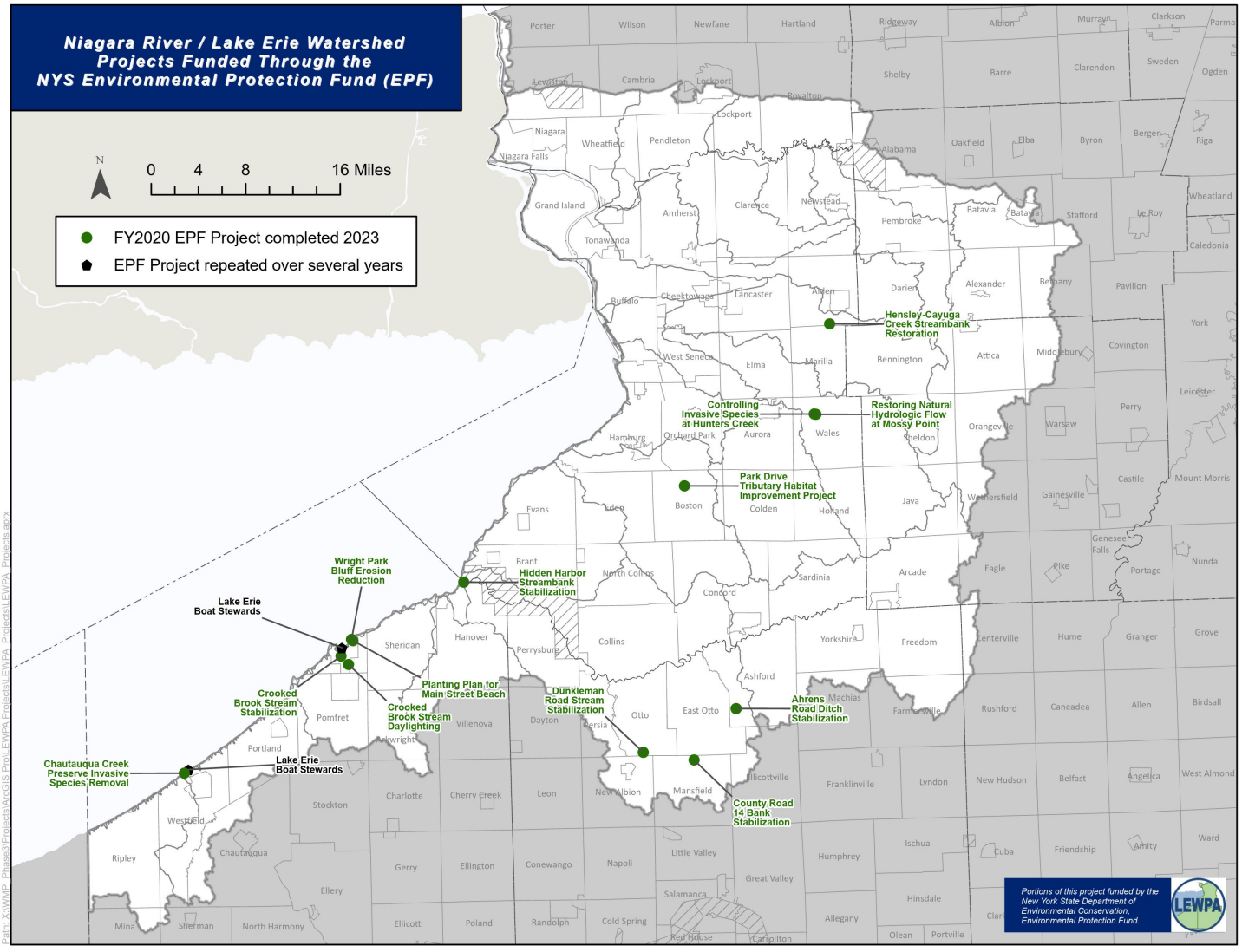
Annual Report of the Lake Erie Watershed Protection Alliance—2024

The Lake Erie Watershed Protection Alliance (LEWPA) formed in 2012 as an alliance of municipal officials and concerned stakeholders working together within the Niagara River/Lake Erie Watershed including Cattaraugus, Chautauqua, and Erie counties. The mission of LEWPA is to foster collaboration and partnerships within the watershed to address regional water quality and quantity concerns, and in doing so, protect and enhance our Lake Erie resource. Tinyurl.com/LEWPANY

LEWPA completed projects for the fifth year of funding through the NYS Department of Environmental Conservation, Environmental Protection Fund (EPF), FY 2020.

$250,000 annual allocation leveraged an additional $739,504!



NYS EPF Project Highlights

Stream Labeling

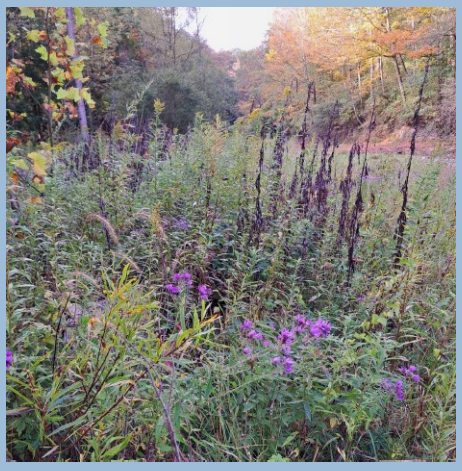
County bridges were labeled with the stream names they cross to increase public awareness.

