New York's Great Lakes Action Agenda Project Highlights

VOLUME 1, ISSUE 2 2012—2014

Improving NYS's Great Lakes Ecosystems and Communities

HIGHLIGHTS BY WATERSHED

This newsletter provides an update on projects taking place within NYS's Great Lakes basin to benefit communities and ecosystems. Ecosystems are communities of animals, birds, fish, plants and people that all live in the same area and interact with each other.

An ecosystem-based management (EBM) approach considers the health of the entire ecosystem in management plans and projects — including people— to achieve win-win outcomes to benefit both the environment and the people that depend on it. The NYS Ocean and Great Lakes Ecosystem Conservation Act (2006) calls for state agencies to consider the following EBM principles in their work:

- Place-based focus
- Protection of ecosystem structure, function and key processes
- Interconnectedness within and among systems
- Integration of ecological, social, economic and institutional perspectives
- Sustainable human use of the ecosystem
- Stakeholder involvement
- Collaboration
- Scientific foundation for decision making
- Adaptive Management

When one tugs at a single thing in nature, he finds it attached to the rest of the world.

-John Muir

Consistent with EBM's place-based focus, this newsletter is organized by the four smaller watersheds (see graphic) that make up NY's Great Lakes basin (another word for watershed). A watershed is a an area of land where all of the water that falls onto it drains to a large body of water— such as the Great Lakes!

These watersheds are used as an organizing framework for state agency program work in the basin, which is guided by the interim Great Lakes Action Agenda (GLAA). This action plan identifies high priority EBM projects to advance restoration, conservation and sustainable development goals throughout NY's Great Lakes basin. Each of the projects highlighted in this newsletter support one or more of the GLAA's ten goals:

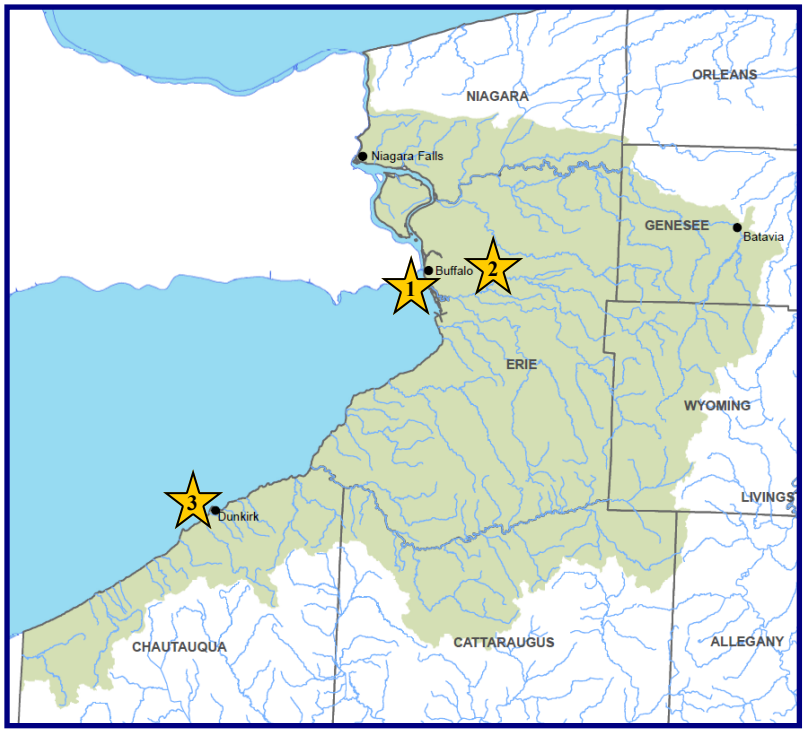
GLAA Goals

1. *Virtually Eliminate Toxic Substances*
2. *Control Sediment, Nutrient and Pathogens*
3. *Delist Areas of Concern*
4. *Combat Invasive Species*
5. *Restore and Conserve Fish, Wildlife and Habitat*
6. *Conserve Water Supplies*
7. *Enhance Community Resiliency & Ecosystem Integrity*
8. *Promote Smart Growth, Redevelopment and Adaptive Reuse*
9. *Enhance Recreation & Tourism*
10. *Plan for Energy Development*

We hope you will be inspired by these projects and support our efforts to restore the Greatness to our Great Lakes!

