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Go Wild!

50th Anniversary of the Wild and Scenic Rivers Act

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Young osprey calling
from nest

CREDIT: Lynn Maun, Great Egg Harbor Watershed Association



Newsletter of the Partnership for the Delaware Estuary: A National Estuary Program

ESTUARY NEWS

The Partnership for the Delaware Estuary

Connecting people, science, and nature for a healthy Delaware River and Bay

SUMMER 2018

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DIRECTOR'S MESSAGE



The Delaware River may not be the first place that comes to mind for wilderness. But think again! This year's 50th anniversary of the National Wild and Scenic Rivers Program is a reminder that you don't have to go far to go wild. There are a number of Wild and Scenic Rivers in the Estuary focus area, each with its own unique

draw (see page 8). All offer amazing wilderness experiences not far from home.

These wild and scenic rivers are just a few amazing places in and around the Delaware Estuary to enjoy the outdoors. The Delaware River watershed is also home to six national wildlife refuges, including America's First Urban Refuge, John Heinz at Tinicum. And a growing network of trails in and near the water, including The Circuit in Philadelphia, the Schuylkill River Trail, the Northern Delaware and East Coast Greenways, and Rancocas Creek Water Trails, not to mention scenic byways along the Delaware Bayshore on both sides of the Bay.

Studies have shown that enjoying nature is not just good for our health in the obvious ways (think hiking, paddling, biking), but ways that are harder to see – relieving stress, improving concentration, mental health, and even vision. Outdoor recreation is also an important part of the economy, contributing an estimated \$1.2

billion in the watershed each year. And it's one of the best ways for organizations like PDE and those in the Alliance for Watershed Education (see page 14) to connect people to our work for clean water and a healthy environment.

So if you find yourself feeling guilty about taking an afternoon off for a little time outdoors, don't. It's good for your body and mind, not to mention the economy and the environment. So, enjoy! ♦

Jennifer A. Adkins
Executive Director
Partnership for the Delaware Estuary



See "Go Wild" on page 8
A man fly fishes in the White Clay Creek Wild and Scenic River.

CREDIT: Stewart Whisenant

MEETINGS CONTACT LIST

Meetings conducted by the Partnership for the Delaware Estuary's implementation and advisory committees occur on a regular basis and are open to the public. For meeting dates and times, please contact the individuals listed below:

Estuary Implementation Committee

Jennifer Adkins,
Executive Director (Chair)
(800) 445-4935, ext. 102
jadkins@DelawareEstuary.org

Monitoring Advisory & Coordination Committee

John Yagecic, P.E., Manager, Water Quality Assessment
Delaware River Basin Commission
(609) 883-9500, ext. 271
john.yagecic@drbc.nj.gov

Toxics Advisory Committee

Ron MacGillivray, Senior Environmental Toxicologist
Delaware River Basin Commission
(609) 883-9500, ext. 257
ron.macgillivray@drbc.nj.gov

Science and Technical Advisory Committee

Dr. Danielle Kreeger, Science Director
(800) 445-4935, ext. 104
dkreeger@DelawareEstuary.org

Water Quality Advisory Committee

John Yagecic, P.E., Manager, Water Quality Assessment
Delaware River Basin Commission
(609) 883-9500, ext. 271
john.yagecic@drbc.nj.gov

New Congressional Estuaries Caucus and Delaware River Grants Program

by Jennifer Adkins, Executive Director, PDE

More than half of the U.S. population lives in coastal areas, where estuaries provide food, jobs, recreation, and coastal protection. National Estuary Programs provide an opportunity for people, governments, and businesses, to work together with scientists and other experts to keep estuaries healthy and productive. Partnership for the Delaware Estuary is one of 28 National Estuary Programs in the country and is the organization that brings these kinds of partners together for the Delaware Estuary Program.

The National Estuary Program and others that provide critical resources for estuaries have faced funding threats in the last several years. In response, a Congressional Estuaries Caucus formed last year to educate leaders at all levels of government about the importance of estuaries. U.S. Rep. Frank LoBiondo of New Jersey is one of four co-chairs leading the caucus.



Estuaries Caucus Co-Chair U.S. Rep. Frank LoBiondo at a press conference for Delaware Bay Oyster Restoration in 2012. The Caucus has highlighted the importance of estuaries at a critical time.

The Delaware Estuary has featured prominently in four of the six briefings the caucus has hosted in Washington D.C. since 2017. Topics for these briefings have

included the National Estuary Program, Natural Infrastructure and Living Shorelines, Private Sector and NGO Support, and Coastal Resiliency and Preparedness.

The caucus has proven to be a valuable way to educate congressional leaders and staff about the important role of estuaries. Proposed 2017 and 2018 funding cuts to the National Estuary Program were averted last year thanks in part to caucus briefings, leadership by caucus co-chairs, outreach by the Association of National Estuary Programs and many NEPs.

Estuaries Caucus Co-Chairs

Rep. Bill Posey (Florida)
Rep. Suzan Bonamici (Oregon)
Rep. Frank LoBiondo (New Jersey)
Rep. Rick Larsen (Washington)

But the need to continue educating people about the importance of estuaries continues.

New Delaware River Grants Program

With the success of the Delaware River Basin Conservation Act in 2016 and an appropriation of \$5 million, the Delaware River now has funding of its own. As a result, the U.S. Fish & Wildlife Service introduced the new Delaware River Conservation Fund grants program this year, administered by the National Fish and Wildlife Foundation. This is a major accomplishment for PDE and other organizations working with the Coalition for the Delaware River Watershed, which led the charge to create and fund this new program. Grants will support projects to improve water quality as well as fish and wildlife habitat throughout the Delaware River Watershed, including the Delaware Estuary. Proposals are being accepted through Sept. 27 at <http://www.nfwf.org/delaware>.



