



Reconnect with your environment

Learn about environmental issues, their effect on your community and actions for your involvement.



ANNA MCCARTNEY/Contributed photo

Are you interested in protecting the Pennsylvania's Lake Erie Watershed?

New TREC programs focus on water quality

By ANNA MCCARTNEY
Contributing writer

Pennsylvania Sea Grant responded to a recent survey of yacht clubs and marina operators by bringing together experts to shed light on their requests for information about the following topics: preventing and responding to spills; threats posed by falling water levels in the Great Lakes; the dredging process and required permitting; and aquatic invasive species identification and prevention in Pennsylvania.

This interactive program will provide participants with the opportunity to ask questions and network over complimentary refreshments and receive handouts and resources on new dredging regulations, the application process, spill management and other helpful information.

The program is free but you must register by March 22. E-mail your contact information and club or marina name (if appropriate) to Tom Cermak tjc29@psu.edu. Or you can confirm via doodle poll at: <http://doodle.com/8afhixr9fr6dts3h>

What: Clean Marina Pollution Prevention Workshop.

When: March 25, 8:30 a.m. to noon.

Where: Tom Ridge Environmental Center.

Other important meetings and workshops supported by Pennsylvania Sea Grant to be held at the TREC include:

What: "Managing Municipal Stormwater Workshop" — New stormwater regulations and best management practices to reduce flooding and protect water quality; \$40.

When: April 17 and 18; RSVP deadline to register is April 2.

Register online at: <http://environmenterieworkshops.ticketleap.com/stormwater-erie/> or contact: Matt Pluta at 835-8069 or Scott Sjolander at (814) 333-7440.

What: The Trout Unlimited "Water Quality Monitoring Workshop" — Learn how to monitor your local stream; free for members, women anglers; \$17.50 for others

When: March 23, 9 a.m. to 3 p.m.; RSVP deadline to register is March 20.

To register: E-mail Mitchell Blake at mblake@tu.org or call (814) 977-0007.

What: Presque Isle Bay Public Advisory Committee meeting.

When: Monday, March 18, at 9:30 a.m. in Room 112

For more information and a meeting agenda: visit www.pibpac.org.

ANNA MCCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu. Be sure to like the NIE pages on Facebook at www.facebook.com/PennsylvaniaSeaGrant.



ANNA MCCARTNEY/Contributed photo

By working together, municipalities can protect our regional economy, which relies on eco-tourism, fishing, boating and other water-related activities. Establishing green zones that protect the countryside from sprawl, and restoring native habitat that has been paved over where possible, are important steps in stopping the degradation of Presque Isle Bay and the entire Lake Erie Watershed.

Watershed moments

Learn how stormwater runoff poses threat to Lake Erie, bay

By ANNA MCCARTNEY
Contributing writer

Lessons learned from Presque Isle Bay's watershed can help us continue restoration efforts to improve this important waterway in the Lake Erie ecosystem. But they can also keep us from making the same mistakes in the entire Lake Erie watershed in Pennsylvania.

While Presque Isle Bay has been taken off the list of the most polluted places around the Great Lakes, it does not mean that the bay has been completely restored or that it is not facing new threats. Instead of the pollutants coming from industry as in the past, many of the pollutants make their way to the bay and the lake because of land development choices that have increased the amount of stormwater runoff in the entire watershed.

Between 1950 and 2009, the city of Erie's population declined dramatically. People left Erie and built new houses, stores, offices and manufacturing plants in neighboring municipalities. Instead of compact communities, the countryside was replaced by a sprawling trend that paved over the wetlands and green spaces with impervious surfaces. Because everything was so far apart, driving everywhere became necessary. Other unforeseen consequences arose, including the loss of farmland, air, surface and groundwater pollution, and the physical deterioration of Erie.

Wetlands are now less than one percent of the Presque Isle Bay watershed — well below the 3 percent to 5 percent suggested for optimizing flood control and water quality enhancement. Currently 77 percent of this watershed is urbanized, with 63 percent impervious cover, according to GIS-based analysis performed by Sean Rafferty, senior outreach specialist for Pennsylvania Sea Grant. Rafferty reports that this watershed has approximately 511 miles of roadways, more than 2,000 parking lots and more than 50,000 buildings. There are approximately 182 miles of storm sewers carrying polluted runoff; this discharges into Presque Isle Bay through 15 storm sewer outfalls.

