

A photograph of a group of people kayaking on a river. The kayakers are wearing life jackets and are in a red and a green kayak. The river is surrounded by dense green trees and foliage. The water is calm, reflecting the surrounding greenery.

Lessons Learned in Watershed Planning

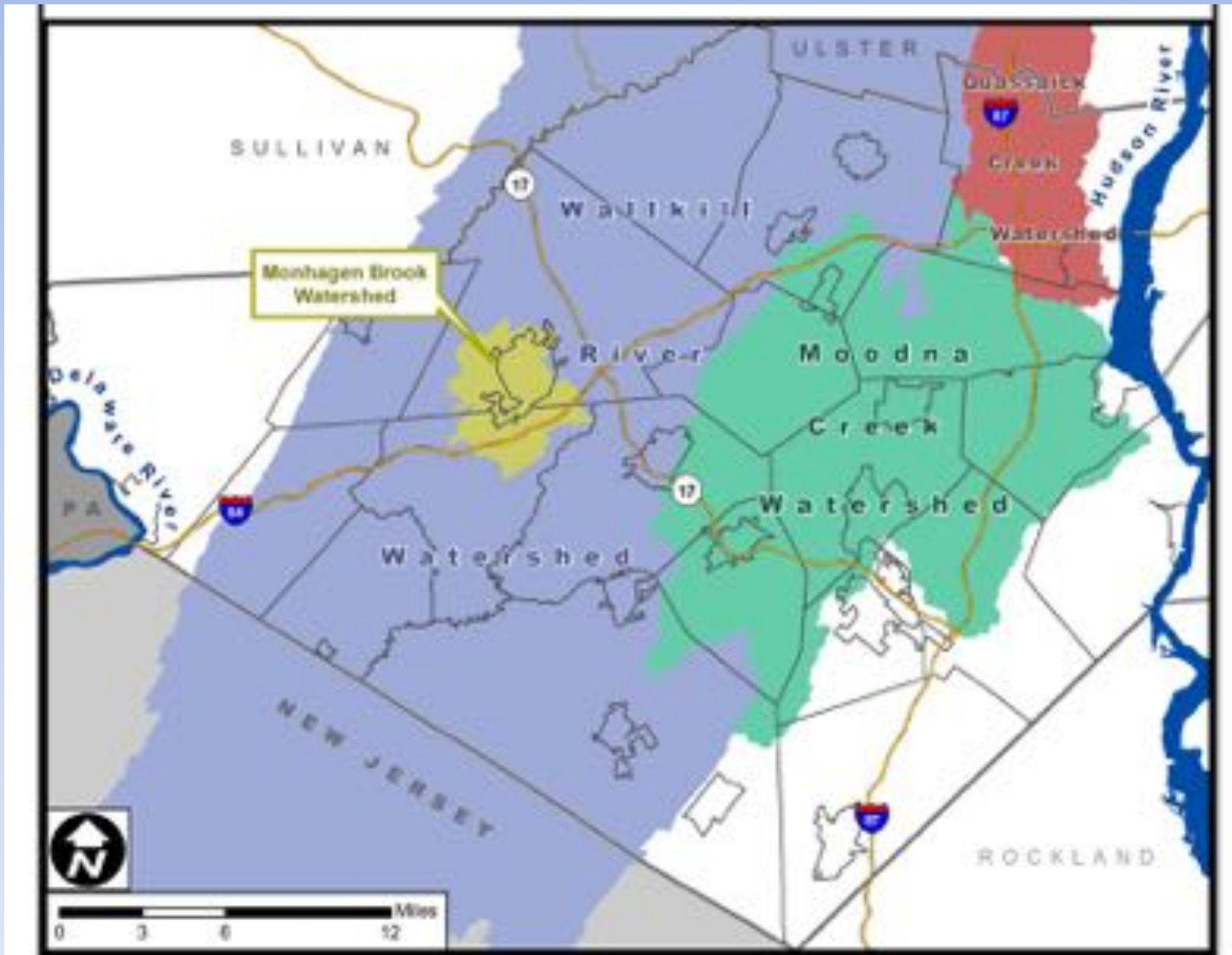
Kelly Morris, AICP

**Orange County Planning Department
& Orange County Water Authority**

Common Watershed Management Goals are to Improve or Protect:

- **Water quality**
 - **Habitat**
- **Recreational access to water**
 - **Flood resiliency**
 - **Water quantity**
 - **Historical sites**
 - **Scenic areas**
- **Quality of life of areas abutting water resources**

Watersheds with watershed plans (in Orange County)



