



PROGRAM

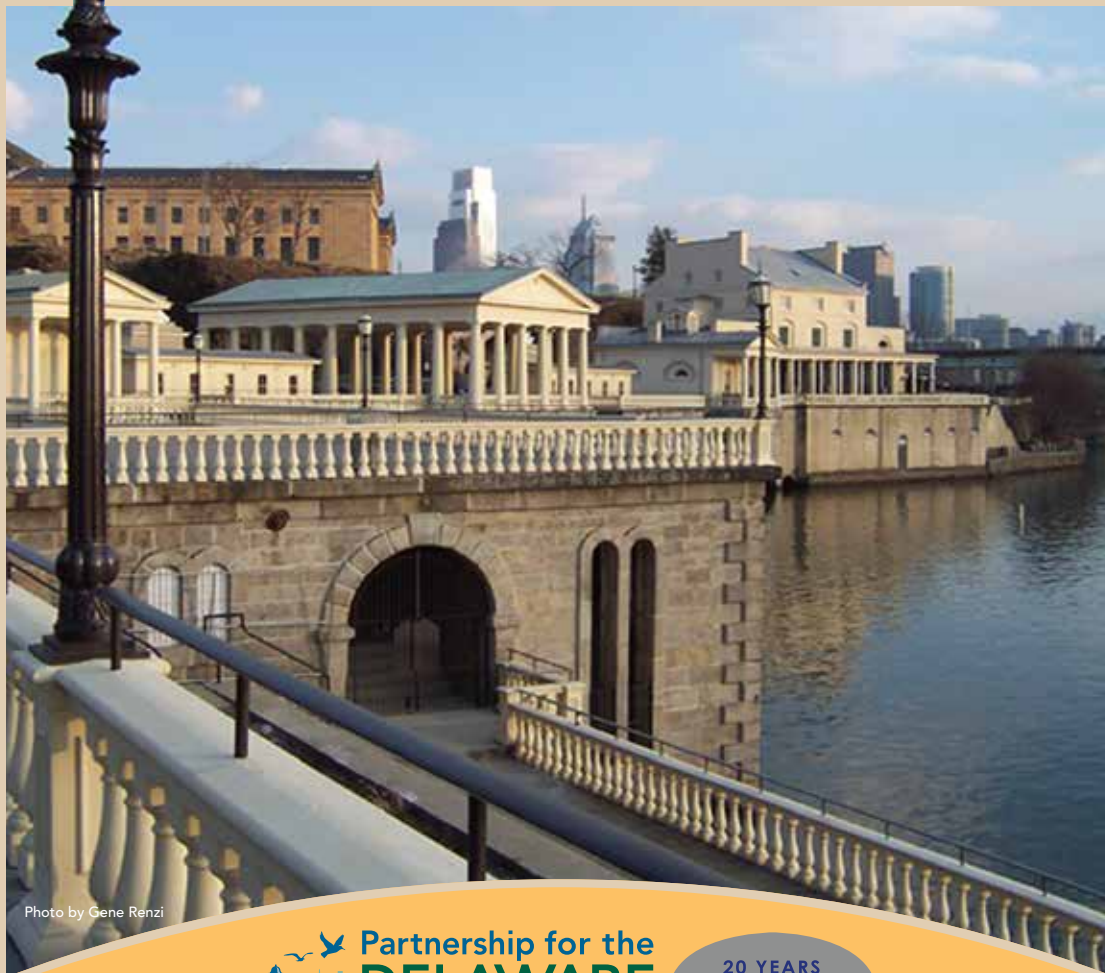


Photo by Gene Renzi



Partnership for the
**DELAWARE
ESTUARY**



DELAWARE ESTUARY SCIENCE & ENVIRONMENTAL SUMMIT 2017

"Reflecting on Progress, Charting the Future"

January 22 – 25, 2017
Cape May, New Jersey

For more information visit www.DelawareEstuary.org

Welcome to the Delaware Estuary Science and Environmental Summit!

On behalf of the Partnership for the Delaware Estuary (PDE), welcome to Cape May and the 7th biennial Delaware Estuary Science and Environmental Summit!

It's hard to believe it's been 20 years since the Delaware Estuary was accepted into the National Estuary Program and PDE began bringing together partners from across the region. It's amazing to look back and celebrate our successes; but even more important to look forward to the challenges facing us today and in the future.

In that spirit, our Summit program includes greater opportunities for collaboration across disciplines than ever before, while looking back on the last 20 years and forward to the future. We have special sessions on Post Sandy Lessons, the Delaware River Watershed Initiative, and Revising the CCMP for the Delaware Estuary. We also have a variety of sessions on outreach and communications, and a growing base of technical sessions on core topics like water, habitat, and living resources. Three concurrent tracks of sessions over three days will mean some tough choices!

Sharing and collaborating grows more important with each year, as the challenges facing the Delaware Estuary grow more complex. The Summit plays a critical role for us as the National Estuary Program, bringing the latest scientific information, debate, stakeholder input and collaboration together and to bear on our work. With efforts underway to revise the Comprehensive Conservation Management Plan for the Delaware Estuary – the plan that started it all – that's particularly important. Look for opportunities during the Summit to learn more about CCMP revision, and give us your input.

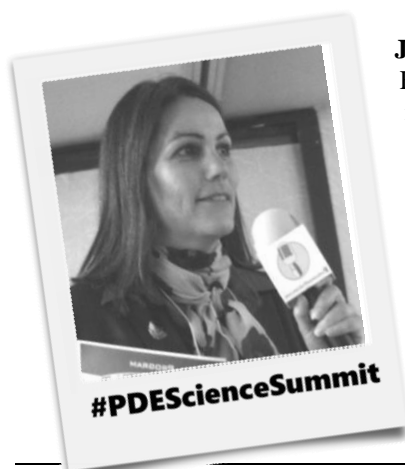
As always, it's YOU, and the hundreds of people who present, discuss, use, and share information here and afterward that make the Summit so special. Thank you for all you do for the Delaware Estuary, and for joining us as we wrap up a year of celebrating **20 Years of Cleaner Water!**



Jennifer Adkins

Executive Director

Partnership for the Delaware Estuary



Jennifer Adkins is the executive director at the Partnership for the Delaware Estuary, where she leads a team of science and outreach professionals devoted to improving the health of the tidal Delaware River and Bay and its tributaries.

Jen has been active in conservation planning and collaboration in the Mid-Atlantic region for nearly 20 years, working for The Nature Conservancy in Delaware, the Land Trust Alliance, and the Brandywine Conservancy, before joining the Partnership in 2005.

She is a graduate of the University of Delaware with a Master of Public Administration degree specializing in environmental and energy management, and a Bachelor of Science degree in economics.

