

The Muskegon Lake Watershed Partnership—A Celebration of Community Partnerships

The Muskegon Lake Watershed Partnership (MLWP) is a volunteer organization of community members that bring their skill, talent and passion together to get things done!

We are a diverse group that includes general public, conservation, business, local government, non profit groups, academia, students and other community stakeholders. One thing that we all have in common is that we care about Muskegon Lake, Lake Michigan and the Great Lakes. Together, we set goals and carry out projects that restore and revitalize our watershed, our communities and the Great Lakes ecosystem.

Since 1993, the MLWP has made consistent, tremendous progress in cleaning up what was once a toxic hotspot, restoring it to a vibrant natural resource, world class sport fishery and vacation destination.

This newsletter features updates about the progress that is being made!

Our enthusiasm for improving Muskegon Lake goes hand in hand with our ability to keep solid community partnerships and to continually involve new community members and volunteers.

It is because of our community partnerships and involvement that we have been able to bring in state and federal partners to help us get big things done! And we are still making progress! Join us!

You can make a difference. To find out how, see our contact information on the back page. Everyone is welcome!



Community Partnerships

The MLWP's volunteer "Shoreline Stewards" have been restoring native plant habitats and removing non-native invasive plants along the shoreline. Muskegon County, Veterans Council and Northside Lions are partnering on a sustainable landscape, water quality and habitat improvement

See "Community Partnerships" pg. 3 See "Shoreline Stewardship" pg. 3

Volunteer Stewardship

The 2013 Annual Muskegon Lake Watershed Cleanup was inspired by low water levels in April. 100 volunteers pried, dug and tugged 289 tires from shallow water habitats along the shoreline and from Ruddiman and Ryerson Creeks. More than

Environmental Cleanups

MLWP worked with the US EPA and the MDEQ to complete two large-scale contaminated sediment cleanups (Ruddiman Creek in 2006 and the Division Street Outfall in 2012). New sediment projects are currently being planned for the former Zephyr Oil Refinery and for Muskegon

See "Environmental Cleanups" pg. 2

Fish and Wildlife Habitat

Extensive habitat restoration of the Muskegon Lake shoreline was completed in 2013 with a \$10 million dollar NOAA/ARRA-Great Lakes Commission grant to the West Michigan Shoreline Regional Development Commission. 13,000 feet of shoreline and 30 acres of wetland were restored with

See "Fish and Wildlife Habitat" pg. 2

Fish and Wildlife Habitat (continued from Page 1)



Large, woody structure (fallen trees) and colorful, native wetland plants are the finishing touches on the restored shoreline at Heritage Landing. Turtles use the trees to bask in the sun. Fish find cover and prey on



Public/Private Partnerships are needed to complete the cleanup and restoration projects currently being planned.



Public Involvement Tour of a Great Lakes Legacy Act Cleanup & Habitat Restoration Project



wetland plants, native flowers, grasses, shrubs and trees. Soft shoreline techniques designed by Cardno JFNw and Progressive AE softened the hard shoreline while safeguarding it from ice, wind, and wave erosion.

Three public and five private landowners committed to permanent protection of the restored areas at 15 contiguous locations, and they received management plans to guide future care of the restored sites. Grand Valley State University Annis Water Resources

Institute monitored fisheries and aquatic plant beds over a 3-year period. The results have been used to measure restoration success. GVSU Seidman Business College completed a socio-economic study, revealing the project's 6-to-1 return on investment, an \$11.9 million increase in housing values in neighborhoods surrounding the improved shoreline, and an increase in the value of recreation of \$35.6 million over 15 years. Please contact Kathy Evans to find out more.



Bass Anglers at Heritage Landing Scouting for the Bass Pro Event



Environmental Cleanups (continued from Page 1)

Lake near Ryerson Creek. The Muskegon Lake Watershed Partnership and West Michigan Shoreline Regional Development Commission provide opportunities for public input and involvement by communities, landowners and industry partners to set cleanup goals and to review sampling and cleanup plans.

Here's an update on two current projects:

The Zephyr Remediation and Revitalization Project Bordered by Muskegon River on the south, the Zephyr property offers a spectacular view of the River, Lake and State Game Area wetlands. For years, containment was a remedy for the 84-acre site. In 2011, MLWP became concerned that this would not be a sustainable solution, and that pollutants may have migrated to Muskegon River. The Michigan DEQ, US EPA and the US Army Corps of Engineers investigated soils,

groundwater, wetland and river sediments in 2012 and in 2013. The US EPA Great Lakes Legacy Act & MDEQ are planning to remove contaminants from river and wetland sediments in 2014.

