



WATERSHED CHARACTERIZATION TECHNICAL ASSISTANCE

Hudson River
Watershed Alliance



EMILY VAIL

EXECUTIVE DIRECTOR
HUDSON RIVER WATERSHED ALLIANCE

May 19, 2022

HUDSON RIVER WATERSHED ALLIANCE

- Unite and empower communities to protect our local water resources
 - Support watershed groups
 - Improve inter-municipal coordination
 - Communicate as a collective voice



October 2020 Annual Watershed Conference

OUTLINE

- Program overview
- Watershed planning and characterization process
- Technical assistance details
- Eligibility and selection criteria
- Application process and timeline
- Questions



PROGRAM OVERVIEW

- In 2022 and 2023, Hudson River Watershed Alliance will provide technical assistance to develop two watershed characterizations, the first step of a watershed plan.
- No funding or match required from participants, but they will need to commit time
- Application deadline: Wednesday, June 15 at 5 pm
- Details available online: <https://hudsonwatershed.org/watershed-characterization-technical-assistance/>

OVERVIEW

- This program is supported by funding from the Hudson River Estuary Program, New York State Department of Environmental Conservation, with support from the New York State Environmental Protection Fund, in cooperation with NEIWPCCC.



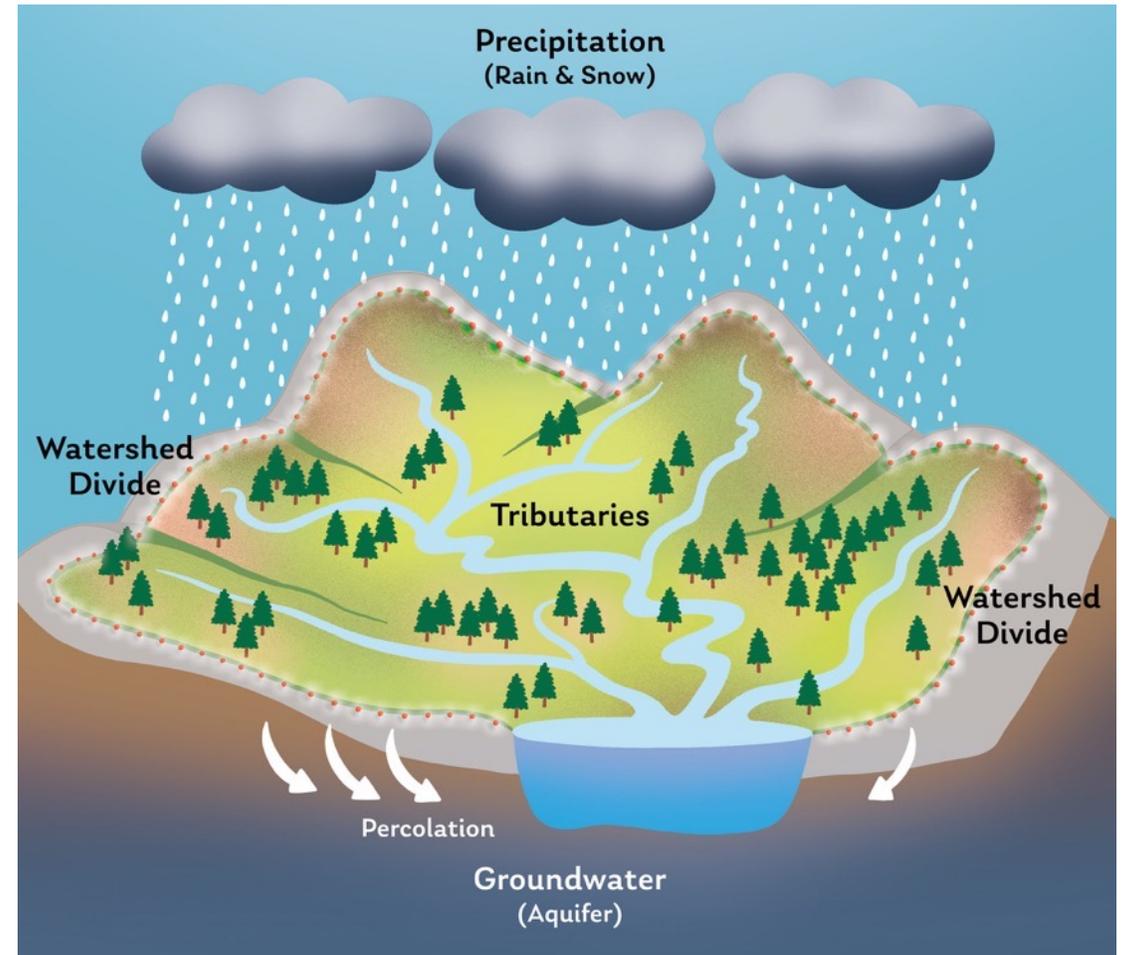
Department of
Environmental
Conservation

Hudson River
Estuary Program



WATERSHED PLANNING

- Watershed: the land area where water flows to a specific waterbody
- Rain, streams, groundwater
- Defined by topography
- Geographic unit to understand conditions and manage waterbodies
- Larger watersheds can be broken into smaller subwatersheds