Agenda at a Glance

Monday, January 23

- 8:00 AM **Registration and Breakfast**
Registration - 5th Floor
Continental Breakfast* - Atrium, 1st Floor
- 9:00 AM **Welcome and Keynote** - Grand Ballroom, 1st Floor
Welcome: Jennifer Adkins and Dr. Danielle Kreeger, Partnership for the Delaware Estuary
Keynote Address: Ben Horton, PhD, Rutgers University
- 10:30 AM **Break**
- 10:45 AM **Concurrent Sessions**
Post Sandy Lessons - Grand Ballroom A, 1st Floor
Establishing the Explore the Delaware River Watershed Branding - Crystal Room, 1st Floor
Trash Talking the Waterways - Grand Ballroom C, 1st Floor
- 12:00 PM **Lunch** – 5th floor
- 1:30 PM **Concurrent Sessions**
Estuary Restoration - Grand Ballroom A, 1st Floor
Water Quality - Crystal Room, 1st Floor
Green City, Clean Waters: Planning and Outreach for the First 5 Years - Grand Ballroom C, 1st Floor
- 3:30 PM **Break**
- 3:45 PM **Concurrent Sessions**
Delaware River Watershed Initiative Panel - Grand Ballroom A, 1st Floor
Thin Layer Placement in Coastal Wetlands - Crystal Room, 1st Floor
Connect the Dots - Leveraging Community Partnerships and Media Relations to Elevate Nonprofit Success - Grand Ballroom C, 1st Floor
- 5:15 PM **Poster Session** - 5th Floor
- 6:15 PM **Dinner** - 5th Floor
- 7:30 PM **Charting the Future of the Delaware Estuary** - 5th Floor

Tuesday, January 24

- 8:00 AM **Registration and Breakfast**
Registration - 5th Floor
Continental Breakfast* - Atrium, 1st Floor
- 9:00 AM **Concurrent Sessions**
Water Quality - Grand Ballroom A, 1st Floor
Coastal Wetland Monitoring Panel - Crystal Room, 1st Floor
Motivate Volunteers and Make a Difference - Grand Ballroom C, 1st Floor
- 10:00 AM **Concurrent Sessions**
Wetlands - Grand Ballroom A, 1st Floor
Monitoring - Crystal Room, 1st Floor
Beyond Education to Engagement - Grand Ballroom C, 1st Floor
- 11:15 AM **Break**
- 11:30 AM **Revising the CCMP for the Delaware Estuary Panel Discussion** – 1st floor

Agenda at a Glance continued

Tuesday, January 24 continued

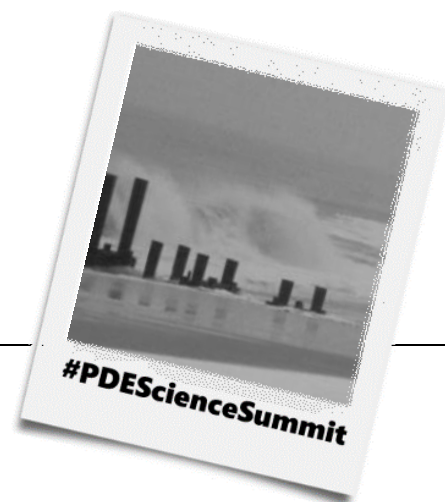
- 12:30 PM **Lunch** - 5th Floor
2:00 PM **Concurrent Sessions**
Physical and Chemical Processes - Grand Ballroom A, 1st Floor
NJ Bayshore & Vicinity: Planning, Projects, Resiliency - Crystal Room, 1st Floor
Social Marketing: Hands on Workshop Part I - Grand Ballroom C, 1st Floor
- 3:15 PM **Break**
3:30 PM **Concurrent Sessions**
Living Shorelines - Grand Ballroom A - 1st Floor
Social Marketing: Hands on Workshop Part II - Grand Ballroom C, 1st Floor
- 5:30 PM **Poster Session and Flying Fish Happy Hour** – 5th floor
6:30 PM **Dinner on Your Own**

Wednesday, January 25

- 8:00 AM **Registration and Breakfast**
Registration - 5th Floor
Continental Breakfast* - Atrium, 1st Floor
- 9:00 AM **Concurrent Sessions**
Monitoring - Grand Ballroom A, 1st Floor
Connecting Youth to the Environment - Grand Ballroom C, 1st Floor
- 10:15 AM **Break**
10:30 AM **Concurrent Sessions**
Estuary Restoration - Grand Ballroom A, 1st Floor
Leadership and Communication Workshop - Grand Ballroom C, 1st Floor
- 12:15 PM **Lunch** – 5th floor
1:45 PM **Hot Topics** - Grand Ballroom, 1st Floor
3:15 PM **Announcements, Awards, Closing Remarks** - Grand Ballroom, 1st Floor

**Continental breakfast is provided daily, beginning at 8:00 AM, in the Atrium outside of the 1st floor Ballroom. If you would like a more substantial breakfast, one can be purchased at Hemingway's Restaurant at the front of the Grand Hotel. Hemingway's opens daily at 6:30 AM*

Abstracts are available at the registration table and online at: www.DelawareEstuary.org



7th Biennial Delaware Estuary Science & Environmental Summit

Reflecting on Progress, Charting the Future

The Grand Hotel
Cape May, New Jersey
January 22nd – 25th, 2017

Sponsors

Benefactor	<ul style="list-style-type: none"> • Geraldine R. Dodge Foundation • New Jersey Department of Environmental Protection
Patron	<ul style="list-style-type: none"> • Delaware Coastal Programs • Philadelphia Water Department • PSEG Nuclear, LLC
Contributor	<ul style="list-style-type: none"> • Delaware Department of Natural Resources and Environmental Control • Haskin Shellfish Research Laboratory Rutgers University • Pennsylvania Department of Environmental Protection, Coastal Resources • The William Penn Foundation
Friend	<ul style="list-style-type: none"> • The Academy of Natural Sciences of Drexel University • Anchor QEA, LLC • Barnegat Bay Partnership – Ocean County College • Delaware Sea Grant • Drexel University Department of Biodiversity, Earth and Environmental Science • EA Engineering, Science, and Technology, Inc. PBC • Pennsylvania Sea Grant • Sovereign Consulting, LLC

