



# ESTUARY NEWS



NEWSLETTER OF THE PARTNERSHIP FOR THE DELAWARE ESTUARY: A NATIONAL ESTUARY PROGRAM

## Urban Treasures

By Jennifer Adkins, Executive Director,  
Partnership for the Delaware Estuary

This issue of *Estuary News* is full of exciting reports from the most urban stretch of the Delaware Estuary. Another successful Coast Day on Penn's Landing and Experience the Estuary Celebration at Adventure Aquarium remind us of how wonderful our urban waterfronts are! And there are efforts under way to make them even better.

Engaging people in the Estuary has always been a goal for us here at the Partnership for the Delaware Estuary, and urban waterfronts are one of our greatest assets for introducing people to the beauty of the river and bay. As water quality improves and we get better at managing different uses of the river, urban waterfronts are also becoming home to more fish and wildlife. A good example of this is the exciting discovery of freshwater

mussels detailed on page 5. Finding beds of mussels thriving where we least expected them makes us more confident than ever that we can restore shellfish throughout the Delaware Estuary.

In recognition of the value of urban waterfronts, they were identified as an important area for investing restoration dollars by the PDE Alliance for Comprehensive Ecosystem Solutions. The Bridesburg Urban Waterfront Restoration Project highlighted on page 7 is one of only five projects selected by the Alliance this year as the most important for the Delaware Estuary. It is part of a larger effort led by the



Visitors arrive for Pennsylvania Coast Day on September 11 at Penn's Landing in Philadelphia. See page 2 for more insight.

Pennsylvania Environmental Council (PEC) to redevelop vacant industrial sites along the Delaware River to provide scenic trails, vistas, and natural areas for people and wildlife to enjoy.

Redevelopment plans, mussel discoveries, and a fun new "spokesdog" campaign in Manayunk and East Falls are some of the assets our urban-waterfront areas have to offer that you can read about in this issue. ■

### 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

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#### Monitoring Advisory Committee

John Yagecic, Monitoring Coordinator, (609) 883-9500, ext. 271  
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#### Science and Technical Advisory Committee

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#### Delaware Estuary Education Network

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#### Polychlorinated Biphenyls Implementation Advisory Committee

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## Over 300 'Experience the Estuary' at Fundraiser

**T**he Partnership for the Delaware Estuary (PDE) packed the Currents Ballroom inside Camden's

Adventure Aquarium on October 7 when it hosted its annual fundraiser, the Experience the Estuary Celebration. More than 300 people enjoyed cocktails, hors d'oeuvres and dinner while bidding on auction items and networking with one another. This year's theme was "The Delaware River: A National Treasure," and supporters responded in a big way. Thirty-six agencies, corporations, and nonprofits showed their support through the purchase of full or half-tables, and over 150 auction items were sold. In all, the event raised close to \$40,000 in profit to benefit the PDE's work.

Please visit [DelawareEstuary.org](http://DelawareEstuary.org) to see photographs or learn more about the event. To become a sponsor or donate an item to next year's event, please contact Karen Johnson at (800) 445-4935, extension 101, or [KJohnson@DelawareEstuary.org](mailto:KJohnson@DelawareEstuary.org).

## Hundreds Explore Coast at Coast Day

**H**undreds of people discovered that, indeed, Pennsylvania has a coast during Pennsylvania Coast Day on September 11 at Penn's Landing in Philadelphia. That is where:

- 262 people completed the Wonders of Water Challenge and won prizes
- Up to 1,200 passengers enjoyed a narrated tour of the Delaware River aboard a RiverLink Ferry boat, or 235 more than in 2009
- 52 people embarked on a sailing voyage with either the *North Wind* of Gloucester City or the *A.J. Meerwald*, New Jersey's official tall ship
- 331 Philadelphians toured the

Fairmount Water Works Interpretive Center thanks to the festival's free shuttle bus – up from 318 the year before

- 357 festival goers discovered the Independence Seaport Museum next door

To become an exhibitor at next September's Pennsylvania Coast Day, please contact Cheryl Jackson at (800) 445-4935, extension 112, or [CJackson@DelawareEstuary.org](mailto:CJackson@DelawareEstuary.org).

