Stream Lines Fall 2014

River Raisin Rescue Cleanups

The watershed council was awarded over $1,500 through the MiCorps Volunteer River, Stream and Creek Cleanup Program for three River Raisin Rescue Cleanups this summer. This funding allowed us to provide our volunteers with

T-shirts and helped to pay for disposal costs of materials that could not be recycled. Tecumseh Paddling Company, Washtenaw Equine Center and Michigan International Speedway also helped to fund the cleanup, and Frank's Place Pizzeria in Manchester provided lunch to our hungry volunteers.

Forty volunteers participated in the cleanups throughout the summer removing over 30 cubic yards of garbage. The cleanups took place in Jackson, Lenawee and Monroe Counties in areas that citizens suggested. We rely on the input of concerned residents to know where problem areas are in the watershed, and are always open to new suggestions for future cleanups.

In Jackson County we targeted over 4 miles of the River Raisin and its banks from Brooklyn to Norvell. Nearly 100 cubic feet of garbage was collected. The majority of volunteers focused on problem areas near the bank of the river, often at locations that are easily accessible to fishermen and other outdoor enthusiasts. Other volunteers took boats downstream to collect garbage from less accessible reaches. The owners of the Old Irish Mill generously donated boats for the day of the cleanup.

Our cleanup in Lenawee County took place in Adrian at Heritage Park and on Academy Road. Over 500 cubic feet of garbage was collected. A majority of this garbage was collected from the river bank near the Academy Road bridge. Academy Road is notorious for illegal dumping, and the watershed council is working with the Lenawee County Solid Waste Planning Committee to abate this problem by beautifying the area and informing citizens on how to report dumping to the police.

The final cleanup took place near the Raisinville Township Hall by the Ida-Maybee Road Bridge. Nearly 300 cubic feet of garbage was collected. Most of the garbage was located near the bank on the bridge, as this is another site that is often visited by fishermen and other outdoor enthusiasts. We hope that the cleanup will help to discourage visitors from leaving garbage behind. Monroe County plans to turn this area into a public access site with a boat launch in the near future.

Contact Us!

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Neon Nuisance: Algal Blooms in Our Waters

Harmful algal blooms (HABs) made nationwide headlines this summer when nearly a half of a million people near Toledo, Ohio lost access to clean drinking water due to a HAB in the Western Lake Erie Basin (WLEB). In addition to Lake Erie, algal blooms are often observed in the River Raisin during the summer months. This has left many people wondering what processes lead to the formation of these algal blooms, and when are they potentially harmful.

Algae are single celled microorganisms that can form a green "slime" in the water when they multiply and a bloom occurs. This green color can be attributed to the presence of chlorophyll and other light capturing pigments, which the algae use to produce food from the sun through photosynthesis. It is important to understand that there are many different types of algae. The blue-green algae that cause HABs are a type of cyanobacteria called *Microcystis*.

Although all algae may multiply to form blooms, not all of these algae give off harmful toxins. In fact some of them can be beneficial to the health of the ecosystem. Algae form the base of the aquatic food-web because other microorganisms, macroinvertebrates, fish and animals eat algae. The structure of filamentous algae provides habitat for other organisms. The oxygen that algae release as a by-product of photosynthesis is also important for the health of higher life-forms that live in the water. While it is important to keep an eye out for changing environmental conditions in the river, the striking green color of algal blooms could indicate a healthy ecosystem, depending on the particular species of algae that is present. Harmful algae can also be present, so it is important to report blooms so that the species of algae can be properly identified.

The WLEB is the shallowest basin in Lake Erie. This is part of the reason that algal blooms occur there each summer. The shallow water warms up more quickly than the water in the other basins. Generally, HABs form when water temperatures are above 60 °F and there are ample amounts of dissolved phosphorus in the water. Phosphorus is typically the nutrient that limits the growth of cyanobacteria.

Nutrient run-off from this storm drain and geese near shore likely contributed to the algal bloom in the River Raisin in Tecumseh this summer.

This dissolved phosphorus comes from a variety of different sources including agriculture, wastewater and cleaning products. The River Raisin is the third largest contributor of surface water to the WLEB, behind the Maumee River in Ohio and the Detroit River in Michigan. A majority of the land area in the watershed is in agricultural production, so we need to be concerned about enhancing and encouraging environmentally responsible agricultural practices in our communities to help reduce the amount of phosphorus reaching the WLEB. Programs such as the Michigan Agricultural Environmental Assurance Program (MAEAP) can help to guide farmers towards nutrient management practices and strategies that reduce runoff. The watershed council helps to coordinate the farmer led River Raisin Farmer's Advisory Committee, which provides a venue for farmers to share ideas on the best ways to spread these conservation practices. We are fortunate that the farmers in our watershed represent a uniquely innovative group that have an innate connection to the land and water.

Contact us if you would like to join the River Raisin Farmer's Advisory Committee or have concerns about algae blooms in the River Raisin.