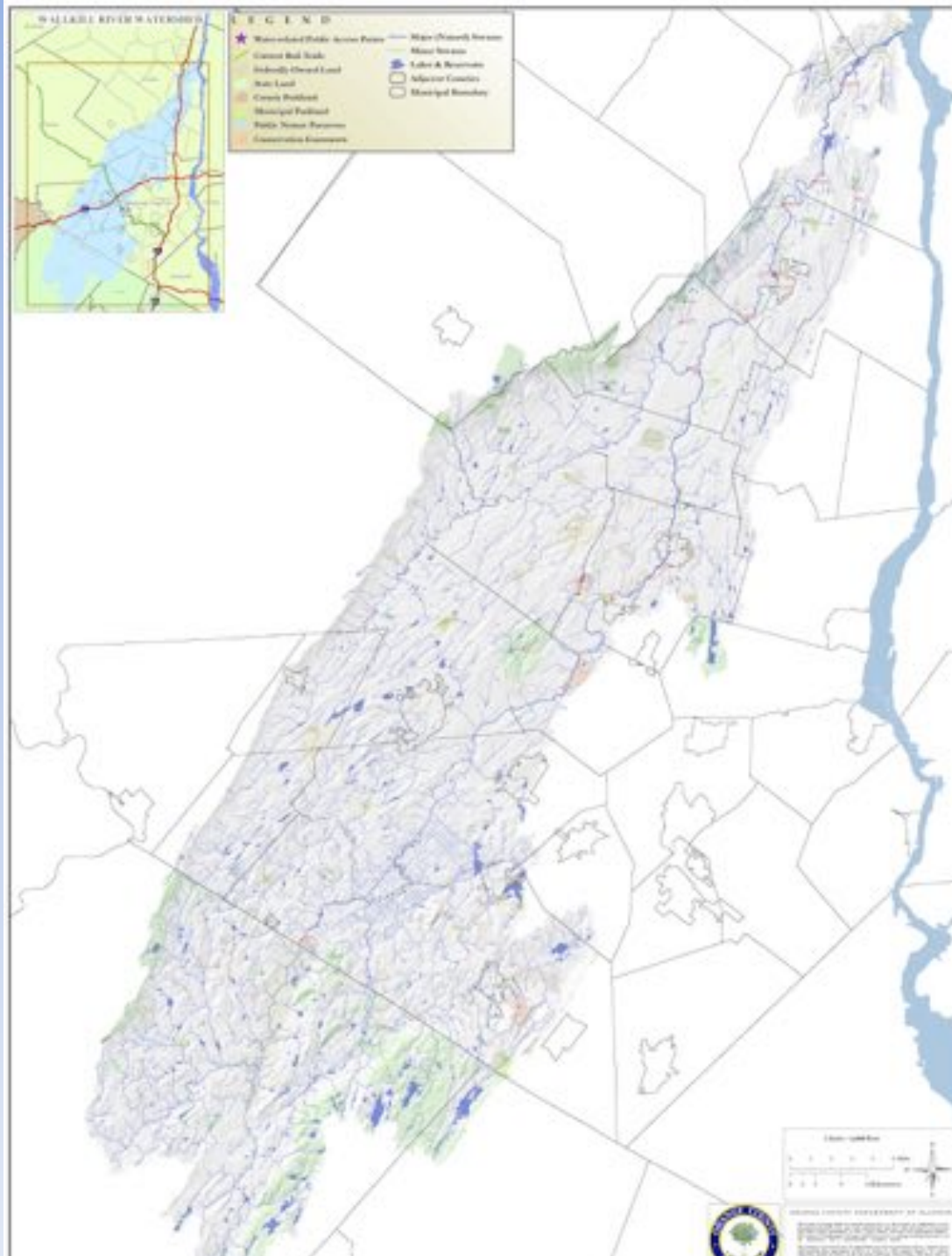
Wallkill River Watershed Conservation and Management Plan



Project Staff:

Orange County Soil and Water Conservation District
Ulster County Soil and Water Conservation District
Orange County Planning Department
Orange County Water Authority
Ulster County Planning Department

Funded in part by a grant from the
New York State Department of Environmental Conservation's
Hudson River Estuary Program



Moodna Creek Watershed Conservation and Management Plan



Mouth of the Moodna on the Hudson

*Prepared by the
Orange County Water Authority*

*New York State Department of Environmental Conservation provided
funding for this project from the Environmental Protection Funds through
the Hudson River Estuary Program*



