

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 changing conditions in and around the community. Developing a watershed characterization and a watershed plan can help identify key projects and strategies to improve climate adaptation.

B. How to implement this action

This Climate Smart Communities (CSC) action can be implemented by creating (or updating) a watershed characterization and/or a watershed plan focused on the quality of water resources within the community. When implementing this action, local governments should follow the general process and report components described in the New York State (NYS) Department of State (DOS) comprehensive [Watershed Planning Guidebook](#).

Alternately, applicants can use the NYS Department of Environmental Conservation (DEC) guidance for a [Nine Element Plan](#). A Nine Element Plan may be approved by DEC, which increases the likelihood of grant awards for that watershed. Successful Nine Element Plans must include quantification of pollutant loads and an estimate of pollutant reductions needed to achieve water quality goals. Staff from NYS DOS (opd@dos.ny.gov) or NYS DEC (DOWinformation@dec.ny.gov) can advise on the best type of plan for your community and goals.

Since watersheds often cross municipal boundaries, the watershed plan may be developed at a regional or intermunicipal level by the county or a regional or intermunicipal organization with input from local watershed groups. Applicants requesting CSC points for participation in regional or intermunicipal watershed plans are required to demonstrate substantial investment and involvement in that process.

Develop a Watershed Characterization

A watershed characterization provides an inventory and analysis that describes the current state of one or more watersheds.

- Determine the appropriate geographic scale: Identify an area or areas on which to focus within the municipality and delineate watersheds that flow to that waterbody or location for your watershed plan. Consider what scale is most appropriate based on your community’s concerns and priorities. If watersheds extend beyond the community’s

boundaries, engage neighboring municipalities and county partners within that watershed who may want to complete this CSC action together.

- Establish community involvement and build partnerships: Plan for community involvement by identifying key stakeholders, organizing a watershed advisory committee, establishing partnerships, and clarifying the role of consultants.
- Gather existing data: Review existing baseline information on water quality, quantity, land use and land cover, intact natural areas, water infrastructure, transportation infrastructure including stream-road crossings and existing watershed management or planning documents.
- Create or update a watershed characterization: Identify known water quality concerns, vulnerabilities and gaps in the existing data. Identify areas vulnerable to poor water quality. To the extent possible, identify causes of vulnerabilities. Assess existing local capacity to address the concern and develop a vision and initial goals. Minimum aspects of a watershed characterization are outlined on page 38 of the [NYS DOS watershed planning guidebook](#).

Develop a Watershed Plan

To create a watershed plan, refine your characterization and develop specific management recommendations and site-specific projects and plans that will address specific water quality goals.

- Conduct additional research to evaluate specific priorities. This may include field data collection and data modeling, as needed, to understand the potential sources and extent of existing impacts and future vulnerabilities.
- Identify the priority concerns, considering stakeholder input as a major component of prioritization that need to be addressed to reach water quality goals.
- Prepare an implementation strategy, including a list of priority projects with specific locations, estimation of pollution reduction, or water quality protection potential. The project list should identify responsible parties, an estimated timeline for implementation, and potential funding sources.
- Prepare a long-term monitoring plan to measure and evaluate progress.

The development of a watershed plan will be useful for the implementation of other CSC actions related to land use and adaptation strategies, including the following:

- PE7 Action: Hazard Mitigation Plan
- PE7 Action: Riparian Buffers
- PE7 Action: Conserve Natural Areas
- PE7 Action: Green Infrastructure
- PE7 Action: Watershed-based Flood Mitigation Plan
- PE7 Action: Nature-based Shorelines
- PE7 Action: Culverts and Dams

Communities may want to combine this effort with other adaptation planning actions, such as PE7 Action: Climate Vulnerability Assessment, PE7 Action: Evaluate Policies for Climate Resilience, and PE7 Action: Climate Adaptation Plan.

C. Timeframe, project costs, and resource needs

Depending on the geographic scale and the resources available to help with plan creation, this action could take several years.

D. Which local governments implement this action? Which departments within the local government are most likely to have responsibility for this action?

This action is applicable to all types of local governments. The departments or people with the responsibility for engineering, public works, planning or climate or sustainability efforts, and floodplain administration are most likely to help implement this action. In some cases, outside expertise may be useful. Consultation with DEC or DOS is recommended. Diverse stakeholder engagement and involvement and support are recommended, including support and involvement from local or regional watershed groups, neighboring municipalities in the watershed and county agencies (such as planning departments, Soil and Water Conservation Districts, etc.) Municipal committees, such as CSC task forces, conservation advisory councils and environmental conservation committees, and other conservation organizations may also be involved. Local governments claiming credit for participation in regional or intermunicipal characterizations and plans will be required to demonstrate substantial involvement in that process to be eligible for points (see below). The

same departments or representatives listed above should be involved in such a regional effort.

E. How to obtain points for this action

Points for this action are tiered based on the geographic coverage of the plan/characterization. The methods must be consistent with the guidelines above and must have been created within the last ten years.

	POSSIBLE POINTS
Develop or update a watershed characterization for one or more watersheds covering a minimum of 15% of the municipal geographic area.	2
Develop or update a watershed plan that covers less than 75% of the municipal geographic area.	2
Develop or update a watershed plan that covers 75% or more of the municipal geographic area.	4

F. What to submit

New or updated watershed characterizations and plans must have been completed within ten years prior to the application date.

Watershed characterization: Submit a copy of (or a web link to) a watershed-based characterization document that clearly demonstrates stakeholders engagement and data gathering. Specify and illustrate that the characterization covers at least 15% of the geographic area of the local government.

Watershed plan: Submit a copy of (or a web link to) a watershed plan document that clearly demonstrates management recommendations and site-specific projects and plans that will address specific water quality goals, along with stakeholder input and a long-term monitoring plan. The plan must be based on a watershed characterization. Specify and illustrate whether the assessment covers more or less than 75% or more of the geographic area of the local government.

If the applicant is seeking CSC points for participation in regional or intermunicipal watershed characterization or plan, demonstrate substantial investment and involvement in that process.

All CSC action documentation is available for public viewing after an action is approved. Action submittals should not include any information or documents that are not intended to be viewed by the public.

G. Links to additional resources or examples

- [NYS DOS Watershed Plans Overview](#)
- [NYS DOS Watershed Plans in New York](#)
- [NYS DOS Watershed Planning Guidebook](#)
- [NYS DOS, Watershed Planning and Implementation Tools and Resources](#)
- [NYS DEC, Nine Element Plans \(description of plans, resources and examples\)](#)
- [NYS DEC, TMDL / Clean Water Plans \(description of plans and examples\)](#)
- [NYS DEC Water Quality Improvement Program](#)
- [NYS Clean Water and Drinking Water State Revolving Funds](#)
- [NY Source Water Buffer Program](#)
- [US Environmental Protection Agency \(EPA\), Handbook for Developing Watershed Plans to Restore and Protect Our Waters](#)
- [US EPA, Water Topics](#)
- [US EPA, Healthy Watershed Protection](#)
- [US EPA Protecting Source Water with the Drinking Water State Revolving Fund Set-Asides](#)
- [Hudson River Watershed Alliance, Links to watershed plans](#)
- [Moodna Creek watershed-scale flood study](#)

- [Quassaick Creek Watershed Plan](#)
- [Center for Watershed Protection, Resources on watershed planning](#)
- [NYS Watershed Boundary Dataset \(GIS\)](#)

H. Recertification Requirements

The recertification requirements are the same as the initial certification requirements.