



Department of  
Environmental  
Conservation



# Genesee River Watershed Implementation Plan

## Genesee River Basin Summit

May 16, 2024

Ryan Elliott – Southwest Lake Ontario Watershed Coordinator, NYSDEC Great Lakes Program in partnership with the NYS Water Resources Institute at Cornell University

# Engagement Forum Agenda

1. Geographic Setting: Genesee River Watershed
2. Watershed Implementation Plan Overview
3. Implementation Strategy
4. Next Steps



Credit: Genesee RiverWatch

# Geographic Setting

## Genesee River Watershed

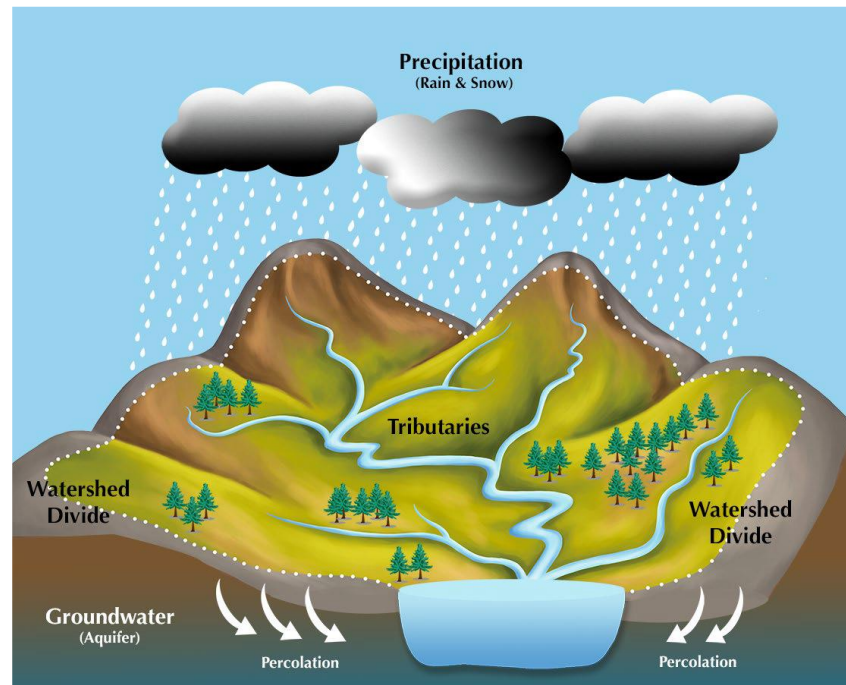


Department of  
Environmental  
Conservation

# What is a watershed?

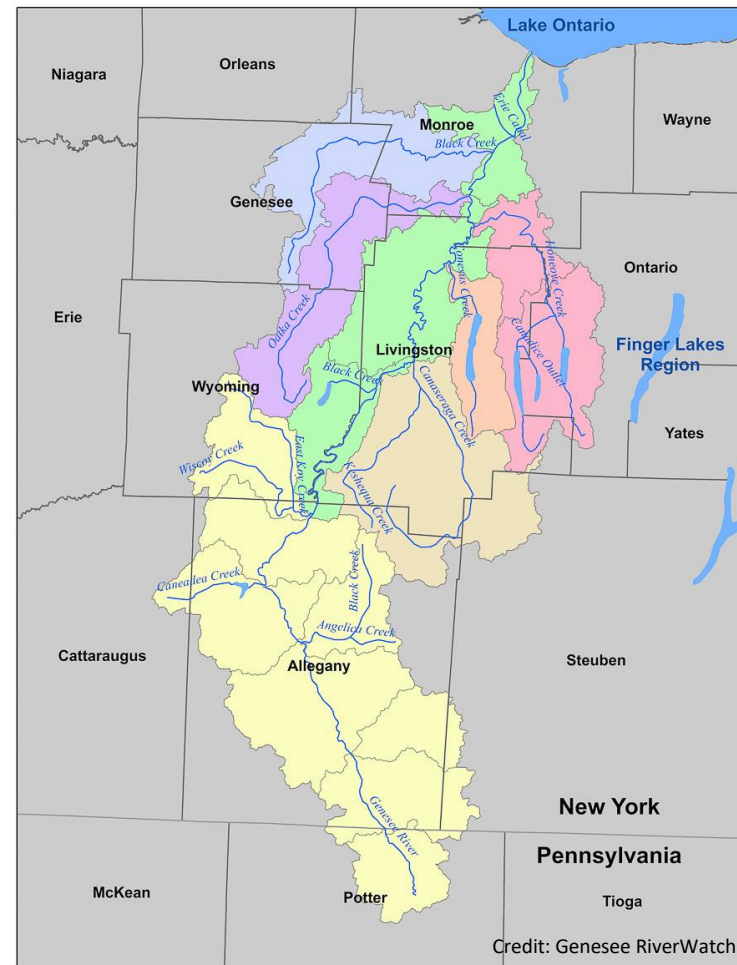
A watershed is the land that drains to a common body of water.

