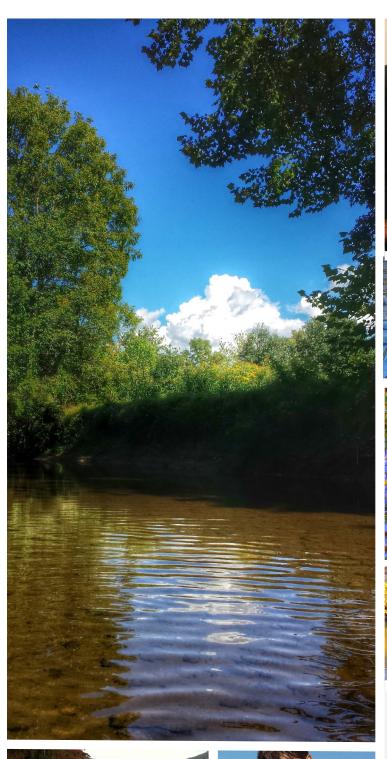


Coalition for the Delaware River Watershed

OCTOBER 5-6, 2015 CLAYTON HALL, NEWARK, DELAWARE



























Welcome to the 3RD ANNUAL DELAWARE RIVER WATERSHED FORUM. I'm excited to hold our first-ever event in Delaware. Much of what takes place upstream, for better or worse, affects Delaware, and makes it a perfect setting from which to explore the need for, and benefit of, watershed-wide action.

The theme of this year's Forum is the development of a watershed-wide vision. Your thoughts, experience, and insight over the next two days will directly impact the development of that vision. We've seen the success of other watersheds across the country when efforts align under a common framework, and the time is right to achieve similar outcomes for the Delaware River Watershed.

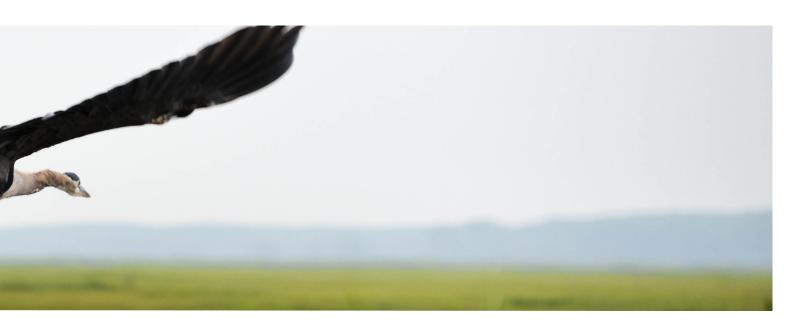
In addition to the significant, coordinated investment in water quality improvement being made by the Watershed Forum's founding sponsor, the William Penn Foundation, this past year saw the watershed receive one of the largest awards made nationally for conservation work on privately owned lands, as well as steady advancement of the Delaware River Basin Conservation Act in spite of challenging political times. The momentum is real. The time to capitalize on it is now.

This year's program continues our tradition of providing opportunities to learn about the diverse ways in which organizations are working to ensure a future with clean water, while allowing time for substantive discussions. I hope you'll take advantage of our field trip offerings to see first-hand local protection and restoration efforts, as well as enjoy an entertaining reception at the Delaware Nature Society's Ashland Nature Center on Monday night. New this year are breakfast roundtables to informally share information with other attendees about common areas of interest, and mini-workshops to provide more focused and practical examinations of topics facing organizations working across the watershed.

Get ready to learn and contribute as we work together to build a vision for our future - one where clean water is plentiful and related goals for habitat, recreation, the economy, and a resilient landscape are achievable. The foundation is being laid now; I'm glad you could join us.

Kim Beidler, Director Coalition for the Delaware River Watershed

Kim Beidler



Monday, October 5

WELCOME BREAKFAST 8:30 AM

> LOBBY A SPONSORED BY:

Participants should check in at the registration desk upon arrival at Clayton Hall Please visit the desk at any time throughout the conference if you

need assistance. A continental breakfast will be served.

MAIN AUDITORIUM (128) 9:00-9:30 AM

> **David Small, Secretary** SPEAKER:

> > Delaware Department of Natural Resources & Environmental Control

Brian Winslow, Executive Director HOST:

Delaware Nature Society

DELAWARE RIVER WATERSHED FORUM OVERVIEW 9:30-9:45 AM

MAIN AUDITORIUM (128)

The Coalition for the Delaware River Watershed welcomes you to the University of Delaware's Clayton Hall for this year's Delaware River Watershed Forum. In its third year, the Watershed Forum brings together stakeholders to examine watershed-wide issues and work toward a unified vision for the Delaware River Basin. This session will describe what to expect during this year's Forum, and what we hope to achieve together.