Hidden Harbor Marina

Cattaraugus Creek bank stabilization to reduce erosion and nutrients.

Invasive Species Control

WNY Land Conservancy treated invasive species along Hunter Creek corridor.



First Year of Second Contract EPF Project Results

Lake Erie Watershed Protection Alliance

Environmental Protection Fund FY 2020 – 2021 Project Results

5,441 lbs of nutrients and **1,801** tons of sediment prevented from entering waterways

2,925 linear ft of streambank stabilized

13.7 acres hydroseeded

$211,950 investment leveraged **$739,504** additional funds

1,695 linear ft of riparian buffer planted

57 Lake Erie Watershed signs

36 acres of invasive species treated

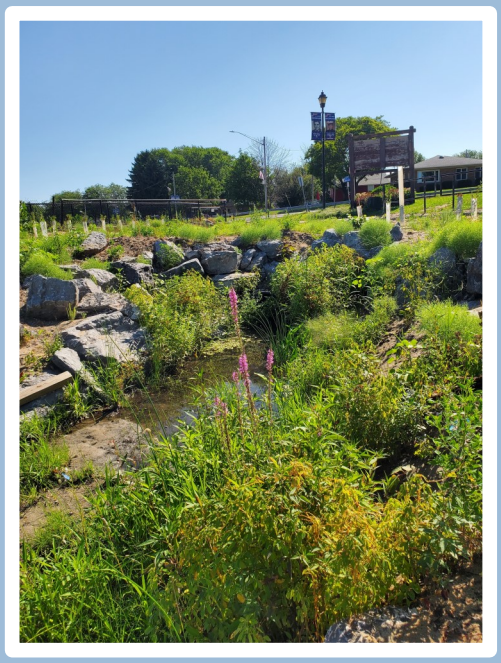
259 boats inspected for invasive species

25,000 people educated on water quality issues

1 localized coastal planting plan

U.S. Environmental Protection Agency (USEPA) Funding

LEWPA has coordinated a total of $2,795,000 in USEPA funding so far to assist with Lake Erie nearshore health improvement projects. One project is nearly complete in Chautauqua County at Wright Park Beach and Main Street Beach in Dunkirk. The project addresses polluted stormwater runoff from Hyde Creek and a stormwater outfall. It constructed green infrastructure solutions including a shoreline engineered wetland (below left) and floodplain benches (below right with high and low water). They treat approximately 47 million gallons of stormwater runoff annually. The project is scheduled to wrap up in spring 2025 with additional plantings.



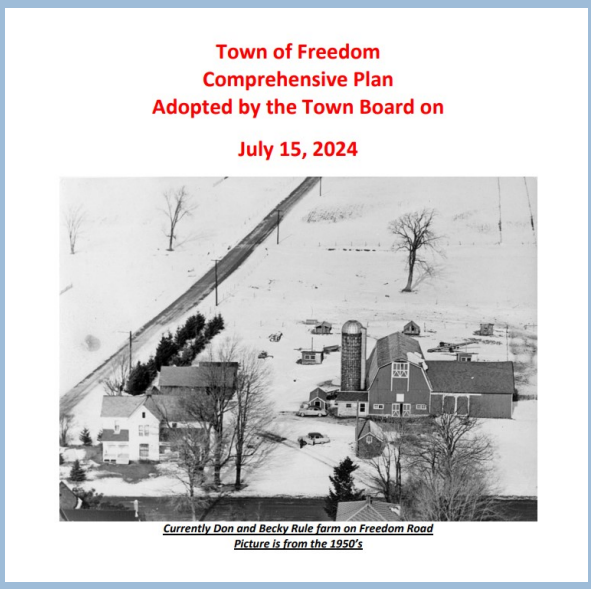
Another USEPA project is just beginning in the Cattaraugus Creek watershed. Stream erosion inventories suggest that streambank erosion and the presence of agricultural lands without riparian buffers contribute significantly to increased sediment and nutrient loading in the Cattaraugus Creek Watershed. **A recent study by the US Geological Survey indicated that Cattaraugus Creek had the highest estimated average annual total phosphorus yield and flow-weighted mean concentration to Lake Erie**, more than the Maumee River in Ohio! As a result of collaboration with the farmers who own the most severely eroded sites identified in erosion inventories, a shovel-ready project involving the stabilization of approximately 1,900 linear feet of stream bank is planned. Mitigation measures will include toe stabilization utilizing longitudinal peaked stone toe protection along with rock vanes. An aquatic bench will be created with an establishment of a riparian buffer to include native tree and shrub species. Significant nutrient reduction is anticipated, and the final design will also incorporate minor in-stream fish habitat improvements.

Upstream Heroes!

