



Delaware River Basin Commission

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Kristen Bowman Kavanagh, P.E.
Executive Director

Advisory Committee on Climate Change

Virtually via Zoom

MEETING SUMMARY

Tuesday, December 16, 2025

11:30 a.m. – 1:45 p.m.

MEETING ATTENDEES (44)

Members and Alternates (15):

Reserved:

Delaware – Ashley Norton, Ph.D.; Delaware Department of Natural Resources and Environmental Control

New Jersey – Nicholas A. Procopio, Ph.D., GISP; New Jersey Department of Environmental Protection

New York – Leo Matteo Bachinger; New York State Department of Environmental Conservation

United States Government – Amanda L. Babson, Ph.D.; National Park Service

United States Government – Arthur DeGaetano, Ph.D.; United States Government, NOAA Northeast Regional Climate Center, Cornell University

New York City – Brent Gotsch, New York City Department of Environmental Protection

City of Philadelphia – Ashley Ebrahimi, Philadelphia Water Department

Partnership for the Delaware Estuary – Martha Maxwell-Doyle

Pennsylvania – James Horton; Pennsylvania Department of Environmental Protection

Non-Reserved:

John Callahan, Ph.D.; Climate Scientist, Ocean Associates, NOAA National Ocean Service
Thomas Gilbert; Pennsylvania Environmental Council

Christopher Linn, AICP; Delaware Valley Regional Planning Commission

Howard Neukrug, P.E.; The Water Center at Penn, University of Pennsylvania

Maggie Reilly; Aqua Pennsylvania

David Velinsky, Ph.D.; Academy of Natural Sciences of Drexel University, Drexel University

Not present: William Brady III, P.E.; Robert Nicholas, Ph.D.; Marjorie Kaplan, Dr.P.H.

DRBC Staff (20):

Amanda Khalil	Joey Fogarty	Naomi Mendelsohn
Amber Munchback	Kate Schmidt	Pam Bush
Amy Shallcross	Kristen Bowman Kavanagh	Patricia Hausler
Elizabeth Brown	Li Zheng	Raveena Pachucki
Elba Deck	Lulin Zhong	Sara Sayed
Fanghui Chen	Matthew Amato	Sarah Beganskas
Jake Bransky	Mike Heller	

Other Attendees (9):

Barbara Arrindell (DCS)	Jerry Mead (NYCDEP)
Brent Gotsch (NYCDEP)	Melanie Knezich (PWD)
Christine Martin (public)	Natalia Teekah (MGKF)
Duke Adams (PADEP)	Seung Ah Byun (CCWRA)
Janine Barr (Rutgers)	

Reference acronyms:

Academy of Natural Sciences of Drexel U. (ANSDU), Aqua America (Aqua), Chester County Water Resources Authority (CCWRA), Damascus Citizens for Sustainability (DCS), Delaware Appalachian Edge Bioregion (DAEB), Delaware Riverkeeper Network (DRN), League of Women Voters of Delaware (LWVD), Manko, Gold, Katcher & Fox, LLC (MGKF), National Oceanic and Atmospheric Administration (NOAA), National Parks and Conservation Association (NPCA), New Jersey Department of Environmental Protection (NJDEP), New York State Department of Environmental Conservation (NYSDEC), New York City Department of Environmental Conservation (NYCDEC), Partnership for the Delaware Estuary (PDE), Pennsylvania Department of Environmental Protection (PADEP), Pennsylvania Environmental Council (PECPA), Pennsylvania State University (PSU), Philadelphia Water Department (PWD), Water Resources Association of the Delaware River Basin (WRA), Upper Delaware Council (UDC), U.S. Environmental Protection Agency (EPA), U.S. Geological Survey (USGS).

MEETING SUMMARY

Prior to the Call to Order, S. Beganskas read an opening statement on the purpose of advisory committees and the meeting format/housekeeping.

Call to Order:

Meeting was called to order at 11:33 am by A. Cohn and held virtually via Zoom webinar and its call-in capabilities.

Member Roll Call:

Attendance was taken by S. Beganskas. Fifteen (15) members present. All committee members (and members of the public) who attended did so virtually.

S. Beganskas welcomed and shared bios for one new ACCC member: Dr. Robert Nicholas (Penn State University).

Approve Meeting Summary:

The 08/27/25 meeting summary was unanimously approved. No discussion. Motion to approve was made by M. Maxwell Doyle and seconded by H. Neukrug.

DRBC Announcements:

S. Beganskas made the following DRBC announcements:

1. DRBC also has three upcoming Advisory Committee meetings:
 - a. Toxics Advisory Committee: Wednesday January 21 at 1 pm
 - b. Water Management Advisory Committee: Wednesday February 11 at 10 am
 - c. Advisory Committee on Climate Change: Tuesday February 17 at 10 amAll will be held virtually over Zoom and you can register to attend on our website.
2. DRBC has two forthcoming reports related to climate change in the Delaware River Basin that will be published in the next few months, one on the impacts of sea-level rise and one on climate change and hydrology.