SPEAKER: Kim Beidler, Director

Coalition for the Delaware River Watershed









9:45-10:40 AM







PLENARY: WATER USE IN THE DELAWARE--RELIANCE & RISKS

MAIN AUDITORIUM (128)

The Delaware River Watershed drains an area of 14,119 square miles in five U.S. states—New York, New Jersey, Pennsylvania, Maryland and Delaware—and its ecological health is as diverse as the area it covers. Everything that happens on the land affects the Delaware River and its bay and local waterways. This plenary session will provide an overview of how water is used in the Delaware River Basin, and the current and future risks to water that may affect its use and management from the Catskill Mountains to the Delaware Bay.

MODERATOR: Carol R. Collier, P.P., AICP, Senior Advisor - Watershed Management & Policy

Academy of Natural Sciences of Drexel University

PRESENTATIONS: Water Use in the Delaware River Basin

Gerald J. Kauffman, Ph.D., P.E., Director, University of Delaware Water Re-

sources Agency

Kenneth F. Najjar, Ph.D., P.E., Manager, Planning & Information Technology

Branch, Delaware River Basin Commission

Philadelphia's Water Supply

Christopher S. Crockett, Ph.D., Deputy Commissioner of Planning & Environ-

mental Services, Philadelphia Water Department

The Future of Flow: What do Climate Models Tell Us?

Ray Najjar, Ph.D., Professor of Oceanography, Department of Meteorology,

The Pennsylvania State University

11:00 AM-12:30 PM





FACILITATED DISCUSSIONS: SESSION 1—FOCUS ON SCIENCE & APPLICATION

Sound science is crucial to guide policy development and to ensure that work (i.e., application) effectively achieves intended results. The more we know, the better able we are to define, assess, and address issues, yet keeping up with new data and advancements in knowledge is a daunting task, and interpretation of findings may not always be straightforward. The content covered during these sessions will add to our scientific comprehension of the Watershed and help spark discussion about the knowledge that is needed to realize a long-term vision. All five facilitated breakout groups will begin with issue-specific presentations to prompt ideas and conversation.

#1 WATER QUALITY AND QUANTITY

ROOM#120

FACILITATOR: Roland Wall, Senior Director, Environmental Initiatives

Academy of Natural Sciences of Drexel University

SPEAKERS: Kathryn Christopher, Staff Scientist

Academy of Natural Sciences of Drexel University

Beth Styler Barry, Executive Director Musconetcong Watershed Association

Thomas Murphy, P.E., Chief, Water Systems Operations Division,

Bureau of Water Supply, NY City Department of Environmental Conservation





Monday, October 5

11:00 AM-12:30 PM







FACILITATED DISCUSSIONS—FOCUS ON SCIENCE & APPLICATION (CONTINUED)

#2 FISH & WILDLIFE HABITAT

ROOM #119

FACILITATOR: Rachel Dawson, Senior Manager, Delaware River

National Fish and Wildlife Foundation

SPEAKERS: Paul Faeth, Director, Energy, Water & Climate

Institute for Public Research, CAN

Emile DeVito, Ph.D., Manager of Science and Stewardship

New Jersey Conservation Foundation

Scott Schwenk, Ph.D., Science Coordinator

North Atlantic Landscape Conservation Cooperative, U.S. Fish & Wildlife Service

#3 RECREATIONAL ACCESS

ROOM #117

FACILITATOR: Andrew Strauss, AICP/PP, Principal

Strauss and Associates/Planners

SPEAKERS: Patrick Starr, Executive Vice President

Pennsylvania Environmental Council

Jean Beljean, Delaware River Field Representative

National Parks Conservation Association

Elissa Garofalo, Executive Director

Delaware & Lehigh National Heritage Corridor

#4 SUSTAINABLE ECONOMY

ROOM #125

FACILITATOR: Gerald J. Kauffman, Ph.D., P.E., Director

University of Delaware Water Resources Center

SPEAKERS: Daniel Nees, Senior Research Associate, Environmental Finance Center

University of Maryland

Edward Donahue, III, CMC,, President/CEO,

Municipal & Financial Services Group

Will Price, Director of Conservation Programs

Pinchot Institute for Conservation

Richard Jones, Jr., State Director (Delaware)

The Nature Conservancy



#5 CLIMATE RESILIENCE

ROOM #115

FACILITATOR: Jennifer Adkins, Executive Director

Partnership for the Delaware Estuary

SPEAKERS: Susan Guiteras, Supervisory Wildlife Biologist

U.S. Fish & Wildlife Service

Dan Tamaso

abc27 Meteorologist

Larry Niles, Ph. D.

