



## Delaware River Basin Commission

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Executive Director

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# Monitoring Advisory and Coordination Committee (MACC)

## Meeting Highlights

November 2, 2022 – 1:30 PM

Delaware River Basin Commission – Autumn Meeting

Remote via Zoom Webinar

### Attendees:

Heather Heckathorn (USGS)	Karl Heinicke (DRBC)
Michael (Josh) Lookenbill (PADEP)	Sara Sayed (DRBC)
Marc Peipoch (Stroud Center)	Sarah Beganskas (DRBC)
Kurt Cheng (PDE)	Kate Schmidt (DRBC)
Matthew Fritch (PWD)	Anthony Preucil (DRBC)
Preston Luitweiler (WRA DRB)	Kevin Pregent (DRBC)
Chris Kunz (NJDEP)	Amy Shallcross (DRBC)
Bob Schuster (NJDEP)	Fanghui Chen (DRBC)
Brian Henning (NJDEP)	Kristen Kavanagh (DRBC)
Jonathan Malzone (NPS)	Li Zheng (DRBC)
Leah Morgan (PDE)	
Don Hamilton (NPS)	
Laura Lockard (DNREC)	
Garret Kratina (PAFBC)	
Eric Bind (NJDOH)	
Vic Poretti (NJDEP)	
Christopher Main (DNREC)	
John Yagecic (DRBC)	
Jake Bransky (DRBC)	

### 1) Welcome and introductions

- Panelists introduced themselves, and Elaine Panuccio introduced the attendees on the Webinar

### 2) MACC Business

- Announced non-reserved and reserved openings

- Leah Ettema with USEPA R3 filled a Reserved Member role ahead of time of the meeting
- Most of the Non-Reserved Members' appointments expired or expire soon
- Looking for chair (one of reserved members)

### 3) Overview of 2022 DRBC Monitoring and Planned 2023 Monitoring

- John Yagecic – monitoring updates
  - Boat Run:
    - Performed boat run monitoring at 25 locations in 2022 & will do the same in 2023
    - Let folks on the call know that recommendations for added parameters to Boat Run are welcome (the cost of conducting the survey is the bulk of the cost)
  - 1,4-dioxane:
    - Added to Boat Run due to measured concentration in estuary
    - Will mostly be tied to boat run
    - Will have more to share next year
  - PCBs:
    - New Toxicologist starts in mid-December
    - Passive samplers and surface water sample collection in budget
- Jake Bransky – monitoring updates
  - Thermal shading study
    - Completed a good portion of work in 2022 and plan to complete in 2023
    - Goal is to find areas without adequate tree canopy shading and initiate tree plantings in areas that are lacking
  - Biomonitoring
    - Completed work between 2021 and 2022 (paused monitoring in '21 due to hurricanes)
    - Analytical work to be done in 2023
  - PFAS
    - Completed fish tissue work in 2022
    - Collected blue crabs at Pea Patch Island for PFAS analyses
    - Plan to monitor again in 2023
  - Enhanced Dissolved Oxygen Monitoring of Sturgeon Habitat
    - Found concentrations of DO considerably different between Marcus Hook area and USGS Chester gage (better at Marcus Hook and better suited for Sturgeon vs. the low summertime readings at the Chester gage)
    - Will repeat in '23
  - Mussel Survey 2023
    - Repeat of 2014 survey
    - [https://www.nj.gov/drbc/library/documents/mussels-rpt\\_lower-del\\_dec2014.pdf](https://www.nj.gov/drbc/library/documents/mussels-rpt_lower-del_dec2014.pdf)
    - Sheila Eyler with FWS asked if mussel survey will survey all species
      - Yes
- Elaine Panuccio – monitoring updates
  - Bacteria
    - Microbial Source Tracking (MST) & shore-based monitoring completed in 2022

- 3 wet weather & 3 dry weather MST events (some overlapped with shore-based monitoring)
- In 2023, plan to collect samples over a few-day period for adequate storm coverage
- John Yagecic added that MST analytical is being done by MSU. Draft report in December. Wet weather events were captured well in 2022.
- Algal toxins
  - Deployed SPATT (Solid Phase Adsorption Toxins Tracking) bags at 15 locations (apparatuses disappeared at 4 locations, so successfully collected from 11)
  - DNREC is analytical laboratory
  - Testing out the extraction and analytical method & will repeat in 2023
  - Get an idea of presence of cylindrospermopsin, anatoxin, and saxotoxin in mainstem river
  - Late August-September period
  - Preston asked about grab sample collection concurrent with deployment of SPATT bags
    - John Yagecic clarified that this sampling was to confirm whether or not blooms in impoundments are reaching the Delaware. Just in beginning stages of that effort.
- Non-tidal chloride monitoring
  - Added additional ions in 2022
  - Year-round once per month effort with continuous HOBO loggers deployed and maintained a couple of times per month
  - Finishing up 2-year effort in May '23
  - Preston asked: Can you plot the chloride/SC data in 3-D -- time and spatial (river mile)?
    - Yes
- Special Protection Waters Monitoring
  - Resuming from 2017; starting in May 2023-Sept 2023
  - NPS partnerships (Middle and Upper Delaware NPS staff help with sample collection efforts)
  - Jumpstart next measurable change assessment period (last done in 2016 for the 2009-2011 period)

\*Note that there are slides covering a majority of these monitoring updates [here](#).

