Sterling & Wolcott Creeks Integrated Watershed Action Plan

Public Meeting #2

June 15, 2023

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

RAMBOLL

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EcoLogic

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Watershed Stakeholder Committee

Informed of project progress and advise on project priorities and decisions

- Soil and Water Conservation Districts (SWCDs), Wayne and Cayuga Counties
- Planning Departments, Wayne and Cayuga Counties
- Wayne County Water and Sewer Authority
- Genesee- Finger Lakes Regional Planning Council
- Central New York Regional Planning & Development Board
- Cayuga County Parks
- SUNY College at Brockport
- NYS Department of State
- NYS Sea Grant
- NYS Department of Environmental Conservation, Region 7 and 8
- Municipal Leaders and Bay Associations
- The Nature Conservancy
- Little Sodus Betterment Association
- Sterling Water Stewards

Agenda

Meeting purpose: provide information on IWAP development, next steps and opportunities for involvement

- Background
- Project StoryMap
- Key findings and project ideas
- Next steps

IWAP Purpose

To identify, protect, and restore key aspects of the Sterling & Wolcott Creek watersheds that support human health and well-being

Vision:

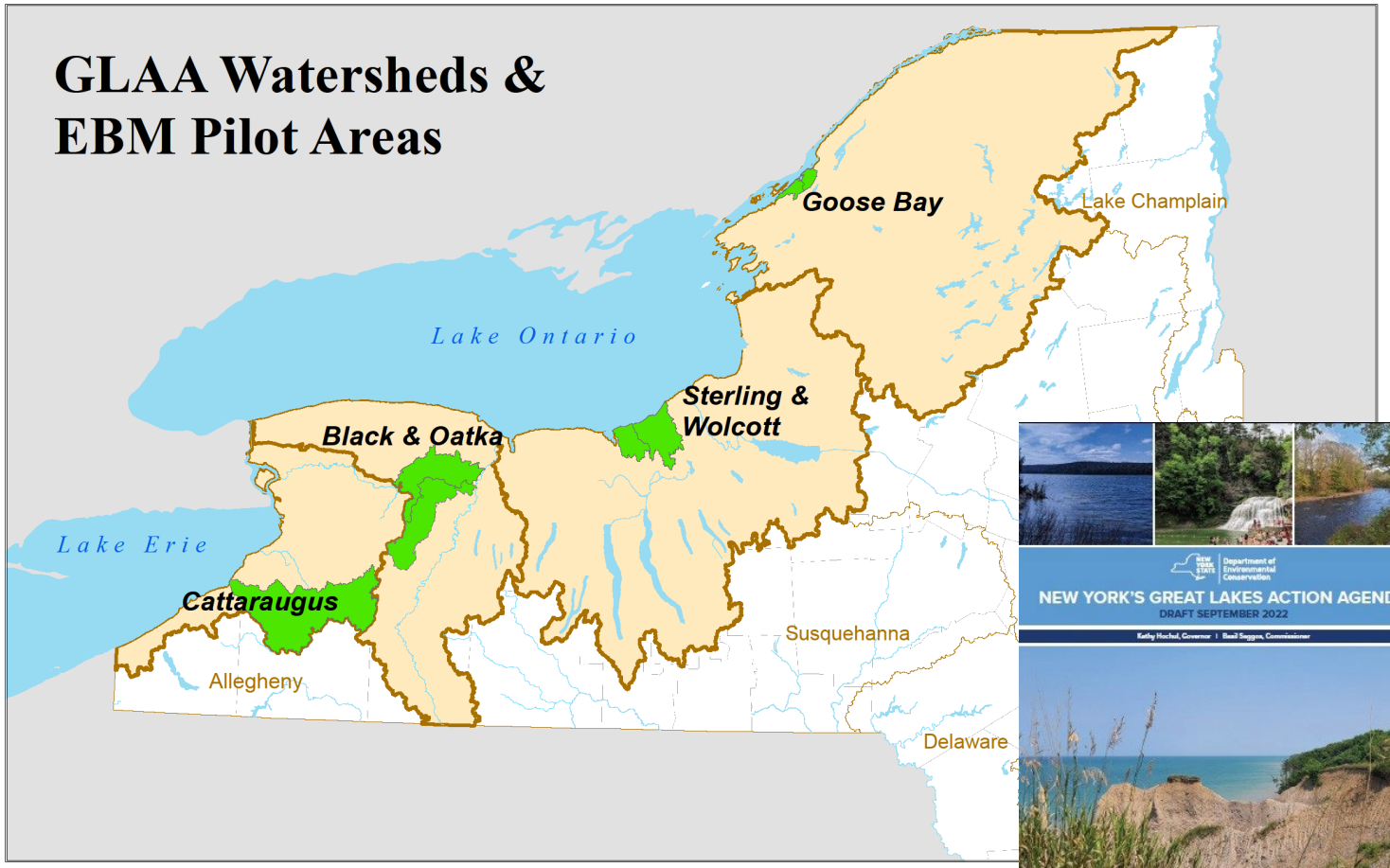
*An engaged and empowered community protecting and restoring the watershed based on **actions** identified through this project. **A healthy watershed for families and communities into the future!***

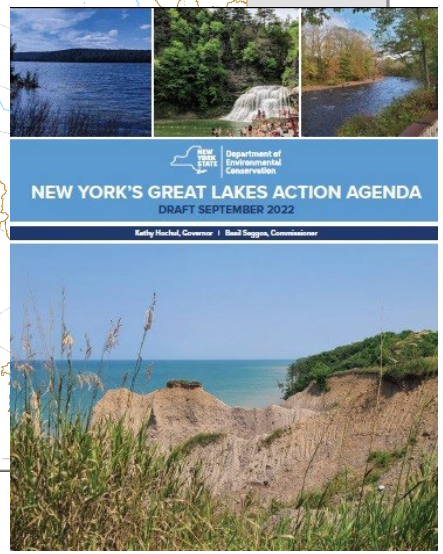
Approach:

*Science-based, collaborative, focused on **ecosystem-based management***

Great Lakes Action Agenda

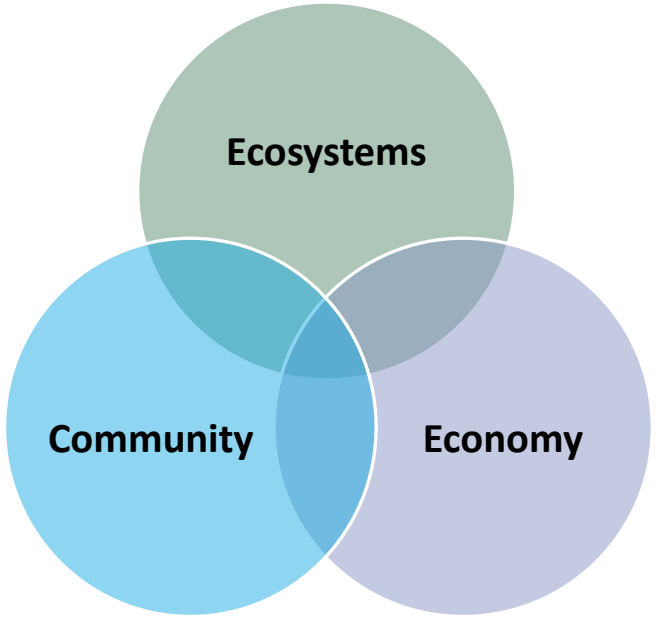
Protect, conserve, restore and enhance NY's Great Lakes





