

New York's Great Lakes Action Agenda Project Highlights

2014-2016

Advancing Ecosystem-Based Management in NYS's Great Lakes

In spring 2016, New York will celebrate the ten-year anniversary of the passage of the NY Ocean and Great Lakes Ecosystem Act (OGLECA), which called for an innovative, holistic and participatory approach to environmental management called Ecosystem-Based Management (EBM).

Since 2010, New York State has received \$125 million in federal Great Lakes funds to support 271 projects.

DEC's Great Lakes watershed program is promoting an EBM approach by engaging stakeholders in collaborative efforts to identify and implement projects that achieve water quality and conservation, protect natural resources, promote sustainability, create resiliency to climatic changes, and promote state recreation and renewable energy goals in the Great Lakes basin.

A public workshop was held in early 2015 to announce the release of the interim NY Great Lakes Action Agenda and to begin the implementation process. Since then, quarterly stakeholder (work group) meetings have been held in each of the four identified sub-basins (northeast, southeast and southwest Lake Ontario plus Lake Erie) of NY's Great Lakes. Diverse attendees, including federal and state agency partners, not for profit organizations, county soil and water conservation districts, county planners, educational and research institutions and many others, have identified regional needs and priority projects that can be addressed using an EBM approach.

This regionally focused coordination will support stakeholder efforts to better engage and collaborate with local, state and federal partners, leverage existing resources and expertise, and attract additional state and federal resources to implement New York's Great Lakes Action Agenda. For more information, visit <http://www.dec.lands/91881.html>.

To become involved with quarterly work group meetings, contact Great Lakes program staff at: GreatLakes@dec.ny.gov

EBM Opportunities Identified by NY Great Lakes Stakeholders

- Reducing beach closures and nutrient loading by promoting and incentivizing on-site septic maintenance and upgrades
- Implementing and incentivizing riparian buffers and other agricultural best management practices to achieve multiple benefits
- Engaging communities in planning to increase resiliency to potential climate change impacts and flood events
- Enhancing fish and wildlife habitat and connectivity through ecological restoration and culvert enhancement projects
- Working with Partnerships for Regional Invasive Species Management (PRISMs) to better coordinate invasive species control efforts
- Advancing more natural (vs. structural) approaches to protect shoreline infrastructure and conserve and restore aquatic habitat



Great Lakes Action Agenda

Cross-Cutting Priorities

NY Sea Grant Partnership Supports Multiple GLAA Cross-Cutting Priorities

DEC's Great Lakes Watershed Program and New York Sea Grant have formed an innovative partnership to achieve multiple priorities and goals within the Great Lakes Action Agenda and to advance the practice of ecosystem-based management.



DEC and NY Sea Grant hosted the Great Lakes Nature-Based Shorelines Workshop in November 2015.

- Now in its second year, the NY Great Lakes Basin Small Grants program provides funding for EBM demonstration and capacity-building projects that have been identified by stakeholders to advance GLAA goals. In the first year, four grants totaling \$89,000 were awarded to enhance community resiliency. Funded projects included a North Pond resiliency study, a study of Lake Erie seiche-induced erosion, a shoreline protection project to enhance the resiliency of wastewater infrastructure in Wayne County, and community-based outreach and education initiatives to improve shoreline resiliency and stewardship on Grand Island.

- Coastal resiliency outreach, education and extension activities have been expanded through the hiring of a Great Lakes Coastal Processes and Hazards specialist in spring 2015. In addition, a technical workshop to advance the practice of nature-based shorelines was held in November 2015 to benefit area practitioners. Workshop presentations can be accessed through NY Sea Grant's website at: www.nyseagrant.org/naturebasedshorelines. NY Sea Grant's Coastal Processes and Hazards Specialist, Heather Weitzner, can be contacted at: hw528@cornell.edu

- A NY Great Lakes clearinghouse website, to be unveiled in spring 2016, will advance EBM by enhancing access to and sharing of relevant information.

- Partnerships and Coordinated Action
- Science, Monitoring and Information Mgmt.
- Environmental Education and Outreach
- Climate Change Adaptation and Mitigation

- A NY Great Lakes Ecosystem Education Exchange (NYGLE3) program is being developed to advance Great Lakes literacy and stewardship among students in K-12 classrooms and in nature center programs throughout the basin.

NYS Department of State Promotes EBM Decision-making with New Geographic Information Gateway

The Geographic Information Gateway is a dynamic website providing public access to data, real-time information, interactive tools, and expert knowledge relevant to the Office of Planning and Development's (OPD) activities throughout New York State, including the Great Lakes region. Interactive map viewers enable users to easily download and explore geographic data.



