in conjunction with downstream structural and operational measures.¹⁸ In particular that permit's Schedule of Compliance demanded that DEP evaluate the potential benefit of "heightened or more expansive implementation" of programs in the Ashokan watershed, including stream restoration, and then implement those measures.¹⁹ Shortly thereafter, in 2008, DEP recognized that, among the various watershed programs: "the greatest opportunity for reducing such turbidity [in the Ashokan Basin] in the long-term is enhanced implementation of the Stream Management Program."²⁰

In the 2013 Consent Order, DEC recommitted to remediation of Upper Esopus tributary streams as a required component of the effort to reduce the Ashokan Reservoir turbidity problem. In particular, it ordered DEP to invest \$750,000 to two stream restoration projects and declared its

¹⁷ Ashokan Watershed Stream Management Program, *Action Plan 2019-2021*, May 1, 2019, available at <https://ashokanstreams.org/wp-content/uploads/2012/09/2019-2021-Action-Plan-FINAL.pdf>.

¹⁸ SPDES permit NY0264652, January 1, 2007, at 10.

¹⁹ *Id.* at 11.

²⁰ DEP, *Evaluation of Turbidity Reduction Potential through Watershed Management in the Ashokan Basin*, available at http://catskillstreams.org/wp-content/uploads/2018/04/CAT_IC-SPDES_Permit_TR_Report.pdf, at v.

intent to incorporate further “non-structural” measures in a subsequent SPDES permit modification – the current draft permit.²¹

Careful, controlled studies of stream stabilization projects in the Ashokan watershed have demonstrated that they are effective to reduce turbidity. A report published by USGS in 2016 compared the results of suspended sediment and turbidity reduction projects in two Upper Esopus tributaries, with untreated control stream.²² The report concluded that “suspended-sediment concentrations [‘SSC’] and loads within the watersheds significantly decreased” due to the projects.²³ “The most substantial decreases in daily mean SSCs were measured at the highest streamflows.”²⁴ For example, in the Stony Clove Creek daily mean suspended sediment concentrations decreased nearly 300 mg/L at high streamflow after the projects were completed.²⁵ After the projects were implemented, average suspended sediment concentrations in high flow conditions were reduced to near zero.²⁶

The National Academies of Science’s report on the City’s watershed program specifically recognized the effectiveness of DEP’s stream stabilization projects.²⁷ It highlighted the work in the Ashokan watershed, observing that the stabilization projects were “highly effective in reducing suspended sediment concentrations” in the Stony Clove Creek.²⁸ It noted that a 10-year USGS study that began in 2016 will monitor the long-term effectiveness of these projects.

After spending two decades cataloging the stream stretches most in need of stabilization, implementing pilot projects, measuring the results, and finding the practices to be effective, DEP and DEC have omitted any commitment to stream stabilization in the Ashokan watershed from the SPDES permit revision and the associated DEIS. The SPDES permit contains no conditions related to stream stabilization, and the DEIS makes only one very brief and generic mention of watershed protection.²⁹

This refusal to make an enforceable commitment to a robust stream stabilization program contravenes the 2013 Consent Order, fails to meet SEQRA standards, and generally disregards basic principles of pollution prevention that underlie the watershed agreement and filtration avoidance, as well as virtually all modern environmental management.

²¹ Order on Consent ¶ 27; Appendix A § v.

²² Siemion, Jason, Michael R. McHale and Wae Danyelle Davis, *Suspended-Sediment and Turbidity Responses to Sediment and Turbidity Reduction Projects in the Beaver Kill, Stony Clove Creek, and Warner Creek Watersheds, New York, 2010–14*, 2016, available at <https://ashokanstreams.org/wp-content/uploads/2012/10/USGS-Scientific-Investigations-Report-2016-5157.pdf>.

²³ *Id.* at 22.

²⁴ *Id.* at 1.

²⁵ *Id.* at 12.

²⁶ *Id.* at 16.

²⁷ National Academies of Sciences, Engineering, and Medicine, *Review of the New York City Watershed Protection Program*, 2020, available at: <https://www.nationalacademies.org/our-work/review-of-the-new-york-city-watershed-protection-program> at 188.

²⁸ *Id.*

²⁹ DEIS at 1-19.

Based on the Consent Order and the strong evidence that stream stabilization projects are effective to substantially reduce suspended sediment concentrations, DEC should modify the SPDES permit to include an Intensive Stream Stabilization Program, and include it as a mitigation measure in the DEIS. Alternatively, a supplemental DEIS should be produced studying an Intensive Stream Stabilization Program in combination with the IRP to quantify its potential to reduce the impacts of turbid releases into the Lower Esopus.

DEP and its partners in the Ashokan Watershed Stream Program are moving forward with identifying and slowly constructing stream stabilization projects. An Intensive Stream Stabilization Program would build off these planning efforts but dramatically scale up implementation to achieve a measurable decrease in suspended sediment loading and turbidity. Benefits would include reducing the frequency or duration of alum application and operational releases, while also improving water quality in the Upper Esopus and its tributaries.

Conclusion and demand for an adjudicatory hearing

The DEIS and draft Catalum SPDES permit are stunning failures by DEP to comply with its commitments embodied in the Watershed Agreement and to follow basic principles of environmental management, and by DEC of its responsibility to govern and restrict polluting uses of the state's waters. The absence of an effort to comply with water quality standards, to at least ensure that water quality violations are reduced, to utilize pollution remediation strategies that have been demonstrated to show promise, and to even begin to heed the complaints of impacted communities all condemn this effort.

The lack of progress is all the more remarkable since the Upper Esopus, the Ashokan Reservoir, and the Lower Esopus are all 303(d) water quality listed as impaired for sediment and turbidity, and it is DEC's responsibility to develop a way to clean them up. In listing the Lower Esopus as impaired (over DEC's objection), US EPA found that "[d]uring the 2012 303(d) listing cycle, New York did not demonstrate that the management actions currently in place constitute pollution control requirements that will result in attainment of water quality standards for turbidity in the Lower Esopus Creek within a reasonable period of time."³⁰ Eight years later DEC still cannot demonstrate any such pollution control that will result in attainment of water quality standards any time soon.

Combined with all the other factors listed above, including DEC's heretofore consistent promotion of turbidity control efforts at their source, it is clear that the present juncture, featuring a SPDES modification and DEIS called for in an enforcement consent order almost 8 years ago, is the appropriate and essential time for the agencies to craft a truly remedial program, instead of sitting pat. DEP and DEC need to rethink their approach and redraft these documents consistent with basic principles of watershed protection, pollution prevention, intermunicipal comity and compliance with the law.

Because of the patent violations of water quality standards, as well as SEQRA, Catskill Mountainkeeper hereby demands that DEC convene an adjudicatory hearing pursuant to 6

³⁰ USEPA 303(d) Listing Response Summary at 4.

NYCRR § 621.8. In this comment and demand for an adjudicatory hearing, Mountainkeeper does not intend the agencies to do the impossible, to immediately correct longstanding environmental infirmities, or to compromise the supply of clean and healthful water to half the state's population. Instead, we expect and demand that the agencies take reasonable steps to remediate the problems, including pursuing and expanding promising stream stabilization programs outlined above, faithfully disclose the impacts, and protect the public damaged by the IRP.

Sincerely,

A handwritten signature in cursive script that reads "David Gordon".

David Gordon