SCIENTIFIC & TECHNICAL ADVISORY COMMITTEE

Meeting Notes

DELAWARE CENTER FOR THE INLAND BAYS
preserve • protect • restore

DATE & TIME: April *11, 2025 -- 9:00 a.m. to 12:00 p.m.*

LOCATION: Virtual and 39375 Inlet Road, Rehoboth Beach

AGENDA ITEMS

Call to order, Welcome, Introductions - Ashley Norton, Vice Chair

Announcements

Meghan Noe Fellows, Center - Center Staffing Updates and STAC Membership - No science staff and no new STAC members

Christophe Tulou – This is a period of uncertainty for many of us. The Center is has a signficnat portion of the funding at risk (1.7 m); alternate funding sources may be needed to keep the doors open. Christophe and other advocates have shared this information with message to state, county and private donors. There has been surprisingly positive responses from many people who want to see the Center stay in business. Working on redefining the Center if state, county, local, and/or federal support is withdrawn.

Old Business

- Update on James Farm - Bob Collins, Center

  Monday, April 7, the Centerreceived a temporary Certificate of Occupancy; it is temporary as the issue of potable water has not been resolved, we still need to run a water line from Cedar Neck. No date for ribbon cutting has been set yet.

- Andrew Wozinak absent; in Costa Rica work for NSF grant. Sea Grant working on a blog about the event or check out this report: https://www.whoi.edu/press-room/news-release/scientists-in-alvin-witness-seafloor-eruption-on-the-east-pacific-rise/

- Annual Symposium 2025: planning moving along on the Coast Forward Summit - A discussion on the resilience of the Inland Bays. Link to RSVP: https://forms.gle/D7kpEbnJ9iiJAbLEA

  May 1, 2025- 10am to 7pm:practitioner session: 10-2 Open House outreach session 5-7pm for residents. At the Georgetown Cheer Center.

New Business

Panel on Water Quality in the Inland Bays Watershed

Three presentations, then three additional experts will join the panel.

Bhanu Paudel, DNREC Watershed Management Section **- Nitrogen and Phosphorus in the Inland Bays**
Assessment of Nitrogen and Phosphorus in Surface Waters of the Inland Bays' Watershed.

What was historically reported in the Integrated Report and recent changes in how and why the report has changed. In DE there are 137 monitoring stations - where different parameters including total nitrogen and total phosphorus are monitored. There are two categories of station differing in monitoring frequency. Category 1 (co-located with USGS or at mouth of tide) 22 , these are monitored monthly and 115 stations are Category 2(C2), which could be monitored bimonthly on a rotating basis. 24 stations in the Inland Bays (4 are C1). Compare monitored results with state allowed levels. In Inland Bays also have seasonal criteria.

- Delaware has total nitrogen threshold of 3 mg/L and total phosphorus threshold concentration of 0.2 mg/L. Inland Bays' watersheds data were also compared with seasonal (March – October) DIN, DIP, and TSS criteria of 0.14mg/L, 0.01mg/L, and 20mg/L, respectively.

Looking for pass/fail for meeting established criteria for TMDL reporting. Used to treat TMDL assessment as a combined nitrogen and phosphorus total, but are now separated out to identify which is an issue. Analyzing 5 years of data and stating whether water meets the standards.

Mollie Yacano, DNREC - The National Estuarine Research Reserve monitoring network – Measuring Water Quality

An overview of the DE National Estuarine Research Reserve's System-wide Monitoring Program with Michael G. Mensinger (Affiliated with NOAA). The National Estuarine Research Reserve System (NERRS) has a SWMP – Systemic Water Monitoring Program applied throughout the reserve system. Utilize Xylem/YSI EXO2 measuring 6 criteria year round (except when ice is present, like this past year). 45 days for each deployment; each sonde is protected from tampering from curious public. 30 years of data collection and meteorological monitoring as well Nutrient Monitoring. Standardized monitoring data collection – Quality Assurance/Quality Control to ensure consistency throughout the system. Data available online. Not used for regulatory purposes

Chris Lewis, USGS - US Geological Survey monitoring network (freshwater)

US Geological Survey: MD-DE-DC – study the freshwater inputs to the Inland Bays. The US Geological Survey has been around since 1879; and has no regulatory authority. 5 main focus areas Collect, analyze and interpret hydrologic stream flow, groundwater and water quality data. 1879 oldest gauge stream program, currently 11,300 gauges. Real time data collection. Footprint in Inland Bay; tide gauges; water quality; gauges at spill gates discharge; and Millsboro Pond freshwater. The gauges have tracked saltwater intrusion in Millsboro Pond during extreme storm events. In 2016 salt water took a lot longer to flush out of the freshwater portion of the watershed, because in winter, saltwater sinks. Also have documented more frequent higher tides that stay higher. Beaver Dam Millville and Jefferson Creek are examples. It is important that water drains off of the landscapes. All data is online – National Water Information System (NWIS). 13,000 gauges, 1 network.