Local stakeholders developed a cleanup and redevelopment vision that includes green-space and a view of the extensive river valley. Landowners are exploring new agricultural uses. Public sewer and water are available along with highway access and rail to Muskegon Lake's port. The 2012 soil samples indicate that lead is not elevated on most of the property and that isolated spots could be removed through brownfield cleanup and redevelopment. An oil refinery that produced gasoline once operated at the site.

The DEQ also completed a comprehensive groundwater investigation in 2012, and continues to operate a

groundwater treatment system. Groundwater treatment has become more efficient under this renewed cleanup.

The Muskegon Lake/Ryerson Creek Remediation and Revitalization Project is moving forward with completion of the EPA 2012 lake bottom sampling. ECO is assisting the development of a Public/Private Partnership to review sample results and identify feasible cleanup goals and funding opportunities. Non-federal funds are required to leverage 65% of cleanup costs through the US EPA Great Lakes Legacy Act. Cleanup can begin when a feasibility study and remedial design are completed and the non-federal funding commitments are secured. To find out how you can help, please contact Kathy Evans at (231) 722-7878 x17 or by e-mail at kevans@wmsrdc.org.

Community Partnerships

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project for Veterans Memorial Park on Muskegon River. A Consumers Energy \$10,000 Community Transition Sustainability Grant will leverage a proposed WMSRDC/DEQ Coastal Zone project for the improvements, and \$5,000 will be used to match a WMSRDC/DEQ green infrastructure stormwater management proposal. GL&V, LLC is also contributing \$2,000 the stormwater project. During 2013, MLWP Shoreline Steward volunteers helped 300+ volunteers and students restore habitat at Grand Trunk, plant 3000 native flowers at Heritage Landing and 50 white pine trees along Lakeshore Trail. More than seven acres of shoreline habitat were improved. The events were in partnership with the United Way, Alcoa, City of Muskegon and Muskegon County's Michigan Natural Resources Trust Fund and Ice Mountain grants. Community members and landowners also volunteered to create interpretive signage for 15 restored areas. The areas are maintained by landowners and volunteers. Partnership events help educate the public, students and volunteers about water quality and wildlife, while they enjoy the outdoors. Please contact Kathy Evans, WMSRDC/MLWP Staff at (231) 722-7878 x17 to organize a partnership event.

Volunteer Stewardship

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200 tires came from Ryerson Creek alone. All tires were recycled. 3.5 tons of marine debris were removed, including sawmill waste, rubble, metal, slag, bricks, glass and 25 bags of regular old trash. Seven miles of shoreline and stream corridor were cleaned and 125 native trees and shrubs were planted. On October 10, the Red Lotus Gallery hosted an exhibit that featured the work of 24 local artists who created art with the materials collected from the shoreline! A portion of the proceeds will support MLWP projects. The annual shoreline cleanup began with the UAW Local 637's Earth Day Shoreline Cleanup more than 20 years ago. This year, the cleanup included Lakeshore Trail, Grand Trunk, Hartshorn Marina, Heritage Landing, Ruddiman and Ryerson Creeks, Fisherman's Landing and the Muskegon Lake Channel at Lake Michigan. Another annual event that began with a cleanup by the Paperworkers Local 1015 was held in May. Known as the Grand Trunk Restoration Partnership, the event includes Lakeside Neighborhood Association, Muskegon Public Schools, City of Muskegon and many others. Nearly two decades of community cleanups is paying off. The focus is now on native plantings, wetland monitoring, a peace garden, rain garden and education. Please contact Mark Evans, MLWP Treasurer at mevans1899@yahoo.com to become involved.

Restoring Beneficial Uses in the Muskegon Lake Area of Concern (AOC)

How will we know when we've done enough cleanup to remove Muskegon Lake from the list of Great Lakes Areas of Concern (AOC)? One way is to achieve the targets that were set to restore nine Beneficial Uses. The uses were impaired by legacy problems that plagued Muskegon Lake for decades. Uncontrolled shoreline land use and waste disposal led to a 1985 designation of Muskegon Lake as one of Michigan's 14 AOCs. In 1973, the Muskegon County Wastewater System improved water quality. Soon after, the shoreline's appearance also improved with City and County brownfield cleanup and redevelopment projects that followed the closing of heavy waterfront industries. The 1987 and 1994 Muskegon Lake AOC Remedial Action Plans recommended studies of lake bottom sediments, surface water quality and fish and wildlife habitats. Once completed, the studies showed that legacy problems were still harming the lake. By 1995, the public had a growing sense that the lake could improve. This energized the MLWP to further engage local, state and federal partners in cleanup and restoration projects. During the 2000's measurable Targets were set for nine Beneficial Use Impairments (BUIs). Five years later, and with results from monitoring by state and federal agencies and GVSU Annis Water Resources Institute, three BUIs were officially removed: 1) Restrictions on Drinking Water Consumption, 2) Restrictions on Fish and Wildlife Consumption, and 3) Restrictions on Dredging.