The four main watersheds (sub-basins) of NYS's Great Lakes basin. Which one do you live in?

Lake Erie Basin



Major Tributaries: Tonawanda Creek, Cattaraugus Creek, and the Buffalo River
Major Water Quality Issues: Legacy industrial discharges, stormwater & agricultural runoff, and combined sewer overflows
Areas of Concern*: Niagara River, Buffalo River

Highlights

1 Buffalo River Clean-up Sets the Stage for Waterfront Revitalization

Upon completion of dredging activities later this year, nearly one million cubic yards of contaminated sediment will have been removed from the Buffalo River since the project began in 2011, making it one of the largest clean-ups in the nation. Habitat restoration work will include the planting of submerged aquatic vegetation in select locations along the river, to improve aquatic ecosystem function and fish habitat. This project has supported an unrivaled re-investment along Buffalo's waterfront, offering new opportunities for economic development and public access. A growing number of events including walking tours, festivals, and other attractions are drawing residents and tourists alike to the waterfront. Clean-up activities have helped spur a waterfront revival that will be carried forth by the many Buffalonians that are connecting with the river as never before. EPA, NYSDEC, USACE, Erie County, City of Buffalo, Honeywell, and Buffalo Niagara Riverkeeper have collaborated on this dynamic remediation and restoration project, and many more will be involved in the continued progress of Buffalo's waterfront.

GLAA Goals: 1, 3, 4, 5, 8, 9


© Buffalo Niagara Riverkeeper

2 NY Teachers Get WET for the Great Lakes!

The Friends of Reinstein Woods at DEC's Reinstein Woods Environmental Education Center, Buffalo Audubon Society, Buffalo-Niagara Riverkeeper, and Buffalo Urban Outdoor Education offered a combination of teacher workshops, in-class lessons, and student stewardship activities to encourage area students to protect the Great Lakes and NY's Areas of Concern (AOC). A total of 346 educators from 39 school districts were trained on how to use the Great Lakes to teach multiple subject areas. Forty six hundred students and 1300 teachers learned about ecosystem-based management and how they can help take care of the lakes.

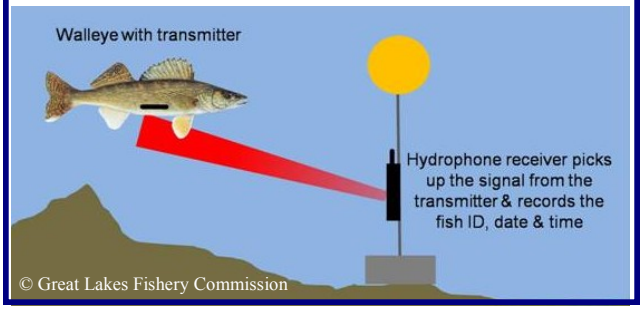
GLAA Goals: 4, 7


© Friends of Reinstein Nature Preserve, Inc.

3 Lake Erie Acoustic Telemetry Study

NYSDEC's Lake Erie Fisheries Unit will coordinate with multi-state partners around Lake Erie basin to monitor the movements, habitat use and survival of walleye and other native fish using acoustic telemetry technology, which allows 3D detection and remote tracking of fish in real time. The results will inform fisheries protection, habitat restoration and management strategies.