Additional Funding Support Provided by:
U.S. Environmental Protection Agency

Detailed Agenda

Sunday, January 22

Registration and Networking: 5:00 to 8:00 PM

Registration: 5th Floor

Networking: Hemingway's at the Grand Hotel

Monday, January 23

Registration and Breakfast: 8:00 to 9:00 AM

Registration: 5th Floor

Continental Breakfast*: Atrium, 1st Floor

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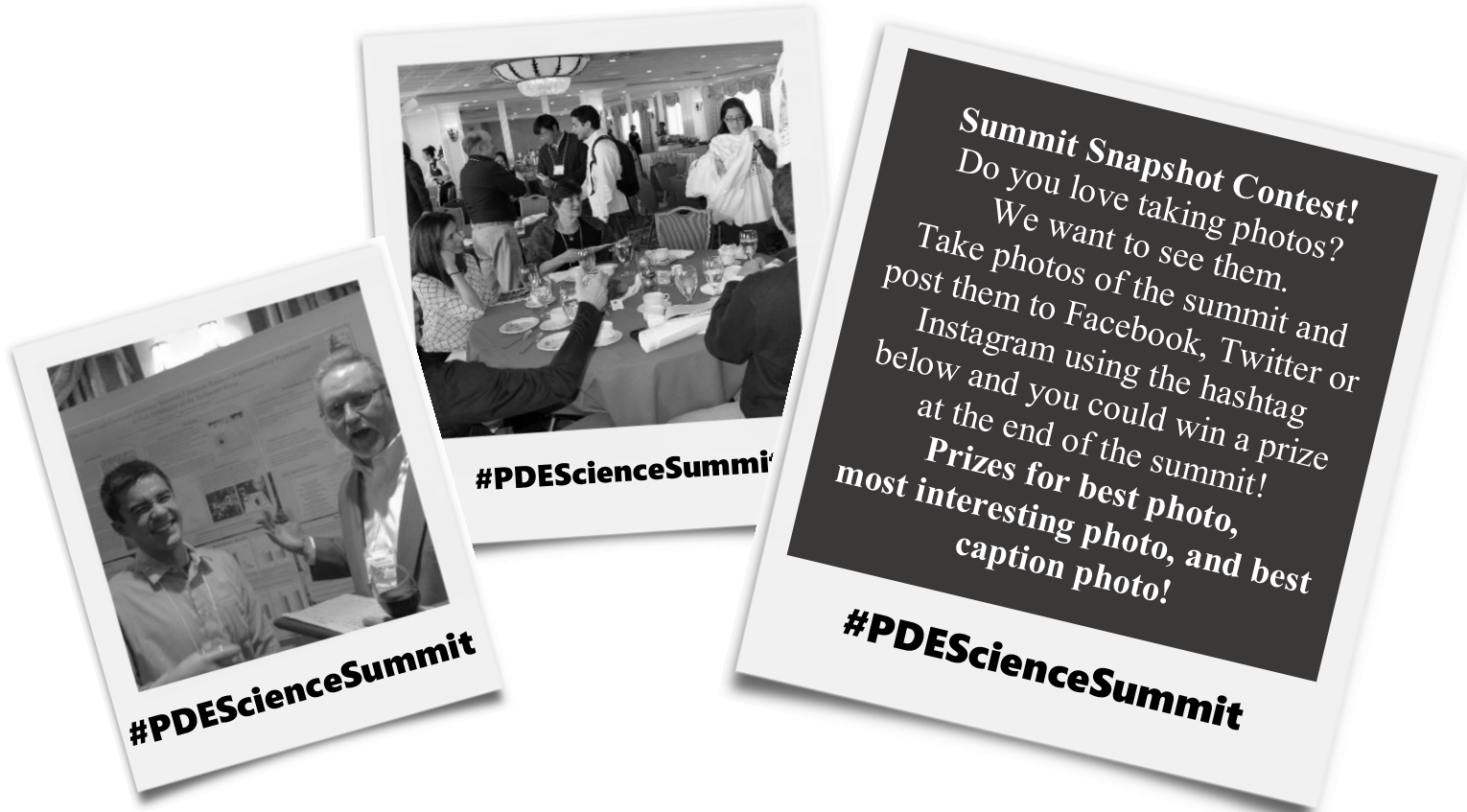
Welcome and Keynote: 9:00 to 10:30 AM

Welcome & Keynote: Grand Ballroom, 1st Floor

Welcome: Jennifer Adkins, Partnership for the Delaware Estuary

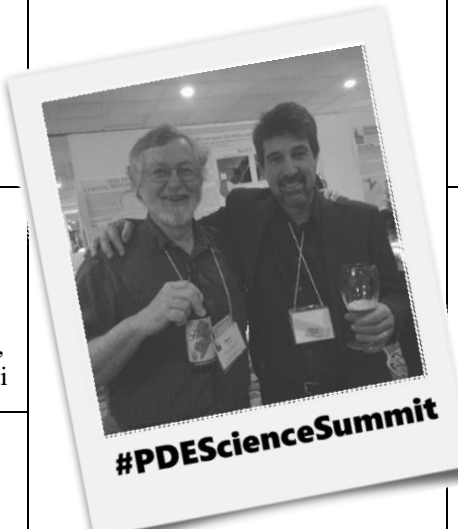
Keynote Address: Ben Horton, Rutgers University

Break: 10:30 to 10:45 AM



Monday, January 23 continued


CONCURRENT SESSIONS: Late morning 10:45 AM – 12:00 PM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Post Sandy Lessons Moderators: Heather Jensen and Dorina Frizzera	Establishing the Explore the Delaware River Watershed Branding Moderator: Kathy Klein	Trash Talking the Waterways Moderator: Lisa Wool
10:45	Review and Application of New Jersey's Living Shorelines Engineering Design Guidelines Jon Miller*, Andrew Rella, Thomas Herrington, Amy Williams	<p>What the Delaware River Watershed does not have is a shared identity or a “brand” for telling the Watershed’s story and promoting all the opportunities to experience and be a steward of the resource. To address this need, Kathy Klein with the Water Resources Association of the Delaware River Basin is taking the lead in establishing the Explore the Delaware River Watershed Initiative.</p> 	Spatial and Temporal Variability of the Composition of Urban Litter in the Riparian Zone of the Poquessing Creek Walter Yerk*, Nance Kerns, Suzanne Zlotnick
11:00	Completed Implementation of Prime Hook National Wildlife Refuge's Recovery and Resiliency Ecosystem Restoration Bartholomew Wilson*, Al Rizzo, Art Coppola		Scrubbing Up the Schuylkill Virginia Vassalotti*
11:15	Beyond Sandy: How NJ's Utilities Included Resiliency in their Designs after Superstorm Sandy Eugene Chebra, P.E.*,		Identifying Litter Accumulation Areas on the Tidal Portions of the Delaware River: Field surveys, Laboratory Analyses, and Cleanups Jay Kelly*, Jaclyn Rhoads, Ryan Rebozo
11:30	Green Infrastructure and Storm Events: Combining Insights from Two Studies Patrick Gurian*, Stephanie Miller, Bitia Alizadehtazi, Franco Montalto, Kimberly DiGiovanni, Romano Foti		One Man's Trash (Observations) Bradley Maule*
11:45	Delaware Bay Resiliency Restoration Projects: An Update Capt. Alek Modjeski*, Tim Dillingham, Larry Niles, Joseph Smith, Shane Godshall, Steve Hafner, Dianne Daley		Q&A

