



## 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](http://www.drbc.gov)

**Kristen Bowman Kavanagh, P.E.**  
Executive Director

### Minutes

### Water Quality Advisory Committee

September 15, 2025

#### Members & Alternates:

##### NYS DEC

Sarah Rickard

##### EPA

Taylor Krolik

##### NJDEP

Frank Klapinski

##### Environmental Professional

(Not present)

##### Regulated Community Industrial

Scott Northey

##### National Park Service

Caleb Tzilkowski

##### DNREC

Bhanu Paudel

##### PADEP

Josh Lookenbill

##### Academia/Science

John Jackson

##### Local Watershed Organizations

Erin Landis

##### Regulated Community Municipal

Jay Cruz (PWD)

#### Other Attendees:

Mike Heller (DRBC)

Sarah Beganskas (DRBC)

Elba Deck (DRBC)

Li Zheng (DRBC)

Elaine Panuccio (DRBC)

Jake Bransky (DRBC)

John Yagecic (DRBC)

Namsoo Suk (DRBC)

Chad Pindar (DRBC)

Kate Schmidt (DRBC)

Pam Bush (DRBC)

Elizabeth Brown (DRBC)

Amber Munchback (DRBC)

Joey Fogarty (DRBC)

Kristen Bowman Kavanagh (DRBC)

Bryan Lennon (Wilmington)

Maggie Reilly (Aqua)

Thomas Amidon (DRBC)

Fanghui Chen (DRBC)

James Ray (EPA)

Ben Lorson (PA Fish & Boat)

Stephen Seeberger (NJDEP)

Biswarup Guha (NJDEP)

Bill Brown (PADEP)

Brandon Bach (HDR)

Greg Cavallo (Cavallo Environmental Services)

Katie Lavallee (Woods Hole Group)

Leah Gaffney (Andris)

Leonard Gipson (CCMUA)

Greg Voigt (EPA3)

Oleg Zonis (CCMUA)

Mariya Chiger (DNREC)

Sunendra Joshi (DNREC)

Naomi Intrator (PWD)

Sheila Eyler (USFWS)

Stefanie Kroll (Riverways)

Susan Rosenwinkel (NJDEP)

Marzooq Alebus (NJDEP)

Meg McGuire (Delaware Currents)

Eileen Althouse (CDM Smith)

Kelly Anderson (PWD)	Colleen Hughes (CDM Smith)
Julie Midgette (PWD)	Zach Eichenwald (CDM Smith)
Matt Amato (DRBC)	Dustin Shull (PADEP)
Jessica Martinsen (EPA3)	Kristen Schlauderaff (PADEP)
Kathryn Flynn (EPA2)	Lisa Pfeifer (Pepco Holdings)
Melanie Murphy (PWD)	Jeremy Conkle (DRBC)
Samantha O'Connor (PWD)	Jason Fagel (NYDEC)
Alex Ridyard (Sage Services)	Brenda Gotanda (Manko, Gold, Katcher & Fox)
Naomi Popiel (Sage Services)	Natalia Teekah (Manko, Gold, Katcher & Fox)
Amanda Lacklen (DE)	Carl DuPoldt (Green Buildings Solutions)
Andy Thuman (HDR)	Greg Wacik (USACE)
Brent Gotsch (NYC DEP)	Jason Fry (CCMUA)
Danielle Przywara (DNREC)	Joella Posey (AECOM)
Denise Hakowski (EPA3)	Jonathan Zerbe (Exelon)
Greg Voigt (EPA3)	Kate Merrill (Sage Services)
Ed Layton (GEI Consultants)	Melanie Knezich (Philadelphia)
Eliot Myer (Hazen & Sawyer)	Sean Quinn (American Water)
Michael Hayes (PBF Energy)	Zachary Salada (Pennsylvania)
Jacob Metch (HDR)	Asa Lewis (Hazen & Sawyer)
Matthew Fritch (PWD)	Emily McKeever (Delaware Nature Society)
Scott Hinz (LimnoTech)	Adrienne Rayna
Paula Kulis (CDM Smith)	Charles Hurst (DELCORA)
Kinman Leung (PWD)	Byrne Remphrey (TYLin)
Frank Borsuk (EPA)	David Ksnyiak (TYLin)
Scott Schreiber (CCMUA)	Preston Luitweiler

### **Welcome and Call to Order**

The meeting was called to order by Sarah Rickard at approximately 9:04AM. Voting members were asked to introduce themselves.

### **Administrative Announcements**

John Yagecic announced that Matt Amato and Joey Fogarty had joined the Commission since the last meeting. Yagecic also announced that several non-reserved positions had been administratively continued since there were no WQAC meetings held in 2024. Namsoo Suk announced that Tom Amidon and Matt Amato would be serving as DRBC liaisons to the WQAC beginning with the next WQAC meeting.

### **Meeting Minutes**

Minutes from the April 23, 2024 meeting were provided to the group for review and comment by email on July 15, 2025. DRBC received no comments on the draft minutes.