What has been accomplished? From 2005-2012, two Great Lakes Legacy Act cleanups removed thousands of tons of sediment contaminated with oil, grease, heavy metals, PAHs and PCBs. More than 30 acres of fish and wildlife wetland habitat was restored along 13,000 feet of shoreline. The remaining cleanup and restoration projects needed for AOC delisting are currently being designed. When all priority projects are complete and monitoring tells us that our BUI Targets have been met, we will de-list the Muskegon Lake AOC!

What's left to do? Sixty percent of the restoration needed to remove the Loss of Fish and Wildlife Habitat BUI is complete. Two restoration projects are currently being designed to meet habitat and water quality goals at wetland locations along Bear Lake and the Lower Muskegon River. Bear Lake water quality needs improvement to remove the Eutrophication and Undesirable Algae BUI. A NOAA/WMSRDC grant is designing restoration for the Bear Creek/Witham Road Crossing to improve fish passage, wetland habitat and water quality in Bear Lake. The Muskegon Conservation District installed best practices to reduce phosphorous in Bear Creek with a Muskegon River Watershed Assembly/MDEQ 319 Watershed Implementation grant. Communities are working to prevent phosphorous from reaching the lake through water quality-related ordinances and zoning measures. Residents are working with Public Health Muskegon County on septic system issues.

The Degraded Aesthetics BUI has agencies looking at options to stop a 1,300' deep, abandoned oil well leak to Bear Lake in Fenner's Ditch. Meanwhile, WMSRDC, Public Health Muskegon County, City of Muskegon and MDEQ are locating problem areas in Ruddiman Creek to remove the Beach Closings BUI. "Canine Source Tracking" narrowed down sources of human related bacteria for City follow-up. The Degraded Benthos BUI is being addressed at Zephyr and at Muskegon Lake's Ryerson Creek area with the EPA 2012 sediment sampling results and the formation of a public/private cleanup partnership. EPA will sample sediment near the former paper mill in Spring, 2014.



It doesn't take a lot of time to make a big difference.

Our monthly public meetings often feature presentations on natural resource topics—and we always have progress updates on Muskegon Lake watershed cleanup and restoration projects.

Hands-on volunteer events happen each spring, summer and fall.

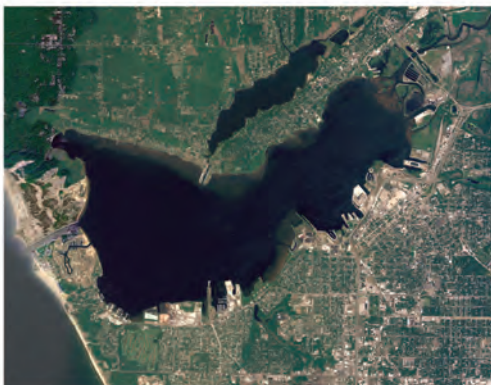
They include watershed cleanups, monitoring of the wetlands, frogs and marsh birds, native plantings for beautification, fish and wildlife habitat and more.

Read about a few of our current projects in this newsletter, and let us know if you would like to hear about special programs, events and monthly meetings. You can expect lively discussion and friendly debate, along with opportunities to share ideas about projects and priorities.

Just contact Kathy Evans, Staff Support at kevans@wmsrdc.org or at (231) 722-7878 x17 to get e-mail notices and find us on Facebook or visit our website at www.muskegonlake.org.

Check us out on Facebook

We stay connected through our public meetings, volunteer opportunities and our website. The Muskegon Lake Watershed Partnership Facebook Group is another way to stay connected. Join our FB Group or “like” our Facebook Page and you will learn more about current activities related to the Muskegon Lake Watershed.



The Muskegon Lake Watershed includes the Lower Muskegon River, Bear Creek/Lake, Cedar Creek, Mosquito Creek, Green Creek, Ruddiman Creek, Ryerson Creek, and Four Mile Creek.

Contact Information

Muskegon Lake Watershed Partnership

Contact Information, Officers, Committees, Staff:

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2013 MLWP Officers and Committee Contacts:

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Kim Arter, Vice Chair

Lea Markowski, Secretary

Mark Evans, Treasurer

Habitat & Non Point Source Committee Contact: Greg Mund

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