From left to right: Rita Yelda, outreach and communications manager for the Coalition for the Delaware River Watershed (CDRW), CDRW Director Sandra Meola, U.S. Sen. Thomas R. Carper, and U.S. Sen. Christopher Coons, celebrate \$5 million in funding for the Delaware River at a July press conference held at Bombay Hook National Wildlife Refuge in Smyrna, Delaware. A similar press conference celebrating the funding was held on July 17 in Port Murray, New Jersey.

Clean Water Rally Reaps \$10 Million for Clean Water in Delaware

By Brenna Goggin, Director of Advocacy, Delaware Nature Society

On June 5, Delaware's Clear Choice campaign brought more than 150 clean water advocates to Dover, Delaware for the annual Clean Water Rally. Attendees urged Gov. John C. Carney and members of Delaware's General Assembly to find a dedicated and sustainable funding stream for clean water. After gathering outside of Legislative Hall, citizen advocates met with their local legislators to explain why sustainable clean water funding is critical to the Delaware. Thanks to these advocates, legislators secured \$10 million for clean water in Delaware's FY 2019 budget — \$4 million more than the governor recommended. ♦

Living by the Tides

By Mark Showers, board chair for the Bayshore Center at Bivalve in Bivalve, New Jersey

Time and tide wait for no one.

That's important to remember if you live, work or play on the water. Large commercial craft and single-passenger kayaks alike must obey the tides. Ignore their rhythms, and boaters can find themselves out of their depths.

Not only can tides drastically affect water levels, tide cycle times move ahead nearly an hour each day, which is why it's important to keep track of their schedules. Tidal ebbs and flows rule life on the Delaware Bay. Water levels can rise or fall as much as 8.5 feet twice a day. Compared to the nearby Chesapeake Bay whose tidal water levels rise and fall by a mere 2.5 feet, crafts have a rougher time in the Delaware Bay.

Large commercial ships that travel in and out of Wilmington and Philadelphia navigate through deep water, and therefore follow high tide schedules so they can pass through shipping channels without their keels scraping bottom. Conversely, ships traveling under the Delaware Memorial Bridge near Wilmington and the Commodore Barry Bridge in New Jersey and Pennsylvania must plan to pass during low tide in order to clear the bridge heights.

Tides can affect daily life for residents and farmers on the bay in New Jersey and Delaware. Several times a month, high tides can block access to bay towns. As water levels have risen over the last

several years, residents have had to watch tide schedules before leaving and going home to

keep from being stranded or blocked. Commercial oyster farmers tend to their stock and equipment at low tide. Every day, the time of day for this chore changes due to tides.

Kayakers and boaters often explore areas around the Delaware Bay to birdwatch and see other wildlife. Birdwatching is fun, and minding tide schedules can prevent someone from getting stranded on the mudflats — a scary and dangerous spot to be in the farther you're out from shore. Boaters can wind up crawling in the mud, heaving their boat through a long, mucky trek to shore, or even having to call for emergency help.

A good rule of thumb is to plan a trip so the tidal current is with the boat upon return. This can make for a smoother and less tiring experience since some Delaware Bay currents run at 3 mph. Imagine walking on a treadmill at that speed on a high resistance for several miles. Many days, wind and wave direction might change during your outing. Always allow for a margin of safety in your trip planning.

The daily cycle of tides provides a rhythm to life on

the Bay. For a smooth ride, obey the tides.

To check tide schedules on the Delaware Bay, go to Google and look up Delaware Bay Tides. You can also visit www.saltwatertides.org. ♦



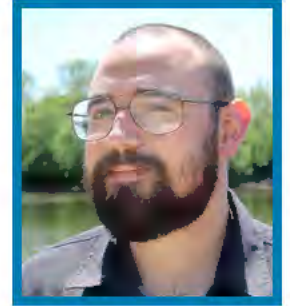
CREDIT: Mark Showers

Staff News

PDE recently had some new staff join the team.



Kate Layton started in April as the agency's new marketing and communications manager. As the editor of Estuary News, manager of DelawareEstuary.org, and PDE's point of contact for the press, she promotes and shares PDE far and wide. Layton came to the PDE from the Dover/Kent County Metropolitan Planning Organization in Camden, Delaware where she worked for 10 years as its public outreach manager.



Matt Gentry, a science intern, is working with various projects and providing support in the field, lab and office as needed. Before coming to PDE he worked as a staff scientist at The Academy of Natural Sciences of Drexel University, occasionally on projects in which the PDE was involved.



Also a science intern, **Cairra Martin** works on living shorelines, wetland restoration and mussel propagation projects. Martin is a Master of Science candidate at the University of Pennsylvania with a concentration in Hydrogeology. She has a Bachelor of Science degree in Environmental Policy from the University of Florida in Gainesville.

Irina Beal's work with PDE involves freshwater mussels and assistance with Living Shoreline projects. Beal came from the Stockton Coastal Research Center in Port Republic, New Jersey where she collected topobathymetric data, or onshore and offshore beach profiles, of the New Jersey beaches from Sandy Hook down to Cape May Point.



Kylie Hall is PDE's new events and office administrator. As such, she provides both development and office support. Hall spent two years as the client services manager at Affinity Wealth Management, Inc.

For more information and background on the PDE team, see www.delawareestuary.org/pde-staff-directory. ♦

Board News

PDE also welcomed six new members to its Board of Directors in 2018, including **Juni Alum** from GPI, **Francis Faunt** from DRBA (retired), Helen Gregory from PSEG, **Roxanne Jayne** from the Law Office of Roxanne Jayne, LLC, **Larry Malizzi** from OBX, and Jill **Vorhees** from Monroe Energy. For a full listing of the PDE Board of Directors, see www.delawareestuary.org/board-of-directors.