## Science Committee Weighs in on Oil Spills

**T**he Partnership for the Delaware Estuary's (PDE) science committee, known as the STAC (Science and Technical Advisory Committee), seized the opportunity to discuss oil spills recently after the Deepwater Horizon disaster off Louisiana's coast. This resulted in a briefing shared with our state and federal partners assessing questions and information gaps regarding readiness for oil-spill prevention and response here in the Delaware Estuary. The PDE is sharing this briefing to raise awareness about this issue and the work of the Delaware River and Bay Oil Spill Advisory Committee, of which Dr. Danielle Kreeger is a member. The briefing urges the creation of an oil-spill trust fund, financed using oil-spill penalties. Its purpose would be to fund high-priority restoration projects, such as those found in the new "Project Registry," created as part of the PDE's Regional Restoration Initiative.

## Schuylkill River to Benefit from Grants

**T**he Schuylkill River Heritage Area has awarded four grants to make restoration projects possible in



**Dr. Danielle Kreeger, science director at the Partnership for the Delaware Estuary, explains how shellfish clean water to two youngsters at Pennsylvania Coast Day in Philadelphia on September 11.**

southeastern Pennsylvania. Each project will result in cleaner water entering the Schuylkill River. They include:

- \$80,000 for the Schuylkill Headwaters Association to prevent silt in coal mines from entering the Schuylkill River in Schuylkill County
- \$52,500 for the Berks County Conservancy to prevent dairy-farm manure from washing into a creek flowing to the Schuylkill River
- \$50,000 for Greening Greenfield to retrofit a Philadelphia schoolyard so it absorbs both rainwater and snowmelt before it becomes polluted
- \$40,000 for Lower Providence Township of Montgomery County to improve five sites where rainwater and snowmelt could absorb into the earth more effectively

The source of these grants is the Schuylkill River Watershed Restoration Fund. It was created in 2006 by Exelon Corporation to offset its use of Schuylkill River water at Limerick Generating Station, a nuclear power plant it owns in Limerick, Pennsylvania.

This year the Philadelphia Water Department became the first benefactor to contribute to the Fund. The utility hopes its grant of \$100,000 will inspire others to give as well.

Grant recipients were selected by a committee of member-organizations affiliated with the Schuylkill Action Network, including the Partnership for the Delaware Estuary. For more information, please call Tom Davidock at (800) 445-4935, extension 109. ■

## Act Now to Reserve Your Spot at the Delaware Estuary Summit

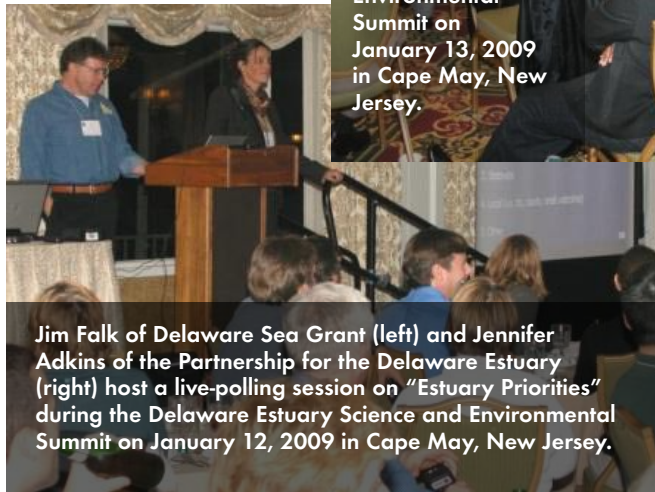
By Elizabeth Horsey, Development Specialist,  
Partnership for the Delaware Estuary

**E**stuaries are the most productive ecosystems in the world, and for four days this winter, the Partnership for the Delaware Estuary's (PDE) Science and Environmental Summit will be equally as dynamic. From January 30 through February 2, educators, government representatives, resource managers, scientists, and students will join together in Cape May, New Jersey for the PDE's fourth Summit. This mid-winter retreat is a unique forum for lively discussions and cutting-edge research, and it's a chance to connect with like-minded people working for the health and future of the Delaware River and Bay.