Stormwater discharges have



SEAN RAFFERTY/Contributed photo

This section of Cascade Creek near Pittsburgh Ave is a perfect opportunity for restoration. It's a painful reminder of past mistakes caused by unchecked development that continues to diminish the water quality of this important Presque Isle Bay tributary.



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The Presque Isle Bay Watershed outlined in this map shows miles of roads and parking lots caused by sprawl. The negative environmental impact and the time and money consumed in constant driving are perfect reasons for a watershed approach to future development.

emerged as a problem because the flow of water and groundwater recharge is dramatically altered as land is developed. Vegetation and topsoil are typically removed to make way for buildings, roads and other infrastructure and drainage networks. This loss of natural water retaining features causes stormwater to reach streams in short concentrated bursts. Roads, parking lots and other impervious surfaces channel and further speed the flow of water to storm drains and streams. This runoff picks up

pollutants from lawns, motor vehicles, pet wastes, industries and other urban sources, leading to degraded water quality.

From 2000 to 2002, researchers from Mercyhurst University, Gannon University and Penn State Behrend conducted physical, chemical and biological assessments of Scott Run, Cascade Creek, Mill Creek and Garrison Run (all of which are on the impaired-waters list for Pennsylvania) to determine the impacts of urbanization on the Presque Isle Bay watershed. These as-

essments and the newest studies led by Rafferty established the criteria for the Presque Isle Bay Watershed Restoration, Protection and Monitoring Plan (<http://pib.psu.edu>). Geospatial data was also collected and used to prioritize restoration needs in the watershed. You can read more and access the interactive GIS map at www.paseagrant.org/projects/presque-isle-bay-watershed-online-gis-tool/.

This watershed approach for planning development and stormwater management broadens the geographic area beyond political boundaries and extends it to the hydrological boundaries. And because it rightfully considers water resources and land uses within the entire watershed, this plan depends on cooperation between municipalities.

Protecting water resources is everyone's business. Learn more about: managing stormwater, collecting stream data from your local stream and about the future of Presque Isle Bay at three upcoming events that you won't want to miss. See side article for details.

ANNA MCCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu. Be sure to like the NIE pages on Facebook at www.facebook.com/PennsylvaniaSeaGrant.



Wanted: Motivated teens for summer science camp

By ANNA MCCARTNEY
Contributing writer

Are you a bright, motivated, high school student and interested in going to college for a degree in science? Do you like learning about environmental issues? Is spending time outside in the field and in the lab appealing to you?

If you're free from other obligations from 8 a.m. to 5 p.m. for the week of July 22-26, consider applying for the 2013 Regional Science Consortium Enviro Research Camp at the Tom Ridge Environmental Center.

The RSC is looking for students in grades 9-11 who are interested in furthering their educational experience. If chosen, you will participate in a week of intensive hands-on research with professors from Penn State Behrend, Gannon University, Mercyhurst University and California University of Pennsylvania to learn about current environmental research. You will work with a team to design a research project, perform experiments and collect data. Students will present their findings before attending an award ceremony and celebration for all participants and parents/guests at a BBQ dinner on the patio of the Sunset Café at the TREC.

Be aware that admittance is



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The 2013 Summer Regional Science Consortium Enviro Research Camp is for students in grades 9-11.

competitive and students are required to have a teacher submit the application with a recommendation. Special consideration will be given to students who attend Regional Science Consortium member schools. The deadline to apply is April 30.

There is no cost for students. Ask your teacher or find more details and the application at www.paseagrant.org.

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Check out these websites to learn more:

<http://pib.psu.edu>
www.paseagrant.org/projects/presque-isle-bay-watershed-online-gis-tool/
www.pibpac.org
www.paseagrant.org

After World War II, Americans began to leave cities and build new houses, stores, offices and manufacturing plants on open land in the countryside. While this new way of living promised lots of open space, beauty, privacy, peaceful surroundings and safety, it has not delivered. Unforeseen consequences arose, such as traffic congestion, the loss of farmland and open space, air, surface and groundwater pollution, and the physical deterioration of cities.

Look for examples of other changes caused by this way of life in the daily newspaper. If you were in charge of new development, what would you do to make it better? Send your ideas to axm40@psu.edu for possible publication in the "your space" feature.

