



## Delaware River Basin Commission

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**Steven J. Tambini, P.E.**  
Executive Director

### Minutes Water Quality Advisory Committee

April 15, 2021

#### Members & Alternates:

##### NYS DEC

Jason Fagel

##### EPA

Greg Voigt

##### NJDEP

Frank Klapinski

##### Environmental

Maya van Rossum (DRN)

##### Regulated Community Industrial

Kimberly Long (Exelon)

##### National Park Service

Pete Sharpe

##### DNREC

David Wolanski

##### PADEP

Tom Barron

##### Academia/Science

John Jackson (Stroud)

##### Local Watershed Organizations

Gail Farmer

##### Regulated Community Municipal

Bryon Lennon (Wilmington)

Jay Cruz (PWD)

#### Other Attendees:

Steve Tambini (DRBC)

Angela Padeletti (PDE)

John Yagecic (DRBC)

Namsoo Suk (DRBC)

Ron MacGillivray (DRBC)

Jake Bransky (DRBC)

Elaine Panuccio (DRBC)

Elba Deck (DRBC)

Li Zheng (DRBC)

Kristen Bowman Kavanagh (DRBC)

Tom Amidon (DRBC)

Adam Hendricks (PWD)

Joe Duris (USGS)

Alex Ridyard (PWD)

Bill Richardson (EPA)

Brent Gaylord (EPA)

Denise Hakowski (EPA)

Gregory Wacik (USACE)

Jessica Newbern (NPS)

Irene Fitzgerald (DELCORA)

Charles Hurst (DELCORA)

Colleen Walters (River Network)

Melanie Murphy (PWD)

Samantha O'Connor (PWD)

Gary Walters (PADEP)

Matt Kundrat (PADEP)

Heidi Biggs (PADEP)

Steve Unger (PADEP)

Rhonda Manning (PADEP)

Sarah Rickard (NYSDEC)

Ben Lorson (PAFBC)

Steve Seeberger (NJDEP)

Marco Alebus (NJDEP)

Meg McGuire (Delaware Currents)

Josh Ferguson (Greeley and Hansen)

Preston Luitweiler (WRADRB)

Andy Thuman (HDR)

Chris Main (DNREC)

Donna Kohut (PennFuture)

Jessica O'Neill (PennFuture)

Christa Reeves (Musconetcong Watershed Assoc.)

Erik Silldorff (DRN)

Eileen Althouse (CDM Smith)

Steve Jandoli (American Littoral Society)

Michael Dillon (Manko Gold Katcher & Fox)

Abby Jones (Penn Future)

Verna Harrison (Verna Harrison Associates)

Scott Krasner (PWD)

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

The meeting was called to order by the Chair, Tom Barron of PADEP, at approximately 9:35AM.

### **Review of WQAC Minutes from December 3, 2020**

Draft minutes from the meeting on December 3, 2020 were provided by email previously. Minor edits were made in response to emailed comments and during the meeting for missing information and clarification. Gail Farmer moved to approve the minutes as amended. John Jackson seconded the motion. There were no objections and the motion passed. The final minutes are available on the DRBC web site at

<https://www.nj.gov/drbc/library/documents/WQAC/120320/minutes.pdf>

### **Socio economic evaluation under Resolution 2017-4**

John Yagecic presented DRBC's intention to perform a socio-economic evaluation of new effluent limits in response to Resolution 2017-4. In the performance of its evaluation, DRBC would rely on two recent guidance documents:

- Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector. Prepared for the AWWA, NACWA, and WEF. April 17, 2019  
(<https://www.awwa.org/Portals/0/AWWA/Government/DevelopingNewFrameworkForAffordabilityReport.pdf>)
- U.S. Environmental Protection Agency, 2021 Financial Capability Assessment Guidance. Report #800B21001. January, 2021 ([https://www.epa.gov/sites/default/files/2021-01/documents/2021\\_fca\\_guidance\\_-\\_january\\_13\\_2021\\_final\\_prepub.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2021_fca_guidance_-_january_13_2021_final_prepub.pdf))

Most needed information is available from the US Census Bureau and other public web sites, but some information would be needed from the Tier 1 wastewater utilities. DRBC anticipated sending a request letter for the additional information in Summer 2021. One task involved in the effort was to map wastewater utility service areas to US Census tracts. DRBC performed an initial mapping and would confirm that mapping with the utilities. The scope of the evaluation would include all 12 worksheet metrics for each of the twelve Tier 1 facilities at each of the 4 different effluent levels estimated in the [Kleinfelder](#) report. Yagecic noted that DRBC was at the beginning of this effort but expected to have a draft by the end of 2021. DRBC expected to make all data tables and scripts available for review.