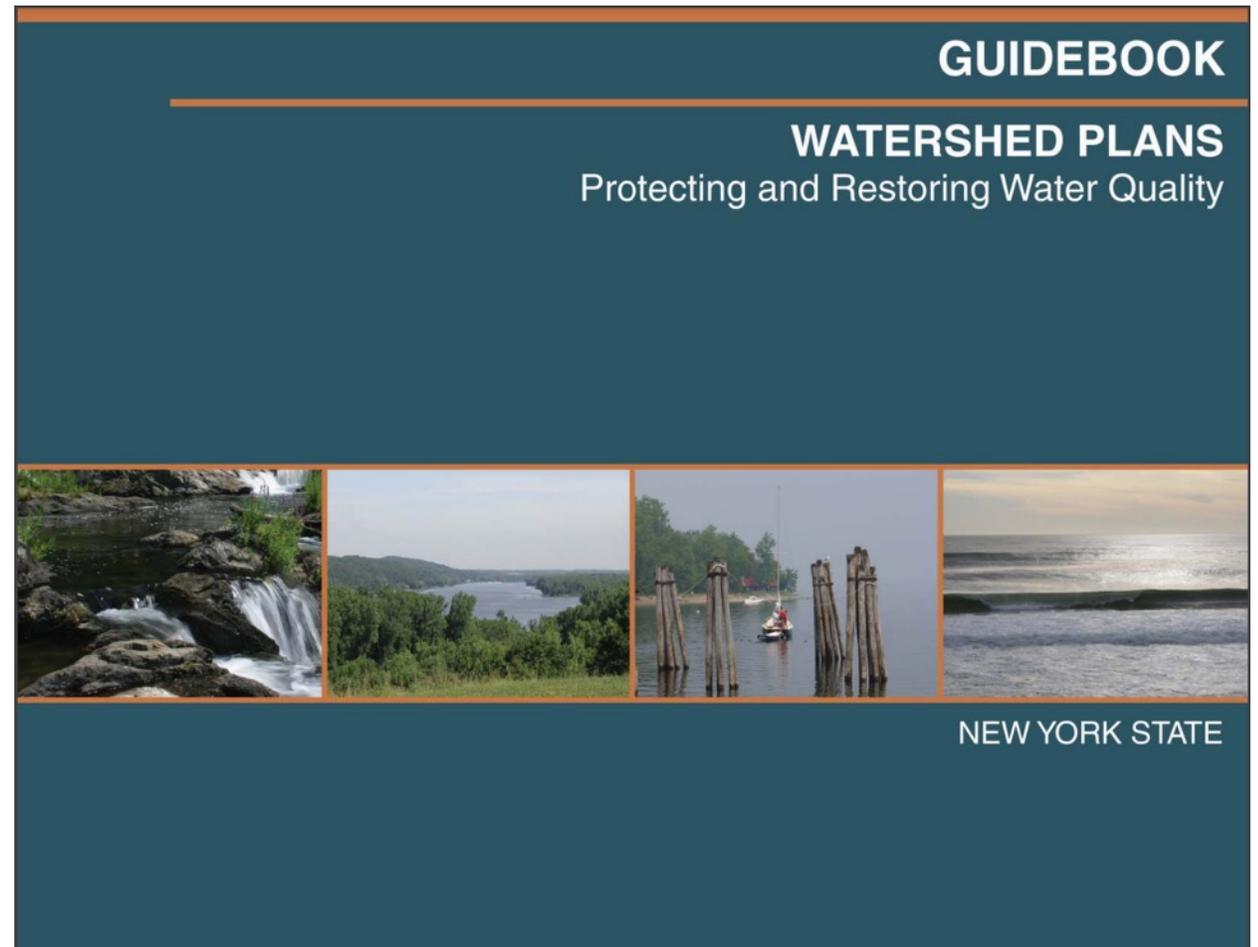
HUDSON RIVER AND ITS WATERSHED

- Hudson River watershed = 13,400 square miles
- Upper Hudson, Mohawk River, Hudson River Estuary
- Tributaries support the health and ecosystem of the Hudson River
- Each tributary has its own watershed



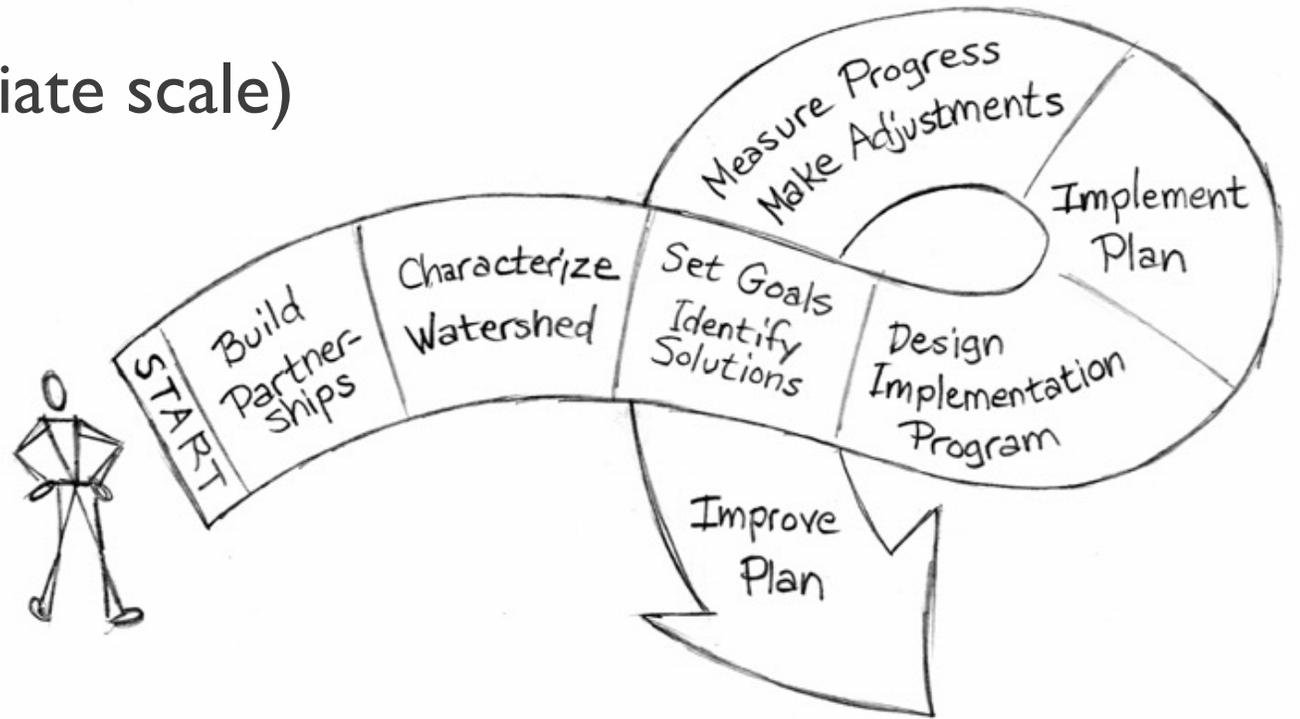
WATERSHED PLANNING

- Watershed plan: compiles information, defines targets, and sets priorities for actions to achieve specific goals
- NYS DOS & DEC's *Guidebook on Watershed Plans* provides a framework for watershed planning in New York State