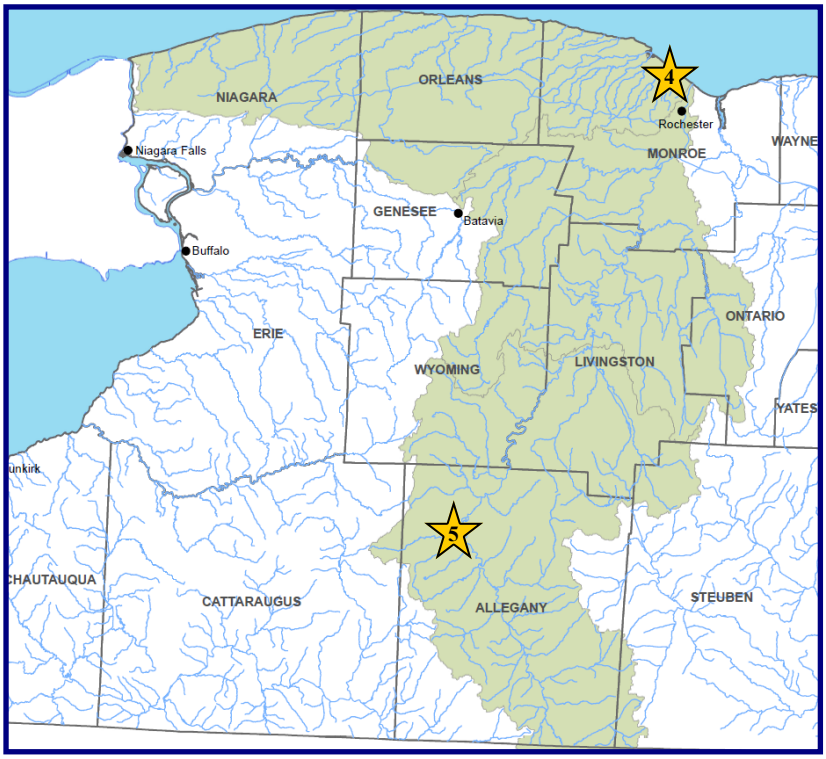
GLAA Goals: 5, Coordinated Science, Partnerships



© Great Lakes Fishery Commission

* Areas of Concern (AOC) are specific geographic areas where significant pollution problems have been identified as impairing beneficial uses of water and waterways such as swimming, eating fish, or drinking water.

South West Lake Ontario Basin



Major Tributaries: Oak Orchard Creek, Genesee River

Major Water Quality Issues: Legacy industrial discharges, agricultural run-off, urban Stormwater, and combined sewer overflows

Areas of Concern: Eighteenmile Creek, Rochester Embayment

Highlights

4 Making Progress on the Rochester Embayment Area of Concern

With support from many partner efforts and studies, the Rochester Embayment AOC is poised for delisting—or recovery status — by 2017. SUNY Brockport is studying mink prey tissue to determine if linkages among contaminant levels and bird/animal deformities exist. NYSDEC and U.S. Geological Survey (USGS) will be wrapping up a study to determine the health of benthic communities (bottom-dwelling invertebrates) in the AOC. Beach closures at Ontario Beach will be significantly reduced due to the installation of a pump system designed to remove accumulated algae from the area. The U.S. Fish & Wildlife Service, Ducks Unlimited, U.S. Army Corps of Engineers (USACE), The Nature Conservancy (TNC) and others are collaborating on the restoration of over 600 acres within Braddock Bay Fish and Wildlife Management Area, a coastal wetlands complex located within the AOC that provides habitat for numerous native species. The AOC process applies an EBM approach by conducting and using the best available science to make informed decisions, engaging a broad base of local stakeholders (organized as a Remedial Advisory Committee) in the planning and restoration process, and considering the multiple uses of the area and how they can be sustainably supported into the future.