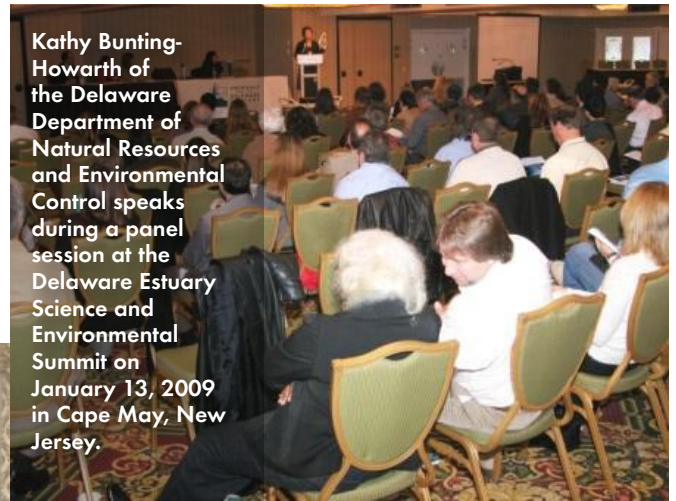
Over 130 presentations are on tap for this year's Summit, which is returning to the Grand Hotel on Cape May's oceanfront. The Summit will feature a variety of speakers, regular sessions, special-topic sessions, hands-on workshops, and roundtable discussions. There will be 21 special-topic sessions, including several 15-minute oral presentations in each session. Poster presenters will also have the opportunity to share their research during several poster sessions that will take place throughout the Summit.

This year's Summit theme is "Connections – Land to Sea, Shore to Shore, Science to Outreach." This theme was chosen with the goal of creating more effective partnerships among scientists, outreach specialists, resource managers and others with an interest in the prosperity of the Delaware Estuary. There is a wealth of information, perspectives, and interests in the Delaware Estuary, and the Summit seeks to capitalize on these connections.

There's something for everyone at the 2011 Delaware Estuary Science and Environmental Summit: presentations about climate change, sea-level rise, the loss of



Jim Falk of Delaware Sea Grant (left) and Jennifer Adkins of the Partnership for the Delaware Estuary (right) host a live-polling session on "Estuary Priorities" during the Delaware Estuary Science and Environmental Summit on January 12, 2009 in Cape May, New Jersey.



Kathy Bunting-Howarth of the Delaware Department of Natural Resources and Environmental Control speaks during a panel session at the Delaware Estuary Science and Environmental Summit on January 13, 2009 in Cape May, New Jersey.

the Grand Hotel, which is offering a discounted rate for Summit attendees. Their cut-off date for the discounted room rate is January 1. Further hotel information is available at (800) 257-8550 and [GrandHotelCapeMay.com](http://GrandHotelCapeMay.com).

natural lands, freshwater availability, natural gas extraction and much more. The Summit will even have a special session on ways to communicate controversial topics and develop effective outreach campaigns.

Registration for the Summit opened on October 1 and is required for all attendees. Registration includes admission to all sessions and most meals and amenities during refreshment breaks. Thanks to our sponsors, we are pleased to offer reasonable early-bird, daily, and student registration rates of \$240, \$90, and \$120, respectively. Take advantage of these early-bird rates and register before December 15 at [DelawareEstuary.org](http://DelawareEstuary.org).

Planning on spending the night? A block of rooms has been reserved at

When it comes down to it, the Delaware Estuary's watershed crosses state boundaries and agency jurisdictions. It is the only thing that connects a 6,800-square-mile region. The 2011 Summit will bring together diverse groups, points of view, and everyday people with an interest in the Delaware Estuary.

Join in the conversation at the 2011 Delaware Estuary Science and Environmental Summit. This Summit takes place every two years, so your next opportunity to attend will not be until 2013.

Have questions about registration? If so, please contact Elizabeth Horsey at (800) 445-4935, extension 114, or [EHorsey@DelawareEstuary.org](mailto:EHorsey@DelawareEstuary.org). ■