CREDITS: Kate Layton | Martin photo courtesy of Cairra Martin and the University of Pennsylvania

PDE and Partners Lay Groundwork for Research Partnership

by Kate Layton, Marketing and Communications Manager, PDE



CREDIT: Renee Brecht

Representatives from partner agencies get ready to sign a memorandum of understanding for the Aquatic Research and Restoration Center. From left to right are Kathryn Ott Lovell, commissioner for the Philadelphia Department of Parks and Recreation; John Brady, president and CEO of the Independence Seaport Museum; Maitreyi Roy, executive director of the John Bartram's Association; Scott Cooper, president and CEO of the Academy of Natural Sciences of Drexel University; Donna Murasko, dean of the College of Arts and Sciences at Drexel University; Debra McCarty, commissioner for the Philadelphia Water Department and Jennifer Adkins, executive director of the Partnership for the Delaware Estuary (PDE).

In May, the Partnership for the Delaware Estuary (PDE) became one of seven regional cultural and environmental organizations to lay the groundwork for a better environmental future.

At a ceremony outside Fairmount Water Works Interpretive Education Center, PDE and partners signed a memorandum of understanding to officially form the Aquatic Research and Restoration Center (ARRC). Besides PDE, ARRC partners include:

- Philadelphia Water Department
- Philadelphia Department of Parks and Recreation
- Drexel University's College of Arts and Sciences
- The Academy of Natural Sciences of Drexel University
- Independence Seaport Museum
- Bartram's Garden

"The goal of this endeavor is to advance innovative science and restoration for improving the health of urban waterways," PDE Executive Director Jennifer Adkins said.

ARRC is committed to the developing programs and projects that promote cleaner water and environmental resilience in the urban waters of the Delaware Estuary. Projects would include a large-scale freshwater mussel hatchery and educational center in Philadelphia, shad propagation and living shorelines projects. The Pennsylvania Infrastructure Investment Authority plans to invest \$7.9 million in freshwater mussel propagation and restoration, including construction of a hatchery. The facility would be the first in the world to be dedicated to restoring freshwater mussels for the main goal of promoting cleaner water. Mussels are natural water filters. An adult mussel can filter up to 10 gallons of water a day. Hatchery-bred mussels will be raised in ponds across the region, then be transplanted to streams.

"Freshwater mussels are one of the most imperiled groups of animals and restoring healthy mussel beds in appropriate areas is one way that we can rebuild nature's ability to filter some important types of pollutants," PDE Science Director Danielle Kreeger said. "The ARRC team will also explore new ways to restore mussel beds, such as in living shoreline projects. These are new restoration concepts, and the ARRC will foster collaboration to test where and how mussel beds, wetlands and living shorelines furnish the greatest environmental and societal benefits."

Bartram's Gardens in Philadelphia is the chosen site for the proposed large-scale mussel hatchery.

Maitreyi Roy, executive director of John Bartram's Association, called the partnership a wonderful opportunity for Bartram's to expand its watershed education. She said that hundreds of children who come to the garden could engage in what it takes to care for our watershed.

The original concept for the partnership developed several years ago with a few agencies. The MOU expanded the partnership to the eight agencies.

Since a small-scale mussel hatchery opened last year at Fairmount Water Works, scientists from PDE, Philadelphia Water Department and Drexel University have successfully bred mussels of five different native species. Together with other PDE-led mussel projects, more than 30,000 baby mussels have been produced since early 2017.

"That's one healthy household of mussels," said Debra McCarty, commissioner for the Philadelphia Water Department. "And one of the coolest hidden gems of the city."

John Brady, president and CEO of the Independence Seaport Museum in Philadelphia said the work ahead

CREDIT: Renee Brecht



Debra McCarty, commissioner for the Philadelphia Water Department, left, and Jennifer Adkins, executive director of the Partnership for the Delaware Estuary (PDE), celebrate the signing of the memorandum of understanding.

would not be possible without the help of all the institutions coming together to form the partnership.

Kathryn Ott Lovell, commissioner with the Philadelphia Department of Parks & Recreation said it was appropriate to hold the signing at the Fairmount Water Works.

"Not only is the history of Philadelphia directly connected to our waterways, but the history of our department is directly

connected to [Fairmount Water Works] in an effort to keep the city's water supply clean."

"The fact that it has become a reality with already some success is amazing," said Donna Murasko, dean of the college of Arts and Sciences at Drexel University.

Scott Cooper, president and CEO of the Academy of Natural Sciences of Drexel University said ARRC's formation is an important step in developing a wide range of education and research opportunities throughout Pennsylvania, New Jersey and Delaware.

"It's exciting that we might be able to bring back mussels into areas that have not had them for decades," Cooper said. "And in this way, we'll be helping in some small part stabilize stream bottoms and to increase stream water quality." ♦



CREDIT: Kate Layton

Research and restoration of freshwater mussels is a big part of the mission for the Aquatic Research and Restoration Center



GO WILD

The national Wild and Scenic Rivers program turns 50 this year. | To celebrate, show off your wild side and take advantage of all the things to do within the Delaware Estuary.

By Kate Layton, Marketing and Communications Manager, Partnership for the Delaware Estuary

In 1968, Congress created the National Wild and Scenic Rivers System, and this year, we're going wild about its 50th anniversary.

According to Rivers.gov, the website about the National Wild and Scenic Rivers System, Congress approved the Act "to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations."

As of August 2018, the National System protects 12,754 miles of 209 rivers in 40 U.S. states and Puerto Rico. Of those, nearly 440

miles of rivers and streams are within the Delaware River Basin where, 50 years later, the program is alive and well. Today, advocates can look back on the impact the program has had on the Estuary and the policy, preservation, places and activity around them that are wild, scenic and worth visiting.