We all live in a watershed.



# Genesee River Watershed

- ~2,490 square miles
- Landcover: Dominated by forest and agriculture
- Main stem is ~157 miles
- 31 significant ponded waters
- High quality fish & wildlife habitat
- Recreational opportunities
- Water quality concerns: Nutrient and sediment





Credit: Genesee RiverWatch

# Watershed Implementation Plan Overview

# Background

- **Great Lakes Water Quality Agreement**
  - Guides binational efforts to manage the Great Lakes
  - 13 Articles
  - 10 Annexes
    - Annex 2: Lakewide Management
      - Lake Ontario Lakewide Action and Management Plan



# Background

## ➤ Great Lakes Restoration Initiative

- Provides federal funding for Great Lakes management activities
- 5 Focus Areas
  - Toxic Substances and Areas of Concern
  - Invasive Species
  - **Nonpoint Source Pollution Impacts on Nearshore Health**
  - Habitats and Species
  - Foundations for Future Restoration Actions



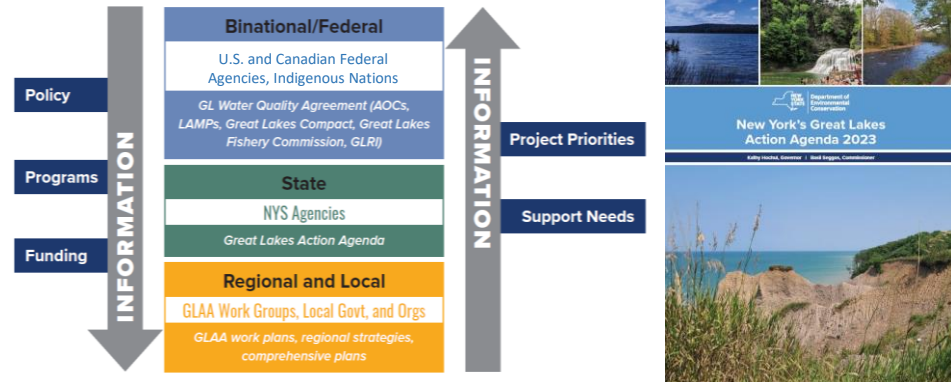
Great Lakes  
RESTORATION



Department of  
Environmental  
Conservation

# Background

- **New York's Great Lakes Action Agenda 2023**
  - Guides management of the Great Lakes basin in New York State
  - Goal 2
    - Reduce sediment, nutrient, and pathogen loading
  - Partnerships are critical!
    - Sub-Basin Work Group Meetings



# Background

- Genesee River Basin Nine Key Element Watershed Plan for Phosphorus and Sediment
  - Published in 2015; the first nine element plan in NYS
  - Voluntary plan
- Opportunities to Update
  - Stakeholder Engagement
  - Implementation Strategy