GLAA Goals: 2, 3, 5, 9

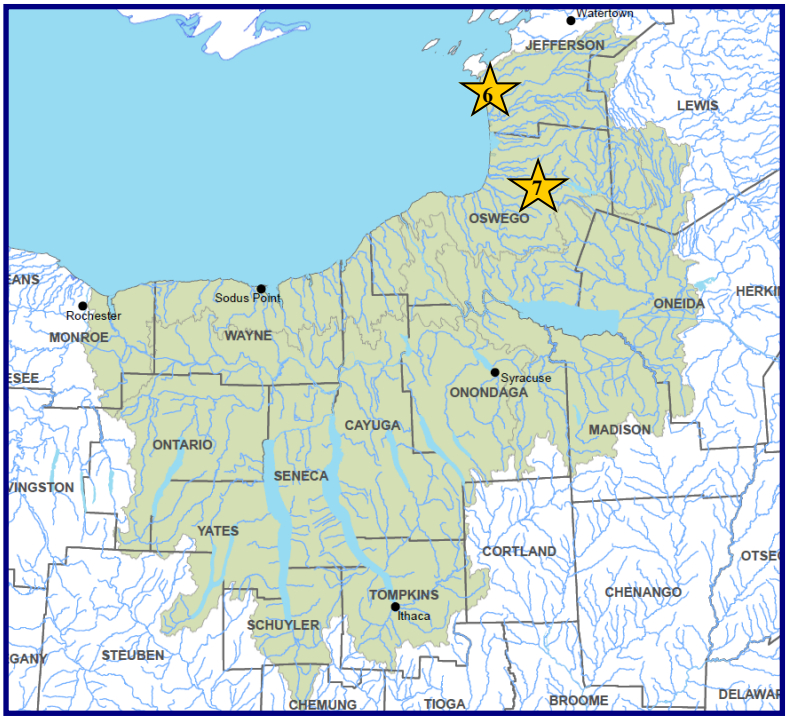
5 Blueways and Greenways as a Conservation Strategy for the Upper Genesee

A simple but effective formula for watershed conservation success is being employed in the Upper Genesee: increased recreational access and opportunity for sustainable economic development will lead to better conservation of the river and its natural resources. Genesee River Wilds, Inc. is a non-profit working in the head waters of the Genesee to develop forested riparian buffers that include a system of riverside nature parks connected by a greenway (rail-trail for bicyclers, hikers, etc) and a blueway, or water trail for canoes and kayaks. To date, the group has worked successfully with municipalities in Allegany County to complete three river access parks.

As a result, recreational use of the river has increased substantially and the parks are used on a regular basis, providing visitors with safe, convenient access to the Genesee River. More people recreating on the river not only supports the local economy and brings new people to this rural area (as well as retaining young professionals), but healthy, connected riparian corridors also contribute to improved downstream water quality, natural flood control, fish and wildlife habitat, and numerous other conservation objectives, making this an exemplary project for demonstrating an effective EBM approach to watershed conservation!

GLAA Goals: 2, 5, 7, 8, 9

South East Lake Ontario Basin



Major Tributaries: Sandy Creeks, Salmon River, Oswego River, Seneca River, Finger Lakes

Major Water Quality Issues: Atmospheric deposition, legacy industrial discharges, agricultural nonpoint source pollution, and invasive species

Areas of Concern: Rochester Embayment, Oswego River

Highlights

6 Leveraging Partnerships to Restore Lakeview Wildlife Management Area

Under a Great Lakes Restoration Initiative grant, The Nature Conservancy, Ducks Unlimited, NYSDEC, and the St. Lawrence-Eastern Lake Ontario Partnership for Regional Invasive Species Management (SLELO PRISM), restored hundreds of acres of stressed Eastern lake Ontario coastal wetlands in Lakeview Wildlife Management Area. Ducks Unlimited excavated potholes and channels to enhance fish and wildlife access to the wetlands, which they depend on for living, feeding, and reproducing. In collaboration with NYSDEC, The Nature Conservancy monitored the wetlands before and after restoration to evaluate fish and wildlife populations and native vegetation, and the SLELO PRISM conducted invasive species surveying and control. Coastal wetland restoration benefits habitat for many critical and endangered species, supports enhanced recreational opportunities, filters nutrient and sediment runoff, and provides valuable property protection through improved flood retention capacity. This project is an example of ecosystem based management as it applied sound science, considered and provided for multiple uses of the ecosystem, and evaluated results so that the project can be adaptively managed and improved in the future.