Lunch: 12:00 to 1:00 PM - 5th Floor

Monday, January 23 continued


CONCURRENT SESSIONS: Early afternoon 1:30 – 3:30 PM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Estuary Restoration Moderators: Beth Watson and Josh Moody	Water Quality Moderators: Josef Kardos and Tom Fikslin	Green City, Clean Waters: Planning and Outreach for the First 5 Years Moderator: Michelle Knoll
1:30	The Impact of Past Management Practices on Tidal Marsh Resilience to Sea Level Rise in the Delaware Estuary. Joseph Smith*, Steven Hafner, Larry J. Niles	Flow Management for the Delaware River and Estuary Amy Shallcross*	<p>This year marks the five-year anniversary of Philadelphia's Green City, Clean Waters plan, but with a 25 year commitment to PADEP and the EPA, there is still a long way to go. While the scale of Philadelphia's green stormwater infrastructure plan is larger than most, lessons learned in planning stormwater management projects and working with communities to embrace green infrastructure can apply to any implementation plan.</p> <p>Panel members include: Christopher Anderson, Stephanie Chiorean, and Maggie Dunn</p> 
1:45	Restoration of Vulnerable and Damaged Marsh Ecosystems to Improve Response to Sea Level Rise Mara Orescanin*, Weishar, L., Hamilton, R. P.	Reconstruction of Historic Water Quality in the Tidal Christina River from Pre-European Settlement through the Present Margaret Christie*, Donald Charles, Ronald Martin, Peter McLaughlin, James Pizzuto	
2:00	Prioritizing Natural Coastal Protection Strategies Through Shoreline Assessments Christiana Pollack*, Jessica Jahre	Water Quality Modeling of Urban Streams in Philadelphia Pennsylvania William Bezts*, Eileen Althouse, Josef Kardos, Kinman Leung	
2:15	Protecting Jersey Shore Residential and Ecological Communities by Changing the Culture of Beach Management Jay Kelly*, Jaclyn Rhoads, Ryan Rebozo	Brandywine-Christina Healthy Water Fund Model-based Prioritization Andrew Homsey*, Jerry Kauffman, Brian Boutin, Kash Srinivasan	
2:30	Floating Oyster Cages and Wetlands As An Alternative Bio-Enhancement Strategy Andrew McGowan*, Marianne Walch, Robert Collins	Advances in Implementation of Antidegradation Policies and Practices in Delaware River Basin Commission Special Protection Waters Robert Limbeck*	
2:45	Developing Sources of Raw Material for Oyster Restoration projects in the Inland Bays Bob Collins*, Marianne Walch, Andrew McGowan	Follow the Raindrop: Stormwater Management in Cumberland County Meredith Brown*	
3:00	Ecosystem Service Valuation: The How and Why for Your Coastal Restoration Project Team Elizabeth Schuster*	Storm Control Treatment Facility – A Novel Solution to Sanitary Sewer Overflows Thomas Amidon*	
3:15	Q&A	Q&A	

Break: 3:30 to 3:45 PM

Monday, January 23 continued

CONCURRENT SESSIONS: Early afternoon 3:45 – 5:15 PM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Delaware River Watershed Initiative Panel Moderator: Carol Collier	Thin Layer Placement in Coastal Wetlands Moderators: Martha Doyle and Joel Pecchioli	Connect the Dots - Leveraging Community Partnerships and Media Relations to Elevate Nonprofit Success Moderator: Joe Tarsavage
3:45	<p>The Delaware River Watershed Initiative is a conservation and watershed protection movement focused on water quality outcomes for the entire Delaware Basin, including the Estuary and upper basin. This discussion will cover the changes and outcomes that have taken place over the last 3 years since the Delaware River Watershed Initiative began with an emphasis on the scientific basis. There will be time for questions in this presentation.</p> <p>Panel members include: Nathan Boon, Amanda Bassow, Scott Haag, and John Jackson</p>	Site Assessment for Salt Marsh Restoration via Beneficial Use of Dredged Material: Insights from Recent Projects in New Jersey Jackie Jahn*, Metthea Yepsen, Mary Paist Goldman	<p>Laura Bishop will share how partnerships are the true key to success in the nonprofit community and can elevate your nonprofit to a new level of public recognition and achievement. This session will explore some successful local examples of effective nonprofit, school district and business partnerships, and will focus on helping you to “connect the dots” within your organization.</p> 
4:00		Habitat Restoration Through the Application of Dredged Material Mary Paist-Goldman*	
4:15		Bearing Capacity: Correlating Sediment Penetration Resistance and Vegetation Recovery in Salt Marsh Restoration Using Dredge Material Jessie Buckner*, Metthea Yepsen	
4:30		Beneficial Reuse of Dredge Material for Salt Marsh Restoration: Early Recovery of Vegetation and Epifaunal Macroinvertebrate Jessie Buckner*, Metthea Yepsen, Joshua Moody, Elizabeth Schuster	
4:45		Perspectives on Linking Sediment Management to Science-Based Coastal Wetland Monitoring and Restoration Danielle Kreeger *	
5:00		Q&A	

Poster Session: 5:15 – 6:15 PM- 5th Floor

Dinner: 6:15 to 7:15 PM- 5th Floor

SPECIAL: Charting the Future of the Delaware Estuary: 7:30 PM, 5th Floor

In this interactive evening session, Delaware Estuary Comprehensive Conservation and Management Plan (CCMP) workshop facilitators Jim Eisenhardt and Sari Rothrock from RK&K will share information about efforts to revise the CCMP. Attendees will hear about the process, discover what they’ve learned so far through expert workshops, and engage in a discussion of next steps.

