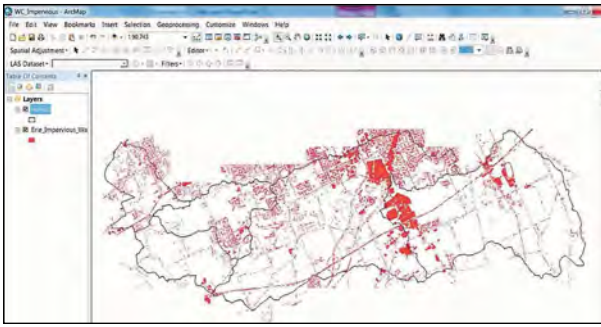




# Reconnect with your environment

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



CONTRIBUTED PHOTO

A Nov. 15 workshop will provide an overview of how to use GIS for municipal operations and watershed planning.

## Free workshop will cover planning for watersheds

By ANNA MCCARTNEY  
Contributing writer

Geographic Information Systems (GIS) and geospatial data are great tools for municipal operations and watershed planning to increase municipal efficiency, effectively manage stormwater, protect against flooding and protect local water quality.

PA Sea Grant and the Pennsylvania Department of Environmental Protection will provide an overview of how to use GIS and geospatial data at a free workshop for municipal officials, planners, engineers, environmental organizations, and others interested groups. It is scheduled from 9 a.m. to 2:15 p.m. on Friday, Nov. 15, at the Tom Ridge Environmental Center. You must register by Nov. 6. To register, e-mail Sean

Rafferty at sdr138@psu.edu. In your e-mail, please include your name, affiliation, job title, phone number, e-mail address, and meal preference (vegetarian or no preference). Attendance is limited to 100, with municipal and environmental personnel from the Pennsylvania Lake Erie Basin given preference if interest is greater than the number of openings.

If you would like further information or have question, e-mail Rafferty or call him at 217-9013. To see the announcement and a workshop agenda, visit [www.paseagrant.org](http://www.paseagrant.org).

**ANNA MCCARTNEY**, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at [acm40@psu.edu](mailto:acm40@psu.edu).



NOAA

Pinpoint your location. Even if you don't live by the water, your actions have lasting impacts on this limited resource because all the water on Earth is connected. Evaporation from the ocean forms clouds, which carry precipitation that falls across the Earth. This water replenishes the system's surface water and aquifers, which in turn, replenish the lakes and the cycle begins again.

# Act now: limited supply

## Hydrologic water cycle must be safeguarded

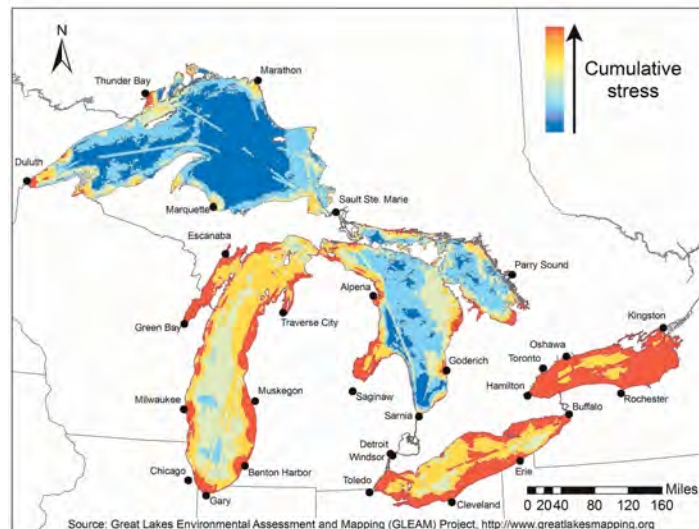
By ANNA MCCARTNEY  
Contributing writer

A closer look at Earth from space reveals an immense shared system of freshwater lakes that are connected to each other and to the world ocean by the water cycle.

