

NIE **Connect with your environment**
 Learn about environmental issues, in your community and how you can get involved.

Walnut Creek focus of Saturday tour

By ANNA McCARTNEY
 Contributing writer

A yearlong state Department of Environmental Protection investigation of the Walnut Creek watershed in 2007 found that land use and human alterations were damaging the creek, one of the best steelhead fisheries in the Great Lakes region. — See more at www.paseagrant.org/nie/



CONTRIBUTED PHOTO

Rain barrels will be given away at the Walnut Creek bus tour.

Home and business owners can learn how they can help restore water quality in the creek by attending Environment Erie's Walnut Creek Watershed Best Management Practices Bus Tour on Saturday from 9 a.m. to 2 p.m. Registration is required. Rain barrels will be given to each participating household.

school properties, Millfair composting site, Browns Farm and Asbury Woods.

A donation/fee of \$15 per household will be collected of the day of the tour, which begins at the Tom Ridge Environmental Center. The bus tour will feature green infrastructure practices, including best management practice stops that highlight rain gardens and other projects at the Lake View Landfill, business and

Pennsylvania Department of Environmental Protection funding and donations from the Erie Metropolitan Transit Authority and the Whole Foods Co-op have made this event possible. For more information, contact Nate Millet at 440-3953 or 746-0544.

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



USGS

Beach closings, toxins in Toledo's drinking water and lake water that looks like spilled paint are just a few signs that voluntary efforts are not working to fix Lake Erie's water problems.

Holy Toledo

Lake Erie water woes don't stop in Ohio

By ANNA McCARTNEY
 Contributing writer

They live in the world's most freshwater-rich area and not a drop was safe to drink.

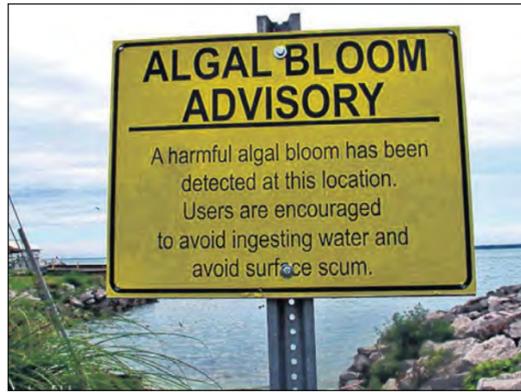
From Aug. 2 to Aug. 4, almost half-a-million Lake Erie citizens were warned: Do not drink the water, do not brush your teeth or prepare food with it, and do not give it to your pets. Health officials also advised that children and people with weak immune systems not use the water to bathe.

The water treatment plant serving Toledo, Ohio, and some Michigan communities issued this ban when dangerous levels of a toxin produced by a Lake Erie harmful algae bloom contaminated their water supply. It is not the first and probably won't be the last. In September 2013, a water treatment plant in Carroll Township, Ohio, issued a similar ban.

In freshwater, the majority of HABs are caused by cyanobacteria (also called blue-green algae). Depending on the exposure and the type of toxin, health effects can include gastrointestinal, neurological, dermal and respiratory symptoms and even death. Cyanobacterial toxins (cyanotoxins) are implicated in human and animal illness and death in more than 50 countries worldwide, including at least 35 U.S. States.

Beyond the health problems, HABs wreak havoc on marine ecosystems and the communities that rely on commercial and sport fishing, boating and other recreation and tourism. At stake are tens of billions in lost revenue and millions more in additional monitoring, and treatment for affected drinking water. But the phosphorus and nitrogen that feed the blooms, which produce the toxins that contaminate the water, don't originate at the coast.

They begin their journey to Lake Erie from land as far away as Fort Wayne, Ind. Water drains from land in Indiana, Michigan, Ohio, Pennsylvania and New York, as well as the Cana-



OHIO SEA GRANT

HABs should be reminders of the hidden economic costs of pollution, including the need for more water treatment and lost income from fishing, recreation and tourism.