Tuesday, January 24

Registration and Breakfast: 8:00 to 9:00 AM

Registration: 5th Floor

Continental Breakfast*: Atrium, 1st Floor

**For a more substantial breakfast, it can be purchased at Hemingway's Restaurant at the front of the Grand Hotel. Opens daily at 6:30 AM*

CONCURRENT SESSIONS: Early Morning 9:00 – 10:00 AM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Water Quality Moderators: Tom Fikslin and Josef Kardos	Coastal Wetland Monitoring Panel Moderator: LeeAnn Haaf	Motivate Volunteers and Make a Difference Moderator: Virginia Vassalotti
9:00	Extensive Biogeochemical Sampling of the Sediment and Water Column in the Tidal Freshwater Delaware River, 2012-2014 David Velinsky*, Jeffrey Cornwell, Mike Owens, David Walsh, Josef Kardos	The coastal wetland long term monitoring panel discussion seeks to create a conversation that will lead to a higher degree of collaboration; an enhanced utility of datasets for restoration; and the creation of consensus on how programs might be funded for the future. Panel members include: LeeAnn Haaf, Angela Padeletti, Erin Reilly, Martha Maxwell-Doyle, Danielle Kreeger	Walking the Talk: How a For-Profit Business Inspires Environmental Volunteerism and Stewardship Kelly Offner*
9:15	High-Resolution Water Quality Model in the Urban Tidal Freshwater Delaware River Josef Kardos*, Phil Duzinski, Kinman Leung, Paula Kulis, Ramona McCullough		
9:30	Updating TMDLs For PCBs For The Delaware Estuary Thomas Fikslin*, Namsoo S. Suk		9:40 Pennsylvania Master Watershed Steward Program Rebecca Kennedy*, Erin Frederick
9:45	Brandywine-Christina Healthy Water Fund Martha Narvaez*, Gerald Kauffman, Andrew Homsey, Richie Jones		



Tuesday, January 24 continued

CONCURRENT SESSIONS: Late Morning 10:00 – 11:15 AM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Wetlands Moderators: Alison Rogerson and Kelly Somers	Monitoring Moderators: Angela Padeletti and John Yagecic	Beyond Education to Engagement Moderator: Virginia Vassalotti
10:00	Do Nitrous Oxide Emissions Offset Potential Greenhouse Gas Mitigation Benefits of Wetland Restoration in Eutrophic Estuaries? Elizabeth Watson*, Rose Martin, Kerstin Wasson, Kat Beheshti, Elisabeth Powell, David Velinsky, Cathleen Wigand	Monitoring Bird and Vegetation Communities at Prime Hook NWR Before, During, and After Tidal Marsh Restoration Susan Guiteras*, Tim Freiday, Greg Shriver, Elizabeth Tymkiw, Mack McGraw, Annabella Larsen, Jennifer McAndrews	Jersey-Friendly Yards: Landscaping for a Healthy Environment Karen Walzer*, Becky Laboy
10:15	Net Ecosystem Carbon Exchange and the Greenhouse Gas Balance of Tidal Marshes along the Salinity Gradient in the Delaware River Estuary Nathaniel Weston*, Scott Neubauer, David Velinsky, Melanie Vile	Contaminant Exposure and Productivity of Osprey (Pandion haliaetus) Nesting in Delaware Bay and River in 2015 Barnett Rattner*, Thomas G. Bean, Rebecca S. Lazarus, Peter C. McGowan, Dan D. Day, Robert W. Scarborough, Kate Fleming	Exploring Effective Science Communication In The Digital Realm Lisa Tossey*
10:30	Monitoring the Response of Estuarine Wetlands to Anthropogenic Disturbances at the St. Jones Reserve After One Year Christina Whiteman*, Drexel Siok, Lyndie Hice-Dunton, Ph.D, Kari St. Laurent, Ph.D	Bird's Eye View: Quantifying Short-term Beach Morphology Using UAV Photogrammetry Stephanie Dohner*, Doug Miller, Arthur Trembanis	Engaging With Diversity: From Latinas In Motion To Pokémon Trainers Doryan De Angel*
10:45	Mispollion Watershed: Wetland Status and Health Alison Rogerson*, Andrew Howard, Brittany Haywood, Kenny Smith	Dirt Cheap: Low-Cost, Real-Time Remote Soil Moisture Sensor Network For Rain Gardens Matthew Fritch*	Delaware Bay Oyster Shell Deficit Reduction Via Post Consumer Recycling Program Jeff Long*
11:00	The Value of Delaware's Tidal Wetland Ecosystem Services: A Choice Experiment Amanda Santoni*	A Feasibility and Baseline Assessment for Zooplankton Monitoring at the Delaware National Estuarine Research Reserve Kari St.Laurent*, Molly Williams	Online Advertising Michelle Knoll*

Break: 11:15 to 11:30 AM

Tuesday, January 24 continued

Special Panel: Revising the CCMP for the Delaware Estuary

11:30 AM – 12:30 PM - Grand Ballroom, 1st Floor

The Comprehensive Conservation and Management Plan for the Delaware Estuary is a blueprint for collective action over time to make our region's waters drinkable, fishable, and swimmable. Created in 1996, the CCMP guides the work of PDE and its partners. This panel presentation will share perspectives from the PDE Steering Committee on priorities and needs for revising the CCMP, looking into the future. Panelists are Dan Kennedy, Javier Laureano, and Roy Denmark. Moderator is Jennifer Adkins.

Lunch: 12:30 to 1:30 PM - 5th Floor

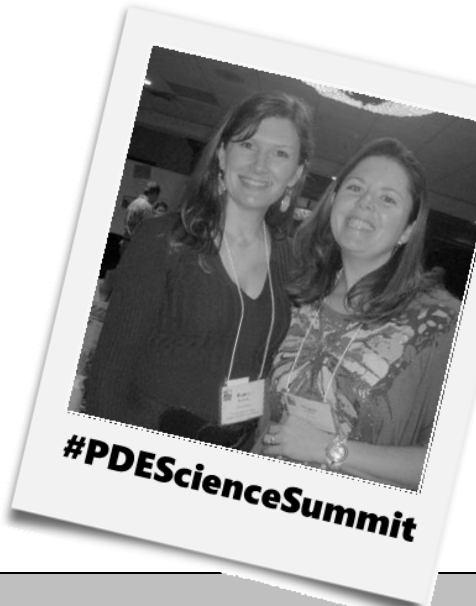
CONCURRENT SESSIONS: Early Afternoon 2:00 – 3:15 PM

