



Delaware River Basin Commission

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Steven J. Tambini, P.E.
Executive Director

September 22, 2021

Marc Cammarata, P.E.
Deputy Water Commissioner, Planning & Environmental Services
Philadelphia Water Department
1101 Market Street
Philadelphia, PA 19107-2994

RE: Response to Comments on Salinity Study Scope

Dear Mr. Cammarata:

The Delaware River Basin Commission's Regulated Flow Advisory Committee (RFAC) appreciate the comments received from the Philadelphia Water Department (PWD) on the FFMP 2017 Salinity Study Scope. Your comments are focused on the nature of the technical work, inclusion of all available information and experts. A significant amount of technical work is being performed for the study by multiple parties and reviewed by experts in the field. The Decree Parties have worked with PWD directly and through RFAC and intend to continue to do so. Responses to your major comments are provided herein.

- 1) PWD requests that language be added to the 2017 Salinity Study indicating that other salinity studies outside of the 2017 Salinity Study will also be used to inform the Decree Parties, RFAC and the public.***

The FFMP 2017 is a two-part, ten-year agreement. Although the agreement does not explicitly reference salinity studies by outside parties, it does not preclude the use and incorporation of other information not conducted by or for the Decree Parties. Modification of the agreement is not required, but information on the results of your work will be considered.

- 2) Model validation for all tools used in the 2017 FFMP Salinity Study should be presented publicly to the RFAC and validation report made publicly available.***
- 3) Model validation should demonstrate model performance of velocity, water level, and salinity simulation at multiple locations in the Delaware Estuary.***

Model calibration and validation reports will be posted on DRBC's website along with links to documents and other information related to salinity in the Delaware River Estuary.

- 4) PWD is performing extensive salinity analyses and will provide results to the Pennsylvania Department of Environmental Protection (PADEP), Decree Parties, RFAC and stakeholders studying fisheries and aquatic resources.***

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DRBC and the Decree Parties are aware of PWD's studies and are reviewing the documentation. As you know, PWD's consultant has presented the work several times at RFAC meetings. Information and suggestions submitted by PWD will be considered.

- 5) ***'Comparable protection' of the Philadelphia drinking water supply is a policy that leads to no ocean salt at the PWD Baxter Water Treatment Plant intake. A policy contributing to ocean salt at the PWD Baxter Water Treatment Plant intake for one day is considered a 'significant adverse impact'.***

The protection of water users, including PWD and New Jersey American Water Company, among others, from salinity intrusion is a goal of the FFMP. Any new program or modifications will need to maintain the current level of protection provided by FFMP 2017. The Decree Parties would appreciate input from PWD to develop a common definition of 'comparable level of protection' so that flow management programs are designed to meet the same objective(s). Qualitative indices, such as specific conductance or the location of the salt front, as well as quantitative explicit criteria for "no ocean salt at PWD's intake" and PWD's definition of "salinity intrusion" would be helpful.

- 6) ***PWD suggests that the best approach to evaluating and understanding the processes that force the intrusion of ocean salt into the upper Delaware Estuary is two-fold. First, through thorough, systematic investigations of the historic observed data and conditions. And second, through the conduct of numerical simulation experiments performed using a validated three-dimensional hydrodynamic model, to expose the important underlying physical mechanisms that drive salinity intrusion and to then predict the necessary conditions for the protection of the Philadelphia drinking water supply.***

The Decree Parties have convened an Inter-Agency Salinity Study Team to provide advice and technical analyses related to salinity and salinity management. The team includes representatives from USGS, DRBC, USGS, and DOE. There are multiple three-dimensional models being developed to investigate the physical processes and phenomena that drive salinity intrusion.

- 7) ***The expert panel convened to advise and support the modeling needs of the DRBC Designated Use Study is a resource that could be consulted to advise RFAC and the Decree Parties on the validity of the variety of tools described as available to study salinity in the Workplan.***

The RFAC will take the request for expert panel consultation under advisement.

- 8) ***RFAC should replace the Decree Party Workgroup, technical and policy deliberations should be made in public.***

The Decree Party Workgroup, comprised of representatives from DE, NJ, NY, NYC and PA, was established as a means for deliberative discussion of various technical issues related to the 1954

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Supreme Court Decree. The Decree Parties use RFAC as the venue to interact with the public. RFAC was established to advise the Commission about the views of stakeholders with respect to diversions and releases from basin reservoirs, to provide a public forum for discussion and debate on flow management issues, to disseminate accurate scientific information to increase the participants' understanding of operational and legal constraints and opportunities, and to advise the Commission with respect to potential changes to the Water Code. Additional clarification of the FFMP2017 Studies public participation process is coming.

RFAC looks forward to working with PWD in the months ahead as the Decree Parties work toward advancing the goals of the 2017 FFMP.

Sincerely,

A handwritten signature in cursive script that reads "Stefanie J. Baxter". The signature is written in black ink on a white background.

Stefanie Baxter
Chair, Regulated Flow Advisory Committee