Frank Klapinski moved that the minutes from April 23, 2024 meeting be approved and Sarah Rickard seconded the motion. All voted in favor and the April 23, 2024 minutes were approved.

### **DO Criteria Update**

Greg Voigt of EPA Region 3 provided a verbal update on the status of the new dissolved oxygen (DO) criteria for the Delaware Estuary. Mr. Voigt indicated that the new criteria was undergoing review by the Office of Management and Budget (OMB) and that EPA expected that review to be completed within a week or so. Once the OMB review was completed, EPA would gather necessary signatures to finalize the rule.

### **Aquatic Life Designated Use Rulemaking**

Dr. Namsoo Suk briefly updated the group on other work pertaining to the Aquatic Life Designated Use Rulemaking. Slides from that presentation are posted on the DRBC web site at [https://www.nj.gov/drbc/library/documents/WQAC/091525/suk\\_ALDUupdate.pdf](https://www.nj.gov/drbc/library/documents/WQAC/091525/suk_ALDUupdate.pdf)

Dr. Suk indicated that 3 technical reports had been released since September 2024:

- A Pathway for Continued Restoration: Improving Dissolved Oxygen in the Delaware River Estuary
- Modeling Eutrophication Processes in the Delaware River Estuary: Three-Dimensional Hydrodynamic Model
- Modeling Eutrophication Processes in the Delaware River Estuary: Three-Dimensional Water Quality Model

In addition, work was nearly completed on an improved DO model that dynamically simulates the impacts of sediments on water column DO. Dr. Suk briefly reviewed DRBC's understanding of events and work performed over the past several years.

DRBC is currently finalizing a strategy document with co-regulators that articulates regulatory underpinnings, responsibilities, and schedule. DRBC anticipates applying its estuary DO model to perform a focused technical study to determine allocations for criteria implementation.

Paula Kulis asked whether the new sediment diagenesis version of the model would be used for developing those allocations. Dr. Suk confirmed that DRBC's intention was to use the newer version of the model including sediment diagenesis for deriving the allocations.

### **Water Quality Criteria Updates for Toxics**

Dr. Jeremy Conkle updated the group on DRBC's intended path forward on updating its toxics criteria. Slides from that presentation are posted on the DRBC web site at:

[https://www.nj.gov/drbc/library/documents/WQAC/091525/conkle\\_toxics-criteria-update.pdf](https://www.nj.gov/drbc/library/documents/WQAC/091525/conkle_toxics-criteria-update.pdf)

Dr. Conkle briefly reviewed the history of DRBC's criteria program and how that history has resulted in criteria structures and values that differ from EPA nationally recommended criteria and basin states' criteria. Dr. Conkle relayed the difficulty DRBC has faced in getting and staying current in terms of its toxics criteria. Dr. Conkle described DRBC's intention to refine the structure of its criteria tables to be more comparable to both the EPA nationally recommended criteria and basin states' criteria by consolidating various toxics criteria tables and by consolidating chemicals to focus on the most protective criteria, where multiple criteria currently exist. DRBC also intends to unify chemical names and add Chemical Abstract Service (CAS) numbers for unambiguous identification. Dr. Conkle recounted

coordination meetings with co-regulators and showed examples of anticipated table and chemical consolidation.

Next steps would likely include a similar presentation to and coordination with the Toxics Advisory Committee (TAC) and additional coordination with Co-Regulators culminating in a public participation process.

### **Proposed Bacteria Criteria Updates**

John Yagecic presented DRBC's intention to update both its Primary and Secondary contact criteria for the Delaware River. Slides from that presentation are posted on the DRBC web site at:

[https://www.nj.gov/drbc/library/documents/WQAC/091525/yagecic\\_bacteria-criteria-update.pdf](https://www.nj.gov/drbc/library/documents/WQAC/091525/yagecic_bacteria-criteria-update.pdf)

The proposed revisions would apply to all mainstem Zones (1A through 1E, 2, 3, 4, 5, & 6) and would change the Fecal Indicator Bacteria (FIB) used. Yagecic stressed that this change would not change designated uses in any Zone, although that initiative was still under deliberation.

DRBC's current bacteria criteria are out of sync with EPA Recreational Water Quality Criteria published in 2012, which are applicable to primary contact recreation only. However, in 2022, EPA published a methodology for deriving criteria applicable to secondary contact waters using the published primary contact criteria. Part of the delay in adopting the newer primary contact criteria stemmed from a policy of allowing basin states to adopt new criteria first, allowing DRBC to consider state actions in its deliberations. Since Pennsylvania, New Jersey, and Delaware have updated their criteria, it would now be appropriate for DRBC to do the same. In 2024, EPA requested that DRBC and the Co-regulators initiate that process.