#### **4) Group monitoring updates & Roundtable Discussion (note that the meeting ran a little fast and Leah Morgan provided MINA updates after the group updates)**

- Preston (WRA DRB)
  - No updates
- Marc Peipoch (Stroud)
  - New NSF project, understand sources and transport of algae in river
    - Next growing season
    - 8 locations within DRB (2 in mainstem)
    - In situ chlorophyll-a and grab samplers (will follow concentrations of algae)

- PhD student for 3 years to work on this project (with funding)
  - Neversink, Perkiomen, Wissahickon, Musconetcong, mainstem, range of sites
- Don Hamilton (NPS):
  - Freshwater snail inventory project partnering with the Academy of Natural Sciences of Drexel University, sampling 30 sites for snails and environmental variables every 4 km the length of the Upper Delaware River (73 miles of upstream-most reach of the main stem Delaware River). Identification work is being done this winter after training with Art Bogan of the North Carolina Museum of Natural Sciences. Environmental DNA samples were also collected at a lesser number of sites throughout that reach.
- Matt Fritch (PWD)
  - Maintaining WQ gage network with USGS
  - Not a lot of details for 2023, still interested in PFAS and 1,4 dioxane
  - Ecological restoration group has been doing stream assessments from headwaters to mouth
    - Habitat and infrastructure assessment for stream restoration
    - Poquessing, Pennypack so far but more to come
    - Maybe add water quality
  - WQ sondes deployed in Pennypack at 2 stations in winter for specific conductance
  - Dr Laura Toran received NSF grant to look at 4 different urban streams & weathering processes and effects on FSS
- Sheila (FWS)
  - No updates
- Josh Lookenbill (PADEP)
  - PA revamping monitoring protocols and assessment methods
    - Merge different protocols to streamline
  - New methods allowing more targeted data collection for nutrient impairment
  - Adding 1,4 dioxane to WQ network site at PA state line on Delaware
  - PA will be participating in NRSA next year
  - PFAS fish tissue and passive sampler monitoring
    - Targeting Neshaminy Creek watershed to help with updating fish tissue advisory
- Kurt Cheng (PDE)
  - Monitoring conductivity in storm water ponds (maybe add DO), water level, and seston
  - Switching out HOBO loggers between different sites
  - Monitoring seston along NJ/Delaware Bay shore (Nantuxent Creek, Morris River)
    - Looking at nutrients of oysters that come from these locations
  - Surveying for freshwater mussel brood stock within the mainstem
    - Identifying rare species in 2023
  - Oyster recruitment in Delaware along with WQ data
    - 5 sites within Delaware (lower half)
  - Mid Atlantic coastal wetlands assessment will continue
    - LeAnn Haaf coordinating this effort

- Received funding to monitor Sediment Elevation Tables
- Jon Malzone (NPS)
  - Will be deploying new data sondes for baseline data in Upper Delaware
- Chris Kunz (NJDEP)
  - Macro monitoring and lake monitoring continuing
  - Started monitoring for 1,4 dioxane in 2021 at 123. Again in 2022. Most (95%) samples non detect in 2022.
  - Continuing to monitor PFAS
  - NJ has focused on HABs the past few years.
    - 11 monitoring buoys deployed.
    - 60-61 HAB advisories, highest number yet
      - May be driven by lack of rainfall
  - Fish and headwaters tissue monitoring
    - All sites monitored this year
  - Will be doing NRSA
- Heather Heckathorn (USGS)
  - Deployed bacteria monitors at 4 sites (two in basin)
    - Total coliform and e coli
    - Fluidion is the instrumentation used
    - [https://www.nj.gov/drbc/home/newsbytes/approved/20220603\\_USGS\\_Fluidion.html](https://www.nj.gov/drbc/home/newsbytes/approved/20220603_USGS_Fluidion.html)
    - Continuing study in 2023 to evaluate the instrument and synthesize data
  - Sea water intrusion in wells adjacent to the Delaware
  - Downstream transport of cyanobacteria in the Raritan basin and Atlantic drainage
  - Received funding to synthesize data from HAB passive samplers
  - PFAS sampling with NJ
  - Evaluation of 2 passive samplers for PFAS (reporting pending, may be ready January 2023)
  - Documentation about techniques to collect surface & groundwater for PFAS
- Bob Schuster (NJDEP)
  - Delaware Bay routine fecal coliform sampling for shellfish classification
    - Year round
    - Tributaries & main part of Bay
  - Sampling oysters over bed where harvest is occurring for vibrio
    - Low levels seen
  - Taking algal & nutrients samples simultaneously
  - Looking at drivers of algal toxins in the Raritan
    - Found saxotoxin, which is paralytic
  - More species of Karenia than they have seen before

## 5) MINA Updates - Leah Morgan (PDE)

- Gave a presentation to discuss the Monitoring Inventory and Needs Assessment (MINA) report and current status (available [here](#))

- Top 10 priorities list – purpose of MINA
- In 2026, how much have we ‘moved the needle’ on priorities?
- 5-years’ worth of monitoring data for 2021-2026 assessment
- Goals:
  - Engage w/ 2-3 experts per priority topic
  - Interim or final outcomes of current/ongoing efforts
  - Changes/gaps
- Report links shared:
  - Information gathering tool can be found here: <https://www.surveymonkey.com/r/WGJGTW6>
  - More info on the MINA can be found here: <https://delawareestuary.org/our-plan-2/ccmp-status-progress-2/>

**Meeting was adjourned at 3:00 PM**