MICHIGAN SEA GRANT

Water problems don't begin in Lake Erie. Pollutants come from cities as far away as Fort Wayne, Ind., and from land in Michigan, Ohio, Pennsylvania and New York, and the Canadian province of Ontario (green area on map).



NASA

Lake Erie algae blooms have been increasing for more than a decade. This NASA image from 2011 demonstrates the extent of the problem.

dian province of Ontario. Rain and snowmelt transport soil particles, fertilizers, pesticides, raw sewage and other pollutants from homes, farms, lawns, roads, Pennsylvania and New York, which deposit them in Lake

Erie. Storms then carry them further into the lake.

This is just one example of why Toledo and any of the communities or states in the Lake Erie watershed cannot fix water pollution problems on their own — and why volun-

WHAT YOU'LL LEARN

Starting today and in coming weeks, we will examine the problems that threaten Lake Erie and the Great Lakes basin. We will highlight what you can do and what others are doing to protect and restore this valuable resource. Educating yourself and getting involved will ensure that the decisions you make where you live, work or go to school will benefit current as well as future generations.

tary programs don't work. These communities and problems are interconnected by water, which does not recognize their political boundaries. Toledo can't force Fort Wayne and other communities in Indiana or Ohio, Michigan and other states that contribute to the problem to stop polluting.

However, the 1972 federal Clean Water Act proved that problems like this, ones that cross municipal and state borders, can be solved.

When Lake Erie was declared "dead," the federal government created a partnership between the states. It set wastewater benchmarks and a range of pollution control programs that held each state to the same standards, and the lake recovered.

Yet this law cannot address the current problems because it only regulates point sources of pollution that can clearly be measured, such as pollution created by power plants.

It did not establish a limit for manure or fertilizers or pesticides that can wash off lawns or farms, (many of which are now factory farms).

Doesn't it make sense to issue standards for these and other nonpoint pollutants to insure current problems will also be solved?

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



CONTRIBUTED PHOTO

Diehl fifth-graders were among 400 students who conducted school cleanups in 2013.

Environmental page can inspire students

By ANNA McCARTNEY
 Contributing writer

You can help create future stewards who have the education and skills to solve problems that threaten Great Lakes resources.

Order free Tuesday newspapers for your classroom at nie.goerie.com, where you can also find teacher lessons for this weekly page, which connects students with resources in their own backyard. The PA Coastal Resources Management Program and Pennsylvania Sea Grant also invite schools to make a difference by hosting a school cleanup anytime this month. Teachers can decide on a convenient day when school meets. After the cleanup is complete, you will share the data with PA Sea Grant to be added to the Lake Erie International Coastal Cleanup data and worldwide totals. To reserve bags, gloves, data cards and instructions, contact Anna McCartney at axm40@psu.edu to register your school.

In the 2013-14 school year, area teachers who participated in the International Coastal Cleanup and who received this weekly NIE page created a new pool of future scientists, teachers, town planners, politicians, farmers, consumers and

business leaders who have the knowledge and skills to be great stewards.

These teachers and more than 400 students collected and documented 586 pounds of trash around their school neighborhoods and kept that trash from reaching local streams, Lake Erie and the ocean. Their results were added to those of 676 volunteers who collected 2,484 pounds of trash along 24.75 miles of Lake Erie shorelines and waterways during the ICC on Sept. 21, 2013. The combined results were shared with the Ocean Conservancy and added to worldwide data.

Diehl Elementary, East High School, Fairview High School, Harding Elementary, Iroquois Elementary/Gannondale, Joanna Connell Elementary, Neighborhood Art House, North East Middle School, Union City High School, and Woodrow Wilson Middle School participated in the school cleanups coordinated through the Pennsylvania Sea Grant BWET program.

Won't you add your school or student program to help this list grow?

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Check out these websites to learn more:

<http://oceanservice.noaa.gov/hazards/hab/>
www.ohioseagrant.osu.edu/
www.toxicalgae.news.com/
www.paseagrant.org

One factor that determines stormwater runoff is precipitation. Find and use the daily weather feature to determine total precipitation so far this year in the Erie region. Is it more or less than the yearly average? How does our precipitation compare with other cities?