Ecosystem-Based Management

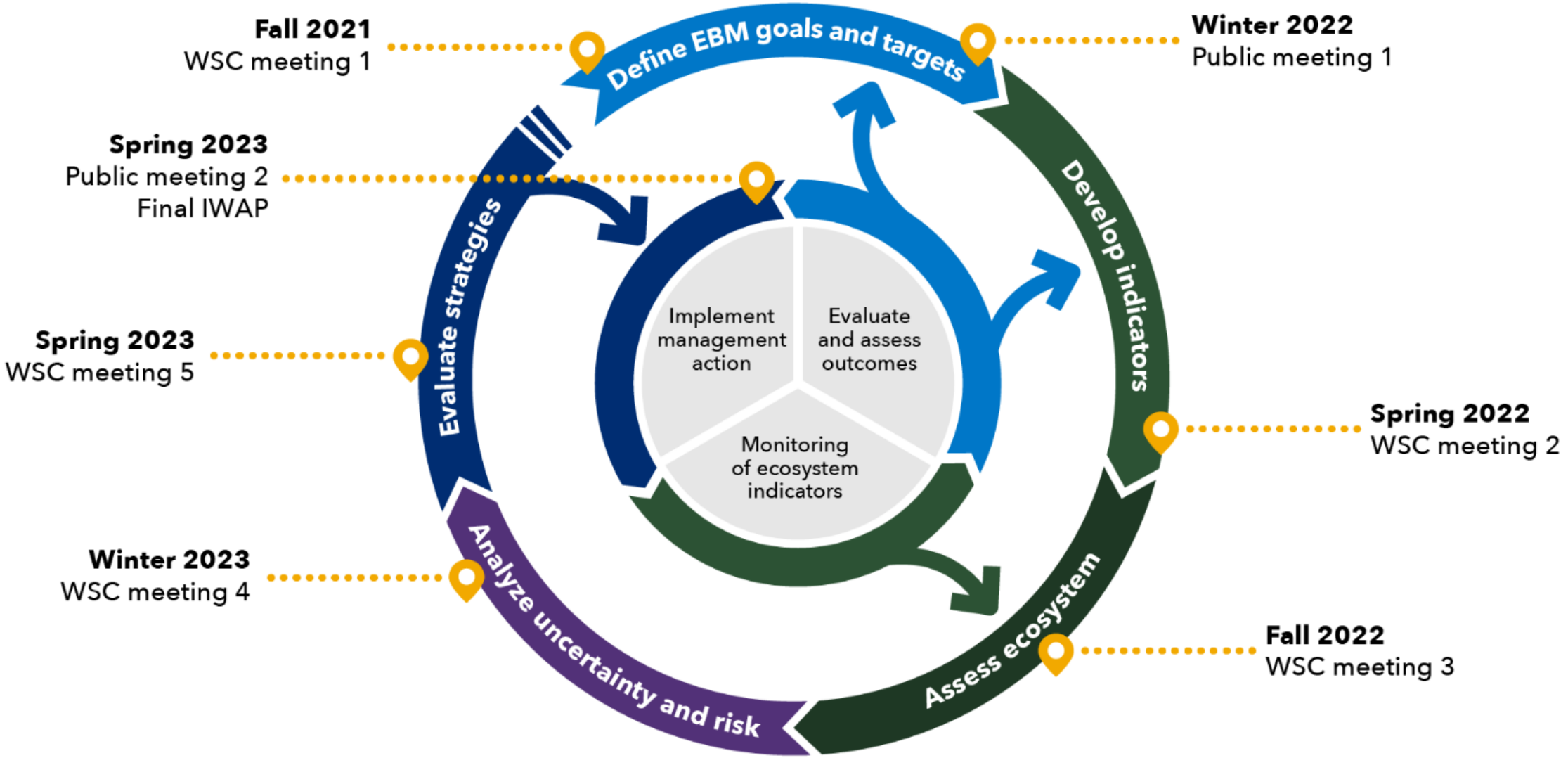
A systems approach that strives to balance the needs of people, nature, and the economy through science-based decision making



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

Process

*FOCUS: science-based **actions** and long-term management*
Based on NOAA Integrated Ecosystem Assessment approach



Goals

Broad based, collaborative

COASTAL — GOAL 01

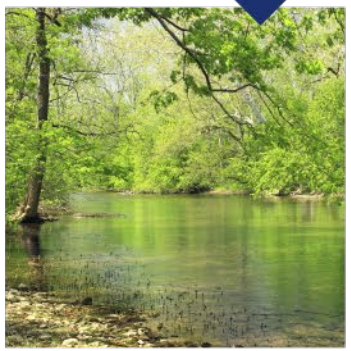
Manage coastal sediment erosion, deposition, and transport to protect natural features and habitat, sustain recreation and tourism, and help to protect public and private assets

WETLANDS — GOAL 02

Restore and preserve healthy wetlands to support clean water, biodiversity, and opportunities for outdoor recreation

FLOODPLAINS, RIPARIAN AREAS, & STREAMS — GOAL 03

Enhance functioning of floodplains, riparian corridors, and streams to minimize infrastructure impacts from flood events, improve water quality, support quality aquatic habitat for fish and wildlife, and provide recreational access



FORESTS & UPLANDS — GOAL 04

Promote healthy and connected forests and upland communities to support clean air and water, biodiversity, opportunities for outdoor recreation, and sustainable use of natural resources