Map of Great Lakes Coastal Boundary on DOS's Geographic Information Gateway

Since the gateway's launch on September 29, more than 7,000 unique visitors have seen it. These visitors represented 46 states, Guam, Puerto Rico and 63 countries outside the US.

The OPD provides technical expertise, funding and regulatory support for communities to create and implement shared strategies and projects that make NY a better place to live, visit and invest. For more information, please check the OPD website at www.dos.ny.gov/opd.

Great Lakes Action Agenda

Water Quality

NYS Ag & Markets Promotes Multiple GLAA Goals with Cross-basin EBM Approach

As part of the Ocean and Great Lakes Initiative, the NYS Department of Agriculture and Markets, in partnership with the NYS Soil and Water Conservation Committee and local Soil and Water Conservation Districts, took action in the Sandy Creeks Watershed to demonstrate opportunities for Ecosystem-Based Management. The work in the Sandy Creeks began with stream restoration and riparian buffers and expanded to include soil health, pollution prevention, and recreational trail management projects.

Using Sandy Creeks as a model for future conservation projects allowed the Department to examine its existing programs and transfer the lessons learned in Sandy Creeks to other watersheds in an effort to break down barriers to conservation efforts on farms. Investing in soil health, for example, greatly improves a farmer's bottom line and the environment. Soil health aims to keep a living cover on the soil year-round to reduce erosion, runoff and the need for added fertilizer. There are many decisions that factor into a farmer's choice to undertake conservation practices like this on their farms, but through the funding of county-based soil health initiatives and a farmer-led alliance, the Department reports an exponential increase in the interest and implementation of soil health practices.

Similarly, the Department was also able to examine the heightened benefits to watershed-level conservation where County Soil and Water Conservation Districts join efforts within a region by forming coalitions. Through encouragement, partnership building and funding opportunities, the Department assisted with the formation of a new coalition of Conservation Districts in the Genesee River Watershed. This coalition is focusing on remediating the Rochester Embayment Area of Concern by working with farms to implement practices to reduce nutrient and sediment pollution. This coalition is already well underway implementing erosion and sediment control mini-grants, funded through the Ocean and Great Lakes Initiative, and seeking federal funding for larger scale projects.

The Department has also funded critical work in other areas of agriculture, including establishing pest management guidelines for hops growers and training Conservation Districts and contractors in stream restoration techniques. The Department has published the *Guide to Conservation Funding for Rural Landowners*, which makes it easier for farmers and rural landowners to access technical and financial assistance.

Goal 1: Virtually Eliminate Discharges of Persistent Toxic Substances

Goal 2: Control Sediment, Nutrient and Pathogen Loadings

Goal 3: Accelerate the Delisting of New York's Areas of Concern



photo credit: Jefferson County SWCD

Sandy Creeks cover crops

DEC's Trees for Tribs Program Expands to the Lower Genesee Basin

With support from a Sustain Our Great Lakes grant and matching funds from the Environmental Protection Fund, DEC has partnered with the Wyoming County Soil and Water Conservation District and the State Department of Agriculture and Markets to expand the successful "Trees for Tribs" (tributaries) riparian restoration program to the lower Genesee River basin. Trees for Tribs is a watershed-based riparian buffer replanting program of the state's Saratoga Tree Nursery that seeks to create healthy riparian corridors to benefit water quality and ecologically sensitive habitats and species. Planting activities are on schedule to begin in spring 2016 and will result in the creation or enhancement of 30,000 linear feet of riparian buffer along high-priority stretches of the lower Genesee basin. At least 15,000 native trees and shrubs will be planted in four focus watersheds, including Upper Black Creek above Byron, Oatka Creek, Honeoye Creek and the Genesee River between Mount Morris Dam and Scottsville. The establishment of riparian buffers in these key areas will reduce sediment and nutrient loadings causing problems in the Genesee River, the downstream Rochester Embayment Area of Concern, and, ultimately, Lake Ontario.