Presentations:

“NYC’s Operations Support Tool (OST): Supporting planning and operation of NYC’s water supply” by Jerry Mead, Chief of Modeling and Analysis, New York City Department of Environmental Protection

J. Mead provided a presentation describing the modeling tool that considers all aspects of NYC’s water supply system, how the NYCDEP modeling staff is adapting the model to include climate change, and past reconstructions of drought.

When available, the presentation will be posted to the DRBC website [here](https://www.nj.gov/drbc/about/advisory/ACCC_dec2025.html):
https://www.nj.gov/drbc/about/advisory/ACCC_dec2025.html

D. Velinsky asked about disinfection byproducts: Do you get all dissolved organic matter, not just disinfectant byproducts? J. Mead responded no, the UV 254 allows them to monitor and look at storm events, they are trying to separate particular types of organic material and refine that, an ongoing project with the United States Geological Survey, and they are open to ideas.

N. Procopio asked about the drought reconstruction, it looks like a tight fit between the actual measurements and the reconstructed model, am I interpreting that correctly? J. Mead responded yes, you are reading it right, although as you go farther back in time, the number of older trees available decreases, so the error bars increase quite a bit. That means the recent data look great, and data from hundreds of years ago is much more uncertain.

B. Arrindell asked about a specific site where a warehouse and trucking terminal is proposed, which would supply a lot of material into the Neversink River and reservoir, is this accounted for in? J. Mead responded that he is unsure what the public relations department is doing in relation to this issue, but it would likely be their purview. B. Arrindell asked if she can follow up with him, J. Mead agreed, and S. Beganskas said that she can provide B. with J’s contact information.

“DRBC’s Resilience Plan: Phase 1 Progress Report” by Sarah Beganskas and Amanda Khalil, DRBC

A. Khalil shared a summary of input received from the stakeholder engagement conducted during Phase 1. S. Beganskas shared the water resource assets and climate change hazards that will form the foundation of the Water Resources Resilience Plan (WRRP), a detailed workplan for Phase 2, and next steps in the process. S. Beganskas posed four questions for the committee to share specific input:

1. Are the water resource assets and climate change hazards lists complete? What adjustments, if any, would you recommend?
2. Do you have guidance on using the latest projections vs. consistency and expediency of the planning process?
3. How have you coded and analyzed qualitative stakeholder input?
4. What kind of time frame have you needed for the type of work we have planned in Phase 2?

The presentation can be found [here](https://www.nj.gov/drbc/library/documents/ACCC/121625/DRBC_WRRP-Update.pdf) on the DRBC website:

https://www.nj.gov/drbc/library/documents/ACCC/121625/DRBC_WRRP-Update.pdf

C. Linn asked about the landscape water resource asset. Human development is a big part of that category, is there a priority regarding types of infrastructure or development? S. Beganskas thanked C. for the question, we will think about how we can do a better job defining this asset more clearly in the report. The goal is to evaluate the impact of climate change hazards on these assets, so we are considering human development that could be vulnerable to flooding and other hazards.

N. Procopio suggested a hazard that was not considered: changes in groundwater conditions (wetting/drying cycles) due to climate change can mobilize contaminants such as arsenic, a significant water quality concern. S. Beganskas thanked N. and noted that DRBC staff will follow up to ensure that we incorporate this into the WRRP.

T. Gilbert commented that this looks like a sound approach and asked about other hazards that are not directly caused by climate change, but would interact with climate change. For example, warehouse development or loss of riparian buffers, would these factors be considered alongside the climate change analysis? S. Beganskas responded that we will focus on the many challenges not directly caused by climate change in Phase 3, but it is a great point that in that assessment, we will need to consider compounding impacts from climate change as well. We will be sure to do that.

D. Velinsky agreed with N. Procopio about flooding, drought, and salinity intrusion can remobilize chemical contaminants. He asked, where does agriculture fit into this, and how would it relate to the hazards listed? S. Beganskas replied agriculture would be included in the landscape asset and we will make that clearer. Certainly drought as a hazard would impact agriculture, for example.

A. Cohn (in chat): This might be a useful resource on this topic: <https://www.wucaonline.org/adaptation-in-practice/cmip6-faqs/index.html>

A. DeGaetano noted that the extreme precipitation projections are in the process of being updated with the latest data, and they will be available sometime next spring. It should be straightforward to pull out data for the Delaware River Basin. S. Beganskas thanked him and promised to follow up. A. DeGaetano noted that when using the latest data, he would recommend scenario SSP3-7.0.

T. Gilbert (in chat) commented that he would recommend using the latest data where possible, even if that means different datasets are being used in the report.

A. Babson noted that the NPS team had plans to update the Climate Future Scenarios Toolbox with the latest projections, but the person leading that effort has left their position and there is no one working on it at the moment. Since wildfire is more independent from the other hydrologic hazards, perhaps it's ok to use the available data for wildfire and the latest data for everything else. S. Beganskas agreed.