L.J. Niles Associates

Joshua Moody, Restoration Coordinator Partnership for the Delaware Estuary



12:30-1:45 РМ

LUNCH

BALLROOM (ROOM 101)

SPONSORED BY:

KEYNOTE: The Honorable Jack A. Markell

Governor of Delaware

SPECIAL ADDRESS: The Honorable John C. Carney, Jr.

At-Large Representative, State of Delaware

Host: Collin O'Mara, President & CEO

National Wildlife Federation





#delrivforum

Monday, October 5

2:15-5:15 PM











SITE VISITS

Participants should gather in the Clayton Hall lobby by 2PM.

If you did not select a field trip during the online registration process, but you're interested in participating, please see the Forum Registration desk, located in the Clayton Hall lobby, to inquire about availability.

TOUR ONE: Bike Tour of Green Infrastructure

Bike Tour of Green Infrastructure – University of Delaware's Water Resources Agency will lead an oncampus bicycle tour of green infrastructure to include a rain garden and green roof, as well as consider best practices for design, construction, and maintenance. The tour will also include the Newark Rails to Trails greenway, stormwater wetlands and stream restoration along the White Clay Creek National Wild and Scenic River, with the final stop at a water treatment facility at a craft brewery. Participants can bring their own bike or one will be provided.

Hosted by: Gerald J. Kauffman, P.E., Ph.D., University of Delaware Water Resources Agency

TOUR TWO: Tour of DuPont Environmental Education Center

Located on the edge of the 212-acre Russell W. Peterson Urban Wildlife Refuge, DEEC provides panoramic views of the surrounding freshwater tidal marsh and the City of Wilmington. Take a guided tour of the 4-story Education Center and quarter-mile pond loop, while learning about urban-focused education and outreach efforts. Handicapped accessible.

Hosted by: Delaware Nature Society

TOUR THREE: Garden Tour on a Higher Level: Mount Cuba Center

The Mt. Cuba Center is a botanical garden with a focus on native plants and ecosystems. The Center has over 50 acres of display gardens and more than 500 acres of natural lands. View the remarkable displays of early fall during this private walking tour and learn about native species, landscaping with native plants, and areas of horticultural research. Participants should be able to spend most of the 1.5-hour tour walking/standing on level paths.

Hosted by: Mt. Cuba Center

TOUR FOUR: Functional Recreation in Action: Newark Reservoir

Constructed 10 years ago, the Newark Reservoir serves as both a water supply and recreational amenity, with a 1.8 mile-paved walking trail around its perimeter, connections to the 112-acre William M. Redd, Jr. Park, and sweeping views of the city and surrounding areas. Learn about the community needs that were addressed by construction of this pump-up reservoir, challenges encountered during construction, and its importance for the future of a growing region. Requires the ability to walk on an incline for a short distance.

Hosted by: Newark, Delaware Department of Public Works and Water Resources

TOUR FIVE: Delaware Birding Trail Hike: Thousand Acre Marsh

These extensive freshwater wetlands are a well-known birding destination that are also at risk for a wide range of impacts due to sea level rise. Join staff from DNREC on a tour of the Marsh and hear about the efforts of a multi-agency partnership to expand habitat and bolster ecotourism while combatting a failing levee, related erosion issues, and other challenges.

Hosted by: Delaware Department of Natural Resources and Environmental Control











8:00 AM

REGISTRATION OPENS

Participants should check in at the registration desk upon arrival at Clayton Hall. Please visit the desk at any time throughout the conference if you have questions or need assistance.