In each newsletter, LEWPA will recognize a municipality that is working to protect or restore our water resources. We are all upstream of someone and we all need to do our part to manage our ecosystem resources wisely.

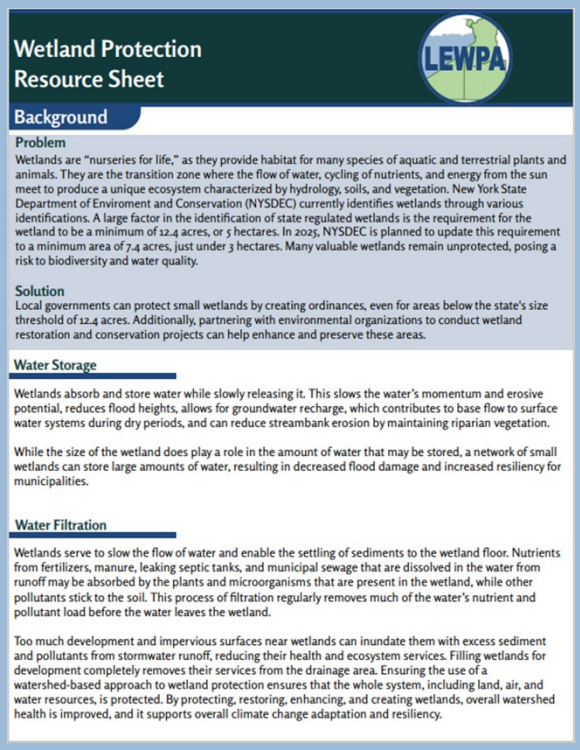
Freedom, NY

The Town of Freedom in Cattaraugus County has updated their Comprehensive Plan from 1995 with objectives to maintain and conserve wood plots, flood plains, and wetlands, as well as support agricultural and forestry practices that protect the environment. In addition, the Plan mentions the need for smart growth principles, ecologically sound gravel mining practices and site reclamation, supporting local ordinances for water quality, and preventing improper waste management.



Currently Don and Becky Rule farm on Freedom Road
Picture is from the 1950's

Lake Erie Watershed Regulation Review


Wetland Protection Resource Sheet

LEWPA

Background

Problem

Wetlands are "nurseries for life," as they provide habitat for many species of aquatic and terrestrial plants and animals. They are the transition zone where the flow of water, cycling of nutrients, and energy from the sun meet to produce a unique ecosystem characterized by hydrology, soils, and vegetation. New York State Department of Enviroment and Conservation (NYSDEC) currently identifies wetlands through various identifications. A large factor in the identification of state regulated wetlands is the requirement for the wetland to be a minimum of 12.4 acres, or 5 hectares. In 2025, NYSDEC is planned to update this requirement to a minimum area of 7.4 acres, just under 3 hectares. Many valuable wetlands remain unprotected, posing a risk to biodiversity and water quality.

Solution

Local governments can protect small wetlands by creating ordinances, even for areas below the state's size threshold of 12.4 acres. Additionally, partnering with environmental organizations to conduct wetland restoration and conservation projects can help enhance and preserve these areas.

Water Storage

Wetlands absorb and store water while slowly releasing it. This slows the water's momentum and erosive potential, reduces flood heights, allows for groundwater recharge, which contributes to base flow to surface water systems during dry periods, and can reduce streambank erosion by maintaining riparian vegetation.

While the size of the wetland does play a role in the amount of water that may be stored, a network of small wetlands can store large amounts of water, resulting in decreased flood damage and increased resiliency for municipalities.

Water Filtration

Wetlands serve to slow the flow of water and enable the settling of sediments to the wetland floor. Nutrients from fertilizers, manure, leaking septic tanks, and municipal sewage that are dissolved in the water from runoff may be absorbed by the plants and microorganisms that are present in the wetland, while other pollutants stick to the soil. This process of filtration regularly removes much of the water's nutrient and pollutant load before the water leaves the wetland.

Too much development and impervious surfaces near wetlands can inundate them with excess sediment and pollutants from stormwater runoff, reducing their health and ecosystem services. Filling wetlands for development completely removes their services from the drainage area. Ensuring the use of a watershed-based approach to wetland protection ensures that the whole system, including land, air, and water resources, is protected. By protecting, restoring, enhancing, and creating wetlands, overall watershed health is improved, and it supports overall climate change adaptation and resiliency.

Erie County, on behalf of LEWPA, received a $49,982 grant from NYS Department of Environmental Conservation via NY Sea Grant to hire graduates with a Masters degree in Urban Planning to assess the regulations of 27 municipalities in the Niagara River/ Lake Erie Watershed from a water quality and resiliency standpoint and make recommendations for improvement. In addition, resource sheets with case studies of what other communities have done were developed on various topics, such as native lawns and groundwater source protection (example pictured left). In addition, a major site plan review checklist was created to allow Planning Boards to start a conversation around the water quality impacts of large-scale developments before approving the plans. These resources are located at www.tinyurl.com/municipaltraining. The goal of this project was to guide municipalities to become more aware of how development decisions impact water quality and provide resources to smaller communities without large planning departments while providing valuable work experience to recent graduates.