GLAA Goals: 2, 4, 5, 7, 9

7 Studying the Tug Hill Aquifer to Inform Planning and Protection

USGS, with support from NYSDEC, Tug Hill Commission, the Tug Hill Tomorrow Land Trust and the Jefferson and Oswego County Soil and Water Conservation Districts, is completing a study to learn about the quality and quantity of water in the northern and central portions of the Tug Hill aquifer, to better inform management of this precious resource. The Tug Hill aquifer supports a multi-million dollar fishery within the Salmon River, is important for fish and wildlife habitat, provides quality drinking water to local residents and businesses, and supports a variety of recreational uses. Water demand in the Tug Hill region is projected to increase, and so it is important that water managers, local government, and users understand what the current status of the resource is so that water use and conservation decisions are based on scientific study, as well as social, economic, and environmental conditions. This study supports multiple GLAA goals and science-based adaptive management.

GLAA Goals: 5, 6, 8, 9

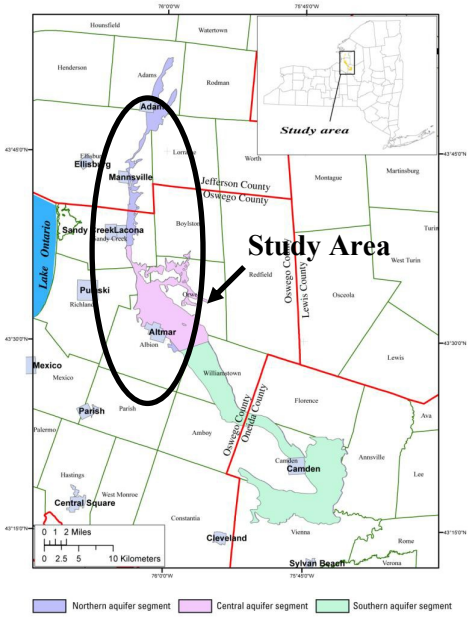
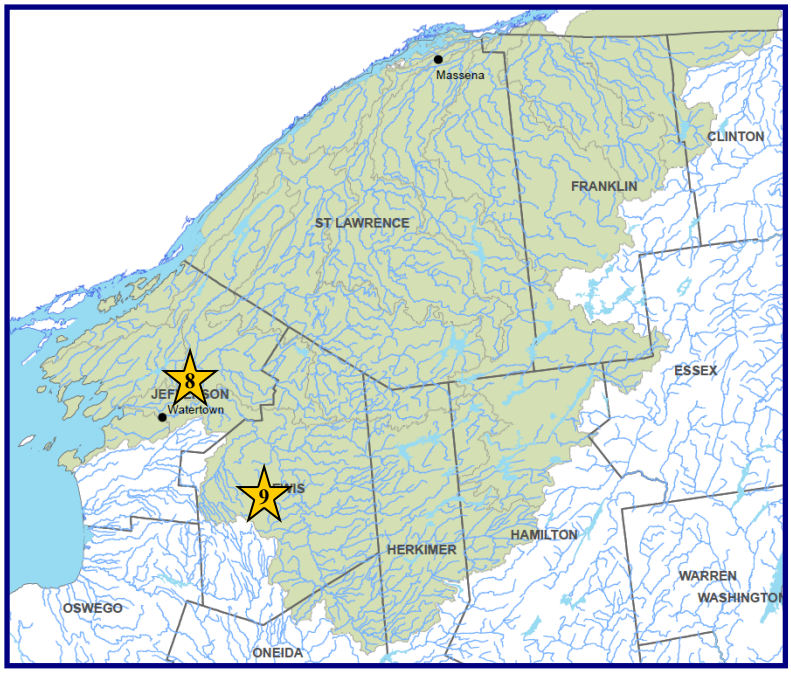


Figure 1. Location of the Tug Hill glacial aquifer proposed study area, and northern, central and southern, aquifer segments.

North East Lake Ontario Basin



Major Tributaries: St. Lawrence River, Black River
Major Water Quality Issues: Atmospheric deposition, non point source pollution, wastewater treatment, and legacy industrial discharges
Areas of Concern: St. Lawrence River at Massena