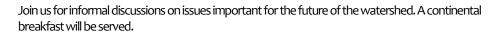
SPONSORED BY:



8:15-9:00 AM

BREAKFAST ROUNDTABLES

LOBBY A



- The Cannonsville Reservoir Scare: Insights & Issues, Dan Plummer & Jeff Skelding, Friends of the Upper Delaware River
- 2. Clean Water Rule, Doug O'Malley, Environment New Jersey
- Delaware River Basin Conservation Act, Kim Beidler, Coalition for the Delaware River Watershed
- Agricultural Brainstorming; Options for Coalition Building, Bill Angstadt, Angstadt Consulting
- Municipal Actions for Water Quality, Alison Hastings, Delaware Valley Regional Planning Commission; Ann Hutchinson, P.P., AICP, Natural Lands Trust
- 6. **Clean Power Plan, Matt Stepp**, Citizens for Pennsylvania's Future (PennFuture); **Katie Bartolotta**, Citizens for Pennsylvania's Future (PennFuture)
- 7. Special Protection Waters & Antidegradation: State Approaches, Gayle Killam, River Network

9:00-9:30 AM

OPENING KEYNOTE

MAIN AUDITORIUM (128)

KEYNOTE: Laura Sparks

Executive Director

William Penn Foundation

Host: Grant La Rouche, Regional Representative & Manager, Delaware River Programs

National Wildlife Federation





Coalition

for the

Delaware River Watershed



9:30-10:30 AM





PLENARY: ENVISIONING OUTCOMES: LEARNING FROM OTHER LANDSCAPES

Main Auditorium (128)

Pollution, warming waters, invasive species, and large-scale habitat fragmentation don't just affect the Delaware, but watersheds across the United States. While our community grapples with protecting our watershed, other great waters like The Great Lakes and Chesapeake Bay are also working to restore their ecosystems. These areas have learned important lessons about applied research, policies, and actions they've undertaken to protect and restore their environments. Join us for a discussion about strategies that our colleagues are using to protect and restore water on a landscape scale.

MODERATOR: Erik Meyers, Vice President

The Conservation Fund

SPEAKERS: Todd Ambs, Director

Healing Our Waters Coalition (Great Lakes)

Jill Witkowski Heaps, Director

Choose Clean Water Coalition (Chesapeake)

Scott Schwenk, Ph.D., Science Coordinator

North Atlantic Landscape Conservation Cooperative, US Fish & Wildlife Service

10:45 AM-12:15 PM





FACILITATED DISCUSSIONS, SESSION 2: FOCUS ON EDUCATION & OUTREACH

When people are aware of the significance of the resources their lives and livelihoods depend on, they are better able to connect their actions and those of others to the health of the watershed. But to successfully raise awareness typically requires more than a one-size-fits-all approach. Different audiences require different messages and delivery mechanisms, and measuring effectiveness is challenging. In these sessions, you'll learn about diverse efforts underway around the watershed while considering how they can contribute to achieving future goals. All five facilitated breakout groups will begin with issue-specific presentations to spark conversation.

#1 WATER QUALITY AND QUANTITY

ROOM #120

FACILITATOR: Grant La Rouche, Regional Representative & Manager, Delaware River Programs

National Wildlife Federation

SPEAKERS: Jennifer Adkins, Executive Director

Partnership for the Delaware Estuary

Sue Currier, Executive Director Delaware Highlands Conservancy

Bethany Keene, Outreach and Events Coordinator

Delaware Highlands Conservancy

Kimberly J. Murphy, President

Berks Nature



10:45 AM-12:15 PM





#2 WILDLIFE HABITAT

ROOM #117

FACILITATOR: Jean Lynch, Stewardship Project Director

New Jersey Audubon Society

SPEAKERS: Diane Rosencrance, RLA, Senior Director, Landscape Planning

Natural Lands Trust

Angela Wenger, Executive Vice President and Chief Operating Officer Center for Aquatic Sciences at Adventure Aquarium Camden Aquarium

#3 RECREATIONAL ACCESS

ROOM #119

FACILITATOR: Jaclyn Rhoads, Ph.D., Assistant Executive Director

Pinelands Preservation Alliance

SPEAKERS: Ethan McKinley, Superintendent

First State National Historical Park

Lamar Gore, Manager

John Heinz National Wildlife Refuge at Tinicum

#4 SUSTAINABLE ECONOMY

ROOM #115

FACILITATOR: Patricia Elkis, P.P., AICP, Division Director, Planning

Delaware Valley Regional Planning Commission

SPEAKERS: Joy Oakes, Senior Director, Mid-Atlantic Region

National Parks Conservation Association

Christopher Anderson, Watershed Partnerships Coordinator

Philadelphia Water Department

#5 CLIMATE RESILIENCE

ROOM #125

FACILITATOR: Ginger North, Director of Conservation

Delaware Nature Society

SPEAKERS: Saleem Chapman, Director of Environmental Justice

Clean Air Council

Patty Doerr, Director of Marine and Coastal Programs

The Nature Conservancy

Lisa Locke, Executive Director Delaware Inter-Faith Power & Light





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12:15-1:30 PM

LUNCH

BALLROOM (ROOM 101)