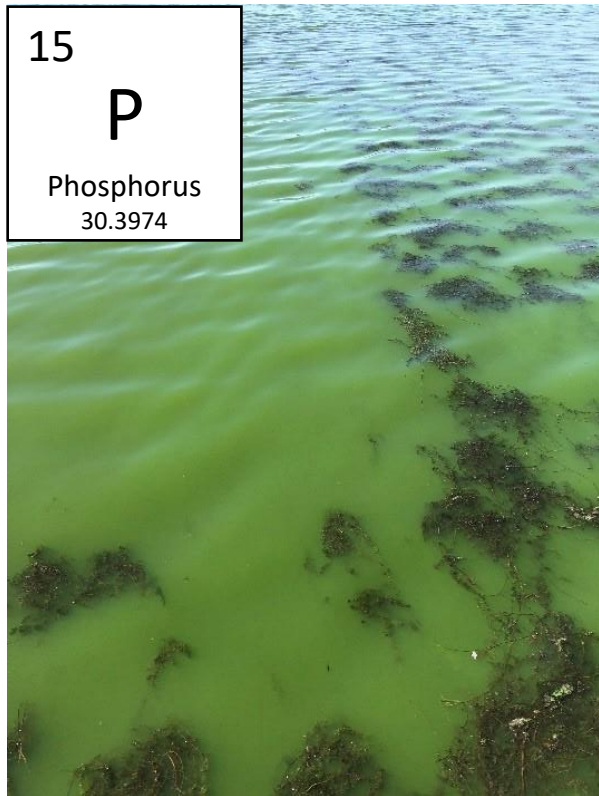
Department of  
Environmental  
Conservation

## **GENESEE RIVER BASIN NINE KEY ELEMENT WATERSHED PLAN FOR PHOSPHORUS AND SEDIMENT**

September 2015

**DIVISION OF WATER**  
Bureau of Water Resource Management  
625 Broadway, Albany, NY 12233-3508

# Why Phosphorus?



- Limiting nutrient in freshwater systems
- Elevated P concentrations can cause problems
  - Nuisance algal growth and harmful algal blooms
  - Extensive growth of submerged aquatic vegetation
  - Depletion of dissolved oxygen

# Why Sediment?



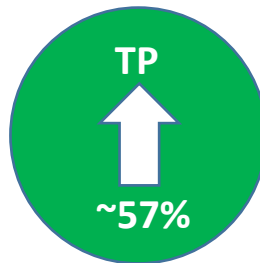
Credit: U.S. Army Corps of Engineers

- Negatively impacts aquatic habitat and species
- Accumulation → Flooding
- Maintenance costs
  - Dredging
  - Drinking water treatment
- Transports nutrients and other attached pollutants
- Aesthetics

# Genesee River Water Quality Trends 2011 – 2020 (USGS)

➤ Total Phosphorus

➤ **Increasing**



➤ Orthophosphate

➤ Stable

➤ Suspended Sediment

➤ **Increasing**



# What will the plan contain?

- Executive summary
- Purpose and background
- Project team and stakeholder engagement
- Watershed characteristics
- Water quality trends
  - Genesee River
  - Ponded waters (with sufficient data)
- Previous implementation
- Implementation strategy
- Project list
- Funding opportunities
- Adaptive management



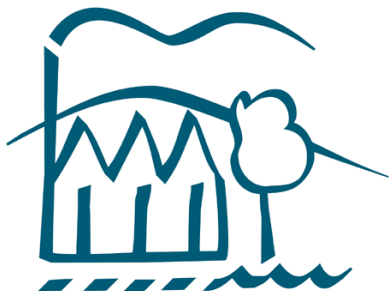
# Why participate in development of this plan?

1. Elevate local projects and priorities
2. Address local water quality issues
  1. Opportunities for projects that also provide water quantity (flood/drought) and/or habitat benefits
3. Refocus implementation efforts in a strategic way
4. Leverage plan to acquire state and federal funding



# Project Organization

## ➤ Project Team



GENESEE/FINGER LAKES  
Regional Planning Council

GENESEE RIVER WATERSHED  
COALITION OF CONSERVATION DISTRICTS



Department of  
Environmental  
Conservation

MONROE COUNTY



SOIL & WATER  
CONSERVATION DISTRICT



SOUTHERN  
TIER CENTRAL  
REGIONAL PLANNING & DEVELOPMENT BOARD



Southern Tier West

Regional Planning & Development Board

# Project Organization

- Watershed Advisory Committee
  - Who?
    - Stakeholders with an interest in improving water quality in the Genesee River basin (e.g., municipal representatives, academics, SWCDs, watershed groups, nonprofits, etc.)
  - What?
    - A group to provide input during the development of the WIP
  - When?
    - To be established later in Spring 2024 but will take interest now

Genesee River WIP Watershed  
Advisory Committee Interest Form



# Implementation Strategy

# Outline

1. Project List
  1. Projects grouped into five sectors
2. Funding Opportunities
3. Adaptive Management

# Implementation Strategy

- Projects are grouped into five sectors
  - Urban
  - Forested
  - Wastewater
  - Septic
  - Agricultural



# Urban Sector – Best Management Practices

- Green infrastructure
- Stormwater retrofits
- Urban tree planting
- Street sweeping
- Local ordinances
- Setbacks, steep slope laws, etc.