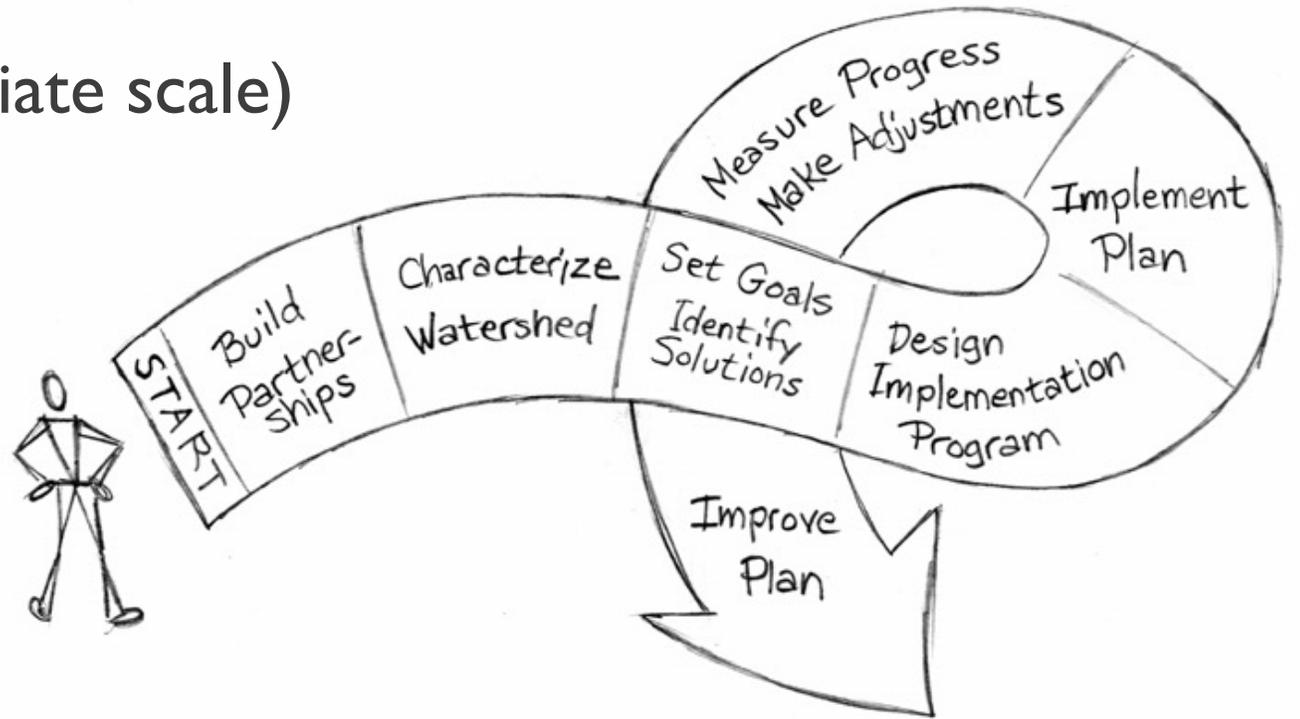
WATERSHED PLANNING PROCESS

- Define goals
- Delineate a watershed (appropriate scale)
- Convene stakeholders
- Compile existing data
- Identify gaps
- Prioritize issues, create targets
- Specify actions
- Implement the plan!
- Measure progress and adapt if necessary



WATERSHED PLANNING PROCESS

- Define goals
- Delineate a watershed (appropriate scale)
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- **Compile existing data**
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WATERSHED PLANNING PROCESS

Compile existing data:

- Physical characteristics
- Water quality & quantity
- Land use & land cover
- Habitat
- Water infrastructure
- Demographics, social data
- Local laws/policies
- Previous plans

Watershed Characterization

- Identify data gaps
- Communicate about watershed, share what you know
- Foundation for future planning

WATERSHED PLANNING PROCESS

- Define goals
- Delineate a watershed (appropriate scale)
- Convene stakeholders
- **Compile existing data**
- Identify gaps

CHARACTERIZATION

- Prioritize issues, create goals
- Specify actions
- Implement the plan!
- Measure progress and adapt if necessary

PLAN

WATERSHED PLANNING PROCESS

- At the end of the process:
 - Group of people on board to work on issues, set of priorities
 - Watershed characterization summarizing current conditions
 - Prioritized, specific, and strategic actions to improve watershed health
 - Helps prepare for future issues

Washington Lake watershed, Newburgh's drinking water supply

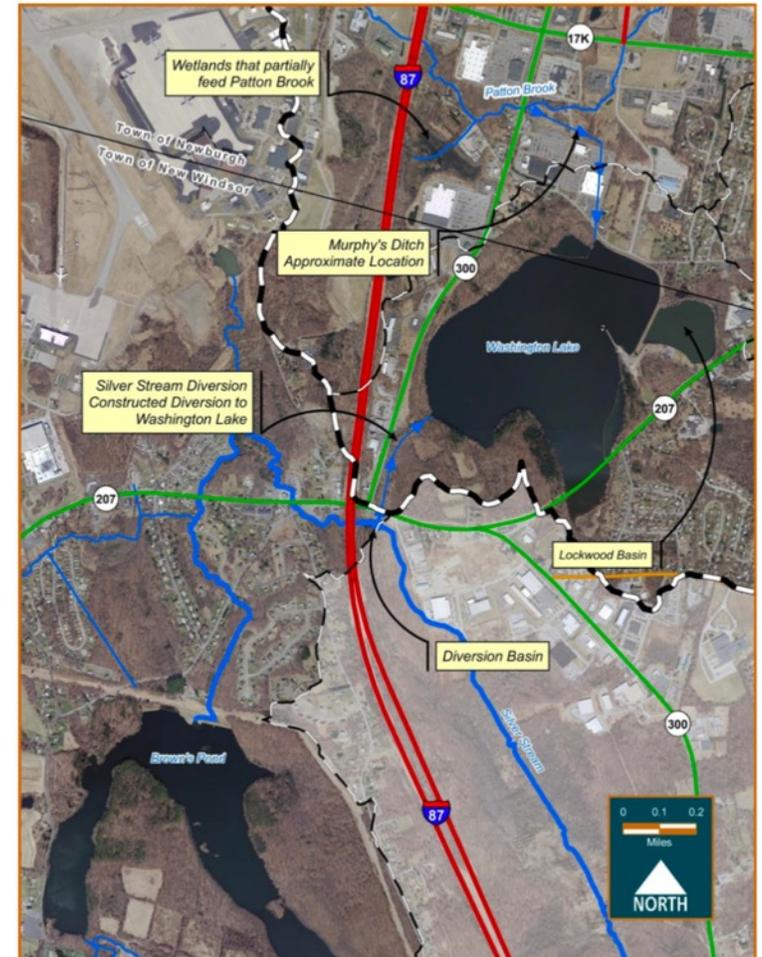
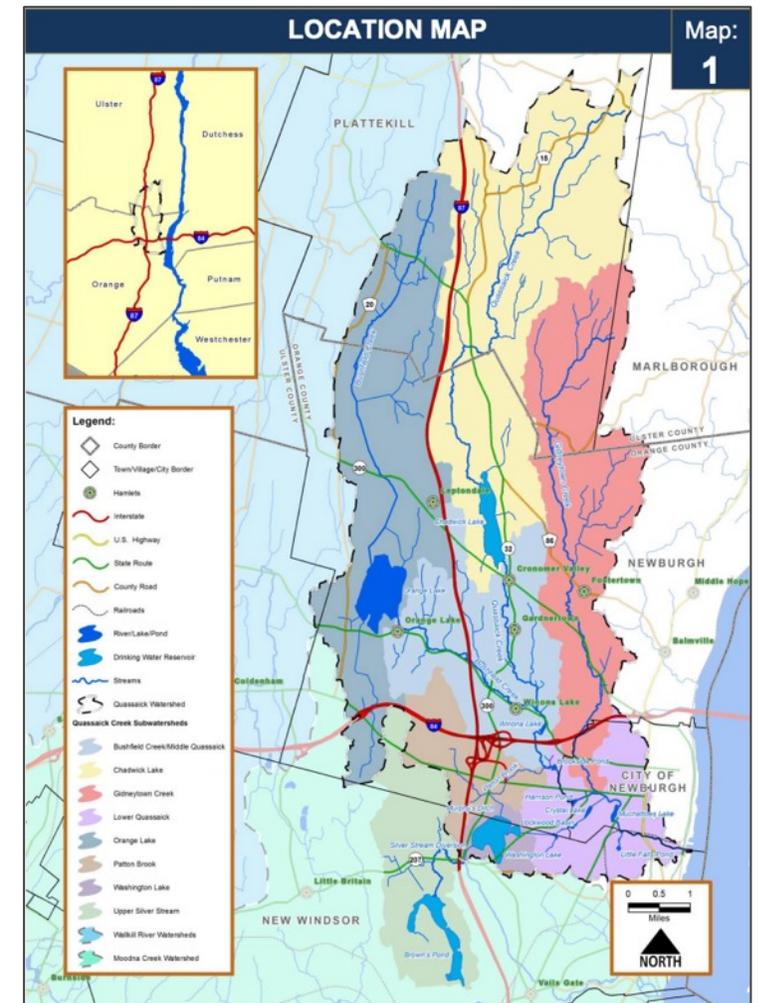


Figure 2. Graphic depicting hydrology among Upper Silver Stream, Patton Brook, and Washington Lake subwatersheds.