Highlights

8 Converting a Coal-burning Facility to Biomass at Fort Drum Achieves Multiple Benefits

The NYS Energy Research and Development Authority selected ReEnergy Black River to sell renewable energy credits under New York's Renewable Portfolio Standard to increase the development of renewable energy projects in New York. In 2013, ReEnergy Holding's LLC converted the coal-burning facility at Fort Drum to a renewable energy biomass facility. The facility is capable of producing 60 megawatts (MW) of power for the North Country and utilizes sustainably produced wood chips and pulp. In 2014, the U.S. Army signed an NOI with ReEnergy for the facility to provide Fort Drum with up to 28 MW of power. ReEnergy procures fuel from loggers, paper mills and local municipalities and is able to utilize wood pulp that would otherwise be wasted to sustainably produce electricity. ReEnergy also partners with the SUNY College of Environmental Science and Forestry and the US Department of Agriculture to utilize shrub willow as a fuel, and has achieved certification to the Sustainable Forestry Initiative® (SFI®) Standard, which verifies that a biomass procurement program promotes land stewardship and responsible forestry practices. The facility created an estimated 300 jobs, conserves water, reduces emissions and mitigates climate change impacts.

GLAA Goals: 6, 8, 10, climate change mitigation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9 Communities enjoy sustained benefits through coordinated efforts in the Black River watershed

As part of an initiative to enhance the social, economic, and environmental character of the Black River watershed, NYSDEC, Tug Hill Commission, the Town of Greig, and the Lewis County Soil and Water Conservation District, developed the Black River Watershed Management Plan, groundwater assessment, and socio-economic characterization in 2010.


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Since completion, partners have leveraged funding and implemented projects to redevelop abandoned properties, improve storm water management, update wastewater treatment facilities, manage floodplains, reduce agricultural non-point source pollution, improve and market recreational opportunities, and manage and control invasive species. Partners have engaged additional stakeholders and strengthened a sense of pride for the natural resources of the region. With its headwaters located in the Adirondack Forest Preserve, and its drainage through seven ecozones and into Lake Ontario, the Black River is a model of how communities in an area of 1.2 million acres can work together to sustain the many beneficial uses that a watershed provides. Through the initiative, communities have been able to enjoy quality drinking water, water dependent recreational activities such as fishing, boating, and swimming, and a successful agricultural economy that produces dairy and maple syrup. This initiative uses an EBM approach by ensuring that decision making is guided by sound science, stakeholders are educated and engaged, and social, economic, and environmental goals are balanced.

GLAA Goals: 2, 4, 5, 6, 7, 8, 9

DEC Great Lakes Watershed Program

Visit our website:

http://www.dec.ny.gov/lands/25562.html

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Program Mission

New York State's Great Lakes Watershed Program uses an ecosystem-based management approach to support traditional core agency responsibilities, implement federal treaties and binational management plans, and advance New York State priorities for environmental sustainability and economic revitalization. Program responsibilities include:

- Fostering collaboration and coordination among the many stakeholder groups working in the basin;
- Participating in and supporting Lakewide Management Plan workgroups, remedial advisory committees, and other collaborative management efforts;
- Providing technical support to advance implementation of management plans; and
- Connecting organizations and stakeholders to funding and project opportunities.

Outlook for 2014-15: Supporting Collaborative Action

In the next year, we'll be reaching out to stakeholders within each of the four sub-basins featured in this newsletter. The goal is to encourage and support stronger partnerships, effective leveraging of resources, and innovative projects that help achieve our shared EBM goals for the region.

The interim Great Lakes Action Agenda (GLAA) proposes an inclusive, coordinated way to do this. Regional workgroups will be developed to facilitate new collaborations at the local level, to implement the goals highlighted in the GLAA.

Coming together is a beginning, keeping together is progress, working together is success.
-Henry Ford

The complexity of the Great Lakes basin and the issues it faces require a cross-region, multi-agency, cooperative effort, relying on the participation of a diverse constituency, including supporting partners from multiple state agencies, regional planning entities, academia, non-profit organizations, and others. This is what we aim to do in the coming year.

If you're interested in learning more, or getting involved in a regional workgroup for your watershed, please contact program staff using the information listed above. Through strategic partnership and common goals, New York State can take full advantage of the many Great Lakes programs available and achieve real success. We look forward to working with you!

Keep your eyes open for EPA's new 2014-2019 GLRI Action Plan, scheduled for release this year.
http://greatlakesrestoration.us/