	Grand Ballroom A, 1st Floor	Crystal Room, 1st Floor	Grand Ballroom C, 1st Floor
	Physical and Chemical Processes Moderators: Peter Rowe	NJ Bayshore and Vicinity: Planning, Projects, Resiliency Moderators: Evan Sherer and Erin Reilly	Social Marketing: Hands on Workshop Part I Moderator: Tom Amidon
2:00	Hydrologic Interaction of Fresh and Salt Water During Salt Marsh Reconstruction in 2015 at Prime Hook National Wildlife Refuge, Delaware Thomas McKenna*	Building Ecological Solutions to Coastal Community Hazards – Projects Update Steven Jacobus*	Social marketing is, “a process that applies marketing principles and techniques to influence target audience behaviors that benefit society as well as the target audience”. Trained social marketing service providers, Jen Dindinger and Kacey Wetzel will be delivering a hands-on, interactive session where participants will learn the steps for creating robust social marketing campaigns and work in groups to build a campaign around mock case studies. Part 1 of a 2-part workshop.
2:15	Hydrodynamic Processes Influencing Transport in the Upper Tidal Delaware River Ramona McCullough*, Paula Kulis, Phil Duzinski	Incorporating Resiliency Features into Bayshore Designs Douglas Gaffney*	
2:30	Tidally-Induced Dispersion in the Delaware River near Philadelphia: Insights from Large-Scale Dye Experiment Phil Duzinski*, Robert Chant, Elias Hunter, David Walsh	The Delaware Estuary Living Shoreline Initiative (DELSI): Results and Lessons Learned Regarding Three Treatments in the Maurice River, NJ. Joshua Moody*, Dr. Danielle Kreeger, David Bushek, Angela Padeletti	
2:45	Impact of Future Salinity Increases on Operational Costs of Power Plants in the Delaware Estuary Yosef Shirazi*, Edward Carr, Dr. George Parsons, Dr. Porter Hoagland	Monitoring and Site Assessment for Post-Sandy Coastal Resilience Projects in New Jersey Martha Doyle, Angela Padeletti*	
3:00	Signals of sea-level rise in Delaware and Chesapeake Bay tides Andrew Ross*, Raymond G Najjar	Q&A	

Break: 3:15 to 3:30 PM

Tuesday, January 24 continued

CONCURRENT SESSIONS: Late Afternoon 3:30 – 5:30 PM

Grand Ballroom A, 1st Floor		Grand Ballroom C, 1st Floor
Living Shorelines Moderators: Danielle Kreeger and Dave Bushek		Social Marketing: Hands on Workshop Part II Moderator: Tom Amidon
3:30	The Promotion of Living Shorelines in Delaware through a Dedicated Work Group Alison Rogerson*, Andrew Howard, Brittany Haywood, Kenny Smith	<p>Would you like to modify your existing outreach program to focus more on specific behaviors and target audiences? In this interactive roundtable session with Jen Dindinger and Kacey Wetzel, participants will learn about the draft Rapid Assessment Tool and run a mock program through the tool to identify elements of the program that align with social marketing principles and elements that could be modified. The concluding discussion following the Rapid Assessment training will help participants understand how to modify their existing programs and help to improve the Tool for future use.</p> <p>Part 2 of a 2-part workshop.</p> 
3:45	Innovative Living Shoreline and Tidal Marsh Enhancement Project at an Inland Bays Marina Marianne Walch*, Douglas Janiec, Brett Dietz	
4:00	Implementation of a Hybrid Living Shoreline Project in Gandy's Beach/Money Island, New Jersey Moses Katkowski*, Katie Conrad	
4:15	A Goal-Based Framework for Coastal Restoration Project Monitoring Plan Development: Measuring Project Success, Informing Adaptive Management, and Guiding Future Project Development Josh Moody*, Metthea Yepsen, Elizabeth Schuster	
4:30	Application of a Goal-Based Monitoring Framework for Assessing Performance of Living Shoreline Projects Josh Moody*, Danielle Kreeger, Angela Padeletti, David Bushek	
4:45	What's Living On Living Shorelines? Monitoring A Hybrid Living Shoreline Project In Delaware Bay Jenny Paterno*, Lisa Calvo, David Bushek, Moses Katkowski	
5:00	Siting Plan and Concept Designs for Living Shoreline Projects on the Inland Bays Douglas Janiec & Marianne Walch*,	
5:15	Apps Aren't Just for Your Smartphone: Facilitating Living Shoreline Projects with Technology and Community Engagement John Truscinski*, Patty, Doerr, Richard Lathrop, Jon Miller, Danielle Kreeger, Martha Maxwell-Doyle, Alek Modjeski	

Posters Session and Flying Fish Happy Hour: 5:30 - 6:30PM - 5th Floor

Beer donated by Flying Fish Brewing Company

Dinner: On your own

Wednesday, January 25

Registration and Breakfast: 8:00 to 9:00 AM

Registration: 5th Floor

Continental Breakfast*: Atrium, 1st Floor

**For a more substantial breakfast, it can be purchased at Hemingway's Restaurant at the front of the Grand Hotel. Opens daily at 6:30 AM*


CONCURRENT SESSIONS: Early morning 9:00 – 10:15 AM

	Grand Ballroom A, 1st Floor	Grand Ballroom C, 1st Floor
	Monitoring Moderators: John Yagecic and Angela Padeletti	Connecting Youth to the Environment Moderator: Kate Hutelmyer
9:00	Evaluation of Light Intensity under a Salt Marsh Boardwalk Utilizing Two Different Materials Kari St.Laurent*, Molly Williams	Camden Youth Lead Ecology History Paddle Tours On The Cooper River To Educate The Community About The Watershed And Promote Conservation Efforts Victoria Carberry*
9:15	The Marshian: Determining a Drone's Ability to Monitor Tidal Marshes Stephanie Dohner*, Doug Miller, Arthur Trembanis	Designing Delaware: Creating Workforce Ready Graphic Designers through Environmental Partnerships Maggie Pletta*, Patti Bishop
9:30	Sediment Carbon Stock and Carbon Accumulation Rates in the Delaware Bay Tidal Salt Marshes Beatrice O'Hara*, Daria Nikitina, Matthew D. Serzega, Daniel Jennings, Deven Scelfo, Steven Esrey	PowerCorps – Camden: Connecting Youth to the Environment Through Employment Opportunities Caroline Gray*
9:45	Paddle for the Edge: Using Citizen Science to Monitor Marsh Shorelines Erin Reilly*, Martha Maxwell-Doyle	Why Study Water Quality? According to the United States Geological Survey, "Water Quality is Critical to the Health and Habitat of Both Humans and Animals." Dina DiSantis*, Christopher Vandergoes
10:00	The Results From A Water Quality Testing Program Conducted By A High School Aquatic Science Class On the East and West Branches Of The Brandywine Creek, Pennsylvania. Dina DiSantis*, Christopher Vandergoes	Using the Urban Watershed as an Integrated Context for Learning: Classroom Curriculum Program Ellen Freedman Schultz*, Rachel Odoroff, Karen Brinkley, Aliya O'Neal, Blaine School, Philadelphia