WATERSHED CHARACTERIZATION

- Developing a watershed characterization report is the first step in watershed planning
- Watershed characterization process:
 - Organize a watershed advisory committee,
 - Delineate the focus watershed,
 - Gather existing data, and
 - Summarize the information into a report.

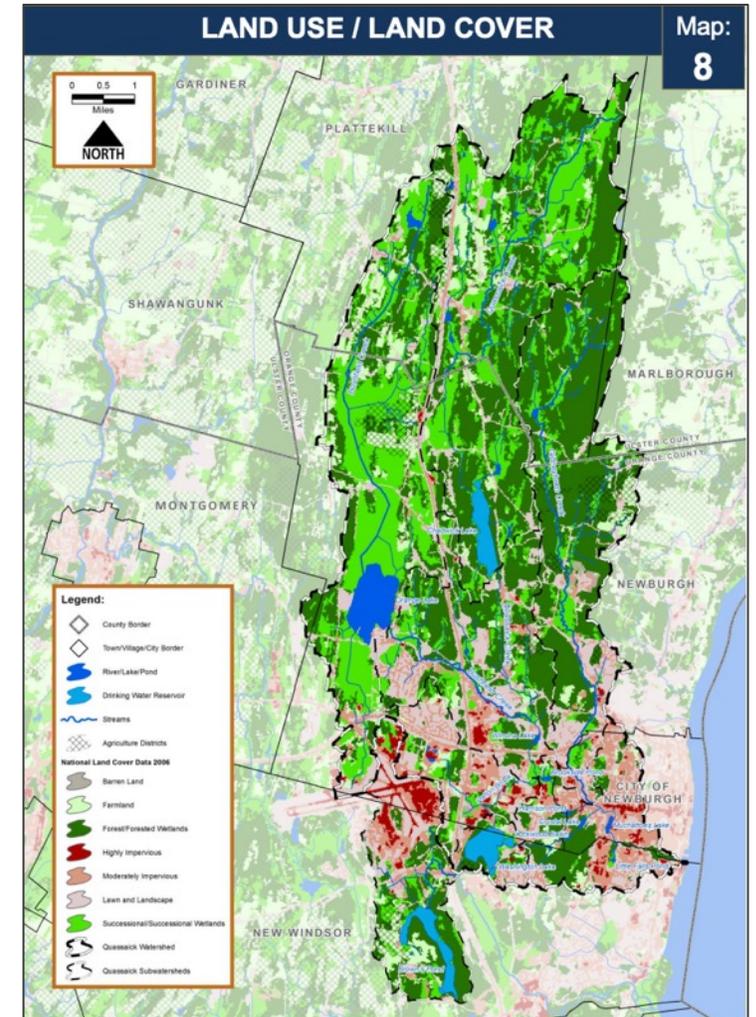


WATERSHED CHARACTERIZATION

- *Guidebook on Watershed Plans*: “This [characterization] report will provide a context for the planning effort, and can be used to educate partners and the community on watershed conditions and generate local support. The watershed characterization report will provide you with a description of the watershed, a summary of baseline watershed conditions, and provide a sense of the key problems in the watershed.”

WATERSHED CHARACTERIZATION

- The watershed characterization report:
 - Compiles existing data into one place
 - Includes maps/charts to understand current watershed conditions
 - Provides a foundation for watershed planning
 - Tells the story of the watershed – what is known, where there are gaps, start to establish priorities for planning



WATERSHED CHARACTERIZATION

- Eligible for NYS Climate Smart Communities certification points for municipalities
- PE7 Action: Watershed Plan for Water Quality (2 points for characterization, 4-6 points for plan)



PE7 Action: Watershed Plan for Water Quality

2 Points

4 Points

6 Points

A. Why is this action important?

Changing precipitation and temperature patterns often result in impacts to water quality that affect communities and ecosystems. Water quality can be affected by erosion and transport of sediment and nutrients from high flows, stormwater pollution, sewage overflows from wastewater systems, and high stream temperatures. These conditions can affect drinking water supplies, infrastructure, recreational opportunities, human health, and stream habitat.

Pollution occurs from many sources within a watershed. The primary contributors of water quality concerns are [point source pollution](#), which comes from one source, like a pipe, and [non-point source pollution](#), which comes from many sources and is transported via rainwater over and in the ground. For this reason, watersheds are the framework best-suited to managing water resources.

[Watersheds in NYS](#) can be delineated at different scales (or "Hydrologic Unit Codes"), from regional to local, and can be selected according to the needs of the community and/or scale of the effort. Then, strategies to minimize water quality impacts can be identified through watershed planning. Implementing high-priority strategies and cost-effective projects to mitigate water quality impacts requires a comprehensive understanding of hydrology, land use, infrastructure, and

WATERSHED CHARACTERIZATION

- Hudson River Estuary Action Agenda 2021-2025 (A Thriving and Resilient Watershed, Benefit: Healthy Tributaries): “By 2025, 10 watersheds have one or more of the following: a watershed-based assessment, characterization, intermunicipal cooperative agreement, management plan, Drinking Water Source Protection Program plan, stream habitat study, or flood risk and mitigation studies (e.g., Resilient NY flood studies).”