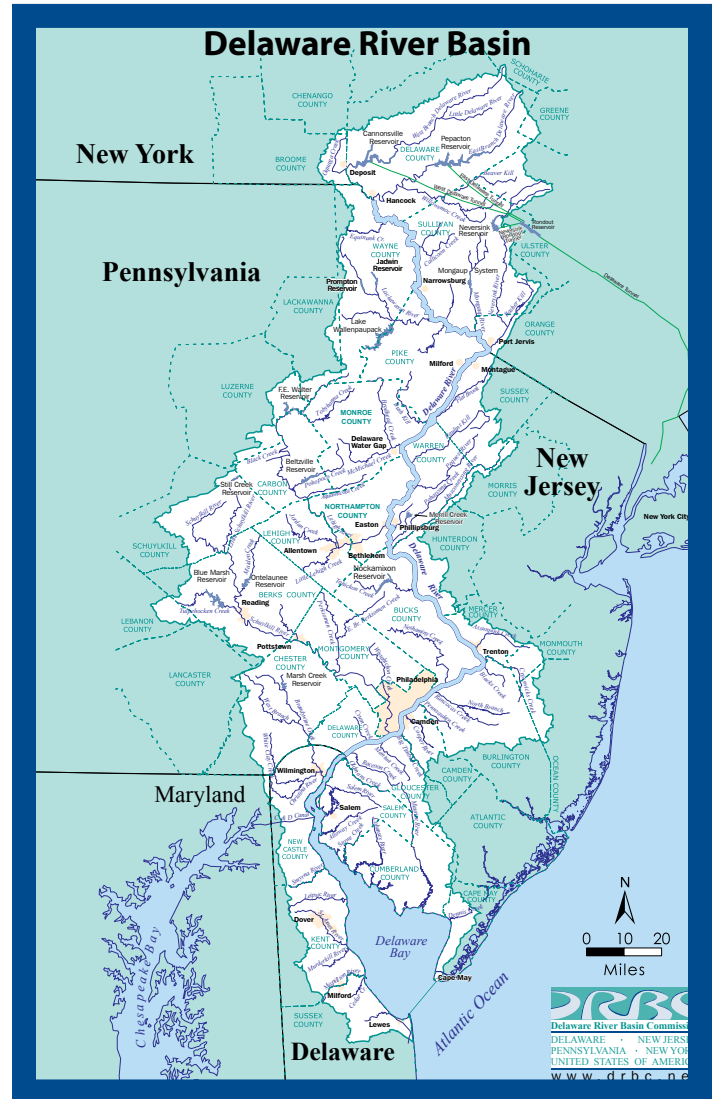
## \$450K Granted to Prioritize River and Wetland Habitats Basin-wide

By Jennifer Adkins, Executive Director, Partnership for the Delaware Estuary, and Shaun Bailey, Marketing and Communications Coordinator, Partnership for the Delaware Estuary

In July, the National Fish and Wildlife Foundation awarded \$450,000 to The Nature Conservancy for a plan to prioritize river and wetland habitats throughout the Delaware River Basin, a 13,600-square-mile area. It will be shared by The Nature Conservancy's four chapters in Delaware, eastern New York, New Jersey and Pennsylvania, as well as the Natural Lands Trust and the Partnership for the Delaware Estuary (PDE). These groups will work together to build upon existing plans and unite river and wetland conservation efforts from southern New York to the mouth of Delaware Bay.

The Partnership for the Delaware Estuary has an extensive *Comprehensive Conservation and Management Plan* (CCMP) aimed at protecting and enhancing the Delaware Estuary. The Delaware Estuary study area addressed by the CCMP includes portions of three states and more than 500 municipalities; just over half of the valley draining into the Delaware River. The entire valley, or "basin," is home to many environmental groups, each focusing on protecting its part of the watershed, whether it is a specific town, county, stream segment or state. But wetlands and streams don't stop at political boundaries. A basin-wide conservation plan for these habitats will help to prioritize and preserve the most critical areas, as well as inform and shape policies for the many institutions working in the region.

The PDE's role in this effort will focus on identifying and



The Delaware River Basin spans over 13,600 square miles and includes all of the land that drains to the Delaware River and Bay.

assessing shellfish habitats and opportunities, which have been identified as a priority based on the PDE's Regional Restoration Initiative and *Climate Change in the Delaware Estuary* pilot study and report. Bivalve shellfish are critical to the environmental and economic health of this region because of the many services they provide. These include filtering pollutants from the water, stabilizing streams and wetlands, providing habitat for fish and other aquatic life, and, in the case of oysters, serving as both food and a commercial resource.