March 2010



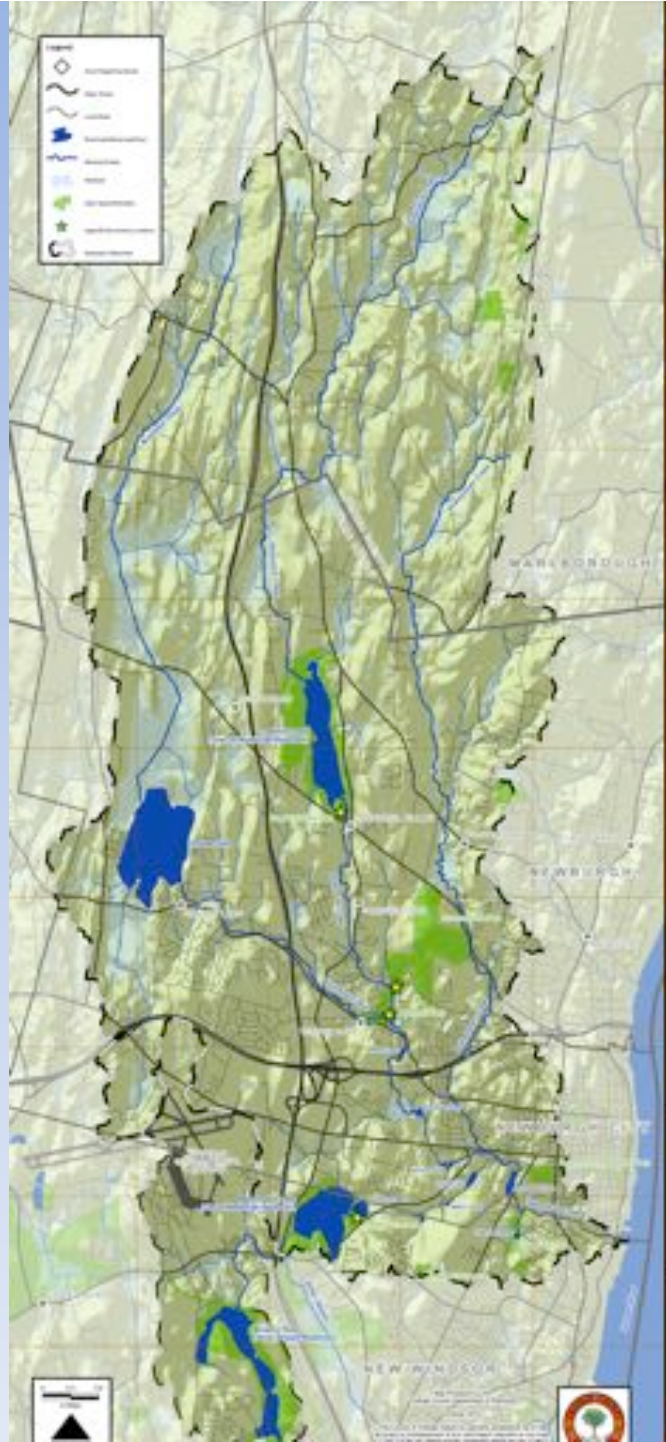


**Quassaick Creek
Watershed
Management Plan**
JUNE 2014

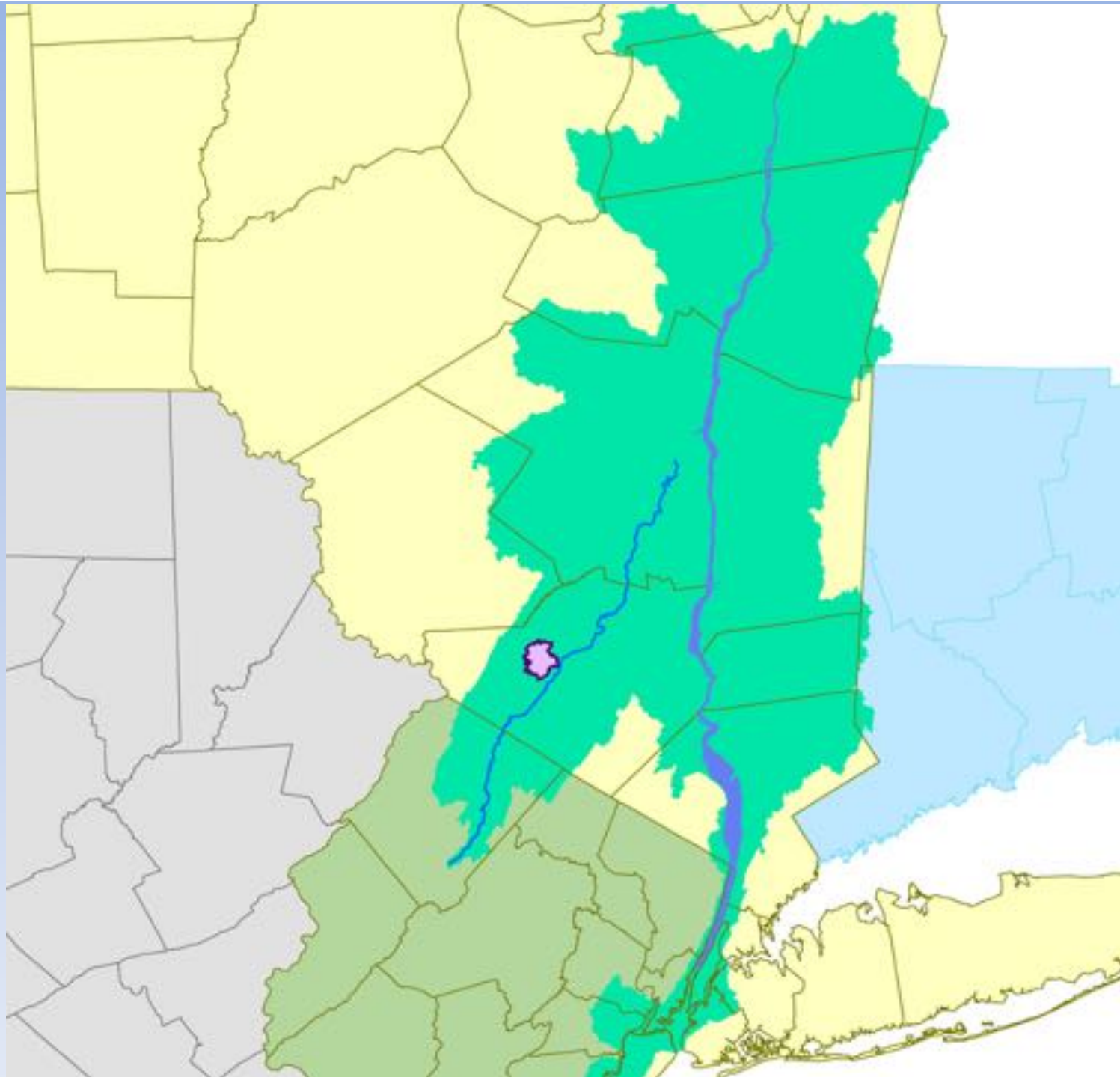
O.C.W.A.