WATER QUALITY — GOAL 05

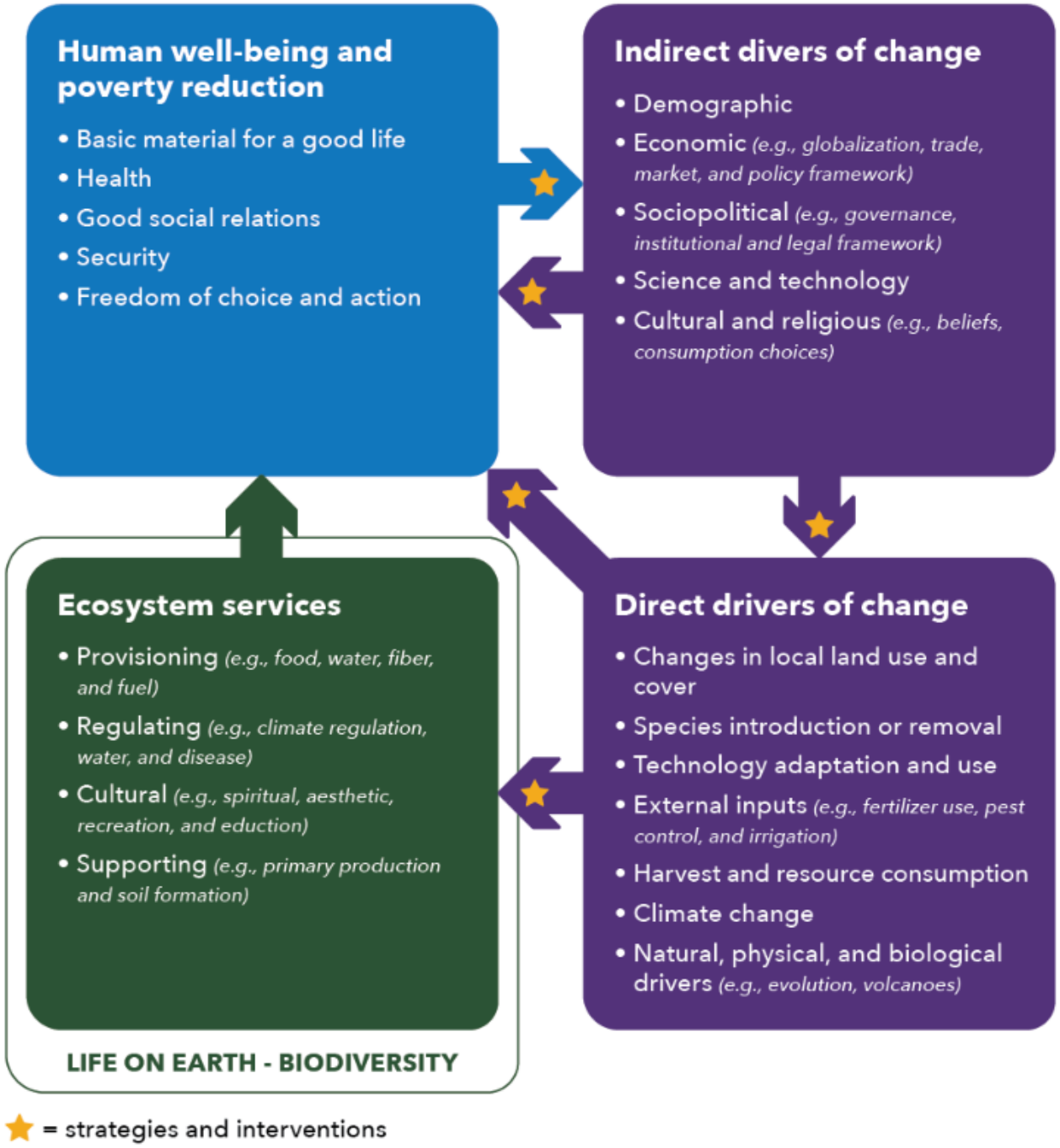
Improve and maintain high quality surface and ground water resources to support aquatic habitat, drinking water supplies, and water-dependent recreation

SUSTAINABLE WORKING LANDS — GOAL 06

Promote, implement, and improve sustainable land uses to provide future generations with the ability to use and prosper from natural resources

HERITAGE & SENSE OF PLACE — GOAL 07

Inspire and facilitate a connection with nature to support physical, social, and mental well-being