To learn more about HABs see:

www.glerl.noaa.gov/res/waterQuality/

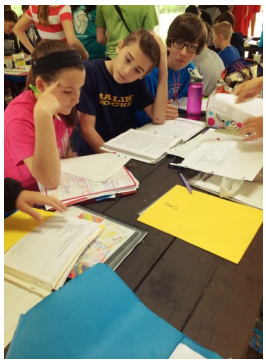
MAEAP: www.maeap.org

What You Can Do to Help Prevent Algal Blooms

Do:	Don't:
Use Native Plants in Landscaping	Fertilize Your Lawn
Make a Rain Garden or Use a Rain Barrel	Feed Animals Near Shore

STEM-Project Lead the Way

Students sampled water from the Saline River, examined the chemical properties of the water, took notes on the surrounding area, and put the results together in a comprehensive report.



This spring, Saline Area Schools 7th graders participated in water quality testing and problem solving. Mrs. Leigh Ann Roehm, Saline Middle School science teacher, obtained a grant from the Foundation for Saline Area Schools to purchase the needed supplies for the testing. All science teachers participated, allowing all 400 Saline 7th graders to get out in the Saline River to learn about the importance of water quality, and what they can do to protect it. The Saline River is a major tributary to the River Raisin. Mrs. Roehm contacted the RRWC's Program Director, Carley Kratz, who provided advice and resources on how to conduct their study.

Seven of the students presented their report outlining some of what they learned, including the difference between point and non-point source pollution. Their study showed good or excellent results for dissolved oxygen, temperature, pH, nitrates and turbidity. Results for phosphates were fair and for fecal coliform were poor. Their report then outlined what these results meant and how they were inter-related, including how phosphates can lead to excessive plant growth and reduced dissolved oxygen, which has a negative effect on the biodiversity of life in the river. During the presentation to a group that included members of the RRWC, their enthusiasm and concern for protecting the Saline River was inspiring.

Saline Area Schools participate in a program called Project Lead the Way, the nation's leading provider of science, technology, engineering, and math (STEM) programs. Mrs. Roehm realized the Saline River, a tributary of the River Raisin, could be an outdoor science classroom for her students. Many other schools in Michigan, and in the River Raisin watershed, participate in these programs. More information can be found at pltwmichigan.org.

Students can make a real connection to the natural world and learn to use science to understand how we can help protect it. The RRWC is committed to helping teachers like Mrs. Roehm introduce their students to the science that can be found in the land and water that surrounds them.

Please contact Carley Kratz (carley.kratz@lenawee.mi.us) for information on how to get schools in your area involved in exploring the River Raisin Watershed.

Join Us At Our Fall Meeting!

Date: October 6, 2014

Time: 5:30 PM Silent Auction
6:30 PM Official Program

Location: Hidden Lake Gardens
6214 Monroe Rd. (M-50)
Tipton, MI 49287

Algal blooms will be the theme for our fall meeting. Carley Kratz, our Program Director, will present progress towards our strategic plan goals that took place this summer. Dr. Mary Ann Evans, a Research Ecologist with the USGS will present the science behind algal blooms in Lake Erie. Amy Gilhouse, the watershed NFWF MAEAP Technician, will speak about efforts to enhance farmer involvement in conservation practices to improve water quality.

Partner Update: River Raisin Institute

Three hundred 6th graders from Monroe County schools participated in the Lake Erie Water Festival this spring. Students learned about grey water recycling, organic farming, solar energy and habitat restoration. River Raisin Watershed Council's Carley Kratz presented the benefits and biodiversity of natural areas during a prairie tour (photo). Other topics included lake sturgeon, amphibians and mammals, measuring water quality, Great Lakes geography, and more.

The event was hosted by River Raisin Institute, IHM Sisters, Monroe County Intermediate School District, DTE Energy Foundation, River Raisin Watershed Council, and Cranbrook Institute of Science.

The IHM campus was the perfect setting to teach about sustainability with the LEED-certified renovated Motherhouse and its proximity to the River Raisin. The campus also boasts a DTE solar array installation, organic garden, constructed wetland, and restored habitats.

The River Raisin Institute (RRI) is a non-profit that collaborates with others to promote transformational learning and sustainable community. Founded by the IHM Sisters in 2003, the institute grew out of the sisters' commitment to sustainability. RRI programs focus on place-based education in the areas of sustainability awareness, building sustainable community and ecological restoration. RRI reaches the youth in our watershed through a variety of programs. A film series addressed environmental issues including water, climate change, and food. RRI collaborated on several environmental career days for 7th graders. RRI partnered with 14 local schools on the Flight of the Butterflies and Climate Change project. Each class completed a larger-than-life butterfly sculpture using recycled and repurposed materials while learning about climate change. The sculptures were displayed at the Monroe County Earth Day. The event drew hundreds who learned about sustainable living through educational exhibits and interactive activities.

As the lead organization in the Stewardship Network's Western Lake Erie Cluster, RRI networks with others on ecological restoration projects such as annual garlic mustard pulls and beach and river clean-up work days. These collaborative experiences allow children and adults to build sustainable community; communal experiences through which we share, discover, celebrate and protect the richness of our Great Lakes watershed.

To learn more see: www.rriearth.org