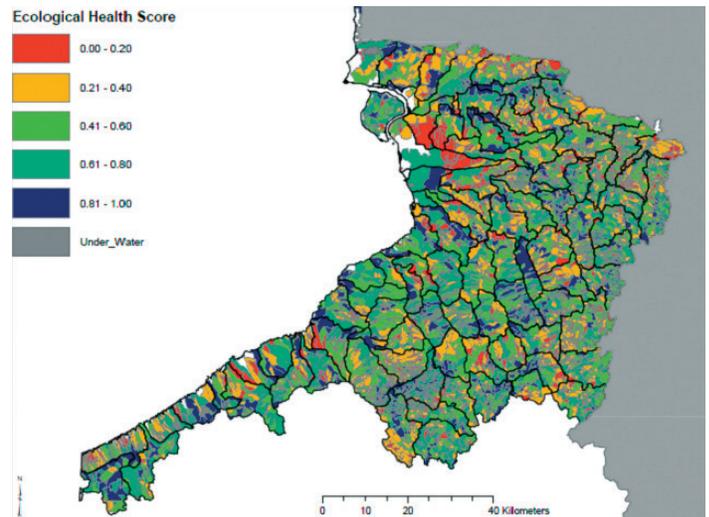
photo credit: Kim Falbo, Wyoming Co SWCD

A completed planting site on Oatka Creek

Great Lakes Basin Riparian Opportunity Assessment

The New York Natural Heritage Program of the State University of New York College of Environmental Science and Forestry has developed riparian land inventory and opportunity assessment products that will assist DEC and other stakeholder organizations in identifying and prioritizing sites for implementation of DEC's Trees for Tribs program and other riparian restoration efforts within New York's Great Lakes basin. These products and maps were developed for stakeholders to identify high-priority stream reaches for water quality improvements, habitat enhancement and connectivity, streambank resiliency, and riparian protection.

Access the assessment here:
<http://nynhp.org/treesfortribsgl>



Ecological health scores by catchment for the Lake Erie basin

Great Lakes Action Agenda Natural Resources

Goal 4: Combat Invasive Species

Goal 5: Conserve and Restore Native Fish and Wildlife Biodiversity and Habitats

Goal 6: Conserve Great Lakes Water Supplies

Braddock Bay Restoration Applies EBM to Planning and Decision-Making

The Braddock Bay Fish and Wildlife Management Area is a shallow water bay-marsh complex on Lake Ontario located within the Rochester Embayment Area of Concern. Habitat restoration is a priority. In the last century, wind and wave-driven erosion has resulted in the loss of a protective barrier beach and over 100 acres of coastal wetlands in the complex. Additionally, managed water levels since the mid-1950s have caused a cattail monoculture that has significantly reduced habitat diversity.

For more information:
<http://www.lrb.usace.army.mil/Missions/CivilWorks/DistrictProjects/BraddockBay.aspx>

With support from the Great Lakes Restoration Initiative, a broad partnership of agencies and stakeholders including the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, New York Department of Environmental Conservation and the Town of Greece worked together to evaluate, design and plan the implementation and long-term adaptive management of a multi-faceted restoration project using an EBM approach. Wetland and habitat diversity will be restored through

a combination of channeling and potholing, and invasive species treatments and an artificial headland breakwater will be created to protect Braddock Bay wetlands from storm-driven impacts. Once completed, these projects will result in increased fish and wildlife habitat and related recreational activities, improved water quality, and enhanced coastal resiliency for Braddock Bay communities and outlying nearshore areas.



photo credit: Emily Sheridan, DEC/NHT

Partners tour Braddock Bay restoration site.



photo credit: Jennifer Dunn, DEC

A new channel recently created by the US Army Corps

NYS Parks Combats Aquatic Invasive Species, One Boater at a Time

Awareness and control of aquatic invasive species (AIS) can help sustain a healthy lake ecosystem and help maintain diverse economic and recreational opportunities. NYS Parks' boat steward program, with support from the federal Great Lakes Restoration Initiative and New York's Environmental Protection Fund, assists with the removal of plant matter from boats and trailers, promotes the "Clean, Drain, Dry" message to prevent the spread of AIS throughout the region, and educates recreational boaters on AIS identification and impacts to state water bodies.

NYS Parks is one of many partners working collaboratively with Partnerships for Regional Invasive Species Management (PRISM) to manage invasive species statewide.

Boat stewards have connected with thousands of boaters and anglers throughout New York's Great Lakes region as they conduct voluntary watercraft inspections and educate the public about boating best management practices to prevent the spread of AIS. In the last two years, the steward program has expanded from 8 to 15 boat stewards, covering NYS Parks and DEC boat launches on Lake Erie, Lake Ontario, the Finger Lakes, the St. Lawrence River, Saratoga Lake and Lake Champlain.