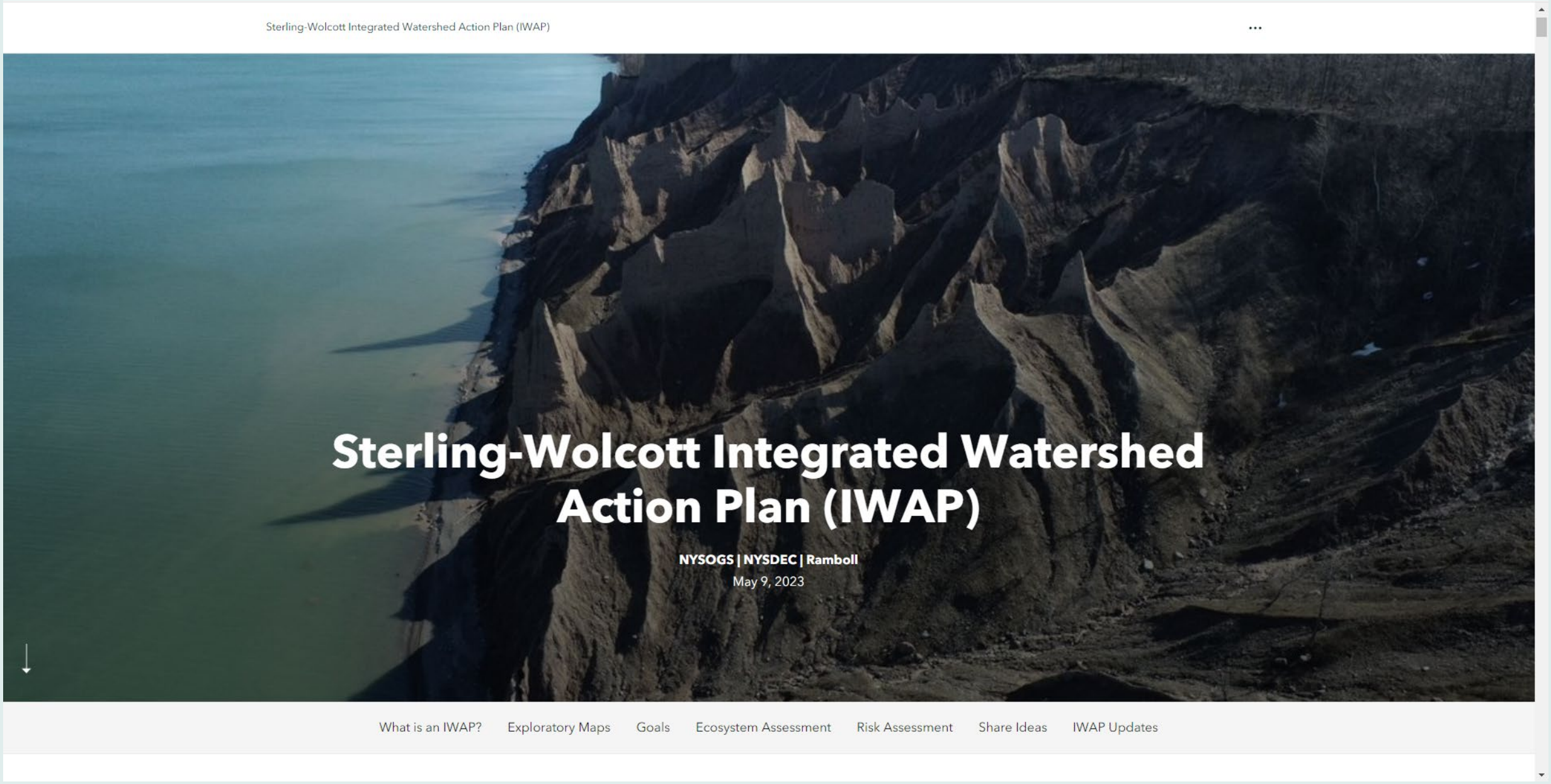


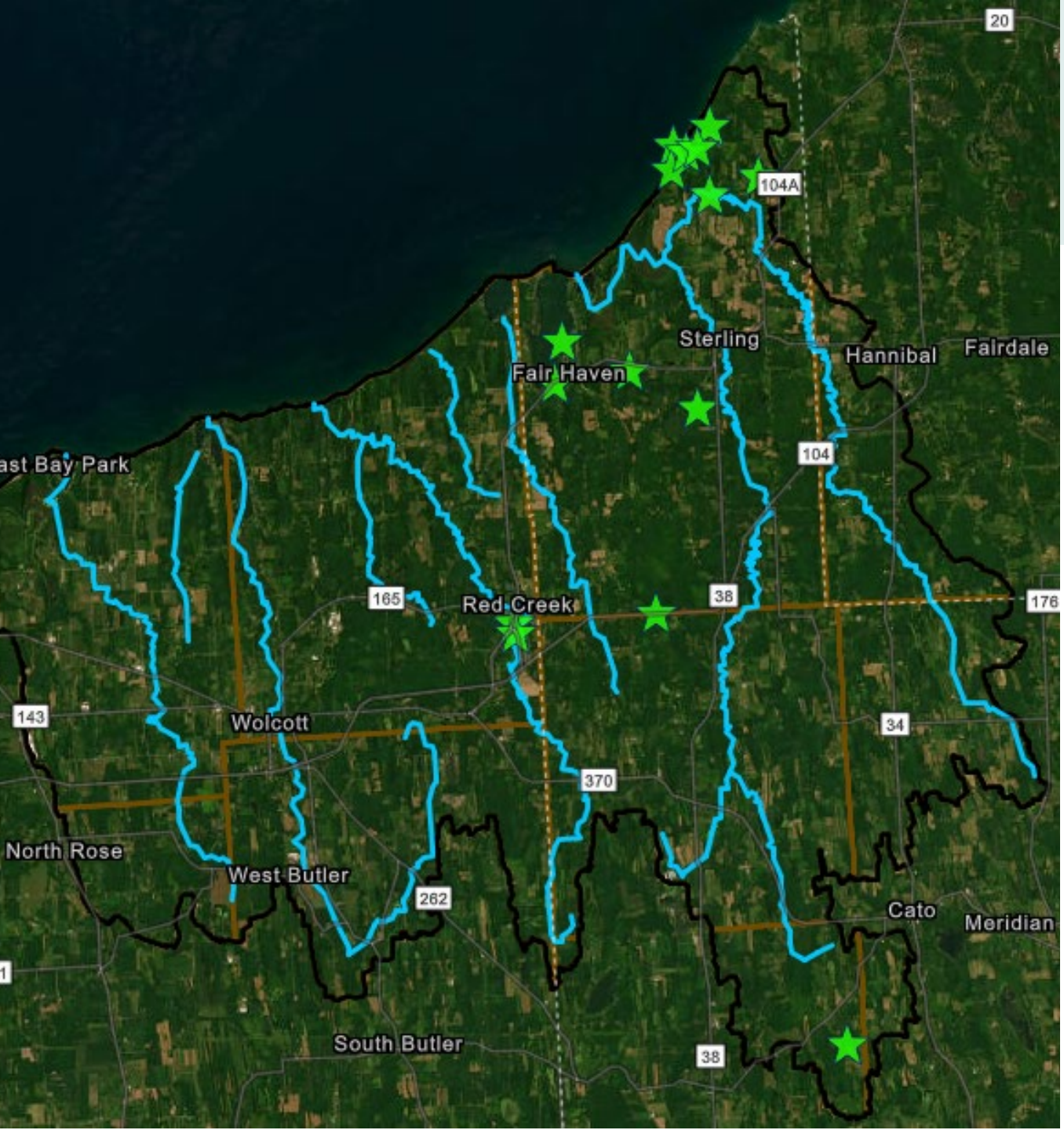
Ecosystem and Risk Assessments

A comprehensive exam of the watershed and risks to realizing management goals

- 67 different types of data evaluated with respect to trends over time and spatially throughout the watershed
- Used to understand current watershed conditions and help identify key projects