SPONSORED BY



KEYNOTE: Shawn Garvin

Regional Administrator

EPA Region 3

US Environmental Protection Agency

Host: Larry Schweiger, President and Chief Executive Officer

Citizens for Pennsylvania's Future (PennFuture)



1:45-3:15 PM

FACILITATED DISCUSSIONS, SESSION 3: FOCUS ON POLICY & ADVOCACY

Effective advocacy helps drive effective policies, but implementation can be complicated by a wide range of other factors including resource constraints, competing priorities, political climate, and programmatic details. More often than not, a sustained effort is required over a long period of time with adjustments along the way as knowledge and/or circumstances change. These sessions will highlight some of the key policies and related advocacy efforts that shape our watershed, and illuminate issues that are critical to safeguarding its future. All five facilitated breakout groups will begin with issue-specific presentations to spark conversation.

#1 WATER QUALITY AND QUANTITY

ROOM #120

FACILITATOR: Liz Deardorff, Director, Clean Water Supply Program

American Rivers

SPEAKERS: Dennis Miranda, Executive Director

Wissahickon Valley Watershed Association

Jeff Skelding, Executive Director Friends of the Upper Delaware River

Gayle Killam, Deputy Director, Science and Policy

River Network



1:45-3:15 PM





FACILITATED DISCUSSIONS, SESSION 3: FOCUS ON POLICY & ADVOCACY

#2 FISH & WILDLIFE HABITAT

ROOM #119

FACILITATOR: Sarah Fleming, Manager of Conservation Programs – North Atlantic

Ducks Unlimited

SPEAKERS: Kellis Moss, Director of Public Policy

Ducks Unlimited

Kasey Taylor, State Conservationist (DE) Natural Resource Conservation Service

Kelly Mooij, Esq., Vice President, Government Relations

New Jersey Audubon Society

#3 RECREATIONAL ACCESS

ROOM #117

FACILITATOR: Mark Zakutansky, Mid-Atlantic Policy Manager

Appalachian Mountain Club

SPEAKERS: David Lange, Program Manager, Rivers, Trails, and Conservation Assistance

National Park Service

Anthony Aglio, Bicycle Coordinator Delaware Department of Transportation

#4 SUSTAINABLE ECONOMY

ROOM #125

FACILITATOR: Matthew Stepp, Director of Policy

Citizens for Pennsylvania's Future (PennFuture)

SPEAKERS: Anna Shipp, Project Manager

GSI Partners, Sustainable Business Network

Jeff Bross, Chairman & Senior Consultant

Duffield Associates

Andrew Levine, Co-Chair, Environmental Practice Group

Stradley Ronon

Matt Walker, Community Outreach Director

Clean Air Council





#5 CLIMATE RESILIENCE

ROOM #115

FACILITATOR: Tim Dillingham, Executive Director

American Littoral Society

SPEAKERS: Amanda Santoni, Coastal Management Fellow

Delaware Department of Natural Resources and Environmental Control

Karl Schrass, Climate Adaptation Manager

National Wildlife Federation

3:30-5:00 PM



WORKSHOPS

STORMWATER PERMITS AND YOU: REGULATORY OVERVIEW AND OPPORTUNITIES FOR INVOLVEMENT IN THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMITTING PROCESS
ROOM #119

This workshop will provide a general overview of the MS4 permitting process including a comparison of programs across the basin states. We will also provide tips on how you and/or your organization can become involved in the process, using Pennsylvania's MS4 program as a case study. Participants will also learn about new developments related to the federal Small MS4 regulations.

PRESENTERS: Susan Myerov, AICP, Watersheds Program Director

Pennsylvania Environmental Council

Michael Helbing, Esq., Staff Attorney

Citizens for Pennsylvania's Future (PennFuture)



ROOM #120

Increasing the diversity of Delaware River Watershed organizations is essential to the success of our clean water movement. This workshop will focus on three areas—governance, hiring, and communications—as part of a larger discussion on increasing diversity within our organizations. As a group, we will discuss strategies to build connections with diverse communities and promote environmental justice. We will all walk away with a "Diversity Tool-Kit" that includes concrete steps to increase diversity among your staff, board, and volunteers.