Break: 10:15 to 10:30 AM

Wednesday, January 25 continued

CONCURRENT SESSIONS: Late Morning 10:30 AM – 12:15 PM

	Grand Ballroom A, 1st Floor	Grand Ballroom C, 1st Floor
	Estuary Restoration Moderators: Moses Katkowski and Douglas Janiec	Leading in a Network or Coalition Moderator: Kelly Valencik
10:30	Rebuilding Beaver Creek Timothy Stahl*	<p>This workshop, based on the Institute for Conservation Leadership's publication, "The Less Visible Leader", will provide staff, board members, and volunteers with a framework for improving results in a network or coalition. Using individual and group exercises, workshop participants will identify strategies for being a more effective leader when engaging diverse partners in collaborative processes. This session will be most helpful for those already in a network or coalition. Workshop is run by Sarah Clark.</p> 
10:45	Stream, Wetland, and Riparian Restoration of a Former Cranberry Bog Site in the Pinelands Mary Paist-Goldman*	
11:00	Using Green Infrastructure to Maximize Restoration Benefits Jessie Thomas-Blate*, Brian Hazelwood	
11:15	Field Study Of Biochar Amended Soils: Water Retention And Nutrient Removal From Stormwater Runoff Joseph Brown*	
11:30	Utilizing LiDAR to characterize forest structure and its effects on aquatic organisms at stream reach- and catchment-scales at DRWI restoration and protection sites Will Ryan*, Scott Haag, Stefanie Kroll	
11:45	Statistical Tools for Connecting Baseline Conditions to Potential Responses of Macroinvertebrate Communities to Restoration Activities Through the Delaware River Watershed Initiative Stefanie A Kroll*, Meghan J O'Donnell, Brian L Brown, John K Jackson	
12:00	The Delaware Watershed Resource Registry Mark Biddle, PWS*, LaTonya Gilliam	

Lunch: 12:15 to 1:15 PM - 5th Floor

Wednesday, January 25 continued

CONCURRENT SESSIONS: Early Afternoon 1:45 – 3:15 PM

Grand Ballroom, 1 st Floor	
Hot Topics	
Moderators: Sue Kilham and Jerry Kauffman	
1:45	Trending National Water Issues, Policies and Regulations. What's Leading and What's Lagging in the Delaware River Basin Steve Tambini*
2:00	A Synthesized Gap-Free Continuous Sea Level Record for the Delaware River at Philadelphia Victoria Reis*, James T. Smullen
2:15	Blue Collar Bivalves, Water Quality and Project ROI, Oh My Danielle Kreeger*, Josh Moody, Kurt Cheng, Dave Bushek
2:30	Rancocas Creek National Water Trail, Nomination: 4,000 Years of Multi Use Impacts John Anderson*
2:45	Green vs. Gray - A Business Perspective Douglas Janiec*, Marianne Walch
3:00	Q&A

Announcements, Awards, Closing Remarks: 3:15 PM

Grand Ballroom, 1st Floor

Moderator: Jen Adkins

Student Awards: Danielle Kreeger

Announcement of Summit Snapshot Winners

Review this Year's Summit

Please take a minute and fill out either a paper survey, available at registration, or our online survey to let us know what you thought of this year's Summit!

To do it online, visit www.surveymonkey.com/r/PDEsummit17



Poster Presentations by Theme

Estuary Restoration

Kathleen LaForce. *Effects of Predator Availability and Substrate Position on Ribbed Mussel Recruitment for Living Shoreline Applications.*

Living Resources

Michael Acquafredda. *Thermal tolerance of juvenile Atlantic surf clams (*Spisula solidissima*): A step towards diversifying the New Jersey shellfish aquaculture sector.*

Kurt Cheng. *Freshwater Mussel Propagation: Propelling Restoration Into The Future.*

Andrew McGowan. *Inland Bays Inshore Fish Survey: Citizen Science At Work.*

Elizabeth Shea. *InvertEBase: Providing Access to 200 Years of Land and Freshwater Mollusk Data from Eastern North America.*

Natalie Zucca. *An Assessment of Fish Species Richness in Cooper River, Camden County, NJ.*

Monitoring

Kaitlin T. Collins. *A Marsh Futures Case Study: Cox Hall Creek (Lower Township, NJ) Marsh Vulnerability Assessment Using Streamlined Survey Methods.*

LeeAnn Haaf. *The Utility of Long Term Reference Data for Understanding Elevation Dynamics and Designing Thin Layer Placement Projects in New Jersey Coastal Marshes.*

Christopher Nealen. *Monitoring Coastal Storm Impacts Using the Surge, Wave, and Tide Hydrodynamics (SWaTH) Network Along the Delaware Bay.*

Kenny Smith. *MidTRAM 4.0: Updates and Improvements.*

Physical and Chemical Processes

Erin Reilly. *Blue Carbon Storage in Natural Estuarine Wetlands and Living Shorelines of Delaware and New Jersey.*

Jane Uptegrove. *Cape May Spit Growth, Migration Of The Delaware River, And Evolution Of The Delaware Estuary Over The Last 150,000 Years.*

Post Sandy

Katie Conrad. *Gandy's Beach Living Shoreline Project.*

John Szczepanski. *Salt Marsh Resilience At Cape May And Supawna Meadows National Wildlife Refuges: Responding To Hurricane Sandy And Beyond.*

Water Quantity and Quality

Marie J. Kurz. *Patterns in Stream Chemistry Across the 8 Sub-watershed Clusters of the Delaware River Watershed Initiative.*

Shirin Mardani. *Delaware Estuary Data Visualization Techniques.*

Kenneth Najjar. *Progress in Water Resource Mapping in the Delaware Estuary.*

Spencer Roberts. *Quantifying the Water Quality Benefits of a New Shellfish-based Hybrid Living Shoreline.*

John Yagecic. *Applications For Near Real-Time And Interactive Data Assessment In The Delaware River Basin.*

Wetlands

Drexel Siok. *Monitoring Wetland Flooding Dynamics in a Delaware Bay Tributary.*

Featured Speaker

Benjamin Horton

**Department of Marine and Coastal Science,
Rutgers University**

Ben's research focuses on sea-level and environmental change. Through his research at Rutgers, he has tested and validated new methods to reconstruction past sea-level change and the history of earthquakes, tsunamis and tropical cyclones.

Recently, President Obama referenced his study on climate change when he acknowledged that Oceans are rising at the fastest rate in 2,000 years. Prior to working at Rutgers, Ben was a professor at the University of Pennsylvania and a Lecturer at University of Durham (UK).