https://storymaps.arcgis.com/stories/7a4c9700cda1482e90adb6e795c3fed9

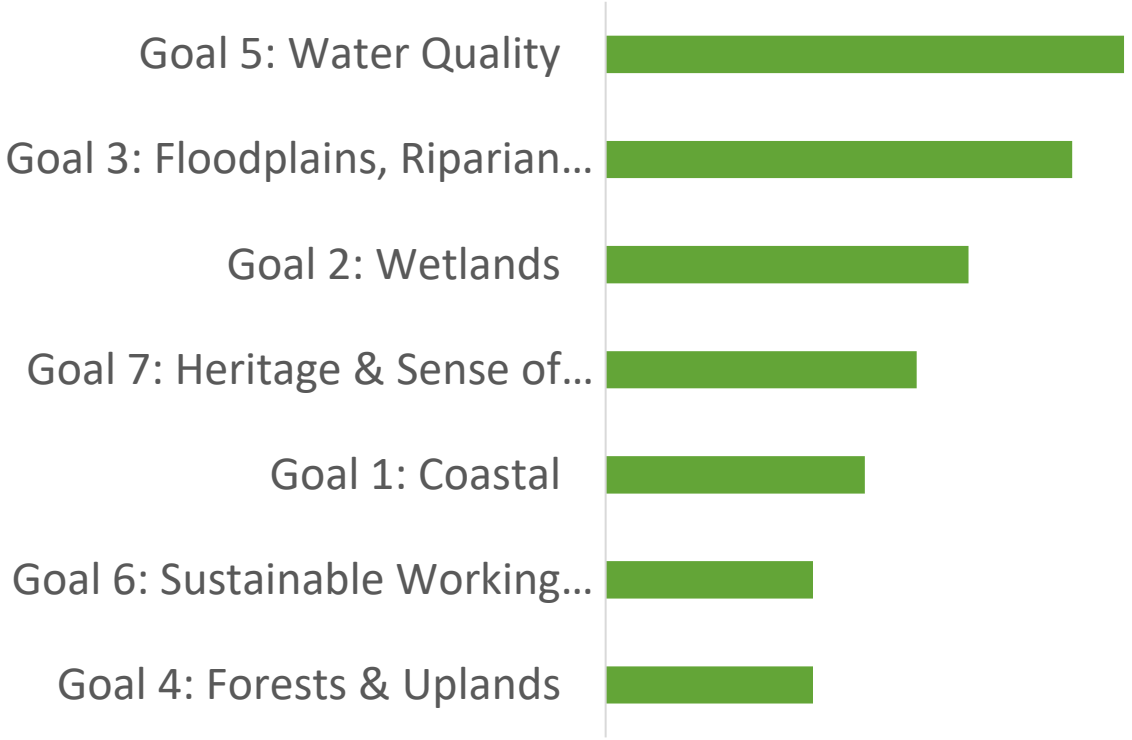




Project Proposals

Project ideas submitted to date, by stakeholders

15 projects submitted to date



Goal 1: Coastal

Manage coastal sediment erosion, deposition, and transport to protect natural features and habitat, sustain recreation and tourism, and help to protect public and private assets.

- The watershed's shoreline is relatively unarmored and provides a source of sediment for longshore movement along Lake Ontario which builds beaches, barrier bars and helps to slow downstream erosion
- During 2011-2018 timeframe, **Chimney Bluffs and Sitts Bluffs each contributed about 10,000 cubic yards of sediment to the Lake Ontario littoral system annually. This natural process provides approximately $2M -$4M of value in sediment every year**
- During the 2019 floods, East Bay, Port Bay and Blind Sodus Bay barrier bars were all breached
- **Need: better understanding and communication of "where the sediment comes from and where it goes"**

Goal 1: Coastal

Manage coastal sediment erosion, deposition, and transport to protect natural features and habitat, sustain recreation and tourism, and help to protect public and private assets.

Key Project Recommendations, suggested locations needed:

1. Conserve areas of eroding shoreline that supply the sediment that builds downdrift beaches, dunes, and barrier bars that protect wetlands and human property
2. Identify sources of impairments and implement projects to improve water quality
3. Conduct nature-based shoreline and integrated coastal management

Educational Recommendation (<u>reference existing resources when available</u>):

1. Create education material, programs, wayside exhibits, etc. to educate public & landowners on dynamics of coastal erosion, deposition and transport; McIntyre and Chimney Bluffs as key educational areas

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Dragonfly Pond. Photo by Jim D'Angelo

Goal 2: Wetlands

Restore and preserve healthy wetlands to support clean water, biodiversity, and opportunities for outdoor recreation

- **Four of five coastal wetlands were considered "impacted"** based on their Indices of Biological Integrity (IBI) (East Bay, Beaver Creek, Port Bay, Red Creek = impacted; Desbrough Park not impacted)
  - Vegetation consistently impacted
  - East Bay and Port Bay had moderately degraded bird IBI values; bird IBIs at Beaver Creek were moderately impacted
  - Water quality IBIs consistently impacted (i.e., turbidity, chlorophyll-a, and specific conductance)
- **From the 1780's to the 1980's, 60% of wetlands in New York State were lost (Dahl, 1990)**
- **Nonpoint source nutrient pollution and water level stabilization are associated with the extensive invasion of coastal wetlands by cattail**
- **Need: Information on condition of inland wetlands**
- **Citizen Science Opportunity!** **Vernal Pool Mapper**

Dragonfly Pond. Photo by Jim D'Angelo

Goal 2: Wetlands

Restore and preserve healthy wetlands to support clean water, biodiversity, and opportunities for outdoor recreation

Site Specific Project Recommendations:

1. Identify and prioritize key areas for construction, restoration, or conservation of wetlands, including inland wetlands (e.g., vernal pools, beaver wetlands, forested swamps, etc.)
    - **Locations:** southern Butler, western Village of Wolcott (Mudge Creek), Blind Sodus Creek, southern-central portion of Ira, McFarland Road, Sterling Nature Center

2. Add nesting platforms and boxes to establish baseline data on health and biodiversity of bird species
    - **Locations:** Sterling Nature Center, state forests

Watershed Wide Project Recommendations:

1. Wetland monitoring and headwaters sediment and nutrient monitoring to reduce loading. Headwaters have direct impact on coastal areas

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Goal 3: Floodplains, Riparian Areas, & Streams

Enhance functioning of floodplains, riparian corridors, and streams to minimize infrastructure impacts from flood events, improve water quality, support quality aquatic habitat for fish and wildlife, and provide recreational access.

- Land cover within New York Natural Heritage Program (NYNHP) riparian buffers has seen a **decrease in forested lands (~1.5 acres/year)** and an **increase in developed land (~1 acre/year)** between 2001 and 2019

- The Northeast Regional Climate Center predicts an additional **3 inches of annual precipitation and up to 9 more 1 inch rain events per year, over the next 50 years**

- **Ironically, median annual precipitation in the 2020s was 22.91 inches, well below the long-term median of 35 inches and significantly more arid than any other decade on record in the area**

- **Need: Acute data gaps exist regarding stream flow and water quality**

- Additional data gaps:
    - Evaluations of floodplain connectivity
    - **Floodplain forest composition and regenerative capacity, particularly in areas affected by emerald ash borer (EAB)**
    - Comprehensive evaluation of undersized bridge overpasses over streams and culverts
    - Fish spawning and recruitment
    - Improved understanding of the role of tributary outlet barriers and inland flooding

Goal 3: Floodplains, Riparian Areas, & Streams

Enhance functioning of floodplains, riparian corridors, and streams to minimize infrastructure impacts from flood events, improve water quality, support quality aquatic habitat for fish and wildlife, and provide recreational access.

Site Specific Project Recommendations:

1. Identify reaches of streams to improve aquatic connectivity to support fish passage and natural flows.
    - **Location:** Vaught's Creek (former salmon spawning location)

2. Dam decommission (Class C) and creek restoration (installation of a fish ladder near the waterfalls)
    - **Location:** Village of Red Creek

Watershed Wide Project Recommendations:

1. Education/funding for landowners to protect existing and restore native shoreline and riparian vegetation

Project Recommendations, suggested locations needed:

1. Expand, protect, and restore of riparian buffers
2. Increase funding for stream flow and water quality monitoring (especially before, during, and after intense storms)
3. Consider restoration and monitoring projects for ash and hemlock, including seedling plantings.