Department of
Environmental
Conservation

Hudson River Estuary
Action Agenda 2021–2025
OPPORTUNITIES FOR ACTION

Kathy Hochul, Governor | Basil Seggos, Commissioner



TECHNICAL ASSISTANCE DETAILS

- HRWA is soliciting applications for technical assistance to develop two watershed characterizations in 2022-2023, using the framework in the *Guidebook on Watershed Plans*.
- One urban watershed, one rural watershed – templates for the future
- Pilot process, will be sharing lessons learned



Wappinger Creek Watershed
Resilience Workshop

TECHNICAL ASSISTANCE DETAILS

- Applicant role:
 - Submit application
 - Identify members of Advisory Committee (can add members later)
 - Serve as point of contact for process
- HRWA role:
 - Facilitate 8 advisory committee meetings
 - Write the watershed characterization report
 - Manage the overall process
 - Provide a final presentation to the watershed

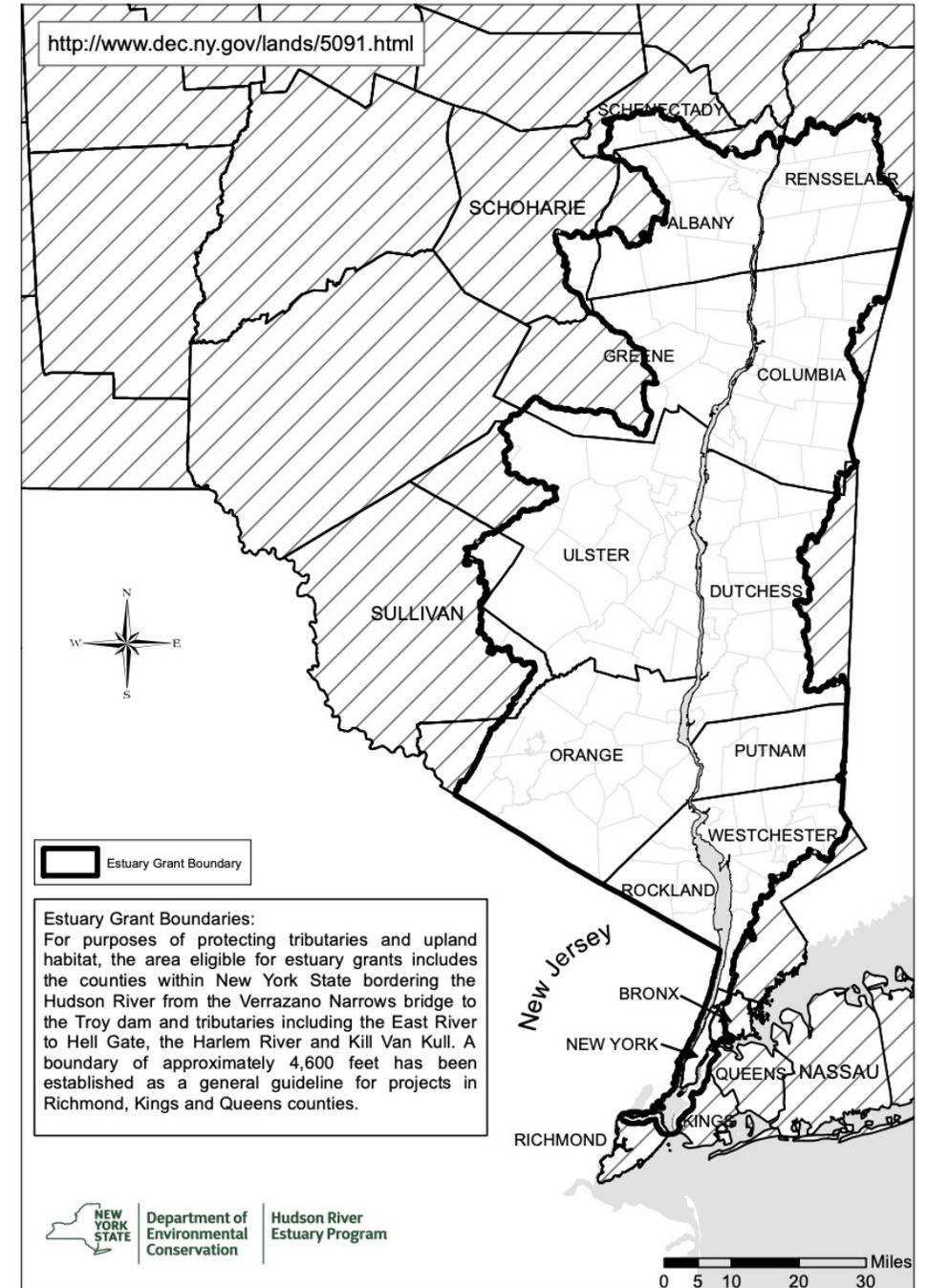
ELIGIBILITY & SELECTION CRITERIA

- To be eligible, watersheds must:
 - 1) be located within the Hudson River estuary watershed,
 - 2) be HUC 12 size or smaller (based on US Geological Survey delineation), and
 - 3) include at least two local municipalities, in addition to the county or counties.
- Applicants may be watershed groups, municipalities, or other entities, and must demonstrate local stakeholder support for this project.

ELIGIBILITY

- To be eligible, watersheds must:
 - 1) be located within the Hudson River estuary watershed
 - Defined as the Hudson River Estuary Program's program area