Yagecic noted that both the EPA published criteria and the methodology for deriving secondary criteria from primary, include multiple options and decision points. After multiple rounds of coordination, DRBC and co-regulators anticipate arriving at a consensus set of selections. DRBC's expectation is that the public notice process could be initiated in Spring 2026, with final adoption in later 2026 or early 2027.

Jay Cruz asked if DRBC expected to use one or two indicator bacteria in the proposed criteria revisions. Mr. Yagecic confirmed that current focus was on using both *E. coli* and enterococci, where applicable.

### **Review of 2024 and 2025 Bacteria Data Collection Efforts**

Jake Bransky of DRBC and Dustin Shull of PADEP jointly presented on bacteria data collection efforts and results from 2024 and 2025. Slides from that presentation are posted on the DRBC web site at:

[https://www.nj.gov/drbc/library/documents/WQAC/091525/bransky\\_bacteria.pdf](https://www.nj.gov/drbc/library/documents/WQAC/091525/bransky_bacteria.pdf)

The presentation included background on previous data collection efforts including boat run, near shore, and transect monitoring, design and results from the 2024 data collection, and design of the 2025 data collection. Mr. Bransky indicated that the 2024 data collection was a collaborative effort between DRBC, PADEP, and NJDEP which included 135 sites sampled 6 times over a 30-day window, with samples analyzed for *E. coli*, fecal coliform, and enterococci, and a subset of samples analyzed for q-PCR.

Dustin Shull reviewed the assessment report developed from the 2024 data. Assessment highlights included:

- Observed fecal coliform concentrations in the upper portion of the estuary were elevated and exceeded DRBC's primary and secondary contact criteria

- Results for q-PCR indicated co-dominance of human and swine sources
- Lower concentrations FIB were observed between Neshaminy Creek and Cooper River, with more elevated concentrations below the Cooper River.

Mr. Bransky resumed presenting and reviewed the structure of the 2025 data collection. The 2025 effort focused on the Zone 2/3 interface and the non-tidal river to Easton. This effort was again a collaborative effort between DRBC, PADEP, and NJDEP wherein 63 sites were sampled 6 times over a 30-day window with samples analyzed for *E. coli*, fecal coliform, and enterococci, and a subset of samples analyzed for q-PCR. Mr. Bransky indicated that results were not yet available to share but would be available shortly.

### **Salt Reduction Strategy Update**

Elaine Panuccio provided a brief update on the status of DRBC's salt reduction strategy. Slides from that presentation are posted on the DRBC website at:

[https://www.nj.gov/drbc/library/documents/WQAC/091525/panuccio\\_chlorides.pdf](https://www.nj.gov/drbc/library/documents/WQAC/091525/panuccio_chlorides.pdf)

Ms. Panuccio reviewed the trend of chloride concentrations observed at the Delaware River at Trenton, NJ in which chloride increased from concentrations in the vicinity of 5 mg/L in the 1940's to nearly 30 mg/L in the 2020's. Ms. Panuccio also reviewed the assessment of measurable change performed in evaluation of DRBC's Special Protection Waters program which showed that while most analytical parameters improved at most sites from that program's initiation through 2016 (when that assessment was performed), salt-related parameters increased at many sites, thus showing evidence of measurable change. In addition, the amount of highway deicing salt used from the 1970's through the 2020's in the "salt belt" states from the upper Midwest through the Northeast increased in a pattern quite similar to the observed chloride increases at Trenton.

A preliminary mass-balance of chloride data in the basin suggest that nearly two thirds of the chloride mass at Trenton is not attributable to either background concentrations in the upper part of the basin or point sources, thus suggesting road de-icing salts as a possible source.

Ms. Panuccio also reviewed an apparent month-long violation of DRBC's chloride criteria in Zone 2 which occurred between February 10 and March 15, 2025.

In response to ongoing observations of chloride problems, DRBC had previously formed a salinity workgroup (SIFT) including many different organizations involved in attempting to reduce salt impact, to discuss management approaches. Lessons learned from that workgroup included:

- All entities are struggling to identify an effective solution
- Outreach and voluntary approaches only go so far
- Finding a solution to address this issue is necessary

Ms. Panuccio described a pilot study included in DRBC's 2025 Water Resources Program to coordinate with municipalities on current salting practices and investigate how DRBC can assist with salt reduction efforts. To initiate that effort DRBC met with staff in Bridgeton Township, PA in August 2025. Those staff highlighted that an outreach and education approach is necessary. DRBC staff also registered to attend the NJ League of Municipalities conference to coordinate on a larger scale.

**Open Comment**

Jay Cruz noted a lack of WQAC meetings during 2024 and thus no opportunity to be aware of or provide feedback on these efforts. Mr. Cruz also noted that several preceding presentations emphasized coordination with co-regulators and expressed concern that coordination with co-regulators was happening at the expense of coordination with advisory committees and depriving advisory committees of the opportunity to provide feedback early in deliberative processes.

**Adjournment**

John Jackson moved to adjourn the meeting. All voted in favor and the meeting was adjourned at approximately 10:35 AM.