Greg Voigt of EPA indicated that EPA believed that assumptions in the Kleinfelder report including interest and inflation rates were excessively conservative and would inflate the final cost. EPA also submitted this comment in response to the draft report. Yagecic suggested that Kleinfelder had provided the computational spreadsheets, so DRBC could evaluate the impact of alternative assumptions and perform a Monte Carlo evaluation to bound the uncertainty of the computed costs. Jay Cruz asked if DRBC intended to perform the socio-economic evaluation with in-house labor. Yagecic responded that DRBC did intend to perform the evaluation with in-house labor, but would coordinate carefully with the WQAC and outside experts including the Environmental Finance Centers. Several members inquired about the period of record for the

data and whether the data would be pre- or post-Covid. Yagecic confirmed that DRBC would have to coordinate with the WQAC and others to better assess the impact of Covid period on the computed metrics.

The slides from Mr. Yagecic's presentation are available on the DRBC WQAC page at [https://www.nj.gov/drbc/library/documents/WQAC/041521/Yagecic\\_SocioEconomicEvaluation.pdf](https://www.nj.gov/drbc/library/documents/WQAC/041521/Yagecic_SocioEconomicEvaluation.pdf)

### **Highest Attainable Designated Use Update**

Dr. Namsoo Suk provided a brief status update on the Aquatic Life Designated Use Program. Enhancements to the water quality model included:

- Upgrade of the re-aeration function using the energy dissipation rate. This required code modifications in both the EFDC and WASP models;
- Incorporation of a 3rd version of the Delaware Estuary specific light extinction formulation; and
- Debugging of the beta version of WASP through collaboration with EPA Region 4.

Model calibration tasks thus far include completion of an evaluation of model vertical resolution and current work on phytoplankton dynamics and sediment oxygen demand representation. The DRBC modeling team has been meeting with the model expert panel approximately every 3 weeks and is planning to hold a joint meeting between the WQAC and the model expert panel when model calibration has progressed further.

Erik Silldorff of DRN inquired about the form of the Light Extinction submodule. Dr. Suk indicated that it would be available at some point after additional work and coordination with the model expert panel was completed.

Dr. Suk's slides are available on the DRBC WQAC page at [https://www.nj.gov/drbc/library/documents/WQAC/041521/Suk\\_UpdateAquaticLifeStudy.pdf](https://www.nj.gov/drbc/library/documents/WQAC/041521/Suk_UpdateAquaticLifeStudy.pdf)

### **Methodology for 2022 Water Quality Assessment**

Jake Bransky presented DRBC's proposed methodology for the 2022 Water Quality Assessment Report. DRBC anticipates that the draft methodology for 2022 assessment report will be completed by August 2021. The methodology would reflect any proposed changes to assessment procedures from prior reports potentially including clarifications to assessment of total dissolved solids (TDS), temperature, and pH.

DRBC currently has TDS criteria in two different forms (not to exceed 500 mg/L and not to exceed 133% of background) in some zones. DRBC proposes to clarify that the 500 mg/L criteria is protective drinking water, and the 133% of background criteria is protective of aquatic life use.

Zones 2, 3, and 4 failed the temperature assessment for aquatic life use in 2020 due to exceedances of the historical temperature gradient, but noted that ambient air temperatures have risen since the 1960's. DRBC will craft a plan to better define the linkage between atmospheric and meteorological drivers of temperature exceedances.

DRBC pH criteria allow exceedances if due to natural conditions, however the Commission has not defined what would constitute demonstration of natural conditions. The entirety of Zone 1 failed the pH assessment for aquatic life use in 2020. DRBC proposes to evaluate the definition of natural conditions for the application of pH criteria before the next assessment.

Erik Silldorff suggested that perhaps the natural background pH could be established using the USGS Montague continuous water quality meter as a reference. Christa Reeves of the Musconetcong Watershed Association inquired whether any relationship between specific conductance and pH was apparent. Preston Luitweiler indicated that diurnal pH swings are common and observed frequently at drinking water intakes. Bransky indicated that DRBC would investigate these suggestions.

