

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Regional Director, Region 3

21 South Platt Corners Road, New Paltz, NY 12561-1620

P: (845) 256-3033 | F: (845) 255-3042

www.dec.ny.gov

July 1, 2024

Rohit T. Aggarwala
Commissioner
New York City Department of Environmental Protection
59-17 Junction Boulevard
Flushing, NY 11373

Re: New York State Department of Environmental Conservation/New York City Department of Environmental Protection (DEC/DEP) Revised Interim Release Protocol (IRP) for the Ashokan Reservoir
NYSDEC Case No. D007-0001-11

Dear Commissioner Aggarwala:

The New York State Department of Environmental Conservation (NYSDEC) and the City of New York and New York City Department of Environmental Protection (the City) entered into an Order on Consent (NYSDEC Case No. D007-0001-11), which was effective October 4, 2013, and modified on November 29, 2018, and March 25, 2020.

As discussed and agreed to, pursuant to paragraph A.ii of the Order on Consent, please see the attached "New York State Department of Environmental Conservation/New York City Department of Environmental Protection (DEC/DEP) Revised Interim Release Protocol (IRP) for the Ashokan Reservoir," effective today, July 1, 2024.

Please note that the "Water Quality Monitoring Plan (Ashokan Watershed – Release Channel Operations)" portion of Appendix B of the Order on Consent remains in effect without revision. All other terms and conditions of Order on Consent, effective October 4, 2013, and modified on November 29, 2018, and March 25, 2020, shall also remain in full force and effect.

Sincerely,



Kelly R. Turturro
Regional Director, NYSDEC



Department of
Environmental
Conservation

Appendix B

New York State Department of Environmental Conservation/New York City Department of Environmental Protection (DEC/DEP) Revised Interim Release Protocol (IRP) for the Ashokan Reservoir

July 1, 2024

Introduction: DEC and DEP have agreed to implement a revised Interim Release Protocol (IRP) for the Ashokan Reservoir to further enhance benefits to the community, improve flood attenuation, provide better water quality on an interim basis downstream in the Lower Esopus Creek, and recognize that it may be modified or terminated as additional modeling and impact assessments are performed and/or as additional information becomes available.

The IRP is considered interim as it may be revised as a result of lessons learned during its implementation, or through a modification to SPDES permit #3-9903-00023/00006: SPDES No.: NY-0264652 issued by the DEC after an appropriate public process.

I. Community Release Protocol:

- a. **Purpose:** to provide environmental, recreational, and economic benefits to the lower Esopus Creek in a manner that will not adversely impact water supply.
- b. **Minimum Flow:** DEP will make releases from the Ashokan Reservoir through the Ashokan Reservoir Release Channel at the rates prescribed in the following table provided that the release turbidity does not exceed 20 Nephelometric Turbidity Units (NTU) for more than 24 hours.

Release Criteria ¹	Summer (May 1 – Oct 31)	Winter (Nov 1 – Apr 30)
Normal Hydrologic Condition	15 MGD	10 MGD
Drought Warning Condition	10 MGD	4 MGD
Drought Condition	0	0

Note 1: Hydrologic Condition is based on the combined storage in the Cannonsville, Pepacton and Neversink Reservoirs.

- c. **Turbidity:** When substantial contrast in turbidity exists, DEP will make releases from either the West or East Basin of Ashokan Reservoir. If turbidity levels exceed 20 NTU for 24 hours at all release points, DEP will cease all releases of water until turbidity levels drop below 20 NTU.
- d. **Action Stage Shutdown:** The community release shall be shut down when the USGS gage on the Esopus Creek at Mount Marion (Lower Esopus) is within 1 foot of the "Action Stage" (18') and is forecasted to reach "Action Stage", as predicted on

the National Weather Service's (NWS's) Advanced Hydrologic Prediction Service web page.