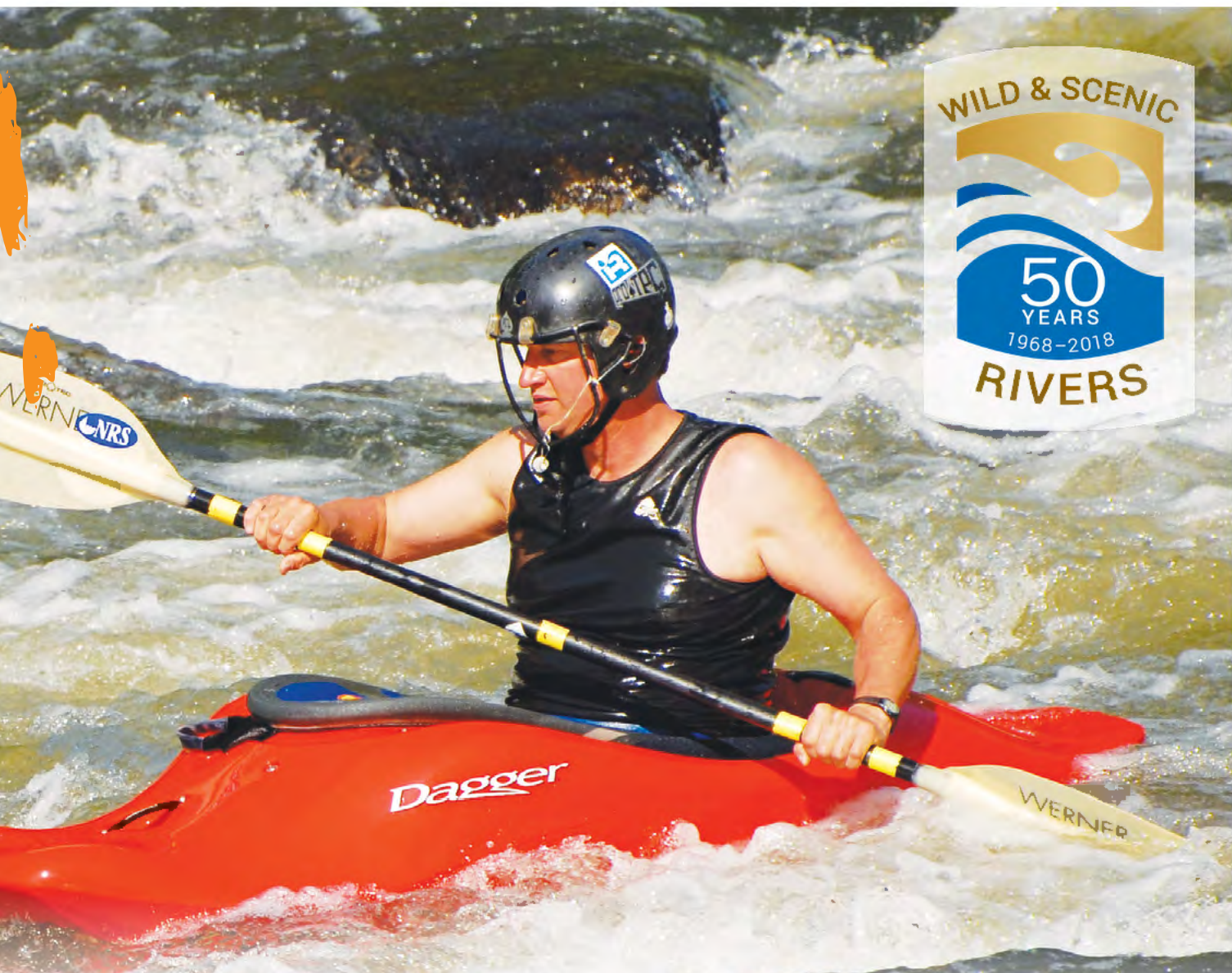
"I would say the program has had a very positive impact on the Delaware Bay," said Shane Morgan, watershed coordinator for the White Clay Creek Wild and Scenic Program.

Two wild and scenic rivers are in the lower half of the Delaware

River Basin -- White Clay Creek and the Maurice River -- which are the focus area for the Partnership for the Delaware Estuary.

In 2000, White Clay Creek was the first river to be designated on a watershed basis. This "beyond-the-riverbank" approach takes into consideration the variety of influences that affect river habitat and water quality.

Morgan said the Act brings in funding that places like the White Clay Creek Watershed, which straddles Pennsylvania and Delaware, can leverage with other funding sources to bring in more partners and better projects. A



wild and scenic designation also adds visibility to our waterways, Morgan said, which helps when organizations like hers apply for grants or communicate with the public.

"They really latch on and take pride in the fact that they live in a National Wild and Scenic watershed," Morgan said.

Doug Janiec, who serves on the steering committee for the White Clay Creek Wild and Scenic River Program, said the area requires a huge coordination between Pennsylvania and Delaware state government, as well as municipal and county governments and

non-profits. The part of the area that lies within Pennsylvania territory was dedicated to the state, and is its only nature preserve. Delaware State Parks oversee the Delaware side of the preserve. Federal funds that come from the Wild and Scenic System pay for land acquisition, conservation, restoration, and for an employee to manage daily business, Janiec said.

"The most unique thing about it is, you can walk into this area — you're smack dab within the [Interstate-95] area — and the main corridor of this river is wooded. You go in, and you don't

hear the cars. It's an oasis. It's this big, natural area within a densely populated area. You just look around and see nature."

Head east to New Jersey, and you'll come to the Maurice River and its tributaries, the Muskee, the Manumuskin, and the Menantico rivers.

Jane Morton Galetto, board president of the Citizens United to Protect the Maurice River and Its Tributaries, Inc., said, "The greatest impact of the wild and scenic program on the Maurice and its tributaries possibly took place during the study process.

continued on page 10

CREDIT: Thomas Davis

Many conservation groups worked together to implement plans that have protected miles of greenway." Further she added, "Eventually a local river conservation plan was adopted by each of the five municipalities in the federally designated area. The municipalities and the federal government adopted a memorandum of understanding to abide by the conservation plans. Ultimately these plans give a future predictability for the protection of cultural and natural resources."

