NYC is dumping billions of gallons of muddy water into the Lower Esopus Creek.

The New York City Department of Environmental Protection is at it again, dumping millions of gallons of turbid water from the Ashokan Reservoir into the Lower Esopus Creek - every day for months on end. High volume, turbid releases, such as those following the 2020 Christmas storm, have left the Lower Esopus a muddy mess. These releases have such a negative impact that the Lower Esopus has been placed on the New York State List of Impaired Waters for excessive silt and sediment.

Why is this happening?

The Esopus Creek is dammed to create the Ashokan Reservoir, one of the most important parts of New York City’s unfiltered drinking water supply, which serves over 9.5 million people in New York City and the Hudson Valley. Erosion from severe storms – which will become more common as the climate changes – causes excessive turbidity in the reservoir.

One of the ways New York City manages this challenge is to dump high volumes of muddy water from the reservoir into the Lower Esopus Creek, which flows 32 miles to the Hudson River. These releases are the least expensive way for the DEP to preserve the quality of NYC drinking water. This “solution” only shifts the costs and consequences onto the farmers, businesses and residents along the Lower Esopus.

To deal with the Christmas 2020 storm, New York City has released highly turbid water to the Lower Esopus Creek nearly continuously for four months and counting.

New York City’s management of turbidity in the Ashokan Reservoir is subject to a State Pollution Discharge Elimination System (SPDES) permit, known as the “catalum” permit because New York City has used alum to reduce turbidity in the Kensico Reservoir, which receives water from the Ashokan Reservoir via the Catskill Aqueduct. A draft Environmental Impact Statement (DEIS), which must study the impacts of the city’s management of turbidity, as well as alternatives to its current management systems, is now open for public comment through June 16. The DEIS presents the first opportunity for the public to influence New York City’s management of the Ashokan Reservoir, and New York State’s oversight of it.
What are the impacts of these muddy releases?

The turbid water severely affects water quality, wildlife habitat, recreation, and quality of life throughout six Ulster County communities along the Lower Esopus: the City of Kingston, the Village and Town of Saugerties, and the Towns of Hurley, Marbletown and Olive.

The most obvious impact of the muddy releases is aesthetic: above the Ashokan Reservoir, the Upper Esopus Creek – a world famous trout stream – runs clear within days after most storms. Below the reservoir, the same creek is a deep muddy brown for weeks or months, following the same storms. Use of the creek by boaters, bathers and farmers – among others – is compromised by this turbidity. Real estate values and quality of life for creekside residents are reduced. Pathogens that are introduced to the water from human or animal waste are likely to persist longer in turbid conditions. Siltation promotes the growth of aquatic invasive weeds like water chestnut and milfoil.

For the ecology of the creek, the impacts are life-threatening. When a waterbody 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 streambed. This reduces habitat for aquatic insects and smothers fish eggs and larvae.

New York City’s DEIS has failed to fully account for the range of ecological, economic and cultural impacts associated with its releases of muddy water to the Esopus Creek from the Ashokan Reservoir.

How will climate change make these problems worse?

Climate change will likely lead to more intense storms that will cause erosion and worsen turbidity problems in New York City’s reservoirs, increasing pollution that threatens drinking water quality, according to the U.S. National Academies of Sciences, Engineering, and Medicine (NASEM). The climate and hydrology of the Catskill Mountain region is highly variable, requiring vigilant and proactive operations of the water supply system by New York City.

Increased frequency and magnitude of heavy downpours, and the flows that result, are likely to increase the magnitude and duration of high-turbidity events. New York City predicts that by mid-century, extreme levels of turbidity could increase by more than 50 percent in the watershed surrounding its reservoirs, and that these high turbidity events could become more frequent. Excessive turbidity will trigger more frequent service interruptions in the Catskill Aqueduct, fed by the Ashokan Reservoir.

With an estimated 20 percent reduction in snowfall and 50 percent reduction in snowpack, the city forecasts an overall 6 percent increase in the annual inflow of water to the Catskill System by mid-century. It’s likely that
increased runoff will intensify problems with pathogens stemming from agriculture, failing septic systems, and sewer overflows, according to NASEM.

In spite of all this, New York City hasn’t proposed any specific measures to address the impacts of climate change in its DEIS, claiming that its “climate change studies demonstrate the high resiliency, high reliability, and low vulnerability of the city's water supply system with a minimal effect on water quality within the system.”

Bottom line: New York City has proposed status-quo solutions to muddy releases in the Lower Esopus that can be expected to worsen.

How does this affect the Hudson River drinking water supplies?

The Esopus Creek contributes a significant volume of water to the Hudson River drinking water supplies, which serve 100,000 people in the City and Town of Poughkeepsie, Village and Town of Rhinebeck, and the Towns of Esopus, Hyde Park and Lloyd. The lower portion of the creek and its confluence with the Hudson are within the NYS Department of Health-designated watershed area identified in Source Water Assessments for these communities. Within this area, the Esopus Creek and Rondout Creek are the largest tributaries, and each contributes nearly equal volumes of water, based on mean annual discharge.