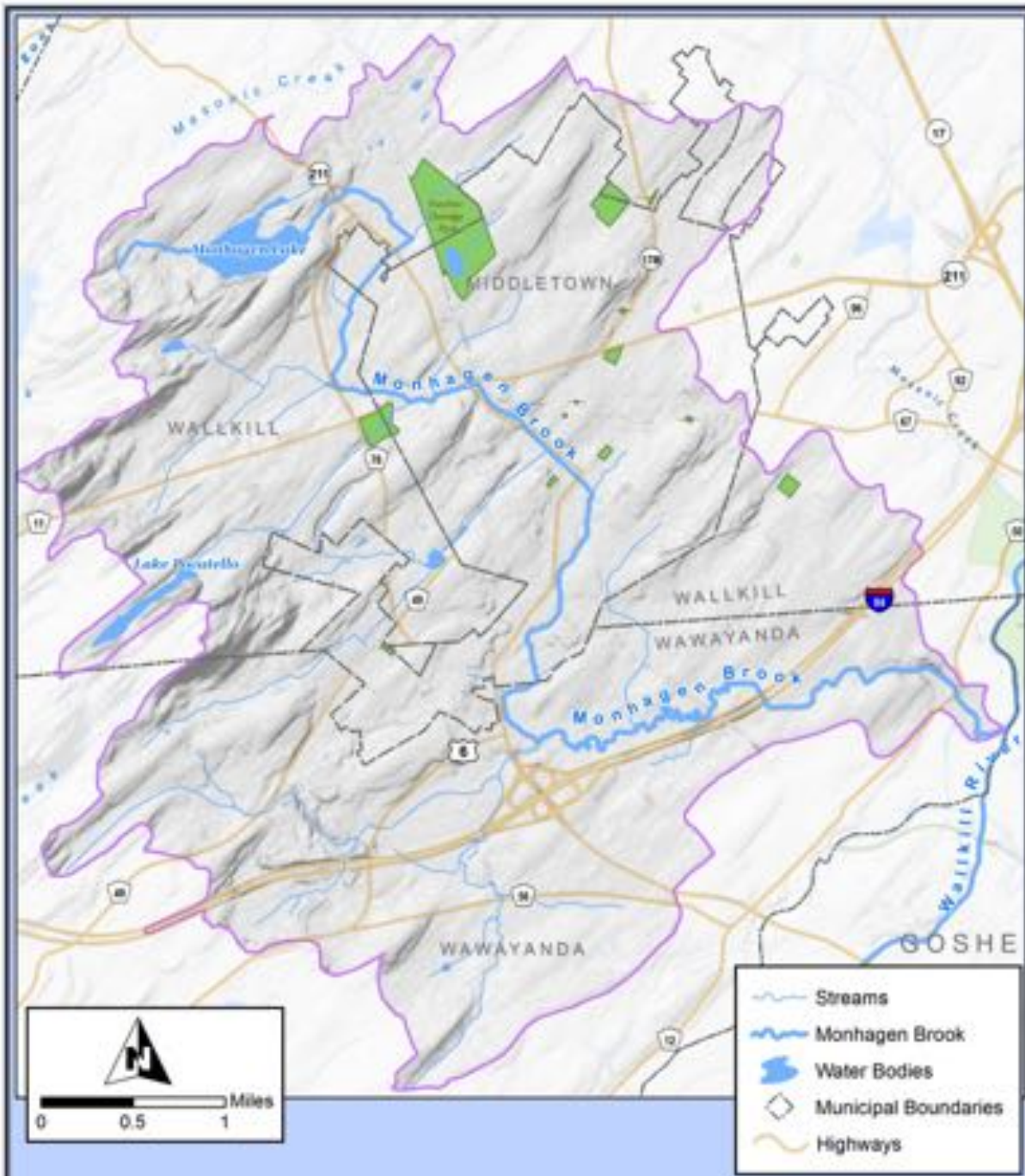
This document was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund. Additional funds provided by the Orange County Water Authority.



