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Students map out ways to safeguard Lake Erie

By ANNA McCARTNEY
Contributing writer

A watershed approach to solving problems is being taken very seriously by Erie County youth who realize that water and pollution do not recognize political boundaries.

By sharing their research and stewardship projects with area elected officials, business leaders, school superintendents, school board members, environmental organization representatives and others, they hope that adults will come to that same conclusion.

Eighty people joined Destination Erie and Pennsylvania Sea Grant for the Great Lakes and Erie County Watershed Awareness Day at Penn State Behrend on May 14 to learn from students about how to improve the region's economic and environmental sustainability. Approximately 100

students and their teachers from five Erie County school districts who participated in PA Sea Grant's Great Lakes Great Stewards B-WET service-learning project attended the event.

Watershed map games created by the students to share best management practices and recommendations in their local watershed were the highlight. The games and event were made possible with funding and assistance from Destination Erie and assistance from PA Sea Grant and Doreen Petri, a science teacher at Collegiate Academy. Additional funding came from NOAA and EPA for Pennsylvania Sea Grant's watershed education projects.

ANNA McCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu.



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North East Middle School Science teacher Ian Williams and his students release trout they have raised in their classroom into Twenty Mile Creek as part of their watershed service-learning project. A connection between stream water-quality degradation and the success of sport fisheries underscores the importance of having a watershed-wide plan that promotes land protection/conservation efforts to prevent degradation of Lake Erie tributaries.

Stress management

State of local streams affects quality of water

By ANNA McCARTNEY
Contributing writer

For every waterway that is polluted, we all suffer the consequences and so does the wildlife.

While Lake Erie is a huge body of water, it cannot continue to provide millions of people with water suitable for drinking or for a healthy environment or strong economy without cooperation among the states, municipalities, businesses and the people that rely on this precious resource.

As we explore Sixteen Mile Creek and Twenty Mile Creek, the eastern-most major subwatersheds in Lake Erie in Pennsylvania, the need for a consistent, uniform proactive approach to managing our shared water resource should once again be obvious.

Sixteen Mile Creek and its tributaries drain 18.8 square miles of land in three municipalities, including Greenfield, and North East townships and the Borough of North East. Twenty Mile Creek and its tributaries drain water from land in Chautauque County, N.Y., and 1.29 square miles of North East Township into the lake.

Grape vineyards dominate the headwater regions of the Sixteen Mile Creek watershed, with increasing urbanization toward the lower stream reaches. Documented evidence about the impact of pollution on Sixteen Mile Creek is a warning sign that preventive and corrective measures are needed to protect and improve water quality. The Pennsylvania Department of Environmental Protection lists Sixteen Mile Creek as an impaired stream due to siltation and municipal point-source pollution. Treated wastewater from two borough/township sewage treatment plants is discharged into the stream just south of where it enters Lake Erie at Freeport Beach. Twenty Mile Creek is considered the largest

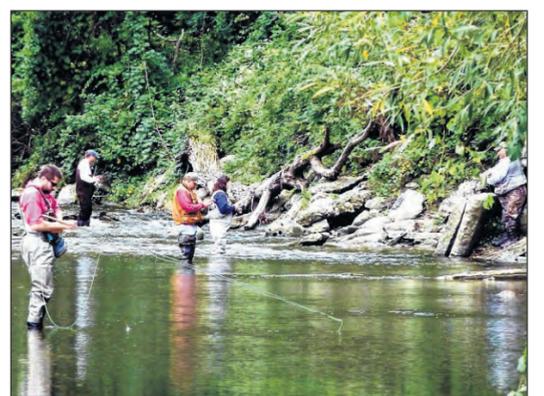
stream to the east of the city of Erie in Pennsylvania. The Pennsylvania Fish Commission stocks it annually with steelhead and trout and because the creek is an approved trout water, its fishing can be good throughout the year. Steelhead run into Twenty Mile all the way to New York.

Yet as more land is developed or converted to residential uses, more stress and direct impact on water quality and quantity are likely. Decisions about the location, density and type of land use affect the environment, economy and quality of life for all residents. Fortunately, many potential sources of pollution and flooding can be prevented or eliminated with watershed planning and active public participation.

Following the path of runoff from your roof or garden could help you see that any fertilizers and chemicals you add to your landscape will eventually reach the closest stream. Faulty septic systems, combined sewer overflows from wastewater plants, industrial spills and untreated agricultural and stormwater runoff are also problems that pollute our drinking water, endanger animals and threaten fishing and swimming.

To find out more about ensuring water quality and quantity in your watershed, attend the Penn State Extension program on Thursday, June 12, from 8 a.m. to 4:15 p.m. at the Tom Ridge Environmental Center. The event is sponsored by the U.S. Department of Agriculture Forest Service, state and private forestry and the state DEP. Register online at <http://extension.psu.edu/watershed-quality> or call (877) 489-1398 by June 5. Registration fee is \$25.

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Tourism and recreation, which rely on the natural beauty and quality of the water, are significant to the area's local economy.



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Sediment-laden water from Sixteen Mile Creek enters a much clearer Lake Erie at Freeport Beach. Runoff from the watershed collects sediment, nutrients and pollutants and deposits them in the lake not far from the drinking water intake.



ANNA McCARTNEY/Contributed photo

Too much algae or sediment in lakes and streams can make them unsuitable for recreation and aquatic life and can also increase the cost of water treatment for drinking and food processing.



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Wilson Middle School students pose with their game.



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Fairview High School students play their watershed game.



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Iroquois Elementary students teach about watersheds.



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Union City High School students share their game map.

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Find articles about different municipalities near you. Do these articles mention how two or more are working together for a common cause? Is the cause at all related to the environment?

Brainstorm ideas about how municipalities can work together to improve the health of our local watersheds. Write a letter about why they should cooperate to protect our environment, then send it to axm40@psu.edu for possible publication in Your Space.