To learn more about the Partnership for the Delaware Estuary's shellfish-restoration efforts, or its involvement in this basin-wide planning project, please contact Priscilla Cole at (800) 445-4935, extension 115, or PCole@DelawareEstuary.org. ■

# SPECIES SPECIFIC



The seven mussel species discovered in the Delaware River near Philadelphia include the pond mussel, *Ligumia nasuta* (Ln); eastern float-er, *Pyganodon cataracta* (Pc); yellow lampmussel, *Lampsilis cariosa* (Lc); elliptio, *Elliptio complanata* (Ec); creeper, *Strophitus undulatus* (Su); tidewater mucket, *Leptodea ochracea* (Lo); and alewife floater, *Anodonta implicata* (Ai).

Freshwater mussels live on the river bottom, where they are often mistaken for rocks. Millions were harvested in the early 1900s to make buttons from the shiny interior of their shells.

## Rare Freshwater Mussels Discovered in Urban Delaware River

By Danielle Kreeger, Ph.D., Science Director, Partnership for the Delaware Estuary, Angela Padeletti, Science Specialist, Partnership for the Delaware Estuary, and Roger Thomas, Staff Scientist, Patrick Center for Environmental Research, Academy of Natural Sciences

In June, seven species of native freshwater mussels were discovered in the tidal freshwater portion of the Delaware Estuary between Trenton and Philadelphia. At least four of these species are critically imperiled in New Jersey and Pennsylvania, and two were believed to be locally extinct. The mussels were found in robust beds not far from highly developed areas of the river.

This discovery is remarkable given that freshwater mussels are the most imperiled of all plants and animals in North America. About three-quarters of our 300 native species are in decline. Even so-called “common” species appear to be suffering decreases in their numbers. In the Delaware Estuary Watershed, at least 12 of our 14 native species are classified by the states as reduced, threatened, or locally extinct (the terminology varies by state).

Freshwater mussels are long-lived, filter-feeding animals that accurately reflect the environmental health within a watershed. Their decline is symptomatic of long-term changes in water and habitat quality. They also have complex life cycles that require a fish host for their babies, or “larvae,” to survive, so mussel reproduction can be interrupted whenever fish are impacted by things such as dams that block fish passage.

Like oysters, freshwater mussels live in dense “beds” that enrich habitats for other animals and plants. Since each adult mussel filters more than five gallons of water per day between spring and fall, a bed of thousands of animals can have major benefits for water quality in streams. Some of these benefits include reducing small particles that make the water cloudy, removing pollutants, and enriching bottom conditions for other small animals.

In 2007, the Partnership for the Delaware Estuary launched

a Freshwater Mussel Recovery Program to begin to restore freshwater mussel populations in the Delaware Estuary Watershed. Working with scientists from the Patrick Center for Environmental Research of The Academy of Natural Sciences, Cheyney University, and others, we hope to reintroduce native species of mussels into streams and rivers that currently have few or no mussels. We also intend to rebuild populations and expand species ranges so that these natural workaholics can help us clean the water and improve habitat diversity for many species of aquatic plants and animals.

Recently, the program has been impeded by a lack of mussels to use for relocation or for reproduction in our hatchery at Cheyney University. Only one type of mussel, the eastern elliptio (*Elliptio complanata*), was found in Southeast Pennsylvania in sufficient numbers to sustain the restoration program, so we focused our initial efforts on expanding their range.

The presence of these seven surviving species of freshwater mussels in an industrialized corridor of the Delaware River showcases how rare and ecologically important natural resources can thrive within an urban freshwater-tidal environment. This discovery also spells hope for replenishing lost species in our streams and rivers. Moving forward, the protection of these mussel beds will be paramount to sustaining our current mussel-restoration efforts and promoting continued improvements in water quality throughout the region.

For more information, please see [www.DelawareEstuary.org/Science\\_Projects\\_Mussel\\_Restoration.asp](http://www.DelawareEstuary.org/Science_Projects_Mussel_Restoration.asp). ■

# MAKING WAVES

## Enter Your Dog in the Philly 'Water's Best Friend' Competition

By Lisa Wool, Program Director, Partnership for the Delaware Estuary

The Philadelphia Water Department (PWD) is looking for two eco-friendly dogs who want to help keep Philly's waterways clean ... one in the Manayunk/Roxborough area and one in East Falls. "Spokesdogs" will be chosen to teach bark-park buddies and their caretakers about the importance of picking up pet waste.