Leslie Ficcaglia, a trustee on the board of CU Maurice River, served on a task force in 1993 to have the Maurice River and its tributaries brought into the Wild and Scenic River system.

"It's certainly helped significantly in terms of preventing overdevelopment and maintaining the water quality of the Maurice, and in terms of maintaining appropriate buffers," Ficcaglia said of the impact the Wild and Scenic Rivers Act has had on the area.

The protections that the river receives have a ripple effect. Not only does it benefit tourism in the area, there's a fishery at the southern end of the river in Commercial Township, New Jersey.

"And that's hugely important for the economy," Ficcaglia said.

The Manumuskin River, Ficcaglia said, is one of only two pristine rivers in New Jersey's Pinelands Protection Area, part of the Pinelands Federal Reserve. It draws botanists from around the country because it has the largest of five known stands of globally endangered plant called sensitive joint vetch. Along the river, there also are barred owls, pine snakes, bald eagles, scarlet snakes, corn snakes, tree frogs, and a host of other threatened and endangered plant and animal species. As many as 80 osprey chicks hatch per summer along the river and are banded by CU, Ficcaglia said. Commercial Township also holds events to celebrate wildlife such as

a purple martin migration festival in August, and an eagle festival in winter with speakers who talk about raptors, wildlife and environmental issues. There also are trails and guided walks.

"We try to celebrate the resources of the area, and they're really spectacular," Ficcaglia said. For more information about birding and other sights to see in this area, visit CUMauriceRiver.org, or Mauriceriver.igc.org.

For more information about White Clay Wild and Scenic Program, visit whiteclay.org.

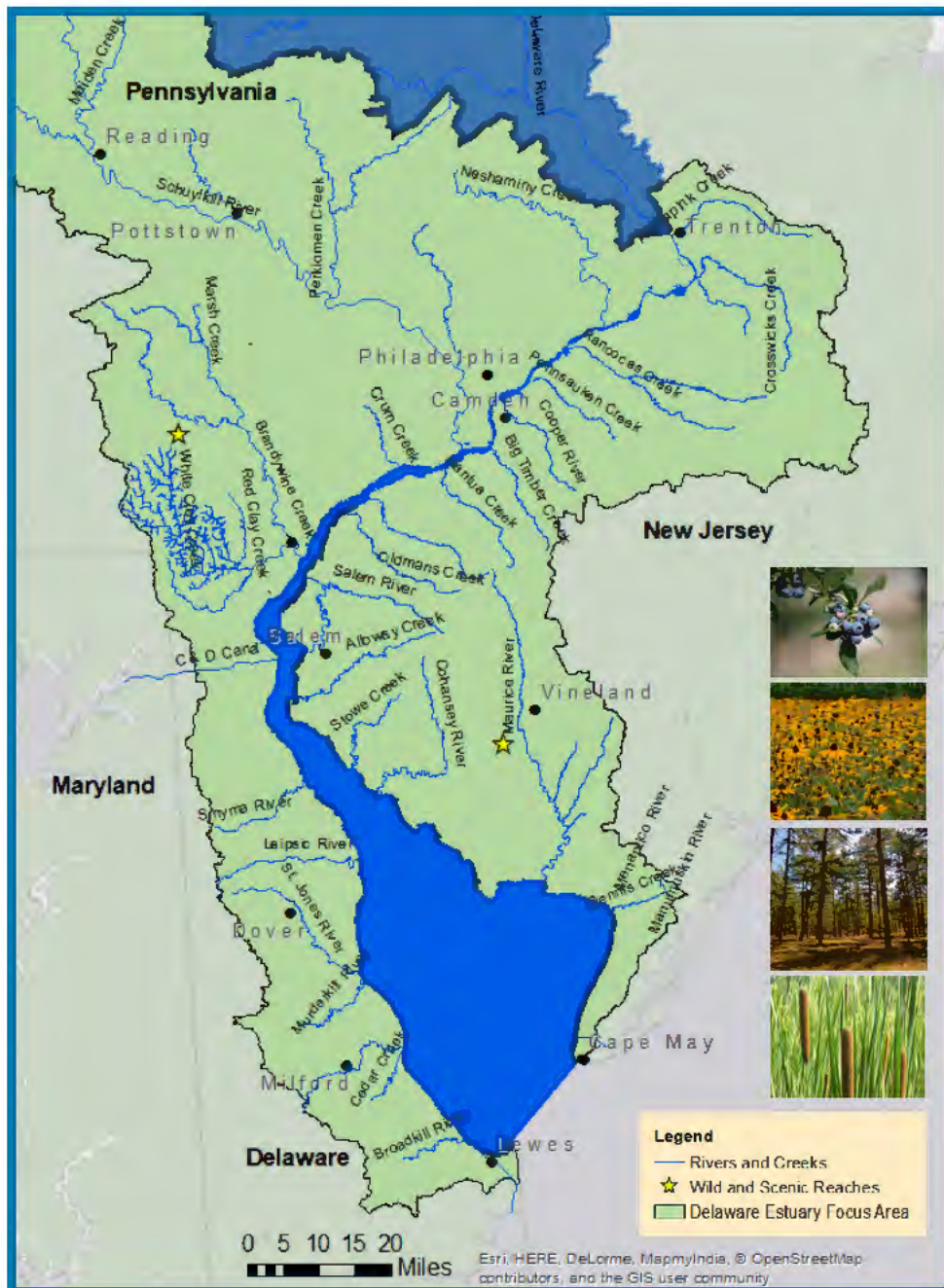


Illustration by: Karlin Collins

Wild About Cumberland

CU Maurice River Collaborates to Connect Children with Nature

By Jane Morton Galetto, Board President of the Citizens United to Protect the Maurice River and Its Tributaries

Since the inception of video games, computers, latch key programs and other organized after school activities, most children's contact with nature has dwindled. Writer Richard Louv adopted a term for this lack of contact with the world around us: Nature Deficit Disorder (Last Child in the Woods, c. 2005). Many nature-based organizations have worked hard to combat this shift in our culture.