Hudson River Estuary Grants Program Boundaries



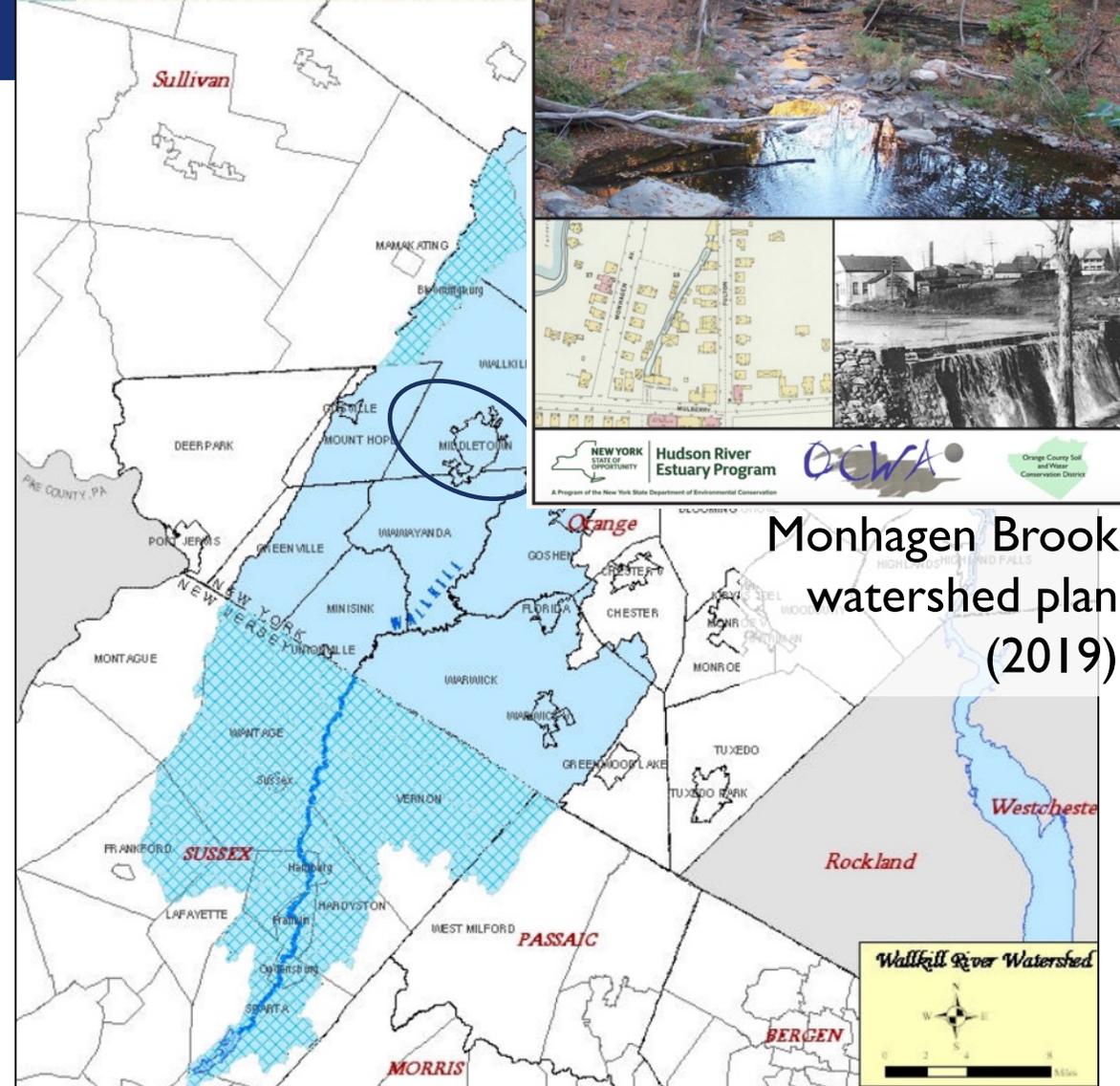
ELIGIBILITY

- To be eligible, watersheds must:
 - 2) be HUC 12 size or smaller (based on US Geological Survey delineation)
 - HUC = Hydrologic Unit Code
 - HUC 12s are ~32 square miles, breaks down watersheds into smaller components
 - Use Hudson Valley Natural Resource Mapper

Wallkill River watershed plan (2007)

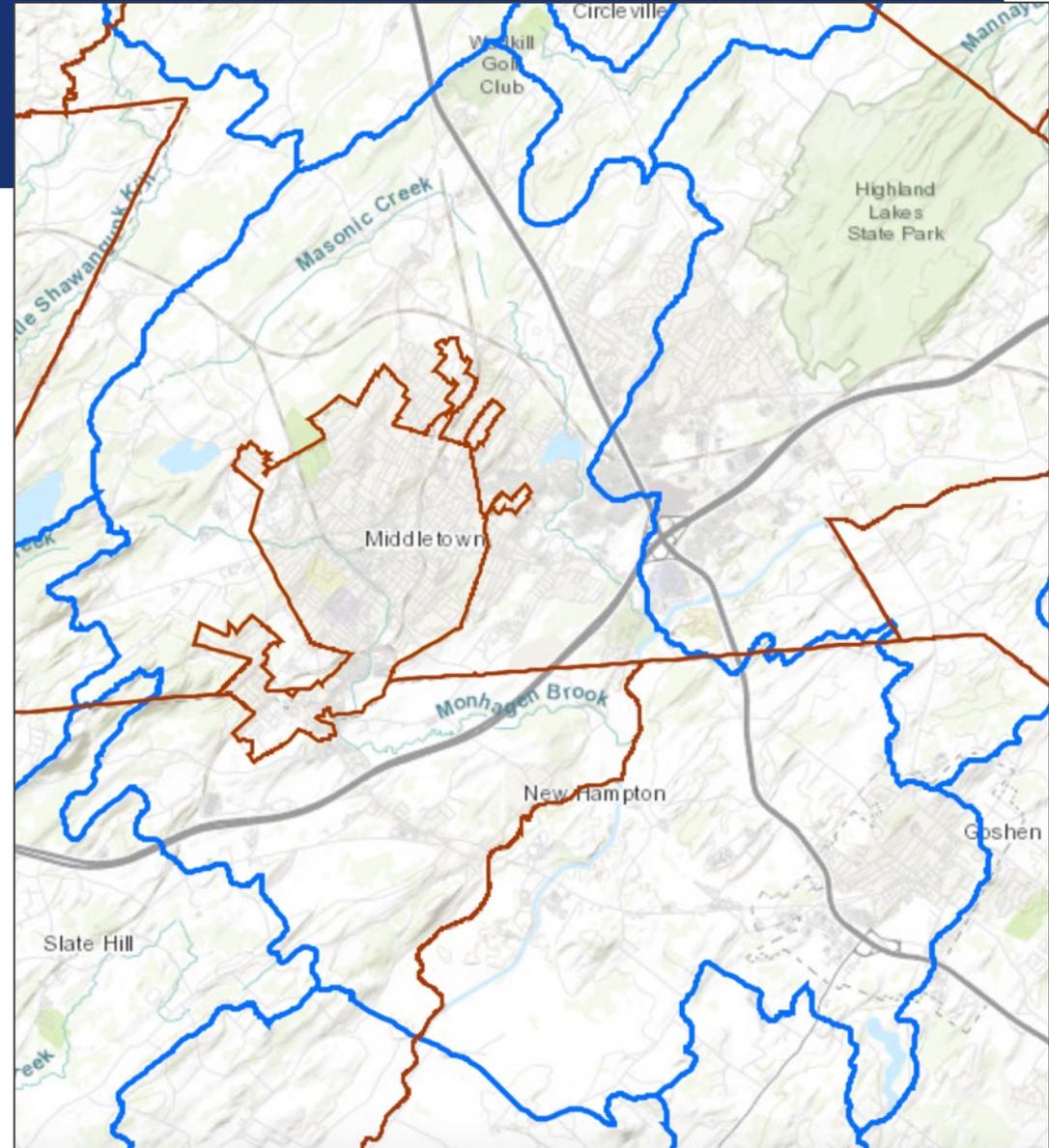
PARTNERS:
Orange County Soil & Water Conservation District
Ulster County Soil & Water Conservation District
Orange County Water Authority
Orange County Planning Department
Ulster County Planning Department
Orange County Land Trust (Wallkill River Task Force)
NYS Horse Council
Ulster County Information Services
Ulster County USDA-Natural Resources Conservation Services