Each spokesdog will be chosen at a community event and will win products or services from either Wag n' Style in East Falls or TOP TAILS in Manayunk/Roxborough. As a part of the campaign, the winning dogs' images will be used on a number of brochures, advertisements, websites, etc. Winning spokesdogs and their owners will be required to attend three community events to distribute information on living the eco-friendly dog life.

### What is Your Doggy Doo Doing?

When dog waste is left on the ground, rainwater or melting snow eventually breaks it down and washes it into our storm drains. The disease-causing bacteria found in pet waste then flows from storm drains into our local streams and the Delaware and Schuylkill rivers.

These local waterways are used by rowers, fishermen, and swimmers, and they supply drinking water to millions of people. Although the rivers are much cleaner than they have been in the past, every little bit helps (or hurts if dog waste flows into our river).

Even though dog waste is "natural," it does not fertilize your lawn and it can become a health hazard if not picked up. People are less likely to pave their front yards when they are confident that dogs are being picked up after. Help keep East Falls, Manayunk and Roxborough beautiful by scooping up after your dog when walking and even in your own backyard. (Neighbors want to open their windows too!)

**You can "doo" something to keep your neighborhood clean and water safe by taking the following actions:**

- Pick up after your pet. Flushing pet waste (not the bag) down the toilet is best, because it will be treated at a sewage-treatment plant, just like human waste.
- If flushing your pet's waste down the toilet is not an option, bag your pet's waste and put it into a trash can. Never put pet waste into a storm drain.
- Encourage your neighbors to use bags or pet-waste stations for the collection and disposal of dog waste.



DestinationSchuylkillRiver.org



Leland the pug and others vying for the title of Philly Water's Best Friend have until November 28 to make themselves eligible to be a spokesdog star.

Credit: Ron Wilson

### Prizes

#### 1st-place Spokesdogs

- Title of Philly Water's Best Friend
- \$200 prize from Wag n' Style in East Falls, or
- \$200 gift certificate from TOP TAILS Pet Sitting and Dog Walking in Manayunk
- Image used in promotional pieces
- Toy-and-cookie prize pack

#### Runner Up

(In case a first-place spokesdog is unable to fulfill his or her duties)

- \$50 gift certificate to a local pet shop
- Toy-and-cookie prize pack

#### For More Information:

Contact the PWD at (267) 625-0589 or Questions@PhillyWatersheds.org, or the Partnership for the Delaware Estuary at (800) 445-4935, extension 112

#### Support and prizes donated by:

- East Falls Development Corporation
- Manayunk Development Corporation
- Philadelphia Water Department
- TOP TAILS Pet Sitting & Dog Walking
- Wag n' Style

**If you live in East Falls, Manayunk or Roxborough and think your dog has what it takes be Philly Water's Best Friend, visit [www.PhilllyWatersheds.org/Spokesdog](http://www.PhilllyWatersheds.org/Spokesdog) by November 28th to enter! ■**

## Plan Taking Shape to Restore N. Phila. Waterfront

By Paul Racette, Watershed Programs Manager, Pennsylvania Environmental Council

The tidal Delaware River, like many urban rivers, is undergoing a 21<sup>st</sup> century transformation thanks to the creation of greenways, parks, and trails along waterfronts long dominated by industrial enterprises. The Pennsylvania Environmental Council (PEC) is leading an effort to identify ecological restoration opportunities along the North Philadelphia waterfront. The East Coast Greenway, a multi-use recreational trail that will run from Maine to Florida, is being stitched together through this riverfront reach. Focusing on areas between the trail and the river, PEC and its partners have assessed restoration opportunities across the upland, riverbank, and tidal wetland areas.

PEC coordinates an urban waterfront workgroup under the umbrella of the Partnership for the Delaware Estuary's Regional Restoration Initiative. The workgroup developed and applied habitat, site-wide, and recreational criteria to prioritize restoration opportunities. Results of this assessment are documented in the *November 2009 Philadelphia North Delaware Greenway Ecological Assessment and Prioritization Report* (see [www.pecpa.org/ecorestoration](http://www.pecpa.org/ecorestoration)).