Since 2006, CU Maurice River has been instrumental in facilitating a program called Wild About Cumberland. In the beginning it was a collaborative effort funded by our local improvement authority (county waste management). It began as Raptor Discovery Days. At that time we coordinated the out-of-door activities associated with the Cumberland County, New Jersey Eagle Fest. In 2011 and 2012, CU Maurice River took over the entire agenda and renamed the event Eagle Fest Education Days. In 2013 we officially adopted the current name. CU Maurice River brings together a host of partners to make the event possible, including Woodford Cedar Run Wildlife Refuge, Bayshore Center at Bivalve, The Nature Conservancy, Association of New Jersey Environmental Commissions, and PSEG. About 35 to 40 volunteers help each year. Our efforts are made possible in part by OceanFirst Bank and the National Park Service.

Over the course of two to three days, 400 to 600 fourth grade students, teachers and chaperones, are treated to sessions that emphasize "sense of place," focusing on the habitats of our local wildlife, and the species they might encounter. Classes are indoors for half the day, and the other half consists of outdoor field studies. Students have a wide array of backgrounds ranging from urban to rural. When asked how many have not been in the woods before, sometimes all the students' hands point skyward. Many marvel when exposed to the secrets of the out-of-doors.

On the trail we look and listen for signs of wildlife: feathers, tracks, sounds, scat, animals, flora, and the like. Each object gives clues about creatures in the habitat. Each remnant relays facts about the natural history of its origins. Our students become investigators looking for clues about the presence of life. We traverse vernal pools, upland woods, tidal wetlands, dikes, man-made ditches, freshwater ponds, and the open water of the Maurice River and Delaware Bay during the course of the day. We discuss the significance of each habitat and various species adaptations. For the indoor portion of the day, students participate in a series of workshops at the Bayshore Center at Bivalve. There, a host of local and regional environmental and community organizations lead hands-on activities that teach about environmental processes and highlight cultural values characteristic of Cumberland County. A favorite program is the Woodford Cedar Run Wildlife Refuge's live raptor show, which features large native birds. This is a treat for many viewers who have never before seen an owl, hawk or vulture. Child and adult faces light up in astonishment when a hawk shows off its wingspan. We feel a great sense of disappointment that so many young people have been cheated out of seeing the natural world around them, and great pride in having given them a thirst for more. ♦

CU Maurice River is dedicated to protecting the watershed of the Maurice River and the region known as Down Jersey, thereby enabling current and future generations to enjoy the environmental, recreational, cultural, and scenic resources of this Wild and Scenic Treasure. CU invites participation and fosters responsible stewardship. CU's educational programming creates awareness and supports informed decision-making utilizing field work, research and advocacy. This year we celebrate 25 years of as a designated partnership Wild and Scenic River. And the Nation's 50 anniversary of Wild and Scenic Rivers.



Birding in the Estuary

by Kate Layton, Marketing and Communications Manager, Partnership for the Delaware Estuary

A snowy egret perches high on a bare branch at Bombay Hook National Wildlife Refuge. It stretches its long wings while 200 feet away, camera shutters click to capture the bird's illuminated plumage. Bird watchers and photographers are as common a sight at the Smyrna, Delaware wildlife refuge as the birds and other animals that live there.

"Birds are a gateway for a deeper interest in nature," said Jeffrey Gordon, president of the American Birding Association. "For many reasons, they just capture our imagination."

The ABA, headquartered in Delaware City, Delaware, is a non-profit organization that is dedicated to recreational birding in the United States and Canada. Among other birding activities, it holds heron watches near its office building, and summer camps for birding, including one that involves a ferry boat ride from Lewes, Delaware to Cape May, New Jersey. Some bird watchers come from as far as Seattle to see the natural bird areas within the Delaware Estuary.

The Delaware Estuary is alive with places to watch birds, and a place that's full of bird and habitat conservation areas. Some places offer both accessibility and conservation conditions, some offer one or the other. Bombay Hook for example, which receives visitors year-round, is a designated Important Bird and Biodiversity Area, or IBA.

An IBA is an area that has been identified as globally important for the conservation of bird populations. BirdLife International, a global conservation partnership, determines these sites using criteria such as species, ornithological importance from the surrounding habitat, population numbers, and whether species are threatened or endangered. The National Audubon Society administers the IBA program in the United States.

There are more than 12,000 IBAs worldwide. Of those, 1,700 are in the U.S. with 96 IBAs throughout Delaware Estuary focus area. IBAs can attract bird watchers and visitors from around the world. They can be a starting point for fledgling birders. But sometimes, what makes for an Important Bird Area is different from an important area for birding. Sometimes conditions overlap, and sometimes they don't. Gordon likens this distinction to a tour of a museum. There's lots to see and appreciate in the areas that are accessible to the public.

"But really, the best and most important things

"Birds are a gateway for a deeper interest in nature. For many reasons, they just capture our imagination."

— Jeffrey Gordon,
President of the
American Birding
Association



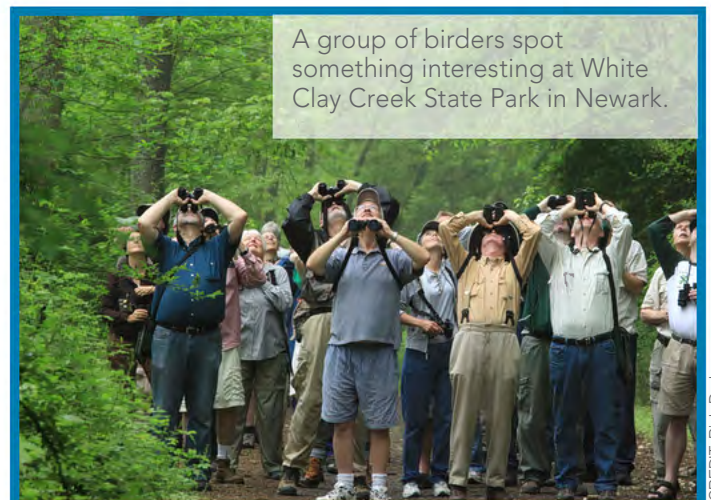
A snowy egret shows off its wings at Bombay Hook National Wildlife Preserve in Smyrna, Delaware

CREDIT: Kate Layton



A grey catbird sits on a branch at Bombay Hook National Wildlife Preserve in Smyrna, Delaware.