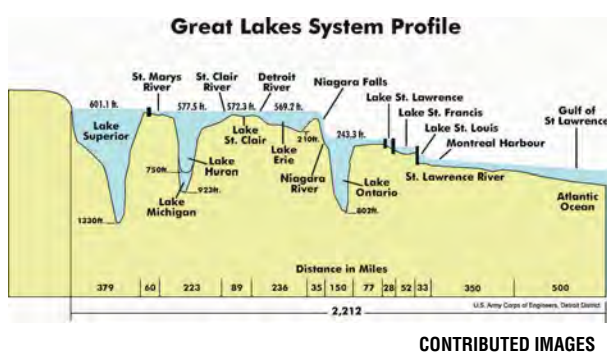
The Great Lakes — Superior, Michigan, Huron, Erie and Ontario — and the rivers, channels, and smaller lakes that feed or drain them make up the largest surface freshwater system on Earth. While the Great Lakes system spreads across more than 94,000 square miles (243,460 square kilometers), it drains a much larger watershed that includes parts of eight states and two Canadian provinces. Like one giant slow-moving river that flows west to east out to the Atlantic Coast, freshwater from the Great Lakes flows back into the ocean through the St. Lawrence River.

The sheer size of the Great Lakes and the ocean has led many to believe that water is renewable and that "dilution is the solution to pollution." Both notions are dead wrong.

The amount of water in the ocean and the world's freshwater system is limited by the complex hydrologic cycle, which recycles the same water that connects past, present and future generations. This means there will be no new water for an ever-growing population that has climbed to over 7 billion. It also guarantees that



This map of the Great Lakes and the accompanying website [www.greatlakesmapping.org](http://www.greatlakesmapping.org) demonstrate the combined severe human-caused environmental stressors that continue to degrade this precious source of freshwater.



CONTRIBUTED IMAGES

The Great Lakes flow west to east, each dumping water and pollutants into the lake below. Eventually the polluted water flows into the St. Lawrence River to the Atlantic Coast and into the ocean.

pollutants introduced by people are accumulating in the world's water.

Pollutants that run off the land, soak into the ground or are spewed into the air get carried to other areas and eventually into the ocean. As the water cycle is repeated again and again, more chemicals, trash, plastic and other pollutants are added to a system that is on the verge of collapse.

We can stop adding to pollution, reduce demands for water and stop climate change to protect the water cycle and the Great Lakes Basin Ecosystem and the ocean. We can keep plastic and chemicals from pharmaceuticals, personal care products, pesticides and other newer pollutants from accumulating along with old pollutants like DDT and mercury that

were added by past generations and which have not disappeared.

Our personal choices and the ones we make collectively in our communities, region and nation about protecting land and water resources will determine the future of the Great Lakes and the ocean. Shouldn't we do what it takes to keep drinking water safe, eliminate dead zones and defend diminishing fish and aquatic wildlife populations?

Join us in the coming weeks as we zoom in for a closer look at our water resources, what others are doing and what you can do to restore this elixir of life and protect it for future generations.

**ANNA MCCARTNEY**, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at [acm40@psu.edu](mailto:acm40@psu.edu).



CONTRIBUTED PHOTO

Neighborhood Art House's Green Team includes, from left, Joel, Robert, Cameron, Valentino and Jayden.

## Students plead with residents to keep neighborhood clean

By ANNA MCCARTNEY  
Contributing writer

The Neighborhood Art House Green Team is one of nine Erie County groups participating in the PA Sea Grant/NOAA BWET Great Lakes Great Stewards project.

The data these students collected will be added to the results of the International Coastal Cleanup effort in northwestern Pennsylvania and sent to Washington, D.C.

The cleanup and data collection is one of two stewardship projects the students will be conducting with their leader, Pat Lupo, O.S.B.

Participating team members wrote the following open letter.

Dear Citizens of Erie,

We are the Green Team of the Neighborhood Art House. In September we cleaned our neighborhood. We found 1,242 cigarette butts, 357 food wrappers, 94 pieces of paper, 44 beverage containers and a lot of other litter. It was a hard job, but we got it done.

Please keep the world clean. Don't litter!

Thank you. It would mean a lot to us.

— Green team members  
**Adriana, Ciarra, Dalaysa, Franco, Kaylee, Leela, Trinity and Yamillah**

**ANNA MCCARTNEY**, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at [acm40@psu.edu](mailto:acm40@psu.edu).

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Name the two countries and all the U.S. states that share the Great Lakes. Why is it important that they cooperate in protecting this important freshwater resource? What can citizens of all ages do to restore and protect water? Are you taking an active role? Share your projects and tell others why it is important to be involved. Send them to [axm40@psu.edu](mailto:axm40@psu.edu) for possible publication in the "Your Space" feature.