Two parcels in the Bridesburg neighborhood were ranked as higher-priority restoration sites based on the size of the parcels, the opportunity to restore tidal wetlands, and landowners' willingness to engage in restoration. PEC received funding from the National Fish and Wildlife Foundation (NFWF) to develop a preliminary restoration design for the parcels, one owned by the city of Philadelphia and the second owned by a private company.

The NFWF funding allowed PEC to hire Conestoga-Rovers & Associates to characterize site conditions and develop a preliminary design. The urban waterfront workgroup, landown-



Credit: Joe Manvil

ers, regulatory agencies, and other stakeholders were engaged in the design's review process.

The result is a preliminary design that envisions restored riverfront and upland habitat areas as well as areas for passive public recreation. There is an excellent opportunity to enhance existing tidal wetlands, and the potential to restore additional tidal wetlands. These wetlands could provide much-needed habitat for fish and wildlife species, as less than 5% of freshwater wetlands remain in the urbanized Delaware River Estuary. Likewise, a restored riverbank forest and adjacent upland meadows could provide food, shelter, and cover, both for local wildlife and for migratory species, such as birds following the Atlantic Flyway.

The passive-recreation amenities proposed in the plan would provide opportunities for both local residents and East Coast Trail users to access the Delaware Riverfront. These amenities include a trail that could offer access to the Delaware River for fishermen, birdwatchers, and walkers. Benches placed at vantage points on the trail could also offer dramatic vistas

of the river, bridges, and shorelines of the Upper Delaware Estuary.

The project's next steps include further negotiations with landowners and local stakeholder groups to confirm the scope and direction of restoration and recreation activities. Fund raising is required to cover final-design and construction costs. An assessment of the potential value gained from restoring wetlands and uplands is included in the preliminary design report.

This restoration project offers an excellent opportunity to develop a green sanctuary along an urban waterfront that would benefit both wildlife and area residents. Restored aquatic and land habitats will offer a variety of fish and wildlife species a place to live and connect with habitats up, down, and across the Delaware River. The project's proximity to the East Coast Greenway offers a destination for both local and regional residents to stop, visit, and enjoy the waterfront.

To learn more or donate to the restoration of Bridesburg's riverfront, please call Paul Racette of PEC at (215) 545-4570, extension 112. ■

# ESTUARY EVENTS

## Video Contest

October 25 to March 1

### Schuylkill River Watershed, PA

You don't have to be a videographer to love Pennsylvania's Schuylkill River. However, it does help if you want to win the Schuylkill Stories Contest. Students of any age are invited to shoot three-minute videos depicting how "This is My Watershed." Those who shoot the best clips will receive \$50, and the best videographer of all will receive a green plan for their school. Visit [SchuylkillWaters.org](http://SchuylkillWaters.org) to learn more.

Featured on [ecoDelaware.com](http://ecoDelaware.com)

## The Nature Nook

October 30 and thereafter

### Greenville, DE

See what animals call home sweet home when you visit the Delaware Museum of Natural History's newest exhibition, the Nature Nook. Children ages two through 10 will love the interactive exhibits depicting a cave, eagle's nest, meadow, streambed and woodland. They may even encounter live reptiles and amphibians during their adventure. Please visit [DelMNH.org](http://DelMNH.org) for more information, including admission rates and hours of operation.

## Delaware Estuary Science and Environmental Summit

January 30 to February 2

### Cape May, NJ

The tidal Delaware River Watershed spans 13 counties in three states, and folks across this region will gather at this winter's Delaware Estuary Science and Environmental Summit. Together they will discuss the health of water running through the Delaware Valley, and you can join them. Come discover the research and many projects taking shape, and let your voice be heard. Visit [DelawareEstuary.org](http://DelawareEstuary.org) for details. ■



## Partnership for the Delaware Estuary: a National Estuary Program

The Partnership for the Delaware Estuary, Inc., (PDE) is a private, nonprofit organization established in 1996. The PDE leads collaborative and creative efforts to protect and enhance the Delaware Estuary and its tributaries for current and future generations. The PDE is one of 28 National Estuary Programs. 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](http://www.DelawareEstuary.org).

### Partnership for the Delaware Estuary, Inc.

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### New Jersey

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### Delaware River Basin Commission

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