2. Spill Mitigation Release Protocol:

- a. **Purpose:** to enhance flood mitigation already provided by the Ashokan Reservoir, DEP will utilize the established Conditional Seasonal Storage Objective (CSSO) rule curve depicted in Figure 1. Consistent with good practices for water supply reservoirs, and in order to ensure that sufficient resources are available during an extended dry period to support water supply needs, it is essential to ensure that the Ashokan Reservoir is filled on or around June 1st every year. To accomplish this, the CSSO must be limited and ramped. For the duration of the IRP DEP shall endeavor, to the maximum extent possible, without impacting water supply reliability, to maintain reservoir levels at the CSSO, thus creating a high probability of maintaining a ten (10) percent void space from October 14 through March 15 to help mitigate flooding events. In determining the releases needed to maintain the CSSO, DEP will consider the following parameters in the evaluation: forecasted inflows over the next seven (7) days including inflow from snow water equivalent as forecast by the National Weather Service's (NWS) Hydrological Ensemble Forecasting System (HEFS), anticipated diversions over the next seven (7) days, and the current usable reservoir storage. Based on any projected seven (7) day storage surplus, DEP will calculate total release volumes to progress toward the CSSO and allocate those volumes over the upcoming seven 7-day period. In making releases, DEP will consider reasonable requests from Ulster County for a release modification related to a downstream agricultural or recreational concern, within the limitations of the release works for the Ashokan Reservoir Release Channel and subject to DEC concurrence. Spill Mitigation releases are designed to help mitigate the effects of potential for flooding immediately below the Ashokan Reservoir to the lower Esopus Creek communities.
- b. **Maximum Flow:** The maximum flow from the Release Channel shall not exceed 600 MGD. DEP will throttle releases as necessary so the combined flow for Ashokan spill and Ashokan Reservoir Release Channel discharge does not exceed 1,000 MGD. No releases shall be made when the spill rate exceeds 1,000 MGD. In addition, DEP will shutdown the Release Channel when the USGS gage on the Esopus Creek at Mount Marion (Lower Esopus) is within 1 foot of the "Action Stage" (18') and is forecasted to reach "Action Stage", as predicted on the NWS's Advanced Hydrologic Prediction Service web page. DEP shall endeavor to achieve the CSSO in a manner that minimizes the need for maximum flow, large volume releases.
- c. **Turbidity:** Spill mitigation releases of water shall be made at levels of turbidity no greater than 20 NTU. When substantial contrast in turbidity exists, DEP will make releases from either the West or East Basin of Ashokan Reservoir. If turbidity levels exceed 20 NTU for 24 hours at all release points, DEP will cease all releases of

water until turbidity levels drop below 20 NTU.

d. **Ramping Rates:** All changes in water release rates will be conducted in accordance with the following schedule:

