



Delaware River Basin Commission

25 Cosey Road
PO Box 7360
West Trenton, New Jersey
08628-0360
Phone: (609) 883-9500 Fax: (609) 883-9522
Web Site: <http://www.drbc.net>

Steven J. Tambini, P.E.
Executive Director

Minutes Water Quality Advisory Committee

April 27, 2022

Members & Alternates:

NYS DEC

Not Present

EPA

Greg Voigt
Wayne Jackson

NJDEP

Frank Klapinski

Environmental

Maya van Rossum (DRN)

Regulated Community Industrial

Bart Ruiters (Chemours)

National Park Service

Peter Sharpe

DNREC

David Wolanski

PADEP

Matt Kundrat

Academia/Science

John Jackson (Stroud)

Local Watershed Organizations

Not Present

Regulated Community Municipal

Jay Cruz (PWD)

Other Attendees:

Steve Tambini (DRBC)

John Yagecic (DRBC)

Namsoo Suk (DRBC)

Fanghui Chen (DRBC)

Ron MacGillivray (DRBC)

Jake Bransky (DRBC)

Elaine Panuccio (DRBC)

Pam Bush (DRBC)

Sarah Beganskas (DRBC)

Kevin Pregent (DRBC)

Elba Deck (DRBC)

Kristen Bowman Kavanagh (DRBC)

Li Zheng (DRBC)

Patti Hausler (DRBC)

Tom Amidon (DRBC)

Vincent DePaul (USGS)

Joe Duris (USGS)

Kelly Anderson (PWD)

Paula Kulis (CDM Smith)

Samantha O'Connor (PWD)

Kinman Leung (PWD)

Brent Gaylord (EPA)

Katie Bentley (EPA)

David Burke (PADEP)

Matt Kundrat (PADEP)

Brian Chalfant (PADEP)

Josh Lookenbill (PADEP)

Kristen Schlauderaff (PADEP)

Sheila Eyler (FWS)

Steve Unger (PADEP)

Bill Brown (PADEP)

Garret Kratina (PAFBC)

Biswarup Guha (NJDEP)

Helen Pang (NJDEP)

Marco Alebus (NJDEP)

Steve Seeberger (NJDEP)

Leslie McGeorge (retired from NJDEP)

Ellen Kohler (UPenn Water Center)

Eloise Gibby (Greeley and Hansen)

Josh Ferguson (Greeley and Hansen)

Jacob Metch (HDR)

Bob Chant (Rutgers)

Meg McGuire (Delaware Currents)

Preston Luitweiler (WRADRB)

Scott Hinz (LimnoTech)

Vic Bierman (LimnoTech)

Kuo-Liang Lai (EPA)
Denise Hakowski (EPA)
Frank Borsuk (EPA)
Tim Wool (EPA)
Gregory Wacik (USACE)
Irene Fitzgerald (DELCORA)
Colleen Walters (River Network)
Melanie Murphy (PWD)
Kurt Cheng (PDE)
Erik Silldorff (DRN)

Andy Thuman (HDR)
Chris Main (DNREC)
Bhanu Paudel (DNREC)
Carl Cerco (Model Expert Panel)
Michael Dillon (Manko, Gold, Katcher & Fox)
Eileen Althouse (CDM Smith)
Steve Jandoli (American Littoral Society)
Greg Cavallo (Cavallo Environmental Services)
Carl DuPoldt (DCVA & CRC)
Ysivagan

Welcome and Call to Order

The meeting was called to order by Dr. Namsoo Suk of DRBC at approximately 9:35AM. Dr. Suk explained that Tom Barron, the chair, had retired and his chair position is expiring. DRBC would be seeking nominations for a new chair at the next meeting. Voting members were asked to introduce themselves.

Administrative Issues, Retirements, and Departures

John Yagecic indicated that many non-reserved positions had been appointed in 2017 and that these appointments were now expiring. Applications for the non-reserved positions are due July 1st. More information is available on the DRBC web site at <https://www.nj.gov/drbc/about/advisory/committee-openings.html>

Josh Lookenbill of PADEP shared a few words about Tom Barron's retirement from PADEP. Dave Wolanski stated that he is retiring in April after decades of work with DNREC. Kim Long from Exelon moving on to a new position May 12th. An alternate / new rep will take Kim's spot on the WQAC until the new appointments. DRBC will be seeking nominations for a new chair at the next WQAC meeting.