Monhagen Brook Watershed



Watershed Profile

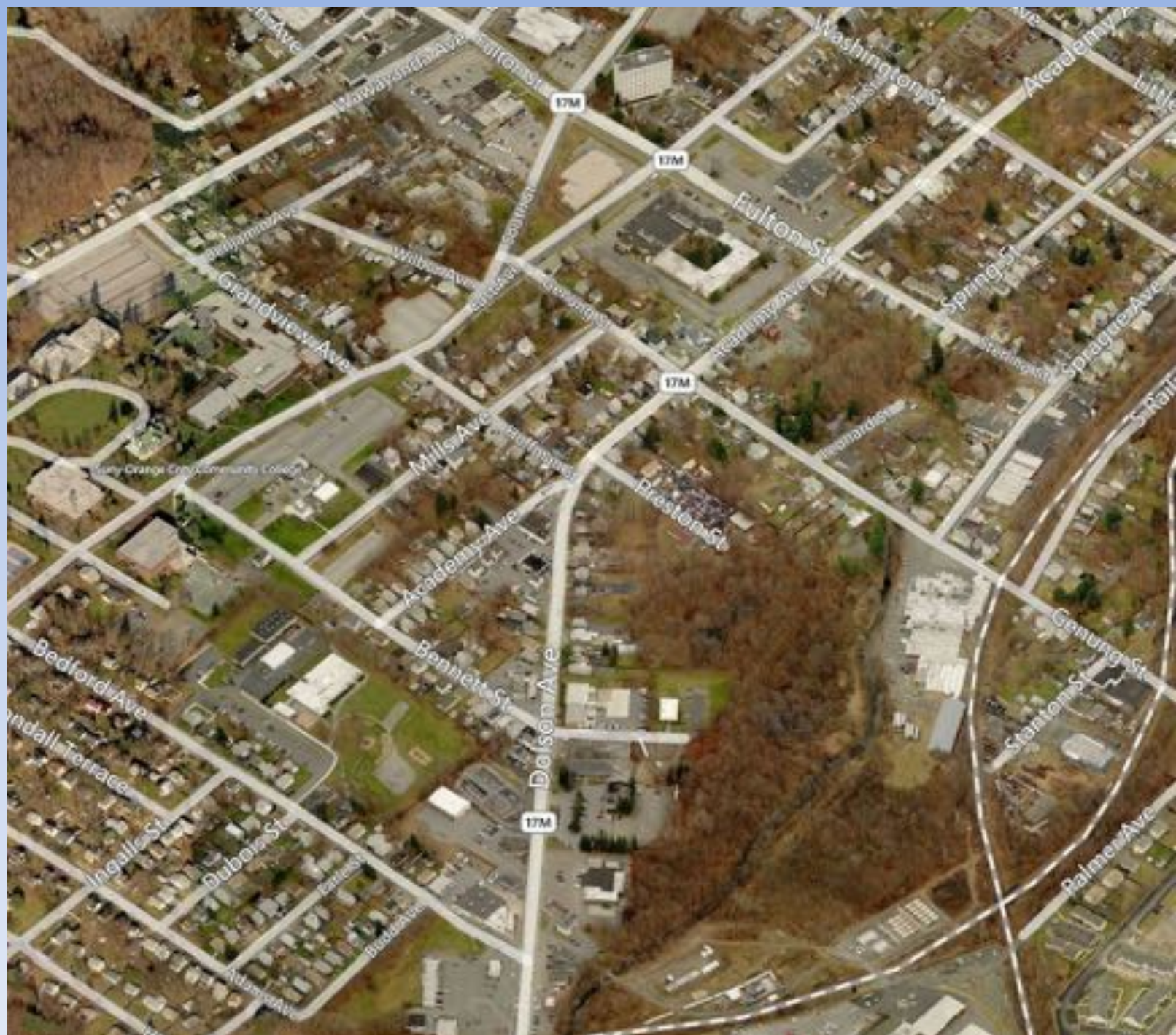


An aerial photograph showing a large, dark green lake in the center. To the left of the lake is a residential area with houses and a road. Above the lake is a large, brown, wooded area. Below the lake are several green fields and some smaller buildings. The text "Monhagen Lake" is overlaid in yellow in the center of the lake.

Monhagen Lake

Fancher Davidge Park











Recent and Current Initiatives

Stormwater planter



Stormwater
Filtering
Practice
18 Seward
Avenue
OCSWCD
OCCCE/Master
Gardeners





'tree filter'

Stormwater
Filtering
Practice
18 Seward
Avenue
OCSWCD
OCCCE/Master
Gardeners





**HUDSON ESTUARY
TREES FOR TRIBS**
A program of the NYSDOC Saratoga Tree Nursery

Replanting the Streams of the Hudson Valley
In partnership with local volunteers, NYSDOC's Hudson River Estuary Program
is conserving tributary streams. Trees planted along streams protect water
quality, fish and wildlife, and also reduce erosion and flooding.