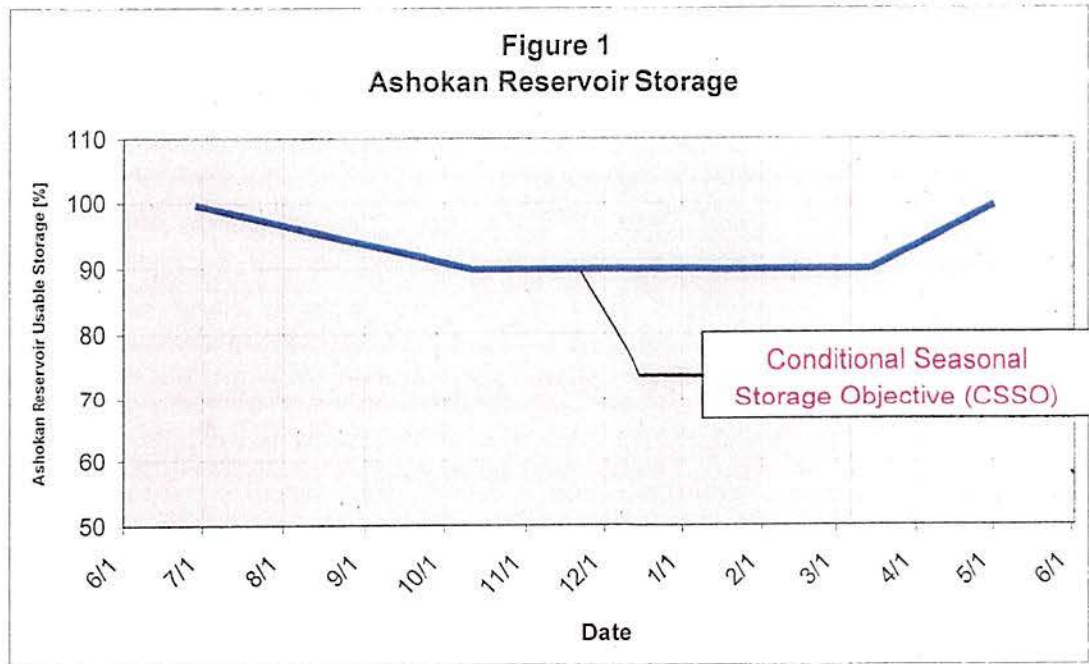
i. **Flow Increases:**

1. For flows greater than 0 and up to 80 MGD: 20 MGD/hr
2. For flows greater than 80 MGD and up to 200 MGD: 40 MGD/hr
3. For flows greater than 200 MGD: 40 MGD/half-hour

ii. **Flow Decreases:**

1. For flows greater than 200 MGD: 40 MGD/half-hour
2. For flows from 200 to 80 MGD: 40 MGD/hr
3. For flows from 80 to 0 MGD: 20 MGD/hr

e. **Void Target:** Conditional Seasonal Storage Objective (CSSO) as per Figure 1



3. Notification:

- a. Report all operational changes of the release channel to the Ulster County Emergency Management office, Ulster County Department of the Environment, and DEC.
- b. Continue to send operational data to Ulster County and Town officials on a daily basis and provide turbidity data to Ulster County upon written request.
- c. Report all water quality data to DEC promptly after receipt.

4. Monitoring:

- a. **Water Flow:**
 - i. Monitor continuously by the DEP Water Supply Control Center via the Supervisory Control and Data Acquisition System with telemetry from release channel gages.
 - ii. During periods of inoperable continuous monitoring - perform visual gage readings at least once daily and as flow is changed.

5. Water Quality:

Please see attached "Water Quality Monitoring Plan, Ashokan Watershed -
Release Channel Operations"

6. Exceptions:

DEP may operate at variance with this Interim Protocol if any of the following conditions are met:

- a. DEP, with concurrence by DEC, determines that additional resources are reasonably necessary for reservoir balancing, for refill of the Ashokan Reservoir, for proper water supply management, or in the case of drought watch, warnings or emergencies.
- b. DEC in accordance with DEC's existing legal authority directs an emergency action or DEP takes an emergency action.
- c. DEC in accordance with DEC's existing legal authority directs a release modification for the purposes of scientific research or natural resource protection.
- d. DEC or DEP with concurrence by DEC, determines that releases must be changed or

interrupted as necessary for inspection, maintenance, testing and repairs (including Delaware Aqueduct repairs).

- e. DEP, with concurrence by DEC, responds to a spill mitigation request (release or request not to release) from Ulster County provided the request will not adversely impact water supply.
- f. DEP responds to a spill mitigation request (release or request not to release) from DEC provided the request will not adversely impact water supply.

8. Utilization of the Shandaken Tunnel:

During Spill Mitigation Releases and after reservoir storage has been reduced to meet the CSSO objectives, the use of the Shandaken Tunnel to provide water to the Ashokan Reservoir will be minimized in keeping with the existing Shandaken SPDES Permit and consistent with proper water supply management. In particular from May 1st through February 1st, for determinations in accordance with footnote 2.J. in the Shandaken Tunnel SPDES permit, the unfilled storage capacity within the Ashokan Reservoir will be calculated from the CSSO curve rather than the spillway elevation for the period.

9. Future Revisions to the IRP

DEC and NYCDEP may agree to modify the IRP as additional modeling and impact assessments are performed and as a result of monitoring and other lessons learned during its implementation, informed by input from the stakeholders.