PRESENTERS: Jill Witkowski Heaps, Director

Choose Clean Water Coalition

Chante Coleman, Field Manager Choose Clean Water Coalition

SPEAKERS: Saleem Chapman, Director of Environmental Justice

Clean Air Council

Julie Slavet, Executive Director

Tookany/Tacony-Frankford Partnership





3:30-5:00 PM

STOP PENELANE PENELAN





5:00 рм

WORKSHOPS (CONTINUED)

PIPELINES THREATS AND STRATEGIES

MAIN AUDITORIUM (128)

The current proliferation of pipelines in the region poses significant challenges to local water quality, land preservation and land use laws. Learn about the legal framework governing pipeline development, the impacts that pipelines can have on streams and wetlands, and how you can get involved in this emerging issue.

PRESENTERS: Tom Gilbert, Campaign Director-Energy, Climate and Natural Resources

New Jersey Conservation Foundation

SPEAKERS: Katy Dunlap, Esq., Eastern Water Project Director

Trout Unlimited

Sam Koplinka-Loehr, Shale Gas Organizer

Clean Air Council

ENHANCING YOUR MONITORING PROGRAM WITH HIGH TECH VOLUNTEERS

ROOM #125

Is your organization looking to start or upgrade your volunteer monitoring program and are you wondering how to develop your program to collect the best data you can? Join Green Valleys Watershed Association, Natural Lands Trust, and French & Pickering Creeks Conservation Trust for a workshop designed to help you get more out of your program and where you will learn directly applicable strategies and techniques. Recruitment? We will look at the successful marketing plan and the interview process derived from Natural Lands Trust's Force of Nature program. Scheduling Training Sessions? We discuss our strategy for matching good stream sites with indoor venues throughout the watershed to provide a fun program both rich in information and experiential learning. We complement this training with presentations from partners and guest speakers on a range of subjects. Monitoring Topics? From Habitat Assessments to Macroinvertebrates to sample collection, we will cover what we are teaching inside, and what we are training creek-side.

PRESENTERS: Michael Bullard, Science Coordinator

Green Valleys Watershed Association

Patrick Gardner, Conservation Associate French & Pickering Creeks Conservation Trust

Kelsey Stanton, Communications & Volunteer Coordinator

Green Valleys Watershed Association

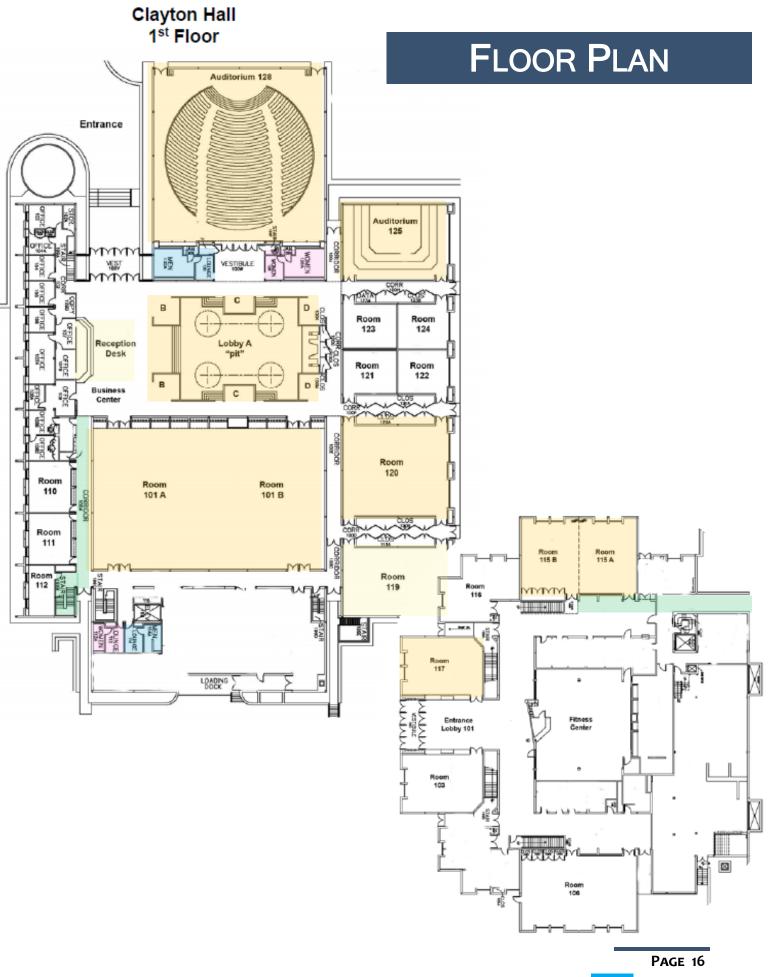
Debbie Beer, Director, Engagement

Natural Lands Trust

CONFERENCE CONCLUDES

Thank you to all participants, and stay tuned to help turn conversation into action.