Panel Discussion - Speakers joined by our additional experts

Changming He, Delaware Geologic Survey - Groundwater Wells in Sussex

100 wells in the state. Real time data collection. Working with Sussex County 50 new wells – to target different aquifers. Ion monitoring – detecting saltwater intrusion monitoring only in 3 wells. Conductivity is not a direct surrogate for salt. Funding sources: EPA clean water fund; DNREC funding; Sussex

County; State revolving fund.

Ed Whereat, Delaware Sea Grant and University of Delaware Monitoring Program - Citizen Science

1998 – 1991 program; Inland Bays and Broadkill River watersheds; recreational beach monitoring; summer interns; 30 volunteers.

John Rebar, DNREC - Water quality policy

Business lines – commercial and government section. Permitting wastewater; safe drinking water; onsite wastewater.

Questions and Discussions continued for the rest of the meeting.

Aquaculture – FL efforts shut down due to water quality issues; how do we use data for action?

DE State is asking: are things getting better or worse? pH issues are being monitored, there is ecological monitoring and some shoreline monitoring; one-size-fits all is not answering all micro and macro questions.

Any measurements missing? What do you want to manage? Do you want to grow oysters? Grow bay grass? Tourism – management of water quality to bring people since it contributes $4.5 billion to the economy on the bays. How to stop strangling the golden goose? What are we trying to measure to help us do what? Point sources mostly gone, but spraying land is an issue. Is there a mission statement? We are collecting data, but how is it tied to acting? Expenditures for data - what is the pay-off?

Action vs collection. Need data to prove that action is needed. Pre-post for funding and did it work?

Model because can't observe. It should be dynamic.

What kind of data does DTAP (DE Targeting Analysis and Planning) use? Lori Mae Brown answered - land use data and loads associated with different lands and based on bmp selected and where placed. Where do we stand on DTAP? How do we get access to add and extract data for modeling? Tool to help make decisions based on data, but limitations of model.

Andrew Homsey (UD WRC) – whole eco-system for cleaner water – all groups. Betterment of quality of life and interdependence of data sets.

Different sources of funding complications.

Role of data in policy/funding decisions -collecting for baseline – for permitting – for developing science and then for regulatory frameworks.

Several issues such as: Turbidity – suspended solids and algae and boat traffic; lack of grass that holds bottom is now suspended. SAV and navigation; TMDL – regulation and science; wastewater modernization disposal framework development; DE tax ditches are waters of the state and history of designated usage and monitoring.

Adjourned 12:00 noon

Next Meeting:

August 1, 2025, 9:00- 12:00 noon, Virtual Only

October 24, 2025, 9:00 - 12:00 noon, Hybrid – Lewes

Attendance

STAC:

P	Hense	Zina	
P	Main	Christopher	
P	Paudel	Bhanu	
P	Simmers	Claire	
P	Somers	Kelly	
P	Tulou	Christophe	
P	Andres	Scott	
P	Bott	Michael	
P	Homsey	Andrew	
P	Janiec	Douglas	
P	Li	Miling	
P	Nardi	Mark	
P	Norton	Ashley	Vice-Chair
P	Rogerson	Alison	
P	Whereat	Edward	
P	Yacano	Mollie	

Guests

P	Bartow	Dennis	
P	Mackey	Megan	
P	Casey	Mark	
P	Soriano	Catie	
P	Barth	Josh	
P	Robbins	A.G.	
P	Kasper	Josh	
P	Cannon	Amy	

Staff

P	Noe Fellows	Meghan	
P	Collins	Bob	
P	Perez Perez	Nivette	
P	Hoffman	Taylor	
P	Krell	Morgan	

Speakers

P	Lewis	Chris	
P	Rebar	John	Jr.
P	He	Changming	