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Sterling Nature Center. Photo by Jim D'Angelo

Goal 4: Forests and Uplands

Promote healthy and connected forests and upland communities to support clean air and water, biodiversity, opportunities for outdoor recreation, and sustainable use of natural resources

- **Between 2013-2019, the average seedling density was 606 seedlings/acre, which is classified as "poor" regeneration capacity, and trends are declining over time**
- Aboveground tree biomass stock estimates increased 0.9 million tons from 1991 to 2019 and on average, **sequestered 62,400 tons of carbon per year** (above- and below-ground combined carbon estimate)
- Forested lands running along Ridge Road (the former Lake Iroquois shoreline) between Wolcott and Martville provide an important habitat link between the Lake Ontario Coastal systems and the Finger Lakes basin however these stands are dominated by **at-risk ash species** and are fragmented
- **Need: better understanding of deer browse and invasive understory shrubs on tree regeneration**

Sterling Nature Center. Photo by Jim D'Angelo

Goal 4: Forests and Uplands

Promote healthy and connected forests and upland communities to support clean air and water, biodiversity, opportunities for outdoor recreation, and sustainable use of natural resources

Site Specific Project Recommendations:

1. Coordinate ways to identify and remove invasive species that are impacting the watershed (e.g., EAB, HWA, and water chestnut). Methods include bio-controls, manual pulling, and early detection/rapid response
    - **Location:** Sterling Nature Center

Watershed Wide Project Recommendations:

1. Consider land use management and policies, such as conservation overlays, to help protect key areas for watershed health and animal habitat
2. Consider restoration and monitoring projects for ash, hemlock, and beech trees, including seedling plantings
3. Increased monitoring at likely locations invasive species could be imported into the watershed (e.g., jumping worms at garden centers/soil sources or bait shops; or creeks downstream of known knotweed areas) and have funding available for businesses to eradicate invasives immediately if found
4. Establish standing contracts with invasive species management specialists, so that new pests or pathogens are quickly identified and controlled

Educational Recommendations (<u>reference existing resources when available</u>):

1. Educate on BMPs to prevent deer browsing, i.e., leaving logging slash/debris in the woods to create barriers and protect seedlings from deer browse

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Goal 5: Water Quality

Improve and maintain high quality surface and ground water resources to support aquatic habitat, drinking water supplies, and water-dependent recreation.

- In 2021 and 2022, Lake Ontario and Little Sodus Bay each had one confirmed count of harmful algal blooms (HABs)

- Facilities withdrawing 100,000 gallons of water per day or more are all withdrawing water below their NYSDEC permitted withdrawal limit. **No maximum contaminant level exceedances were found throughout the 2009-2020 dataset**

- **Little Sodus Bay, Blind Sodus Bay, East Bay and Port Bay are classified as "Impaired" according to NYSDEC's Priority Waterbodies List** and several of the streams within the watershed are unassessed

- **Needs:**
  - **Consistent monitoring of stream water quality metrics and flow**
  - **Citizens Statewide Lake Assessment Program (CSLAP) participation for Port, Blind Sodus, and Little Sodus Bays**

Goal 5: Water Quality

Improve and maintain high quality surface and ground water resources to support aquatic habitat, drinking water supplies, and water-dependent recreation.

Site Specific Project Recommendations:

1. Evaluate, maintain, or increase capacity for existing septic inspection and replacement programs
    - **Location:** Village of Red Creek

2. Identify point and nonpoint sources of pollution, increase monitoring of locations at or near pollution sources
    - **Locations:** Black Creek and Red Creek

Watershed Wide Project Recommendations:

1. Track nutrient reductions from removing priority invasive species (milfoil, water chestnut, frogbit); may help encourage communities to increase removal projects if there's evidence that it reduces nutrient pollution

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Goal 6: Sustainable Working Lands

Promote, implement, and improve sustainable working land uses to provide future generations with the ability to use and prosper from natural resources

- **Over 37% of the watershed is farmland.** In 2020, USDA estimated NY farm real estate value at $3,270 per acre, equating to approximately **$162 million** for the entire watershed
- According to United States Department of Agriculture (USDA) farm census data, **95% of the farms in watershed counties are small and family owned, however there's a risk of land turnover/development as the human population in the watershed is aging**
- Well over half of the farms in the watershed use conventional tillage practices (USDA Census of Agriculture). **Erosion rates from "conventionally plowed agricultural fields average 1–2 orders of magnitude greater than rates of soil production" (Montgomery 2007)**
- Observations during field tours suggest that there may be an opportunity to **pilot grazing and native grassland forage programs**
- **Need: data on soil loss/erosion from conventional and no/reduced-till cropping**

Goal 6: Sustainable Working Lands

Promote, implement, and improve sustainable working land uses to provide future generations with the ability to use and prosper from natural resources

Watershed Wide Project Recommendations:

1. Agricultural soil health practices and initiatives (i.e., cover crops, reduced tillage, no till programs)
2. Expand financial and capacity support for SWCDs (including supporting agencies for technical support)
3. Assist farms with Agricultural Environmental Management (AEM) participation (e.g., address farm needs & identify Best Management Practices)

Project Recommendations, suggested locations needed:

1. Research and mitigate the impact that invasive species has on agricultural land
2. Research on the impact of agricultural drainage practices on natural systems

Educational Recommendations (<u>reference existing resources when available</u>):

1. Educate on the value of native vegetation of land adjacent to streams and promote the use of buffers

Numbers highlighted in **cyan** *denote recommendations that are in more than one IWAP project goal*

Goal 7: Heritage and Sense of Place

Inspire and facilitate a connection with nature to support physical, social, and mental well-being

- The southern shore of Lake Ontario has a fascinating and rich human history, from First Nations, to the Underground Railroad, Prohibition Era, to many families who have lived here for generations
- **Distribution of access to natural resources and protected lands is mostly along the shoreline – highlighting the importance of preservation and expansion of public access to parks and trails inland** (Wolcott Falls, Cato-Fair Haven Trail, Maiden Road Park, Hannibal Hojak Rail trail, Sterling Nature Center Canoe Launch, etc.)
- **The eastern portion of the watershed has elevated socio-economic and demographic risks while also being relatively close to urban centers (Syracuse, Oswego) which may increase development pressures**

Goal 7: Heritage and Sense of Place

Inspire and facilitate a connection with nature to support physical, social, and mental well-being

Site Specific Project Recommendations:

1. Add nesting platforms and boxes to establish baseline data on health and biodiversity of bird species
    - **Location:** Sterling Nature Center, state parks

Watershed Wide Project Recommendations:

1. Consider becoming a part of Tree City USA to increase the number of trees within municipalities
2. Encourage municipalities to apply for a Drinking Water Source Protection Plan (DWSP2) or become a Climate Smart Community (CSC) to address water quality concerns and increase funding opportunities
3. Education on the sediment dynamics and natural processes occurring along the shoreline, shoreline BMPs (with Sea Grant)
4. Build on existing natural history studies to detail local historical conditions