Review of WQAC Minutes from November 3, 2021

Draft minutes from the November 3, 2021 were distributed the previous day for review and comment. Frank Klapinski suggested a correction pertaining to descriptions of priority of SOD and nitrification as factors impacting dissolved oxygen. The correction was made in real-time. John Jackson moved to approve the minutes as amended. Peter Sharpe seconded the motion. Members approved the minutes unanimously. The approved November 3, 2021 minutes are posted on the DRBC web site at <https://www.nj.gov/drbc/library/documents/WQAC/110321/mtg-highlights.pdf>

Comments and Intended Responses on Linking Aquatic Life and DO

Jake Bransky presented a review of comments received on the draft document "*Linking Aquatic Life Uses with Dissolved Oxygen Conditions*" and DRBC's intended responses. Mr. Bransky's presentation is posted on the DRBC web site at https://www.nj.gov/drbc/library/documents/WQAC/042722/bransky_aquatic-life-comments-review.pdf

Mr. Bransky summarized the draft response comments to the WQAC. Multiple agencies and organizations commented, including EPA, Chemours, ANS, PWD, and DRN. The summarized response comments and corrective actions by DRBC were shared as tables to the group. Maya van Rossum expressed disappointment on behalf of DRN in regard to the comment process and in the way the literature was cited/interpreted. Mr. Bransky reassured that this draft was a first cut and not the final document. Additional feedback from WQAC would be sought. Biswarup Guha of NJDEP suggested that there be more elaboration regarding feasibility of 6.3 mg/L DO, and discussion of how the 5.0 mg/L DO requirement for Chesapeake Bay is relevant to the Delaware Estuary. Mr. Guha added that impact on DO-sensitive species with a focus on frequency and duration should be assessed and included. Jay Cruz of PWD inquired about how earlier comments will be incorporated and/or addressed as they were not reiterated or addressed in this presentation of response comments. Mr. Bransky asked Jay to reach out to him to ensure all comments were captured. Frank Borsuk of EPA asked about timeline and the number of expected drafts. Dr. Suk suggested that a second draft for comment and response would be distributed in early summer. Greg Voigt of EPA asked what would happen if a next iteration still needed additional edits. Dr. Suk indicated that DRBC would reevaluate at that time. Dr. Suk also indicated that this document additionally would be part of the full public hearing process before being finalized.

Estuary Eutrophication Model Final Calibration Results with Model Expert Panel

Dr. Suk reviewed background information on the eutrophication model including a review of resolution 2017-04 and the major processes simulated. He indicated that the model calibration has been completed and that the draft report should be distributed to the WQAC in May.

Tom Amidon presented model results for simulation years 2018, 2019, and 2012. Since the November meeting, the modeling team finalized benthic fluxes, sediment oxygen demand (SOD), and kinetic constants and coefficients. They identified key factors affecting dissolved oxygen (DO) and phytoplankton. Calibration of the eutrophication model has been completed and a 2012 test scenario was developed to corroborate model performance. Mr. Amidon reviewed spatial assignment of benthic fluxes and SOD, and model-data comparisons for light extinction and key nutrient parameters. Mr. Amidon reviewed model phytoplankton predictions and highlighted the role played by water clarity in the upper estuary and its impact on phytoplankton throughout the system. Mr. Amidon reviewed model-data comparisons for DO. A review of sources and sinks of oxygen, made possible through the modeling, showed that nitrification of ammonia and SOD were important loss mechanisms for oxygen in the Delaware Estuary. The Eutrophication Model Presentation is posted on the DRBC website at: https://www.nj.gov/drbc/library/documents/WQAC/042722/suk-amidon-bierman_modeling-update.pdf

Dr. Vic Bierman of LimnoTech discussed coordination with the Model Expert Panel and indicated that the model is corroborated for its intended use. Dr. Bierman indicated that the model is well-calibrated to the 2018-2019 data set, and successfully hindcasted the 2012 historical condition. Dr. Bierman stated that the model is quantitatively consistent with observed data across a range of flow and DO conditions. Dr. Bierman concluded the model is scientifically defensible over a wide range of environmental conditions for the Delaware Estuary and is appropriate for its intended use, and opened discussion with the model Expert Panel.

Paula Kulis of CDM Smith asked where observational data was collected and which model segments were selected for comparison. Tom Amidon replied that for boat run data surface grab samples were collected and compared to the surface model layer. Dr. Li Zheng indicated that USGS continuous gages are slightly below surface and the corresponding model output cells below the surface were selected for comparison. Mr. Amidon credited PWD for deployment of Buoy B chlorophyll-a continuous logger at the confluence of the Delaware and Schuylkill Rivers.

Mr. Amidon briefly described the Analysis of Attainability Methodology, including possible effluent scenarios and system response metrics.

Dr. Suk reviewed the upcoming schedule of WQAC meetings and intended topics and outline the tentative schedule for the completion of the Analysis of Attainability project.

Adjournment

Frank Klapinski moved to adjourn and Kim Long seconded the motion. All voted in favor and the meeting was adjourned at 12:36 PM.