Jake Bransky's slides are available on the DRBC WQAC page at [https://www.nj.gov/drbc/library/documents/WQAC/041521/Bransky\\_WQ-Assessment2022.pdf](https://www.nj.gov/drbc/library/documents/WQAC/041521/Bransky_WQ-Assessment2022.pdf)

Angela Padeletti of PDE mentioned that the next round of assessments under the Technical Report for the Estuary and Basin (TREB), which serves as the technical background for State of the Estuary and State of the Basin reports, is beginning shortly. DRBC is the lead author for the Water Quality chapter of the TREB.

#### **Water Resources Program Coordination: Recreational Uses**

Dr. Namsuk Suk provided an introduction to DRBC's Water Resources Program (WRP) for FY 2022 through 2024. The WRP summarizes water resource conditions in the Basin (Section I – Basin Conditions) and describes primary issues and work program initiatives the Commission will undertake during the planning period (Section II – Work Program).

On March 3, 2021, the WQAC and participants were asked to provide inputs on the pre-draft of the Recreation/ Recreation Use section of the FY2022-2024 Water Resources Program (WRP). The entire draft WRP will be available for public comment during May 2021, and the Commissioners are expected to adopt the draft WRP on June 9, 2021.

Christa Reeves asked what primers DRBC was intending to use for Microbial Source Tracking (MST), but DRBC staff indicated that they were in early stages of coordinating with labs. Denise Hakowski of EPA recommended performing sanitary survey observations concurrently with bacterial sampling. Jay Cruz of PWD noted that PWD is working on a recreation safety study with USACE, USCG, NOAA, Philadelphia Police Department Marine Unit, and the Maritime Exchange. Frank Klapinsky of NJDEP requested that DRBC share bacteria monitoring locations with NJDEP Bureau of Freshwater and Biological Monitoring.

Dr. Suk's slides are available on DRBC's WQAC page at [https://www.nj.gov/drbc/library/documents/WQAC/041521/Suk\\_WRP\\_RecUse.pdf](https://www.nj.gov/drbc/library/documents/WQAC/041521/Suk_WRP_RecUse.pdf)

#### **Recreational Use Options Matrix**

John Yagecic presented a draft recreational use options matrix prepared by DRBC staff. The matrix was intended to outline different potential paths associated with recreational uses and to solicit preferences.

EPA suggested that some options in the matrix were not mutually exclusive.

The Recreational Use Options Matrix is posted on DRBC's WQAC page at [https://www.nj.gov/drbc/library/documents/WQAC/041521/Yagecic\\_RecUse\\_optionsDRAFT.pdf](https://www.nj.gov/drbc/library/documents/WQAC/041521/Yagecic_RecUse_optionsDRAFT.pdf)

### **Monitoring Update**

DRBC staff provided brief updates on monitoring activities in light of Covid.

- The Boat Run resumed in March for all sites. 1,4-dioxane is being analyzed at all sites.
- Track down monitoring for 1,4-dioxane was underway in the Lehigh River with additional track down planned for estuary tributaries. More information is available from the January Toxics Advisory Committee (TAC) meeting at [https://www.nj.gov/drbc/library/documents/TAC/012821/DRBC\\_1-4Dioxane\\_yagecic.pdf](https://www.nj.gov/drbc/library/documents/TAC/012821/DRBC_1-4Dioxane_yagecic.pdf)
- Shore and boat based bacterial monitoring would be performed in Summer 2021, funded by EPA's 106 Grant.
- DRBC was preparing for a tree canopy shading study in the upper portion of the basin
- Biomonitoring is planned for the non-tidal river at 25 locations. Bill Richardson of EPA suggested that a hybrid macroinvertebrate method could extend the usefulness of the data. Jake Bransky noted that method evaluation is in progress.
- DRBC will collect DO vertical profiles in the estuary. Erik Silldorff recommended looking the USGS cross channel data collected for QA/QC at water quality gage locations. Tom Amidon indicated that DRBC has reviewed that data and will supplement it. Joe Duris indicated that USGS will be running the EcoMapper platform, which collects DO and other observations at multiple locations and depths.
- DRBC added perfluorinated compounds to the Boat Run, and received NFWF grant funding for additional monitoring.
- Conductivity loggers have been deployed in the Special Protection Waters (SPW) drainage and chloride monitoring is planned. Joe Duris asked for chloride monitoring locations.

### **Adjournment**

John Jackson moved to adjourn and Kim Long seconded the motion. The meeting was adjourned at approximately 11:35 AM.