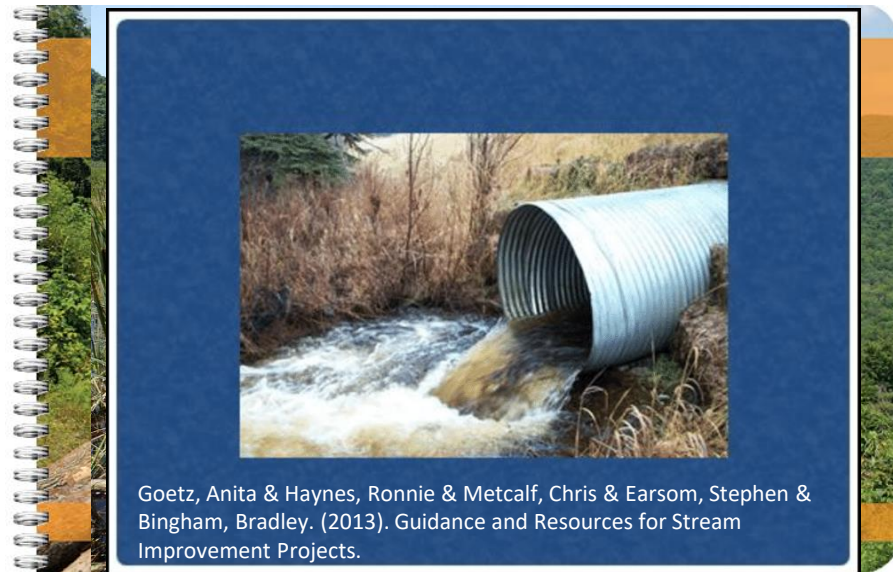


NEW  
YORK  
STATE

Department of  
Environmental  
Conservation

# Forested Sector – Best Management Practices

- Tree planting
- Streambank restoration
- Riparian buffers
- Timber harvest management
- Road and ditch management
- Wetland protection/restoration/construction
- Culvert right-sizing



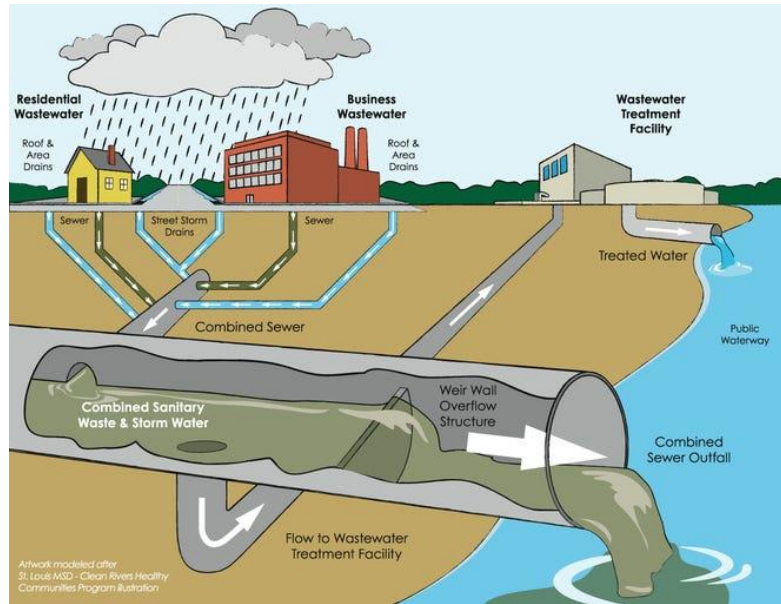
Goetz, Anita & Haynes, Ronnie & Metcalf, Chris & Earsom, Stephen & Bingham, Bradley. (2013). Guidance and Resources for Stream Improvement Projects.