CREDIT: Kate Layton



A group of birders spot something interesting at White Clay Creek State Park in Newark.

CREDIT: Rick Darke

are often in storage and preserved," Gordon said.

An IBA might be in the middle of a marsh or another area that provides great conditions for habitat and breeding, but not in easy reach for bird watchers. For example, Delaware has a large block of salt marsh between the Chesapeake and Delaware Canal and Lewes that provides acres of wildlife habitat, Gordon said.

"But much of that area is exceedingly difficult to access," Gordon said, "unless a person has a boat and navigational equipment."

On the other hand, Gordon said, unconventional spots that are unsuitable as conservation areas can still be great for seeing birds. Eagles and osprey are sometimes visible from Interstate-95, for instance.

IBAs are categorized on global, continental and state levels. National Audubon Society maps show that large parts of the Delaware Estuary fall under all three IBA classifications.

Cape May is world famous as a bird migration spot from summer through late fall. Heislerville Wildlife Management Area in Heislerville, New Jersey, is another great location. Hawk Mountain near Reading, Pennsylvania, Gordon said, used to be a famous as a prime spot to shoot hawks before laws changed to protect birds of prey. Today, it is a famous lookout site for hawk migration in the region, as well as for spotting eagles and falcons migrating south from mid-August through November. It's also great for hiking in spring and summer. There's also Prime Hook National Wildlife Refuge near Milton, Delaware, Reed's Beach in New Jersey and Fairmount Park in Philadelphia which great for both and visitation.

"Our neck of the woods is a phenomenal place to watch birds," said John Cecil, vice president for stewardship for New Jersey Audubon.

Cecil said that the amount of important birding area within the Delaware Estuary is a sign of its diversity and significance.

"It goes to show that our watershed is still intact," Cecil said. "The water is providing habitat for species that are rare and for species that are common and abundant."

Cecil was head of the National Audubon Society's IBA program for nine of his 12 years with the environmental and conservation agency. During that time, Cecil said, Audubon was concerned with creating a network of sites to make sure the habitat was conserved and managed, and species were preserved. Because of the popularity

of bird watching, National Audubon has agreed to let organizations include that factor if they apply for an area to have a state IBA classification, Cecil said.

"Some [birders] are more recreational, and some really go the distance because they support the conservation," Cecil said. "In part,

the IBA program in the United States is attempt to wrap our arms around the birding community and really creating opportunities for all kinds of bird watchers to contribute to bird conservation."

Technology has made birding data more and more sharable. The website Ebird.org, developed by the Cornell Lab of Ornithology, encourages people to contribute their data that tracks hot spots and sightings. Birders also use social networks that can support collection of information and engagement.

Part of the appeal of birding is the chance to get away from daily cares and stresses, Gordon said.

"Birding is incredibly intergenerational – something that grandparents can do with their grandkids, he said. "Some people just want to get off their couch and see birds in their neighborhood," he said. "We can also inspire them to do that and open them up to this world that most people don't even perceive." ♦

To learn more about the organization, visit www.ABA.org. For more information about IBAs, visit NationalAudubon.org and BirdLife.org.

An osprey carries a fish in its talons.



CREDIT: Lynn Maun, Great Egg Harbor Watershed Association

A redwing blackbird calls for attention at Bombay Hook National Wildlife Preserve in Smyrna, Delaware.



CREDIT: Kate Layton

An AWEsome Fellowship

By Ngoc Kim, *Returning fellow, Alliance for Watershed Education of the Delaware River Watershed*

Growing up in Camden, New Jersey, I had little exposure to nature. But now, I'm dedicating my life to ecology.

This is my second summer as a fellow with the Alliance for Watershed Education (AWE) of the Delaware River Watershed in Pennsylvania. Each year, I've gained new experiences and insights that will serve my career in teaching or ecological research.

Each environmental center has offered unique goals for watershed fellows. This alliance is comprised of 23 environmental education centers in New Jersey, Pennsylvania, and Delaware.

During my first year as a watershed fellow, I worked for the John James Audubon Center (JJAC) in Audubon, Pennsylvania. My job was to increase community engagement and improve the Delaware River watershed. I taught students from summer camp groups, after school programs, and children who had limited exposure to nature. In addition, I took care of non-releasable birds on our site. For my capstone projects, I built a rain garden and repaired a riparian buffer to increase native bird and pollinator species, as well as promote a healthy watershed.

This summer, I'm a Watershed Fellow at the Independence Seaport Museum (ISM) in Philadelphia where I am learning a different perspective in environmental and water conservation. Every week, I teach lessons about the Delaware River watershed, guide the museum's River Ambassadors, and lead cleanups. I'm also working on a few projects. One is the construction of an underwater viewer which enables a person to see underwater without glare from the sun. I'm also building a native garden for birds and pollinator species. I hope these few projects will enhance watershed education programs for all who visit ISM.