A boat steward in action at Irondequoit Bay

Great Lakes Action Agenda Sustainable and Resilient Communities

NYS's Community Risk and Resiliency Act Supports Ecosystem-based Management of Great Lakes Coastal Resources

With the passage of the Community Risk and Resiliency Act (CRRRA) in 2014, New York State has taken a significant step in advancing climate change adaptation and community resiliency priorities for the Great Lakes and other regions of the state. Essentially, five major provisions (see box) in the new legislation ensure that certain state monies and facility-siting regulations and permits include consideration of the effects of climate risk and extreme-weather events.

Interagency project teams are developing implementation guidance for CRRRA, which is on track for completion by the end of 2016. The guidance on the use of natural resources and natural processes to enhance resiliency is especially relevant to the goals of NY's Interim Great Lakes Action Agenda and stakeholder priorities identified to date. This document will provide general guidance on the use of natural resiliency measures to enhance community resiliency permitting and funding programs, while also promoting consistency among program-specific guidelines on the use of natural

Goal 7: Enhance Community Resiliency and Ecosystem Integrity

Goal 8: Promote Smart Growth, Redevelopment and Adaptive Reuse

Goal 9: Enhance Recreation and Tourism Opportunities

Goal 10: Plan for Energy Development

resiliency measures developed for coastal erosion hazard areas, tidal wetlands, freshwater wetlands, protection of water and state coastal consistency programs.

The use of natural resources and processes to enhance community and coastal resiliency is a perfect example of an ecosystem-based approach to environmental management that considers human uses of shorelines and watersheds, recognizes the need to protect vulnerable infrastructure, and strives to ensure that the long-term sustainability and ecological integrity of our riparian and coastal areas are protected into the future.

Five Major Provisions are Included in CRRRA

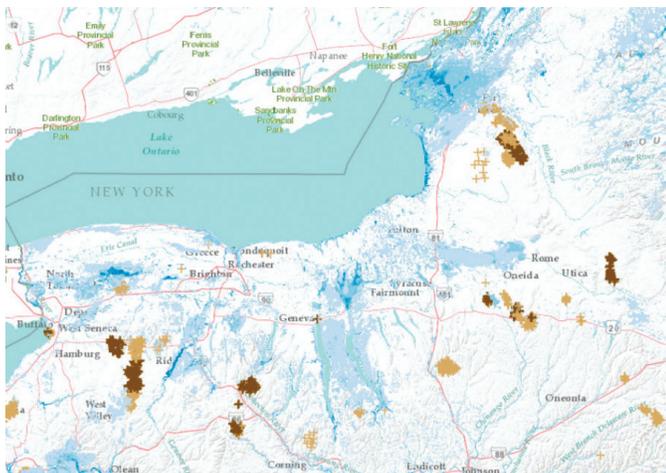
1. Adoption of state sea-level rise projections
2. Consideration of sea-level rise, storm surge and flooding in certain facility siting, permitting and funding programs, and development of implementation guidance
3. Addition of mitigation of sea-level rise, storm surge and flooding as a criterion in reviews under the Smart Growth Public Infrastructure Policy
4. Development of model local laws to enhance resiliency
5. Guidance on the use of natural resources and natural processes to enhance resiliency

NYSERDA's Mapping Tools Help Inform Land Use and Energy Development Decisions

In partnership with The Nature Conservancy and New York's Natural Heritage Program, the New York State Energy and Research Development Authority (NYSERDA) developed a tool that helps stakeholders better inform land use and energy development decision-making. The Biodiversity and Wind Energy siting mapping tool is an example of how social, environmental, and economic spatial characteristics of the state can be considered when informing energy development decisions, such as where to locate wind turbines to prevent impacts to rare, threatened, and endangered species. The tool can also be used to help guide resiliency planning, land conservation efforts and energy planning efforts. For example, through development of scenarios, the tool estimated that New York State has the on-land capacity to develop an estimated 16,300 MW of wind energy while avoiding high biodiversity habitats.

This mapping tool is available online at <http://www.ebd.mapny.info/>

In addition, NYSERDA is continuing to work with The Nature Conservancy and many other key stakeholders to develop the Natural Resource Navigator. The navigator is an online, interactive decision support and mapping tool designed to help decision-makers identify site-specific, actionable strategies to sustain natural resources within the context of a changing climate. The project is nearing completion and the tool will be available in spring 2016.



Map showing locations of rare species (blue) and existing and proposed wind turbines (brown and light brown) to help ensure that wind energy developments consider impacts to rare species

DEC Great Lakes Watershed Program

Visit our website:

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

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Lake Ontario

Program Mission

New York State's Great Lakes Watershed Program uses an ecosystem-based management approach to support 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
- Connecting organizations and stakeholders to funding and project opportunities



**Department of
Environmental
Conservation**