Department of  
Environmental  
Conservation

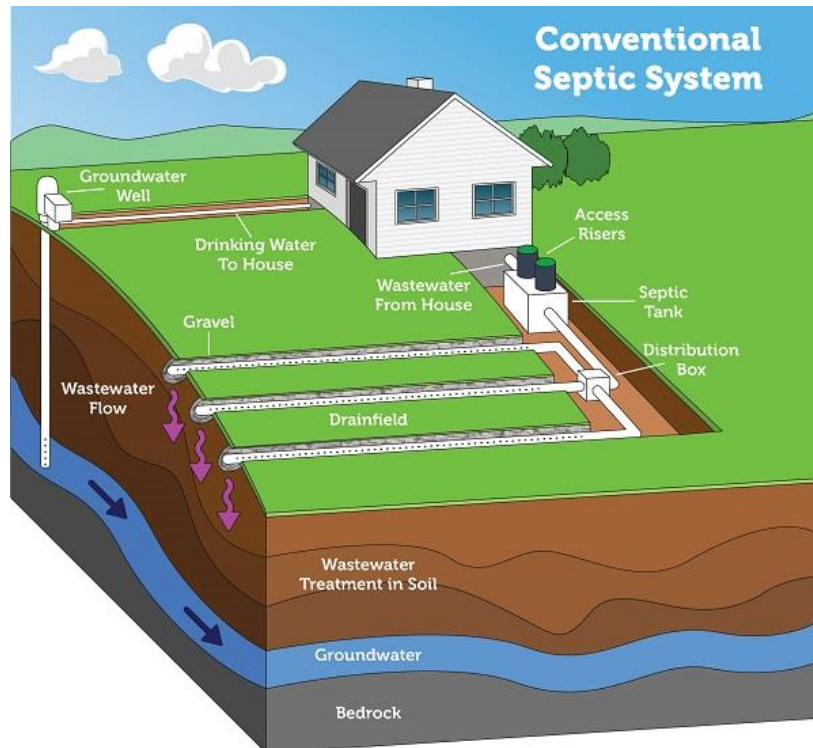
# Wastewater Sector – Best Management Practices

- Reduce sanitary and combined sewer overflows
- Stormwater management to reduce peak flows (e.g., green infrastructure)
- Identify and remove illicit storm sewer connections
- Limit P discharged from point sources
- Treat wastewater effluent to reduce total phosphorus concentration



# Septic Sector – Best Management Practices

- Repair and proper maintenance
- Outreach to property owners about septic system maintenance
- Workshops
- Printed materials
- Inspections



Please note: Septic systems vary. Diagram is not to scale.

# Agricultural Best Management Practices (BMPs)

Focused on erosion and nutrient reduction on agricultural lands

- Cover crops
- Riparian buffers
- Streambank stabilization
- Terracing
- Conservation tillage
- Grassed waterways
- Stripcropping



# Potential Funding Opportunities

- Water Quality Improvement Project Program (WQIP)
- Non-Agricultural Nonpoint Source and MS4 Mapping Grant (NPG)
- NY's Great Lakes Basin Small Grants Program
- Regenerate NY
- Septic System Replacement Fund
- Great Lakes Restoration Initiative
  - Sustain our Great Lakes
  - Great Lakes Sediment and Nutrient Reduction Program



# Adaptive Management

- Potential Supporting Monitoring Efforts
  - USGS water quality and flow monitoring
  - County water quality monitoring programs
  - Water Assessments by Volunteer Evaluators
- Implementation Tracking



# Next Steps

Spring 2024

1

Sign up for the Watershed Advisory Committee.

Spring 2024

- Interested stakeholders
- Municipal and county staff
- Academics
- Non-profits
- Other interested and engaged stakeholders

Summer/Fall 2024

2

Conduct outreach to local stakeholders to compile a project list for the WIP.

- Project Team
  - GRWCCD
  - G/FLRPC
  - STW RPDB
  - STC RPDB
  - NYSDEC

Fall 2024/Winter 2025

3

Compile draft WIP in consultation with WAC.

- Project Team
- Watershed Advisory Committee

Spring 2025

4

Revise WIP based on feedback and prepare final WIP.

- Project Team
- Watershed Advisory Committee



# Thank You!

- Ryan Elliott
- Southwest Lake Ontario  
Watershed Coordinator
- 700 Delaware Ave, Buffalo, NY
- [ryan.elliott@dec.ny.gov](mailto:ryan.elliott@dec.ny.gov)

Genesee River WIP Watershed  
Advisory Committee Interest Form