Special Session Panelists

Delaware River Watershed Initiative Panel

Moderator: Carol Collier, Academy of Natural Sciences of Drexel University

Amanda Bassow, National Fish and Wildlife Foundation

Nathan Boon, William Penn Foundation

Scott Haag, Academy of Natural Sciences of Drexel University

John Jackson, Stroud Water Research

Charting the Future of the Delaware Estuary

Moderator: Jennifer Adkins, Partnership for the Delaware Estuary

Jim Eisenhardt, Rummel Klepper & Kahl LLP

Sari Rothrock, Rummel Klepper & Kahl LLP

Coastal Wetland Monitoring Panel

Moderator: LeeAnn Haaf, Partnership for the Delaware Estuary

Danielle Kreeger, Partnership for the Delaware Estuary

Martha Maxwell-Doyle, Barnegat Bay Partnership

Angela Padeletti, Partnership for the Delaware Estuary

Erin Reilly, Barnegat Bay Partnership

Revising the CCMP for the Delaware Estuary Panel

Moderator: Jennifer Adkins, Partnership for the Delaware Estuary

Roy Denmark, Chairman of the Board, Partnership for the Delaware Estuary

Dan Kennedy, Assistant Commissioner - Water Resources Management, New Jersey Department of Environmental Protection

Javier Laureano, MPA, PhD, Director - Clean Water Division, US Environmental Protection Agency Region 2

Speakers and their Institutions

Michael Acquafredda, Haskin Shellfish Research Laboratory, Rutgers, The State University of New Jersey
Thomas Amidon, Kleinfelder
John Anderson, Rancocas Pathways, Inc
William Bezts, CDM Smith
Mark Biddle, PWS, DNREC, Division of Watershed Stewardship
Laura Bishop, Laura Bishop Communications LLC
Joseph Brown, University Of Delaware
Meredith Brown, American Littoral Society
Jessie Buckner, New Jersey Nature Conservancy
Christina Callahan, University of Delaware
John Callahan, Delaware Geological Survey
Victoria Carberry, UrbanPromise Ministries
Eugene Chebra, P.E., New Jersey Department of Environmental Protection - Division of Water Quality
Margaret Christie, University of Delaware
Sarah Clark, Institute for Conservation Leadership
Carol Collier, Academy of Natural Sciences
Bob Collins, Delaware Center for the Inland Bays
Katie Conrad, USFWS
Doryán De Angel, Tookany/Tacony-Frankford Watershed Partnership
Jen Dindinger, University of Maryland Sea Grant Extension
Dina DiSantis, Downingtown High School West Campus
Patty Doerr, The Nature Conservancy
Stephanie Dohner, University of Delaware
Phil Duzinski, Philadelphia Water
Thomas Fikslin, Delaware River Basin Commission
Matthew Fritch, Philadelphia Water
Ellen Freedman Schultz, Fairmount Water Works
Douglas Gaffney, Mott MacDonald
Caroline Gray, Cooper's Ferry Partnership
Susan Guiteras, U.S. Fish & Wildlife Service, Coastal Delaware NWR Complex
Patrick Gurian, Drexel University
Andrew Homsey, University of Delaware
Steven Jacobuu, NJ Department of Environmental Protection
Jackie Jahn, GreenVest, LLC
Douglas Janiec, Sovereign Consulting Inc.
Josef Kardos, Philadelphia Water
Moses Katkowski, The Nature Conservancy
Jay Kelly, Raritan Valley Community College
Rebecca Kennedy, Pennsylvania Infrastructure Investment Authority
Kathy Klien, Water Resources Association of the Delaware River Basin
Stefanie A Kroll, Academy of Natural Sciences
Marie J. Kurz, Academy of Natural Sciences
Robert Limbeck, Delaware River Basin Commission
Shirin Mardani, U.S. EPA
Bradley Maule
Martha Maxwell-Doyle, Barnegat Bay Partnership
Ramona McCullough, Sci-Tek Consultants
Andrew McGowan, Delaware Center for the Inland Bays
Thomas McKenna, University of Delaware
Jon Miller, Stevens Institute of Technology
Kenneth Najjar, Delaware River Basin Commission
Martha Narvaez, University of Delaware
Christopher Nealen, U.S. Geological Survey
Kelly Offner, United by Blue
Beatrice O'Hara, West Chester University of Pennsylvania
Mara Orescanin, Woods Hole Group
Mary Paist-Goldman, Princeton Hydro, LLC
Jenny Paterno, Rutgers University, Haskin Shellfish Research Laboratory
Maggie Pletta, Delaware National Estuarine Research Reserve
Christiana Pollack, Princeton Hydro, LLC
Barnett Rattner, U.S. Geological Survey - Patuxent Wildlife Research Center
Erin Reilly, Barnegat Bay Partnership
Victoria Reis, Philadelphia Water
Alison Rogerson, Delaware Department of Natural Resources and Environmental Control
Andrew Ross, Pennsylvania State University
Will Ryan, Academy of Natural Sciences
Amanda Santoni, Delaware Coastal Programs
Elizabeth Schuster, The Nature Conservancy
Amy Shallcross, Delaware River Basin Commission
Elizabeth Shea, Delaware Museum of Natural History
Evan Sherer, NJ-DEP
Yosef Shirazi, University of Delaware
Drexel Siok, Delaware Coastal Programs
Joseph Smith, Niles & Associates
Kenny Smith, DNREC: Wetland Monitoring and Assessment
Kari St.Laurent, Delaware National Estuarine Research Reserve
Timothy Stahl, Department of Environmental Resources
Hailey Stern, Trans-Pacific Engineering Corporation
Jack Szczepanski, U.S. Fish and Wildlife Service, Cape May National Wildlife Refuge
Steve Tambini, Delaware River Basin Commission
Jessie Thomas-Blate, American Rivers
Lisa Tossey, University of Delaware/Delaware Sea Grant
Jane Uptegrove, Retired, New Jersey Geological and Water Survey, NJDEP
David Velinsky, Academy of Natural Sciences
Marianne Walch, Delaware Center for the Inland Bays
Karen Walzer, Barnegat Bay Partnership
Elizabeth Watson, Academy of Natural Sciences
Nathaniel Weston, Villanova University
Christina Whiteman, Delaware Coastal Programs, Delaware National Estuarine Research Reserve
Bartholomew Wilson, U.S. Fish and Wildlife Refuge
John Yagecic, Delaware River Basin Commission
Metthea Yepsen, The Nature Conservancy
Walter Yerk, Drexel University
Natalie Zucca, Haddonfield Memorial High School

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The Partnership for the Delaware Estuary, a National Estuary Program, leads science-based and collaborative efforts to improve the tidal Delaware River and Bay, which spans Delaware, New Jersey, and Pennsylvania.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

The **Partnership for the Delaware Estuary**, a National Estuary Program, leads science-based and collaborative efforts to improve the tidal Delaware River and Bay, which spans Delaware, New Jersey, and Pennsylvania.



Connecting people, science, and nature
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Background photo by Sandi Bisgood

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