J. Rockwell noted that PWD is also exploring the SSP-3 7.0 scenario to represent high emissions. She agreed that there are difficult tradeoffs in deciding when and whether to update climate scenarios used, and for messaging it is helpful to use a single source for all projections. She recommended considering the percentiles associated with each scenario, because they do overlap.

J. Callahan commented that the Phase 2 report would likely be used for several years before it is updated, and in that case it makes sense to prioritize using the latest data even if it takes a little longer. He agreed with other committee members about using the SSP-3 7.0 scenario.

S. Beganskas asked how they refer to SSP-3 7.0 in the framework of the other scenarios. Various committee members responded: 4.5 is moderate emissions, 7.0 is high emissions, 8.5 is very high or extreme emissions.

L. Bachinger shared some guidance on coding and analyzing qualitative stakeholder input: It is labor intensive, we look for concepts and relationships between concepts when going through, and combining with additional data to substantiate the findings. Coding is a lot of effort so we try to use it for gaps or blindspots.

A. Norton (in chat) shared: We have produced summary reports for our community engagement sessions for the Delaware Climate Action Plan updates: <https://documents.dnrec.delaware.gov/energy/Climate-Plan/Fall-2024-Community-Engagement-Summary-Report.pdf>

T. Gilbert asked if there will be additional opportunities for stakeholder engagement moving forward. S. Beganskas said yes, absolutely, we plan to continue during Phases 2 and 3. Once we start planning for Phase 2 we plan to reach out to the committee for opportunities to co-host and collaborate on stakeholder engagement.

[“New Jersey’s Rising Seas and Changing Coastal Storms: An Overview of the 2025 NJ STAP Report” by Janine Barr, Senior Research Specialist, NJ Climate Change Resource Center, Rutgers University](#)

J. Barr provided a presentation describing the efforts to produce the 2025 Science and Technical Advisory Panel (STAP) report on sea-level rise in New Jersey, data on how much sea levels have risen in New Jersey and the many specific causes, projections for how much sea levels will rise over the next 100 years, and implications for coastal storms.

The presentation can be found [here](#) on the DRBC website.

https://www.nj.gov/drbc/library/documents/ACCC/121625/Barr_Overview2025STAPrpt.pdf

N. Procopio thanked Janine and the whole team for pulling together such a valuable report and resource, then asked for the sea-level rise projections shown, are those medians? Is rapid ice sheet melt only impacting the higher end of the range, not the middle? J. Barr answered that at the low end, and in more short-term projections, including ice sheet melting has less of an impact, but at the high end and for longer-term projections it has a huge impact.

C. Linn asked about uncertainty in ice sheet loss processes, what does that mean? J. Barr responded that the terms “likelihood” and “probability” are specific terms in climate change literature. There is not a lot of research being done in that space in terms of rapid ice sheet loss, which is why scientists have “low confidence” in the data, but this doesn't discount that it is a real possibility.

M. Reilly (in chat) asked if this presentation will be given anywhere else, for the chance to hear more.

J. Barr shared QR codes and the link for an hour-long webinar on this report:

<https://www.youtube.com/watch?v=W4WAts3Ncal>

Member Roundtable Updates:

A. Norton: Delaware recently completed climate projections and she will share link around. And will be releasing climate action plan early in 2026.

N. Procopio: By end of year, the updated NJ climate science report will be released. This 2025 report brings science up to date, and guidance that department has that is based on some of the findings. Online resource tool for school age curriculums will be updated in the new year.

C. Linn: DVRPC received funding from state DOTs to do transportation resilience plan, will be doing comprehensive assessment of transportation assets and services to climate and severe weather hazards. Focused on transportation specifically, but might be some overlap with WRRP for DRBC.

L. Bachinger: NY state developing adaptation and resilience plan in multiple phases. Phase 1 is wrapping up in first half of next year. Over last year, we conducted extensive stakeholder engagement.

Alan: NYC panel on climate change is working on climate change update.

Public Remarks:

B. Arrindell asked for a definition of CMIP. S. Beganskas shared that CMIP stands for “Coupled Model Intercomparison Project” and refers to versions of global circulation models released by the Intergovernmental Panel on Climate Change. The latest version is CMIP-6.

B. Arrindell asked about a specific resort development (FIMFO) that includes 29 septic systems, 300 small houses, all located in the floodplain. Will the resilience plan take this into account in terms of flooding and pollution? S. Beganskas noted that the WRRP is focused on a Basin-wide assessment and less on individual sites like this, but will overall look to characterize the processes of flooding and pollution in relation to development in the floodplain.

B. Arrindell asked N. Procopio about NJ superfund sites, are you considering the runoff from these sites? N. Procopio answered yes, these sites are of concern throughout NJ, each one is unique in terms of the local landscape, but yes this is included when evaluating environmental hazards.

Adjournment:

M. Maxwell Doyle made a motion to adjourn the meeting. C. Linn seconded the motion. The meeting was adjourned by A. Cohn at approximately 1:41 pm.

Approved 02/17/2025