Areas within watershed not included in this Wat



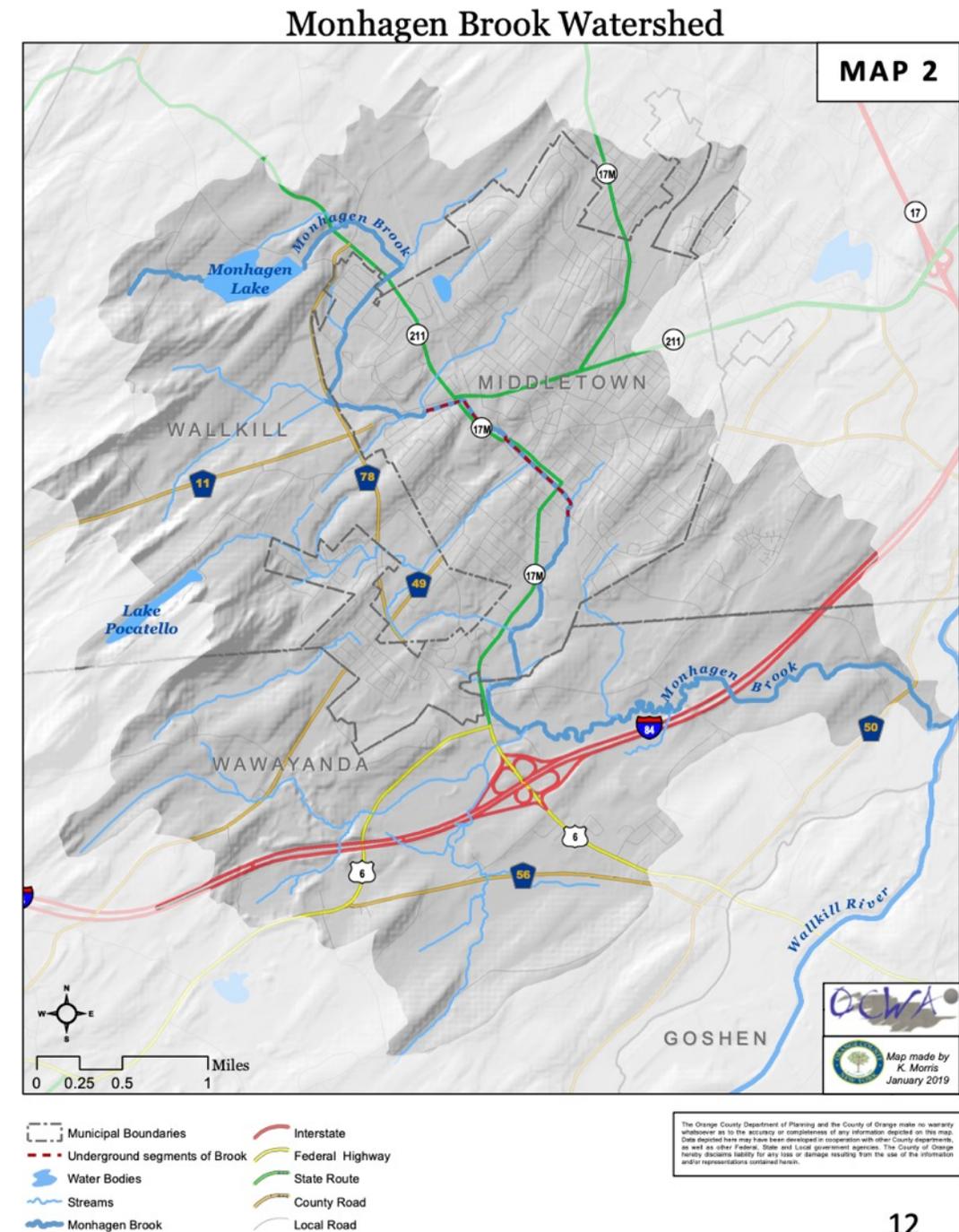
ELIGIBILITY

- To be eligible, watersheds must:
 - 3) include at least two local municipalities, in addition to the county or counties



ELIGIBILITY

- To be eligible, watersheds must:
 - 3) include at least two local municipalities, in addition to the county or counties
 - HUC 12 may be larger than watershed delineation (Monhagen Brook example)
 - If so, work with GIS expert to map delineation or use StreamStats tool



ELIGIBILITY

- Watersheds that are sources of municipal drinking water are **not** eligible
- Currently eligible for free technical assistance through New York State's Drinking Water Source Protection Program (DWSP2)
- More information:
www.dec.ny.gov/chemical/115250.html



Department of
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of State

Agriculture
and Markets

DRINKING WATER SOURCE PROTECTION PROGRAM: **PROTECTING YOUR DRINKING WATER**

October 2021

Free Technical Assistance for Communities

Protecting drinking water is a high priority for New Yorkers. In response, New York State has launched the Drinking Water Source Protection Program (DWSP2) to assist municipalities with proactively protecting their drinking water sources. The goal is to help municipalities develop and implement a drinking water source protection plan for their source(s) of drinking water by providing technical assistance, **free of charge**.

DWSP2 is a four agency initiative co-led by New York State Department of Environmental Conservation (DEC) and Department of Health (DOH), in consultation with the Department of State (DOS) and Department of Agriculture and Markets (AGM). The State will assist municipalities with understanding the risks to their drinking water sources and what protection actions might be appropriate to deal with or minimize those identified. After completing this program, participating municipalities can use their newly developed drinking water source protection plan to start implementing protection measures.

The State encourages and looks forward to all public supply communities working with a technical assistance provider, **at no cost**, to develop a DWSP2 plan for their source of drinking water. If you would like to work with a technical assistance provider, complete an [online application](#) now! If you have any questions, reach out to the DWSP2 Team at source.water@dec.ny.gov.

What can I expect?

- Free technical assistance throughout the entire DWSP2 Plan development process.
- Adaptable schedule in developing and/or implementing for communities to continue meeting other priorities.
- Flexibility in amount of work for the community due to the aid of a technical assistance provider.
- New or updated map of your source water and surrounding area.
- Complete inventory of potential contaminant sources surrounding the drinking water source.
- Thorough list of implementation actions to address current and future potential contaminant sources and land use changes.
- State and Federal funding programs highlighted to aid with the cost of implementation actions (e.g. [Water Quality Improvement Project Program](#) and [Source Water Buffer Program](#)).
- Completed DWSP2 Plan may improve the likelihood of receiving state funding.

SELECTION CRITERIA

- Eligible applications will be scored on:
 - Readiness/Timing
 - Stakeholder Support
 - Template for Future Planning
- Scoring sheet is on the program website

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DECinfo Locator

Search
Tools

DEC Information Layers

Environmental Quality | Outdoor Activity

Permits and Registrations

Check / Uncheck all i Layer Information

Municipal Separate Storm Sewer System (MS4)

MS4 Extended

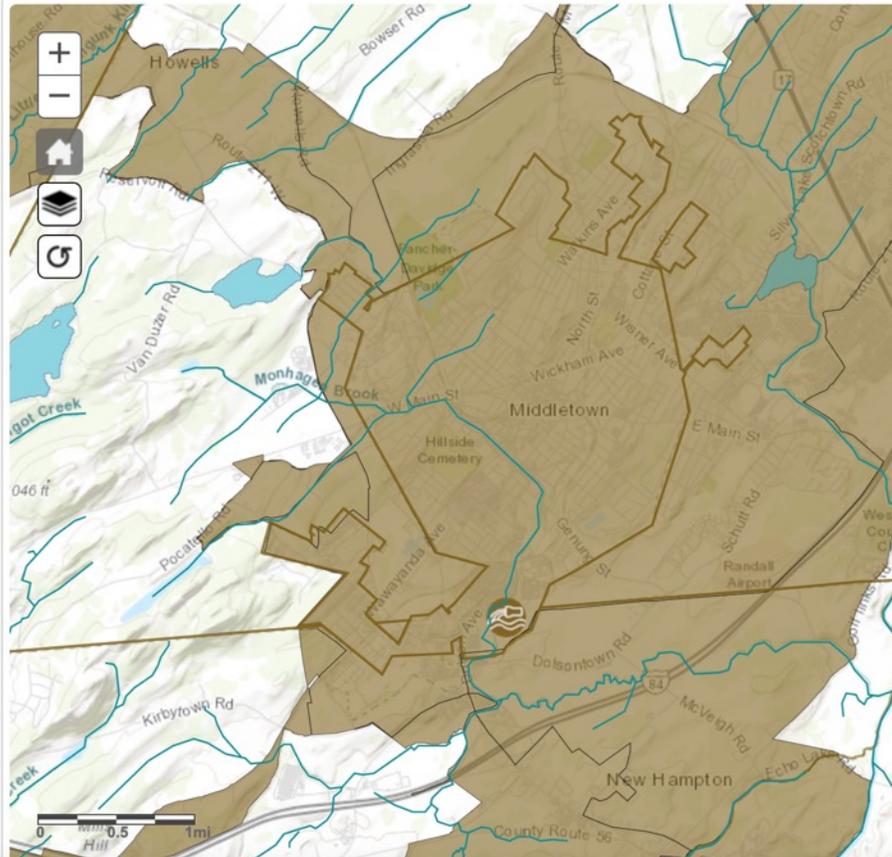
Hazardous Waste Treatment, Storage & Disposal Facilities