Project Recommendations, suggested locations needed:

1. Consider ecotourism projects (e.g., kayak launches, biking trails, **safety** and maintenance on existing parks, blueway trails). Potential opportunity to improve upland and aquatic habitat connectivity

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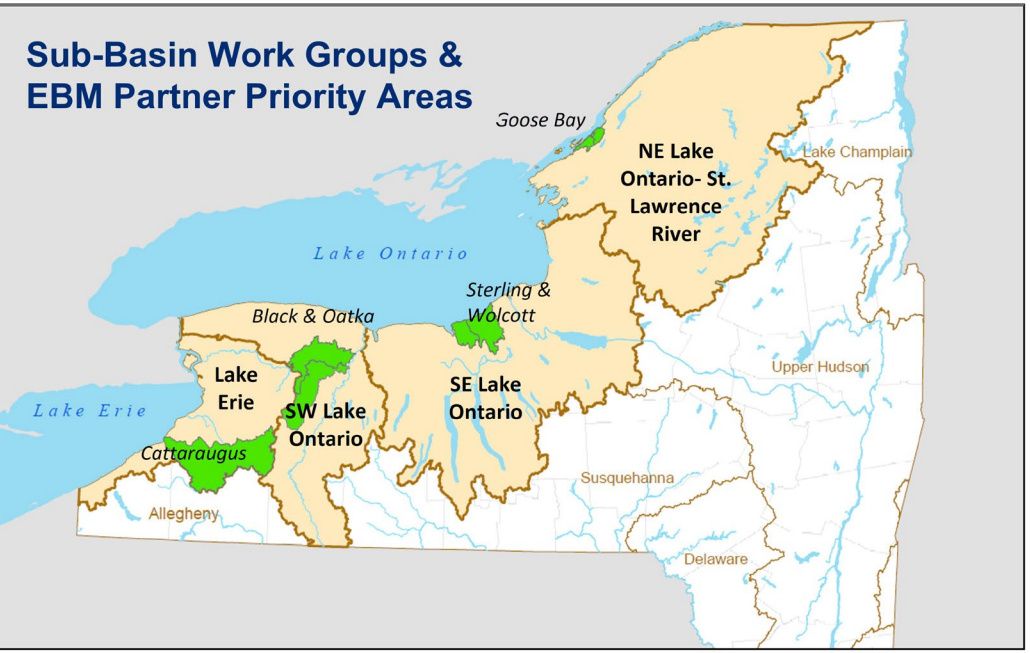


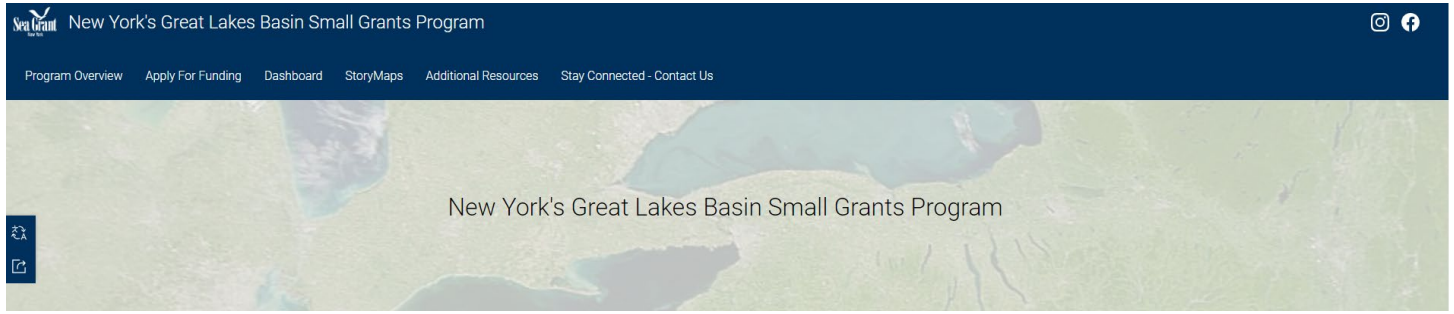
Long Term Management

Inspire and facilitate a connection with nature to support physical, social, and mental well-being

- Great Lakes program will help facilitate the "inner circle"
- GLAA sub basin work groups can be used to share updates and lessons learned
- Local champions can support project implementation, monitoring and evaluations
- Research opportunities to fill data gaps will be explored through partners

Funding Opportunities - DEC Great Lakes

- NY Sea Grant Great Lakes Small Grants (Fall)
- Cornell Water Resources Institute Competitive RFP (Fall)
- Great Lakes Research Consortium (Summer)
- Sign up for the Great Lakes News, Funding, and Events listserv to get updates