THANK YOU TO OUR SPONSORS

FOUNDING



PREMIER







PRESENTING





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Coalition
for the
Delaware River Watershed



FRIEND OF THE FORUM









SUPPORTER













Photo Credits









Cover: "Reflected" Mill Pond, Monroe County. by Nicholas A. Tonelli, Flickr/nicholas_t is licensed under CC BY 2.0; cropped to fit.

Page: [clockwise from top left] "White Clay Creek State Park" ⊚ Grant La Rouche; "take off" by Flickr/Elizabeth Evan, cropped to fit, is licensed under CC BY 2.o. Cropped to fit; "DRBCA Re-Introduction on Capitol Hilli" ⊚ Grant La Rouche; "Bethlehem, PA native garden" ⊚ Grant La Rouche; "Grant La Rouche; "Drant La Rouche; "Grant La Rouche; "Ben Franklin Bridge" ⊚ Grant La Rouche; "Adventure Race Pepaction" by Grant O'Beirne, cropped to fit, by Flickr/Watershed Post is licensed under CC BY 2.o.

Page 3: "Canoeing on the D&R Canal" by Flickr/Jim Lukach, cropped to fit, is licensed under CC BY 2.0

Page 4: "Cannonsville Reservoir from the air" annonsville Reservoir, which dammed the Delaware River. A tiny portion of the NYO&W can be seen (barely) in the upper right by Flickr/Russ Nelson is licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license. "Prairie Grass Trail (2)" Lehigh River, Carbon County, as seen from the Prairie Grass Trail at the Lehigh Gap Nature Center. by Nicholas A. Tonelli, Flickr/nicholas_t, cropped to fit, is licensed under CC BY 2.0

"waterwork III" by Juan Torres, Flickr/santoplacido is licensed under CC BY 2.0; "Fox kit pillow" by Flickr/babyrthimmd is licensed under CC BY 2.0; Page 5: "Grasshopper Sparrow" www.allaboutbirds.org/guide/Grasshopper_Sparrow/ld by Flickr/puttefin is licensed under CC BY 2.0; "smallmouth bass" by Flickr/tm22, cropped to fit, is licensed under CC BY 2.0; "smallmouth bass" by Flickr/tm22, cropped to fit, is licensed under CC BY 2.0; "TUBING" by Jolene, Flickr/joeyjojojo is licensed under CC BY 2.0;

Page 6: "Prime Hook National Wildlife Refuge marsh restoration - birds using restored marsh area" More project details: www.fws.gov/hurricane/sandy/projects/PrimeHookBarrierBeach.html Photo credit: Bart Wilson/USFWS Cropped to fit by Flickr/usfwsnortheast is licensed under CC BY 2.0

Page 7: "Froggy" Cropped to fit; by K Christiansen, Flickr/4x4prints is licensed under CC BY 2.0; "DSCN0986.JPC". Plc from the Move-In Days 2010 at the University of Delaware. Cropped to fit by Mathieu Plounde, Flickr/mathplourde is licensed under CC BY 2.0; "DEEC boardwalk"; © Grant La Rouche; "Convergence" Newark DE reservoir. Cropped to fit; by Alan Levine, flickr/cogdogblog is licensed under CC BY 2.0; "Indigo Bunting (Port Penn)" Indigo Bunting (Passerina cyanea) at the Port Penn Impoundments, Augustine Wildlife Area, New Castle county, Delaware. Cropped to fit by Brian Henderson, Flickr/stinkenroboter is licensed under CV 27.0

Page 8: "Site Visit in the Hot; Ashland Nature Center" © Grant La Rouche

Page 9: "Fall Morning" Wissahickon Creek, Valley Green, Philadelphia. Morning Mist by Flickr/Tom Bee is licensed under CC BY 2.0; "Alight" Cherry Valley National Wildlife Refuge, Monroe County. by Nicholas A. Tonelli, Flickr/nicholas_t, cropped to fit, is licensed under CC BY 2.0;