 **Air Facility Registrations**

 **Title V Air Facilities**

Environmental Cleanup
Environmental Monitoring
Public Involvement
Environmentally Sensitive Areas
Legal Information

Reference Layers



SELECTION CRITERIA

- Readiness/Timing:
 - Background/interest in watershed work
 - Planning to use the watershed characterization process and report in a meaningful way to support local conservation goals (watershed plan, Natural Resource Inventory or municipal plans, watershed group, etc.)
 - Municipalities within the watershed registered or certified Climate Smart Communities
 - Can update outdated plans, but not duplicate recent work

SELECTION CRITERIA

- Stakeholder Support:
 - Demonstrated buy-in from key stakeholders, with letters of support submitted with application (template on website)
 - Outreach plan to involve additional Advisory Committee members, engage the community, support an inclusive and equitable planning process
 - Environmental justice areas within the watershed, defined as DEC's mapped Potential Environmental Justice Areas.

SELECTION CRITERIA

- Template for Future Planning:
 - Extent to which the watershed represents a useful case study and template for future watershed characterization planning processes, based on other applicants
 - Availability of existing local data
 - Rural vs. urban defined by MS4s and municipal wastewater treatment facilities within the watershed (will be relative – we want to include a range of land uses within the two templates)

OTHER PLANNING NEEDS

- This section will not be scored, but is an opportunity to communicate any other watershed-based planning needs.
- We will maintain a list and try to connect people with resources
- For more information on plan types, “Introduction to Watershed Planning” webinar recording:
<https://youtu.be/di8THB-LT9o>



Saw Kill Watershed and Flood Mitigation Assessment - Final Report

NEIWPC and NYSDEC Hudson River Estuary Program

MARCH 2018



APPLICATION PROCESS AND TIMELINE

- Application deadline: Wednesday, June 15, 2022, at 5 pm
- Email completed PDF application form + PDF copy of letter of support to emily@hudsonwatershed.org
- Applications will be reviewed and scored by a team including staff from the Hudson River Watershed Alliance and NYS DEC Hudson River Estuary Program.
- Applicants will be notified by August 1, 2022.

APPLICATION PROCESS AND TIMELINE

- May 4 – opportunity announced
- May 19 – informational webinar
- June 15 – application deadline
- August 1 – notification of technical assistance recipients
- Fall 2022 – project kick off, establish advisory committee
- Fall 2022-Fall 2023 – Advisory committees meet 8 times
- December 2023 – Watershed characterizations complete, presentations to communities

FOR MORE INFORMATION

- All program materials:
hudsonwatershed.org/watershed-characterization-technical-assistance/
- NYS DOS & DEC *Guidebook on Watershed Plans*
- Full Request for Applications (more details and links to information for application)
- Application Form
- Letter of Support Template
- Scoring Sheet
- Recording of this webinar/PDF of slides

FOR MORE INFORMATION

- More information on the Hudson River Watershed Alliance's website:
 - Existing watershed plans in the Hudson River watershed:
hudsonwatershed.org/watershed-management-plans/
 - Watershed planning resources (DOS/DEC Guidebook, DWSP2 framework, DEC 9 element plan guidance):
hudsonwatershed.org/watershed-planning/



THE CATSKILL CREEK WATERSHED

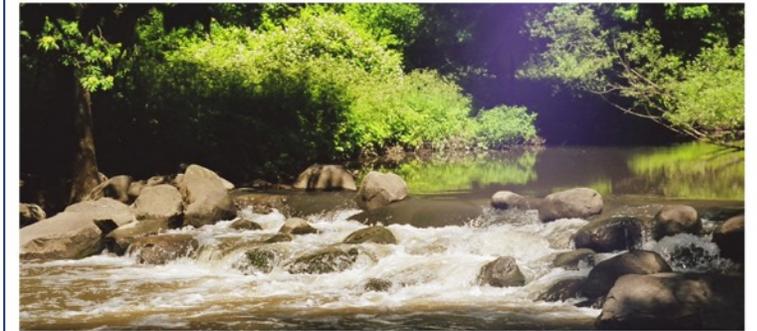
"To foster appreciation and understanding of the Catskill Creek Watershed through outreach to regional stakeholders to promote protection, conservation and stewardship of our natural environment for the benefit of all."

*A description of
the watershed,
initiatives and
recommendations*

Catskill Creek Watershed
Awareness Project
December 2020

FOR MORE INFORMATION

- Other funding for watershed characterizations and planning:
 - Hudson River Estuary Grants for Local Stewardship Planning, up to \$50,000 (due June 1)
<https://www.dec.ny.gov/lands/5091.html>
 - NYS DOS Local Waterfront Revitalization Program, \$50,000-\$3 million, through Consolidated Funding Application (due July 29):
<https://dos.ny.gov/2022-2023-local-waterfront-revitalization-program>



State of the
Saw Mill River
Watershed
2019
Westchester
County, NY



A Report to the Saw Mill River Watershed Advisory Board, The New York State Hudson River Estuary Program and the Westchester Community Foundation from Groundwork Hudson Valley in partnership with the Center for the Urban River at Beczak, Sarah Lawrence College.



THANK YOU! QUESTIONS?

Emily Vail

Executive Director

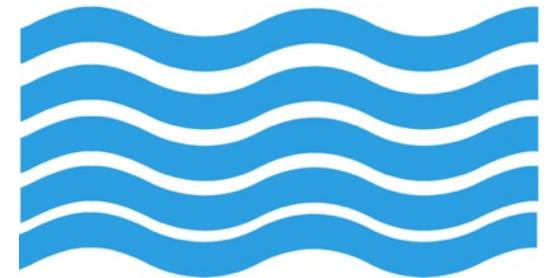
Hudson River Watershed Alliance

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Hudson River
Watershed Alliance



*Uniting & empowering communities
to protect local water resources*