NYSDOC Saratoga Tree Nursery
1000 Route 9W, Saratoga, NY 12158
518-584-2200
www.nysdoc.org



Simon Property
Dolsontown Road
Riparian Planting
OCSWCD
NYSDEC/TFT



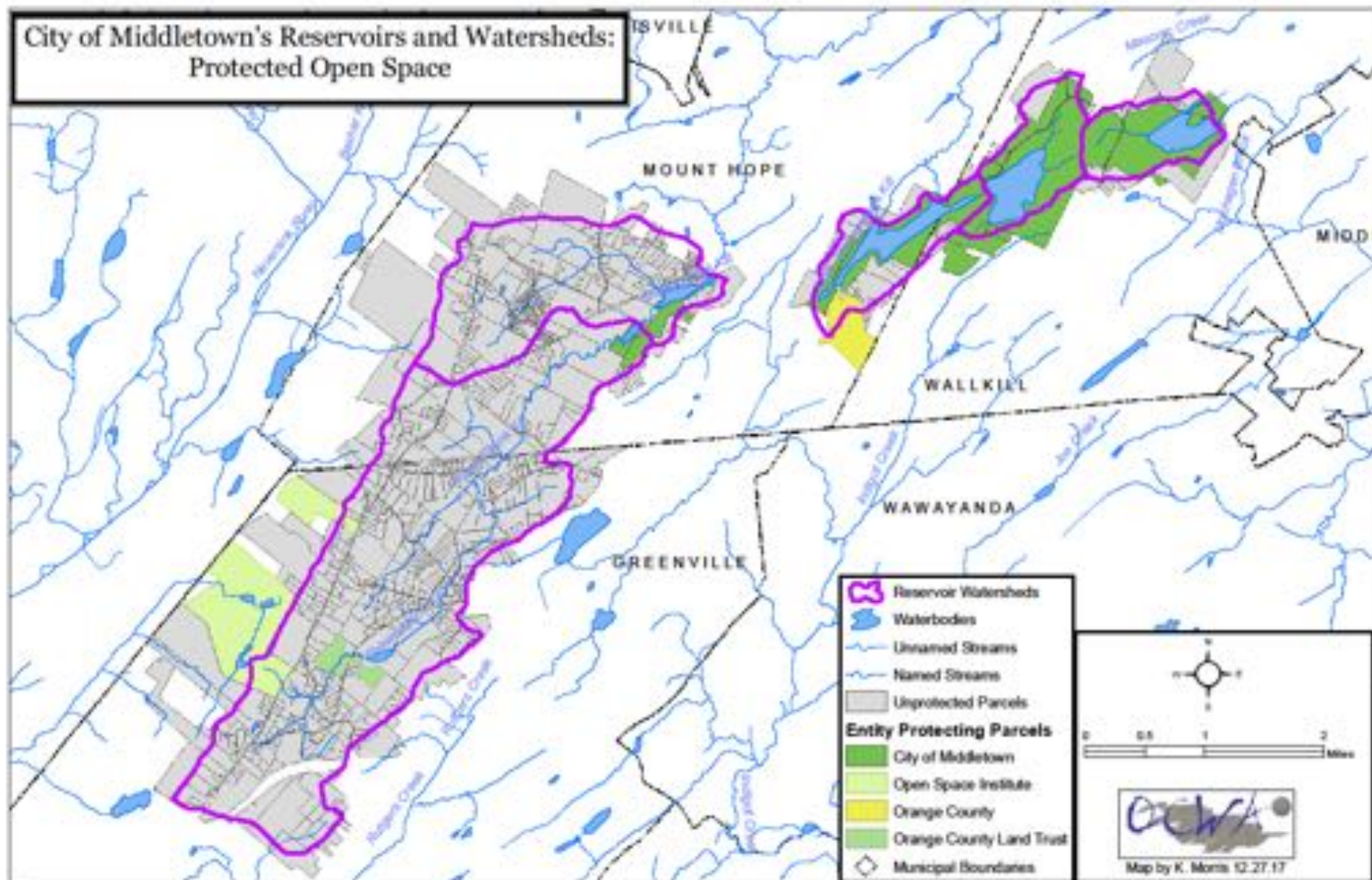


Campbell Plaza Stream Improvement



OCSWCD
NYSDEC (WQIP Grant)
Campbell Plaza Owners
Lehman and Getz

City of Middletown's Reservoirs and Watersheds: Protected Open Space



Proposed
Green Infrastructure
Retrofit Sites
Downtown Middletown



0 0.035 0.07 0.14 0.21 0.28 Miles



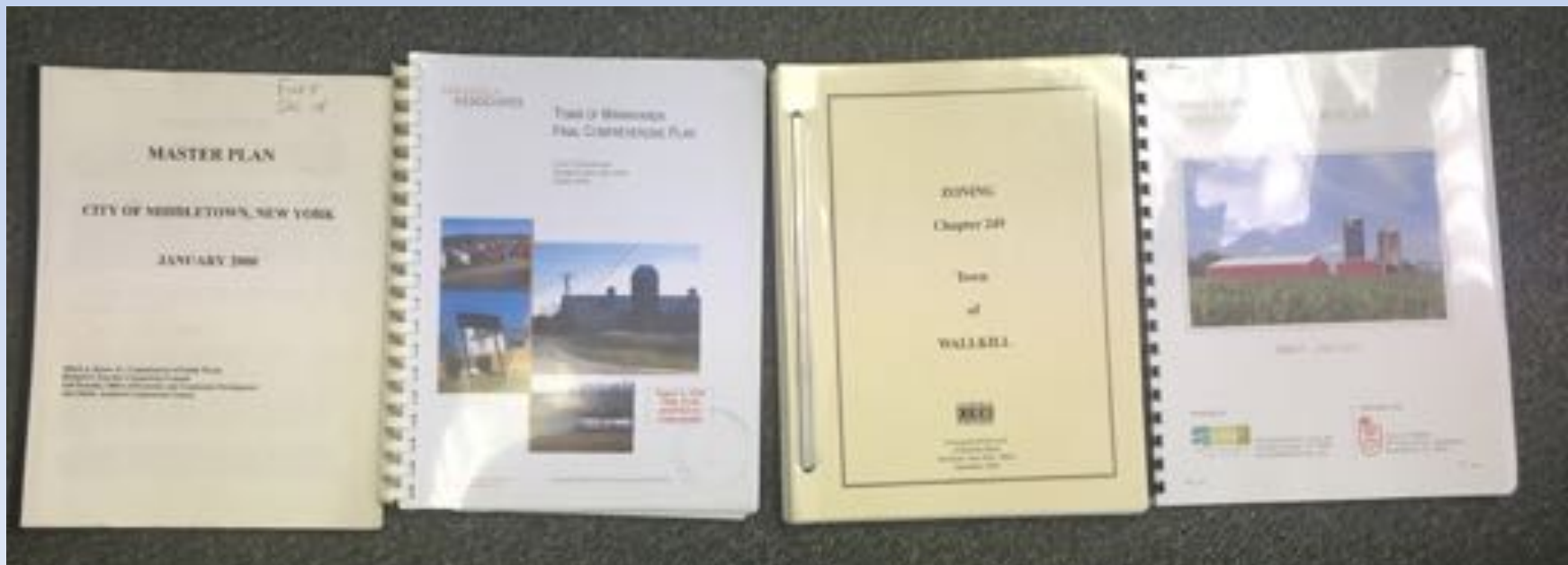
Monhagen Brook Watershed Plan

Watershed Planning Process



Municipal Policy Review

- Local Comprehensive Plans
- Zoning Codes
- Other regs or policies that could affect watershed