Each environmental center is unique and different from one another. JJAC provides a beautiful ecological scenic view and hiking trails, history lessons, volunteer opportunities, bird watching, and so much more. ISM provides maritime history, internship opportunities, ship tours, diverse science lessons, boat rentals, and more. I encourage you to visit and learn what kinds of activities your nearby nature centers has to offer that you may grow to love. ♦

Get Ready for an AWEsome Month of Events

By Becca Gregg Sansom, *Communications Specialist, The Nature Place, Reading Pennsylvania*

River Days events are getting ready to kick off this September at environmental centers throughout Pennsylvania, New Jersey and Delaware.

This year's River Days events include such activities as biking and boating, waterfront festivals, history hikes, bilingual bird walks, any many, many more. Starting Sept. 15, these exciting events will run through Oct. 15, spanning from the Poconos and Reading, Pennsylvania to Wilmington, Delaware. You'll be sure to find something for everyone in the family to enjoy this fall.

Coordinated annually through a partnership of 23 centers that make up the Alliance for Watershed Education of the Delaware River (AWE), River Days "is a great time for people to explore, enjoy and engage with their local nature centers while learning about the watershed and their role within it," said Mica McCullough, AWE's communications coordinator.

Berks Nature and its events at The Nature Place outside Reading, Pennsylvania, is just one destination that's part of River Days. A full listing of AWE events can be found online, at www.watershedalliance.org. ♦



"The primary goal is to introduce visitors to their watershed in a fun way," McCullough said. "If visitors have an AWE-some time at a River Days event, we encourage them to visit the other 22 centers in the Alliance."

PENNSYLVANIA COAST DAY

11 a.m. to 4 p.m. Saturday, Sept. 15 | Philadelphia/Camden, New Jersey

Celebrate the Delaware River in two states, with one great event! The Partnership for the Delaware Estuary (PDE), Alliance for Watershed Education (AWE), and Center for Aquatic Sciences are teaming up for the Delaware River Festival. It's a "coast to coast" experience between Philadelphia and Camden, New Jersey that you don't want to miss. Enjoy festivities on both sides of the river by taking the RiverLink Ferry between the two city waterfronts! The whole event is FREE and fun for the whole family!

For more information, and to register for the events, visit PDE's Facebook page, or visit www.delawareestuary.org



VOLUNTEER FOR CLEAN WATER

9:30 a.m. to 12:30 p.m., Saturday, Sept. 22

Wilmington, Delaware

Looking for a chance to do something for the community? Be a Water Warrior by helping PDE bag oyster shells from local restaurants. Instead of going to a landfill, those shells go back to nature in restoration projects like living shorelines and oyster beds. Volunteers of all ages are welcome to help. Anyone under age 18 must be accompanied by an adult and have a waiver signed by a parent or guardian. More information, including the event's location, will be made available following registration. Go to PDE's Facebook page to register via EventBrite, or visit www.delawareestuary.org.

Care about clean water and want to do more? Sign up to learn more about clean water initiatives in Delaware and how you can help. Complete this form to sign up for the Clean Water Delaware Campaign newsletter: <http://bit.ly/2Aca9Fi.com>



CREDIT: Sarah Morales

Experience the Estuary Celebration

5 to 8:30 p.m., Thursday, September 27 | Claymont, DE

Join us at The Waterfall for the 2018 Experience the Estuary Celebration, our largest fundraiser of the year! This annual celebration attracts more than 350 friends and supporters of the Delaware Estuary. Enjoy an evening of cocktails, our famous 90-minute oyster raw bar, three-course dinner, and auctions. Tickets are on sale now at <https://pde18.eventbrite.com>. You may also visit www.delawareestuary.org



The 2019 Delaware Estuary Science & Environmental Summit

Jan. 27-31, 2019 | The Grand Hotel, Cape May, New Jersey

Mark your calendar for the 2019 Delaware Estuary Science & Environmental Summit! This three-day conference retreat will bring together scientists, researchers, managers and environmental education specialists to share information. *Estuary 2029: Saving our System Through Collaboration*, invites attendees to forge new collaborations that promote ecosystem-based science, management and restoration through networking, scientific presentations, special speakers, and panel sessions.

For information, visit: www.delawareestuary.org





110 South Poplar Street, Suite 202
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The Partnership for the Delaware Estuary: *Connecting people, science, and nature for a healthy Delaware River and Bay*

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The Partnership for the Delaware Estuary, Inc. (PDE), is a private, nonprofit organization established in 1996. The PDE, 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. To find out how you can become one of our partners, call the PDE at (800) 445-4935 or visit our website at www.DelawareEstuary.org.

Partnership for the Delaware Estuary, Inc.

Jennifer Adkins, Executive Director
Tel: (800) 445-4935 / Fax: (302) 655-4991
E-mail: jadkins@DelawareEstuary.org

Environmental Protection Agency

Irene Purdy, EPA Region II
Tel: (212) 637-3794 / Fax: (212) 637-3889
E-mail: purdy.irene@epa.gov
Megan Mackey, EPA Region III
Tel: (215) 814-5534 / Fax: (215) 814-2301
E-mail: mackey.megan@epa.gov

Pennsylvania

Rhonda Manning
Department of Environmental Protection
Tel: (717) 772-4472 / Fax: (717) 783-4690
Email: rmanning@pa.gov

Delaware

Kimberly Cole
Department of Natural Resources and
Environmental Control
Tel: (302) 739-9283 / Fax: (302) 739-2048
E-mail: kimberly.cole@state.de.us

New Jersey

Jay Springer
Department of Environmental Protection
Tel: (609) 341-3122 / Fax: (609) 984-6505
E-mail: jay.springer@dep.state.nj.us

Delaware River Basin Commission

Kenneth Najjar
Tel: (609) 883-9500 ext 256
Fax: (609) 883-9522
E-mail: kenneth.najjar@drbc.state.nj.us

Philadelphia Water Department

Kelly Anderson
Tel: (215) 685-6245 / Fax: (215) 685-6043
Email: kelly.anderson@phila.gov

Editor

Kate Layton
Marketing and Communications Manager
Email: klayton@delawareestuary.org

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