Hudson River treatment plants are equipped to filter turbidity, which occurs naturally in the Hudson River Estuary, and fluctuates under various conditions, including most notably in response to precipitation and associated runoff in the watershed. (In contrast, New York City has a federal waiver allowing it to deliver unfiltered water from its Catskill Mountain reservoirs.) The treatment associated with filtering turbid water costs money that includes chemical additives, electricity, and sludge disposal.

It is New York City’s responsibility to study and mitigate the impacts of its prolonged discharges of turbid water to the Esopus Creek. To date, it has not identified increased treatment costs at Hudson River drinking water intakes as an impact, nor has it proposed any alternatives to reduce the impacts of turbidity on the Hudson River drinking water.

What are the alternatives?

This is an essential question, and the purpose of the DEIS is to examine alternatives that can reduce the impacts. That’s why thoroughly identifying impacts and conducting robust studies of alternatives is critical, and why public comment is so important. It’s essential to study and evaluate alternative solutions that could duplicate the natural hydrology of the creek and address the challenges of a changing climate and avoid harmful impacts. Right now, the protocol allows for releasing the most turbid water in the reservoir when it could reduce turbidity of its releases by blending or releasing cleaner water. Potential alternatives might involve a bypass tunnel from
Upper Esopus to Lower Esopus, improved flow controls between the reservoir’s east and west basins, operational requirements that limit turbid reservoir releases to the Lower Esopus, or a combination of these or other alternatives. The DEP has not taken a “hard look” at alternatives as required by NYS law, and has not documented its rationale for rejecting alternatives.

Is ‘filtration’ the answer?

The cost of a filtration plan would cost New York City $10 billion dollars to build and $300 million a year to operate and maintain – all on the backs of water users that include those that rely on the Ashokan Reservoir outside of New York City. Filtration would have a harmful secondary impact by eliminating incentives for the DEP to continue funding watershed protection programs.

The DEP says the Ashokan reservoir releases help prevent flooding. Is that true?

It is, but the DEP also derives benefit from the flood releases. Releases are a cheaper way to protect drinking water quality in the reservoir’s East Basin. The DEP says that they haven’t any choice but to dump mud because of the flood mitigation procedures outlined in their release protocol. But the release protocol is “interim” and can be adjusted with structural and operational measures to minimize turbid releases to the Lower Esopus during flood mitigation.

What are communities doing about this?

Communities are continuing to raise their voices. In 2010, New York City first started discharging muddy water to the Esopus Creek under a “release protocol” that it adopted improperly without any assessment of its impacts. Since then, Ulster County officials, municipal leaders, community members, grassroots groups and Riverkeeper have insisted on a robust environmental review process to oppose the DEP’s releases and ensure that all environmental, social and economic impacts of the releases are identified and mitigated as mandated by law. A decade later, in December 2020, New York City’s Draft Environmental Impact Statement was finally released for public comment.

The DEP’s Draft Environmental Impact Statement is the first time the public has had in years to influence the city’s future management of turbidity in the Ashokan Reservoir, including its release protocol for discharges to the Esopus Creek.

What are the failures of New York City’s DEIS?

As described in this fact sheet, the DEIS rejected, without thorough analysis, consideration of all structural alternatives to avoid or minimize turbid releases. New York City proposed only minor modifications to its current release protocol. These minor modifications are not enough. Rather, if the city’s proposal is OK’d by
New York State, the Lower Esopus Creek will be subjected to prolonged muddy discharges that could last for months on end, and recur ever more frequently as extreme storms become more frequent due to climate change. New York City’s proposal also fails to identify management approaches that will ensure the sustainable long-term usefulness of the Ashokan Reservoir, which provides approximately 40 percent of drinking water for 8.5 million New York City residents and 1 million Hudson Valley residents.

**What can I do?**

**Tell the DEC to require NYC to #stopthemud.** The public now has an opportunity to be heard and to influence the DEIS review. *Speak out now for the Lower Esopus Creek:*

- Visit our web page [Riverkeeper.org/stopthemud](http://Riverkeeper.org/stopthemud) and follow our action alert.

- Attend a Riverkeeper webinar at 6 p.m. on May 5. [Register here.](http://Register here.)

- Submit your written comments to DEC by 5 p.m. **June 16, 2021.** [Our web page makes it easy.](http://Our web page makes it easy.)

- Ask your municipality to pass this [memorializing resolution](http://memorializing resolution) and to submit a letter to the DEC before the June 16 public comment deadline.

**What should I ask for?**

The current state of Ashokan releases is unsustainable and unacceptable. The DEIS must create a different long-term plan to stop the mud, specifically accounting for climate change impacts.

- Describe how muddy discharges to the Esopus Creek and/or Hudson River have impacted you and your community.

- Insist that New York City take the legally required “hard look” at alternative solutions to extended, high volume turbid releases to the Lower Esopus Creek.

- Demand that New York City document and study short-term, long-term and cumulative impacts on the downstream communities along the Esopus Creek and Hudson River, including impacts on other drinking water systems, the local economy, ecology, and aesthetics.

- Call for New York City to provide an immediate study of the impacts from the releases following the 2020 Christmas storm event, and incorporation of the results of that study into the DEIS.

- Tell the DEC it has a duty to consider all the public comments, and to require that New York City revise its DEIS or produce a supplemental DEIS to comprehensively study both impacts and alternatives.