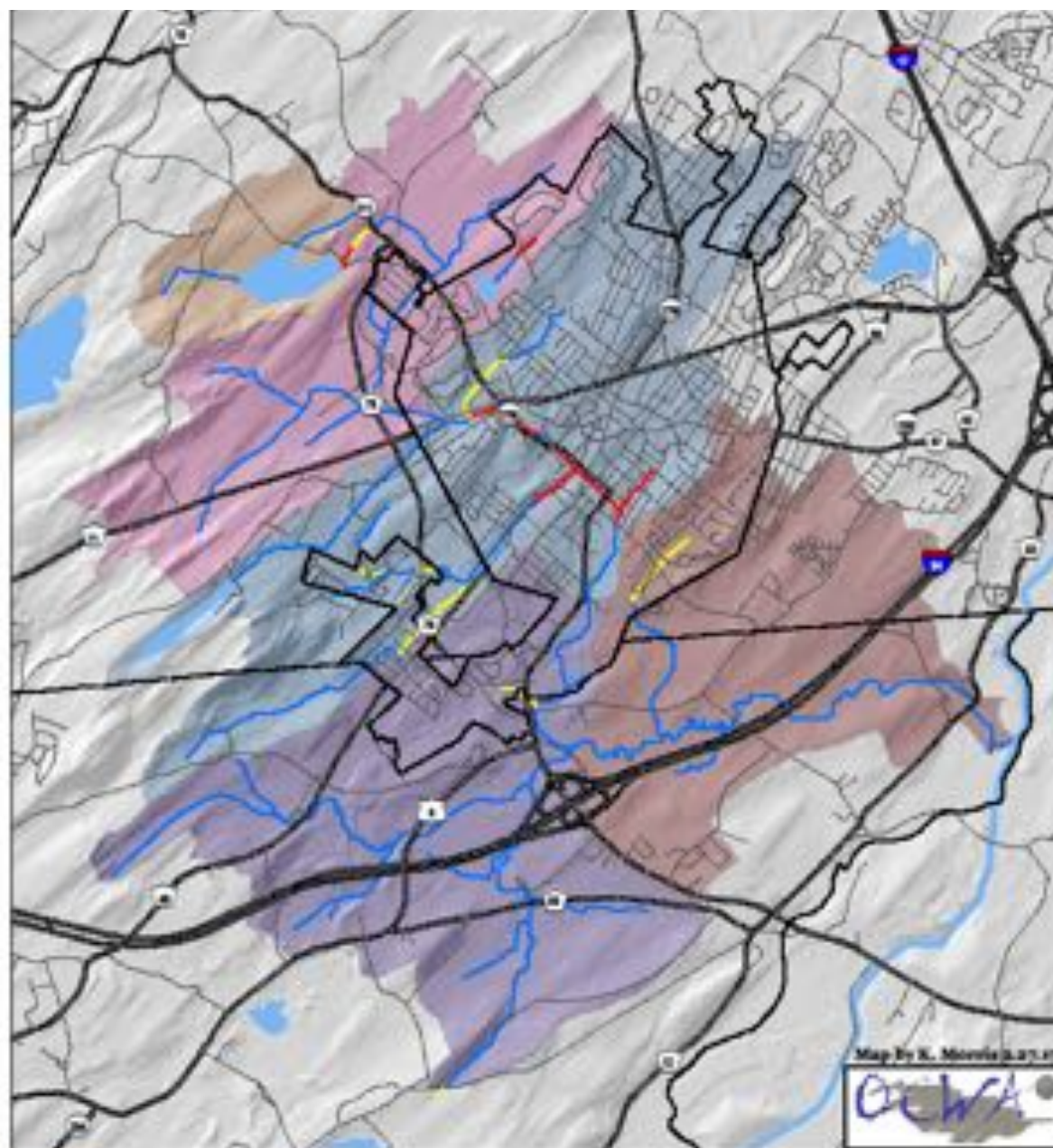


Municipal Policy Review

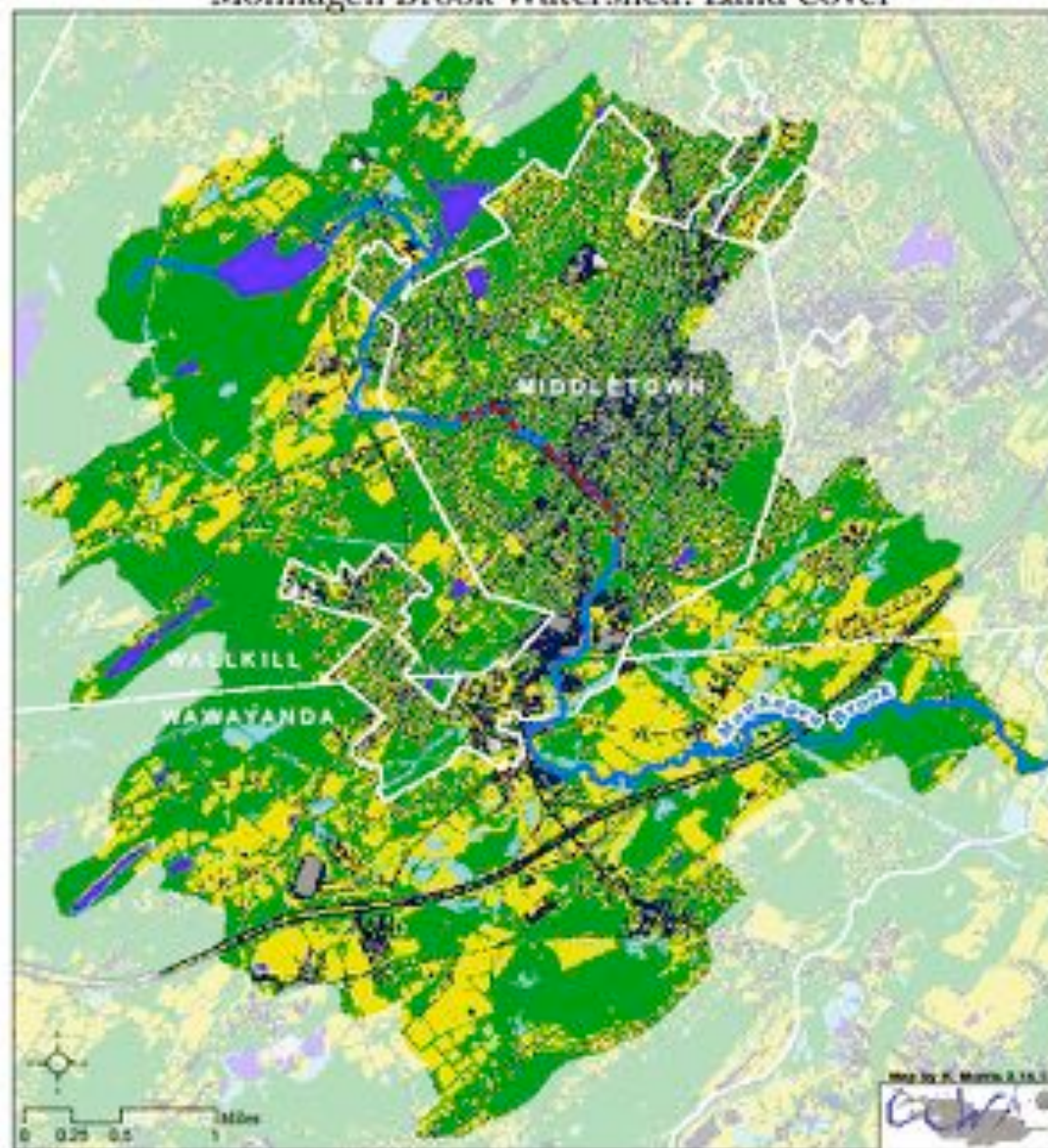
- Parking requirements
- Street width
- Cul-de-sac radius
- Sidewalks
- Maximum lot coverage
- Stormwater management
- Protection of steep slopes, vernal pools, wetland buffers, stream buffers

Collecting New Information

- Stream water quality data
- Identify threats to water quality
- Dams and culverts
- Locate sites for:
 - Public access, particularly informally used
 - Stormwater retrofitting
 - Riparian restoration
 - Streambank stabilization