Page 10: "Elizabeth Wilson - Muskrat - Bombay Hook National Wildlife Refuge, Smyrna, DE" Wild and Scenic. By Partnership for the Delaware Estuary, Flickr/delawareestuary is licensed under CC BY 2.0; "White Clay Creek" © Grant La Rouche; "Training Citizen Scientists" The Partnership for the Delaware Estuary (PDE) trained over 100 volunteers to survey freshwater mussels last summer. This included green-job trainees from both Camden and Wilmington. These citizen scientists will now report what they find to the PDE. This will help the staff's scientists decide where to restore these rare shellfish, which can filter up to 10 gallons of water per day. This work would not

Page 11: "Poppy hunting; Cape Henlopen State Park Salt Marsh" © Grant La Rouche; "Downfall" One of several Slateford Creek waterfalls, Northampton County, within the Delaware Water Gap National Recreation Area. by Nicholas A. Tonelli, Flickr/nicholas_t, cropped to fit, is licensed under CC BY 2.0; "Becoming the Johnny Appleseed of Mussels" The Partnership for the Delaware Estuary (PDE) reintroduced freshwater mussels into six waterways last summer. Pennsylvania's Tacony, Skippack, and Ridley creeks; Delaware's Christina River and Shellpot Creek; and along the Delaware River near the Tacony Bridge. The purpose of this experiment is to see if these sites can once again sustain these all-natural water filters. Streams where they survive and grow best will be candidates for future mussel recovery efforts. The PDE thanks the Delaware Water Infrastructure Advisory Council, DuPont Clear into the Future program, and the Pennsylvania Coastal Resources Management Program for supporting this work. This year's key partners include The Academy of Natural Sciences of Drexel University, Philadelphia Water Department, and the Tookany-Tacony/Frankford Watershed Partnership. To see how you can help, please visit DelawareEstuary.org/Mussel-Survey-Program. Credit: Shaun Bailey of the Partnership for the Delaware Estuary by Partnership for the Delaware Estuary, Flickr/DelawareEstuary is licensed by under CC BY 2.0

Page 12: "The Toll Bridge" There are two parallel bridges in our area; one can be seen from the other. I was standing on what local people call the "free bridge" as I took this photo of the "toll bridge." by John Flick/mtsofan is licensed under CC BY 2.0 Page 13: "May 287 - Idyllic": 10/14/09 88/7/365. Today was a day trip to the town of Jim Thorpe, Pa. (yes, that's a real place) to ride the trail along the Lehigh River between White Haven and Jim Thorpe. You can leave your car at the southern end point and get a shuttle to the other end and ride one way, which is 25 miles. There were plenty of lovely autumn scenes to shoot, including this stream at about the halfway point. I think I'm finally getting the hang of shooting moving water. This was a handheld shot - I braced the camera (and myself) against a tree. by MissTessmacher, Flick/r]bassclarinetist is licensed under CC BY 2.0; "Musconetcong River Bridge Post Steering Committee Meeting" ©Grant La Rouche; "Princeton Hydro engineer Laura Wildman oversees construction." © USDA Natural Resource Conservation Service New Jersey

Page 14: "Little Brown Creeper" Little Brown Creeper captured at the bird banding station this morning. by Flickr/ amdougherty is licensed by under CC BY 2.0; "Teacher Workshop Session IV- Life on the Shore" Living Shorelines, Bayshore Center at Bivalve and Haskin Shellfish Research Lab by Partnership for the Delaware Estuary, Flickr/ DelawareEstuary is licensed by under CC BY 2.0; "neighborhood worker" is licensed by under CC BY 2.0 by TCDavis, flickr/tcd123;

Page 15: "277 - Durham PA, Stop PennEast sign" SONY DSC by Flickr/ScubaBear68 is licensed by under CC BY 2.0; "DSC02955.jpg" by Flickr/schwao21; "Our #estuaryscience crew spent today checking up on the #freshwatermussels they reintroduced to #NCC0's #ChristinaRiver. Each adult can filter up to 10 gallons of water per day for many decades. This makes for a cleaner #river for drinking, #fishing, and" by Partnership for the Delaware Estuary, Flickr/DelawareEstuary is licensed by under CC BY 2.0; Page 16:; "And they're off!" More than 50 teams of adventure racers start the 100-mile national championship race on a rainy Pepacton Reservoir Friday morning. Photo courtesy Catskill Watershed Corp. by Flickr/watershedpost is licensed by under CC BY 2.0

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