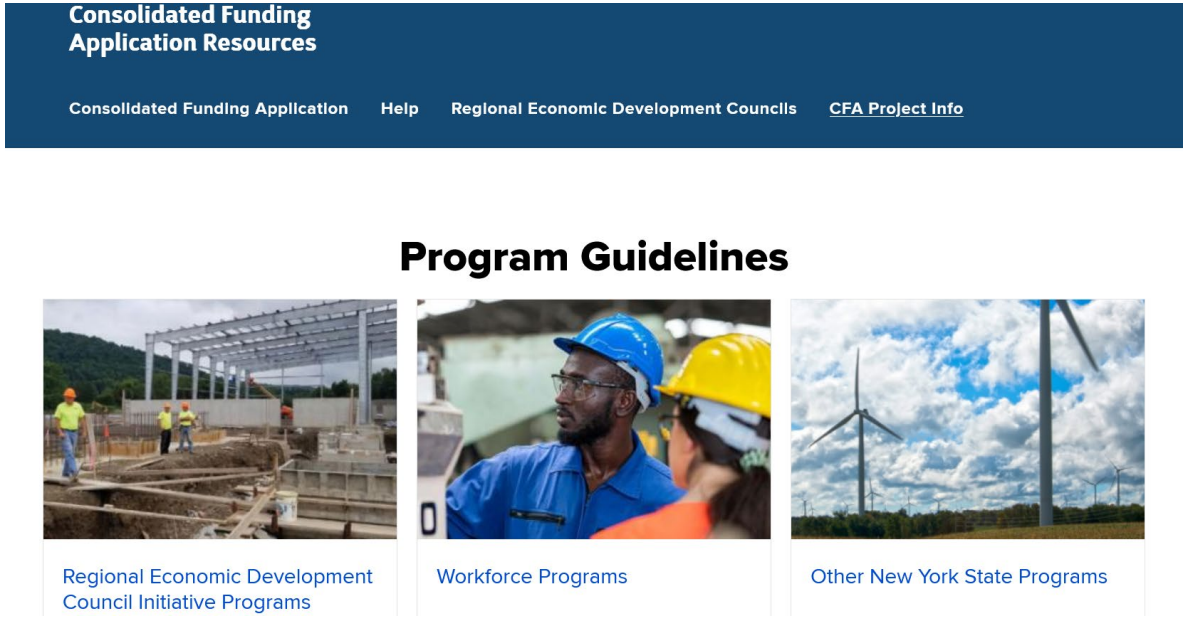


NEW YORK STATE WATER RESOURCES INSTITUTE
Cornell University

GREAT LAKES RESEARCH CONSORTIUM
WORKING TOGETHER FOR GREAT LAKES RESEARCH, OUTREACH & EDUCATION

Funding Opportunities - Consolidated Funding Application

- DEC Water Quality Improvement Project
- DEC Non-Agricultural Non-Point Source Planning Grants
- DEC Climate Smart Communities
- DOS Local Waterfront Revitalization Program
- EFC Green Innovation Grant Program



- Due July 28th, 2023, using www.GrantsGateway.Gov

Funding Opportunities - DEC Funding Finder

Funding Finder Tool

Are you looking for funding? Our new tool can help you!

The Funding Finder, developed by the NYSDEC Division of Water in conjunction with the Long Island Sound Study, is designed to simplify the process of finding grant opportunities. The tool enables grant seekers to filter grant opportunities based on criteria that meets their specific needs.

After discussions with different stakeholders, it was clear there is a barrier to applicants being aware of grant opportunities. The Funding Finder is part of the solution and encompasses a wide variety of federal, state, and local funding and will be updated periodically. DEC grants featured in the tool include: water protection, wildlife protection, land and forest protection, climate change and environmental justice grants. Find more information on DEC specific grants.

To download the Funding Finder and associated User Guide, click the links below.

- Funding Finder (*Note: Preferred browsers for this tool are Chrome and Safari. If you are using Microsoft Edge or Firefox, allow pop-ups and click "download file."*)
- Funding Finder User Guide - Step-by-step instruction packet with illustration for additional guidance.

https://www.dec.ny.gov/pubs/127486.html

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Next Steps

- IWAP Report: late summer
- Long term management survey:

https://survey123.arcgis.com/share/0ce867dcb1724dc8844c432c3829d1d4

- Check out the StoryMap for updates:

https://storymaps.arcgis.com/stories/7a4c9700cda1482e90adb6e795c3fed9

Thank you!

Final questions or comments?

Email: SterlingWolcott@ramboll.com

Website: https://www.dec.ny.gov/lands/124314.html

StoryMap Link:
https://storymaps.arcgis.com/stories/7a4c9700cda1482e90adb6e795c3fed9

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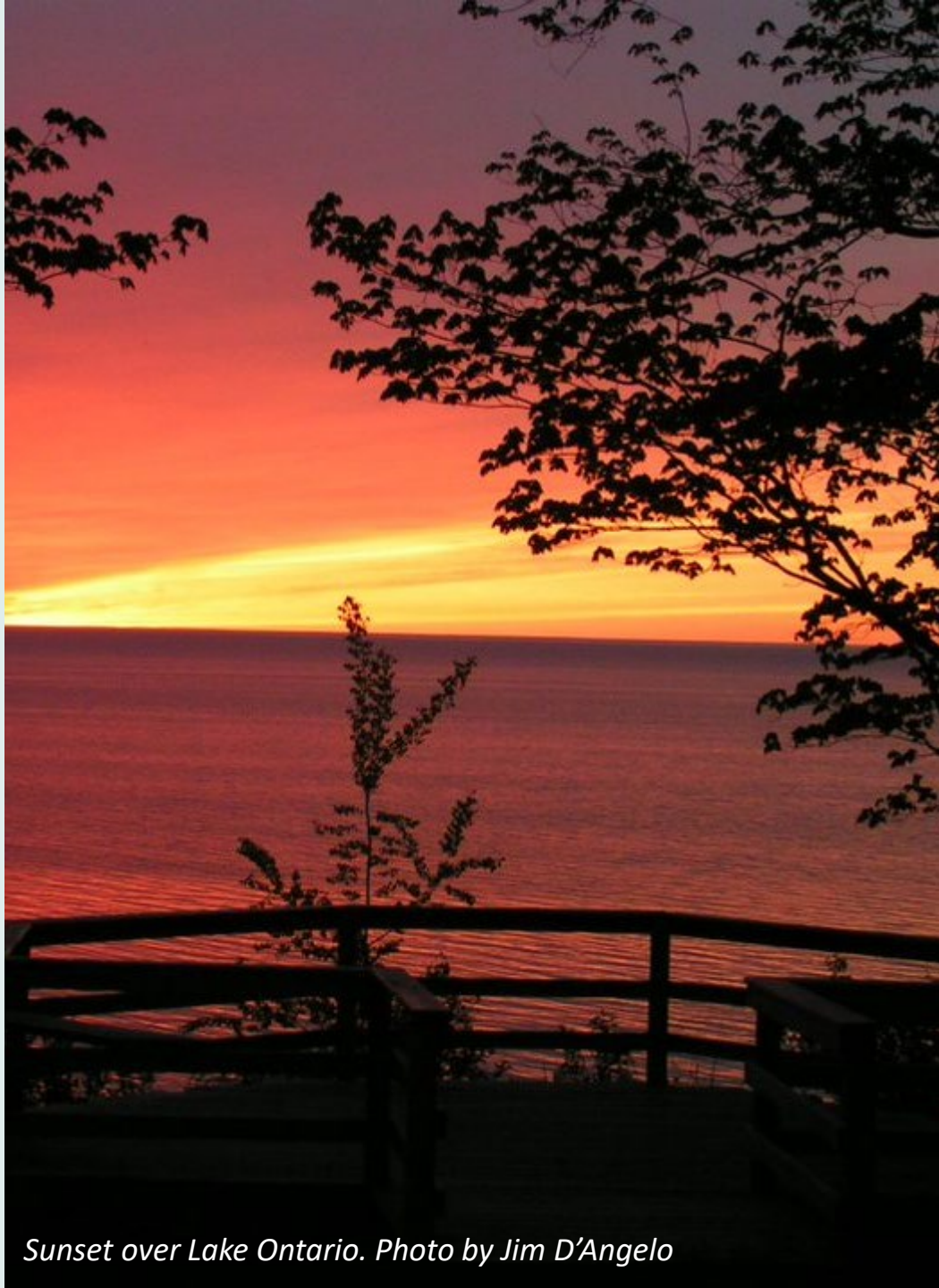

Sunset over Lake Ontario. Photo by Jim D'Angelo