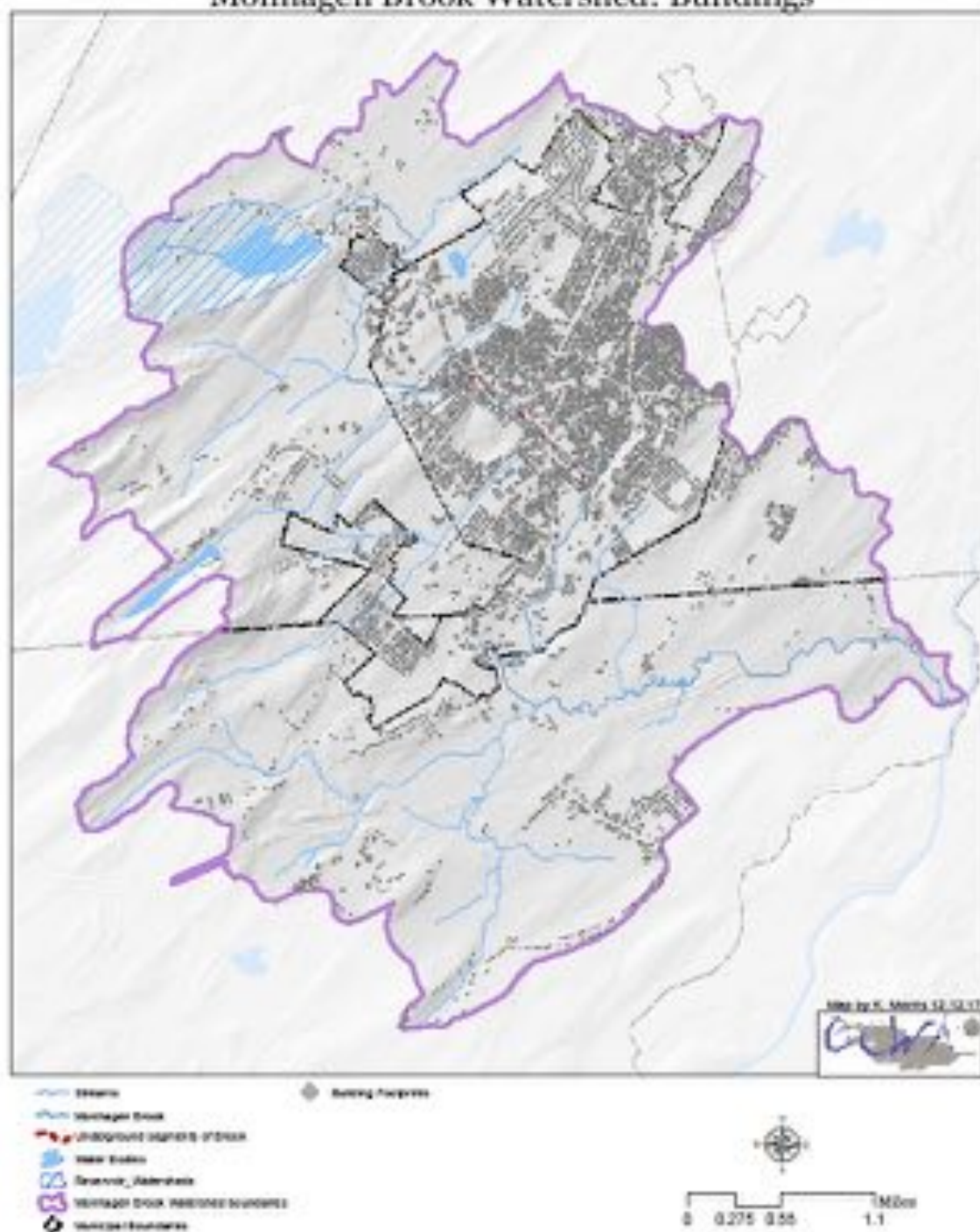
Monhagen Brook Watershed: Land Cover



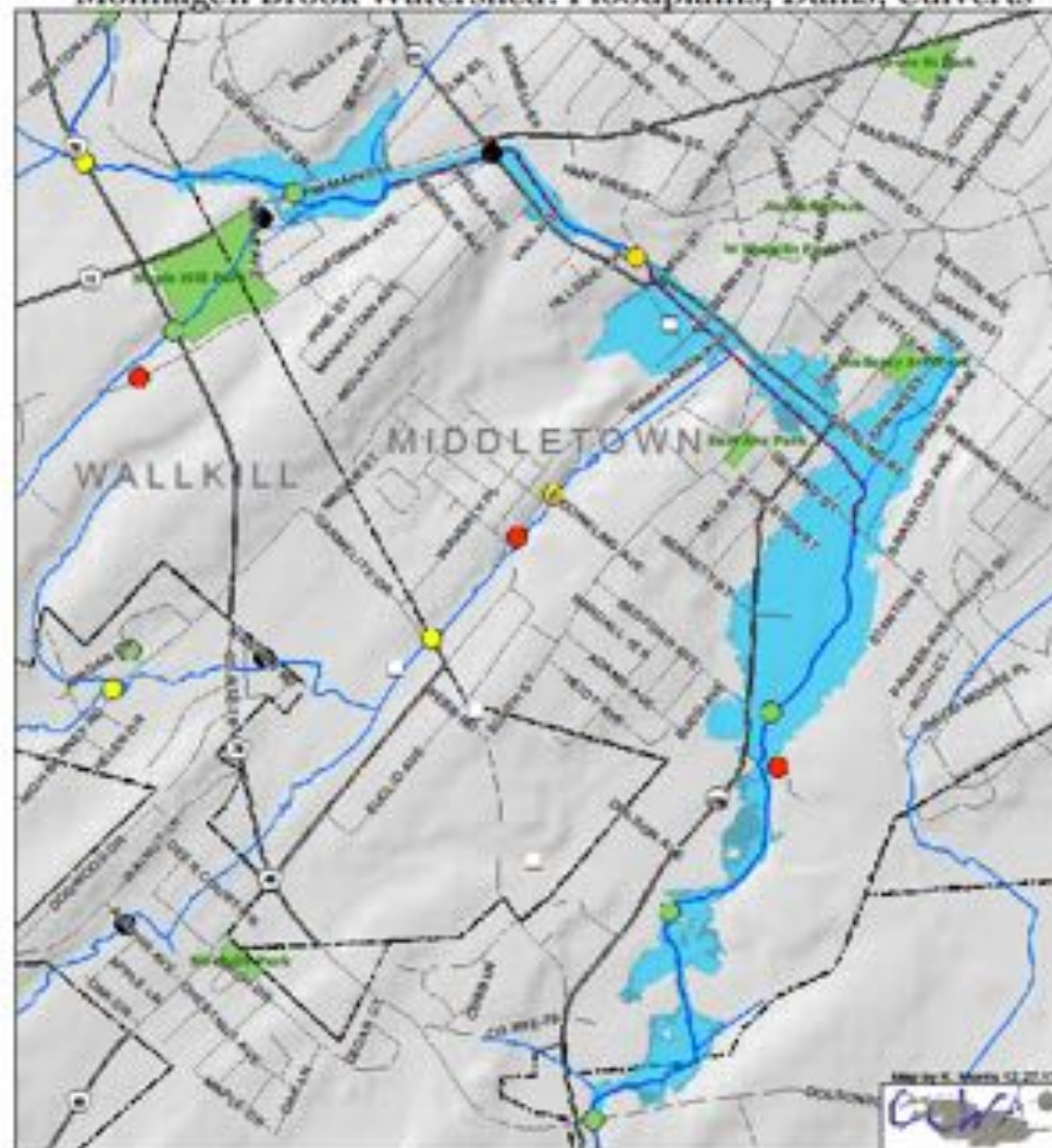
Monhagen Brook Watershed: Biological Resources



Monhagen Brook Watershed: Buildings



Monhagen Brook Watershed: Floodplains, Dams, Culverts



A 9-Element Plan in the Monhagen Brook Watershed

Lessons Learned: DO THIS!

- Forge important partnerships
 - Municipalities
 - Community groups
 - Landowners
- Demonstrate visible progress
- Provide education
- Get people outside
- Get a wide range of people involved
- Make involvement enjoyable and rewarding!

Lessons Learned: DON'T!

- Alienate stakeholders
- Intentionally humiliate a community
- Waste people's time

Tools for Implementation

- Volunteers
- Grants
- Municipal partnerships
- Schools

Overall...

- **Smaller is more manageable – larger is still useful but more difficult to implement**
- **Find knowledgeable people who have time and delegate useful, meaningful work**
- **Identify agency employees who can dedicate time to the cause**
- **Be a do-er yourself and lead the effort!**











Now go find your cause!

Kelly D. Morris, AICP

kdmorris@orangecountygov.com

845-615-3847