



Delaware River Basin Commission

25 Cosey Road
P.O. Box 7360
West Trenton, NJ 08628-0360
Phone: 609-883-9500
Fax: 609-883-9522
www.drbc.gov

Kristen Bowman Kavanagh, P.E.
Executive Director

Regulated Flow Advisory Committee
March 20, 2025

Meeting Summary

A meeting of the Regulated Flow Advisory Committee (RFAC) was held on March 20, 2025, via Zoom. Hoss Liaghat was the chair for this meeting. The RFAC members introduced themselves. The summary of the April 29, 2024, meeting was approved.

Jen Garigiano (NYCDEP) provided an update to the Delaware Aqueduct Project

Jennifer Garigiano provided an update of the status of the Delaware Aqueduct project. Due to last fall's drought and persistent below average precipitation patterns, NYDEP paused the project to conserve water supply to meet the City's water demand. The project is not expected to be completed until after 2027 due to need to develop a new contract and undergo through the procurement process.

Amy McHugh (ODRM) presented on the Balancing Adjustment Revision

ODRM completed an analysis of directed release balancing adjustment procedure, as indicated in the 2017 FFMP. The balancing adjustment is a correction for cumulative error of the directed releases. Error sources include forecasts of powerplant releases, runoff from rainfall, and baseflow behavior. The balancing adjustment is computed as 10% of the difference between directed releases and actual required releases. The study aimed to address pre-existing criticisms of the process, which included that it was not effective, overly complex, and carried a balance for a long period of time. The study structure had three main tasks: 1) data collection and model development, 2) scenario performance testing, and 3) Reporting and decision. Between each of the main tasks, workshops were held to solicit input on alternatives and feedback on model results from USGS and the Decree Party Work Group. The study concluded in June 2023, and a draft report was completed in 2024.

To simplify and increase effectiveness of the balancing adjustment procedure: 1) remove the 10% distribution will be removed and rely only on a maximum value (cap) for the balancing adjustment value, 2) the reset date will be changed from June 15 to June 1 to align with banks, diversion calculations, etc. In 2018, a modification was made to the procedure to only apply the balancing adjustment when directed releases were greater than conservation releases. A review of this modified process identified loopholes in the logic, which will be remedied with the following recommendations, 1) apply the Balancing Adjustment for any directed release value, not just when greater than conservation release, 2) the cap will be increased from 50 to 100 cfs, 3) accumulate error not only when directed releases are greater than conservation releases, but also when the actual required release is greater than the conservation release, and 4) when directed and actual required release values span the conservation release value, only the portion of error above the conservation release value is accumulated.

In 2024, the process was refined again to reduce the cap from 100 cfs back to 50 cfs. A +/-100 cfs creates added difficulties in forecasting releases directed by DRBC to meet the Trenton flow target. Changes were implemented manually for 2024 directed releases. Reverting the cap to +/-50 cfs will take effect after processors are updated in the ODRM database in 2025. The FFMP 2017 Balancing adjustment study report and recommendations implemented in 2023 will be added as an appendix to the ODRM 2023 annual report. The refined process will be documented in the appendix of the ODRM 2024 and 2025 annual reports.

Sara Sayed (DRBC) presented on the 2023-2024 Release Year [FFMP Performance Report](#)

DRBC conducted performance review of the FFMP for the release year starting on June 1, 2023, and ending on May 31, 2024. In release year 2023-2024, precipitation above normal across the basin. The NYC Storage was above the long-term median for most of the year, except in June through mid-July and mid-April through May. Flows were above normal for much of the year and only below the normal range in June. Brief periods of normal flow occurred in late fall, February and after mid-April. The NYC Diversion and NJ Diversion did not exceed their respective limits as set forth in the Water Code and FFMP. A total of 12,238 MG was released to meet the Montague flow objective. The conservation releases were in Table 4G for the entire release year. Warm summer air temperature led to increased water temperatures at the beginning of the release year, and thermal

mitigation was used for three days July and two days during September 2023. Discharge mitigation releases were needed for much of the year. The salt front was in or below the normal range and its most upstream location was RM 71.8 on November 22, 2023, one mile upstream of the confluence of the Delaware and Christina Rivers. DRBC's [FFMP Implementation Reports](#) are available on the DRBC Website.

Amy McHugh (ODRM) presented an Update on [Progress of FFMP 2017 Studies](#)

Amy McHugh provided a status update on the FFMP 2017 studies. [Five specific studies](#) are outlined in the [FFMP 2017 agreement](#) to inform discussions of potential modifications to the agreement. An [additional study](#) was added when the agreement was amended in [May of 2023](#). Work is underway or completed on four of the five studies: [Detachment](#), NJ Diversion, and the [Balancing Adjustment](#) (which Amy summarized at today's meeting). The Lower Basin Storage study is considered the DRBC Phase 1 and Phase II studies. Phase I was completed in 2023 and can be found [here](#). The NJ Diversion study scopes will be posted for comment when approved. The Balancing Adjustment Study was completed, and the [draft report](#) was posted on the [ODRM](#) and [RFAC](#) websites. The ERQ and new Synthesis Study have not yet been initiated.

Elaine Panuccio presented on [Chloride Trends in the Delaware River & Pathways Forward](#)

Elaine Panuccio presented chloride management and monitoring in the Delaware River Basin, providing an overview of nationwide trends in surface water chloride concentrations and the primary sources of elevated chloride, particularly road deicing. Ms. Panuccio explained that road de-icing is expected to contribute substantially to chloride levels and that future data collection could refine these estimates. She added that warming temperatures might reduce the need for road deicing. She discussed the impacts of elevated chloride levels on aquatic life and human health and reviewed local trends observed through long-term monitoring at Trenton and under DRBC's Special Protection Waters (SPW) program, explaining the program's structure and purpose.

Ms. Panuccio also provided an update on the deliberations of DRBC's Salinity Impacts Freshwater Toxicity (SIFT) Workgroup. She noted that engaging Departments of Transportation (DOTs) in salt reduction efforts has been challenging, that public safety concerns often take precedence over water quality considerations, and that existing salt reduction programs are largely voluntary.

She then reviewed previous apparent exceedances of DRBC's chloride criteria in Zone 2, which were inferred from measurements of specific conductance rather than direct chloride measurements. Because of this, Zone 2 was not included on state 303(d) lists. Ms. Panuccio described upcoming monitoring in Zone 2 that will include direct measurement of chloride for at least 15 consecutive days, including weekends and holidays, to better support future listing decisions.

Amy Shallcross (DRBC) presented an update to the [DRBC Storage Study](#)

Phase II of the storage study was passed in a resolution for the minutes during the June 2024 business meeting. The study will be conducted with Mott McDonald in two concurrent parts. One to further evaluate the three quarries identified in Phase 1 (Penn Park, Evansville and Moores Station/Trap Rock) and one to further evaluate an expansion at the Cannonsville reservoir. Phase II requires three contracts, all of which are in various phases. The contract to further evaluate the quarries is awaiting signatures, the contract to evaluate Cannonville's expansion is pending as is the contract between NYCDEP and DRBC to conduct the Cannonsville study.

Adjournment

The meeting concluded at 11:50 am.

For information about upcoming meetings, [sign up](#) for the DRBC listservs for notices on topics of interest to you.

Committee Members in attendance

- Hoss Liaghat, PADEP (chair)
- Jen Garigliano, NYCDEP
- Stefanie Baxter, DGS
- Patty Murray, DNREC
- Ian Snook, NJDEP
- Kelly Anderson, PWD
- Steven Domber, NJDEP
- Brenan Tarrier, NYSDEC
- Amy McHugh, ODRM