NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Climate Vulnerability Assessment

4 Points | 6 Points | 16 Points | BRONZE PRIORITY | SILVER PRIORITY

A. Why is this action important?

To increase local climate resilience, local governments must understand where to target their staff and funding resources. Climate change will not affect all community assets, systems, operations, or community members equally, so performing a comprehensive assessment of local vulnerabilities and risks related to climate change provides an opportunity to effectively identify and thereby address key threats to community resilience in a cost effective and efficient manner. The Climate Smart Communities (CSC) program recommends that local governments complete a vulnerability assessment as one of the first and most foundational steps in developing an effective strategy for adapting to climate change at the local level.

B. How to implement this action

Developing a vulnerability assessment involves identifying, analyzing and prioritizing the effects of climate hazards. A climate hazard is a physical event or trend that could affect specific assets or systems (e.g., transportation or energy infrastructure), vulnerable human populations, ecosystems, industries, or the entire community.

Local governments may elect to undertake this action as a standalone project, or as part of a larger effort, such as a climate adaptation plan, climate action plan, comprehensive plan, sustainability plan, hazard mitigation plan, watershed assessment, or local waterfront revitalization plan. Interested local governments should also integrate a risk assessment into this action or include risk criteria that address the *magnitude* of impact and *likelihood* of that effect taking place into their prioritization process. In assessing the magnitude and likelihood of the event, the local government must consider future, not just current, projections. (For example, in assessing the risk of flooding along coastlines, consider future projections of sea level rise.)

The New York State Department of State (DOS) has developed a risk assessment tool for coastal and riverine communities. It includes guidance on how to prioritize vulnerability, and resilience is an important component the DOS Local Waterfront Revitalization Program (LWRP). See the “additional resources” section for more information. Local governments are encouraged to contact DOS for guidance on use of the risk assessment tool and planning assistance related to coastal and waterfront hazards.

Local governments in New York State should consider the following climate hazards and their effects in their climate vulnerability assessments:

Climate Hazards

- Increasing temperatures and extreme heat
- Flooding
- Drought

Effects

- More flooding
- Less snowfall
- More heat waves
- More intense rainfall

- More short-term drought
- More extreme weather
- Fluctuating lake levels

Steps to conduct a vulnerability assessment include the following:

1. Research relevant studies of climate change projections.

a. Review and summarize state and regional studies, including Responding to Climate Change in New York State (2011 and 2014) and the NYS 2100 Commission Report (2012).

b. Review and summarize local studies, if available.

c. If gaps in key information exist between what is available in regional or local studies and what is needed to make local decisions, review and summarize relevant national studies.

2. Identify potential impacts to the following assets and systems, as appropriate:

a. Municipal and private facilities and buildings including critical facilities (e.g., schools, hospitals, fire and police departments)

b. Transportation infrastructure and systems

c. Waste disposal techniques and systems

d. Wastewater treatment infrastructure and systems, including sewer systems

e. Drinking water sources, infrastructure, and treatment processes

f. Stormwater infrastructure

g. Energy sources, infrastructure, and systems

h. Communication systems

i. Economic sectors (e.g., manufacturing, recreation and tourism)

j. Social sectors (e.g., the elderly, youth, low-income and non-native English speakers)

k. Parks and public land

l. Public health including the private health care system

m. Agriculture

n. Food supply

o. Natural assets and systems (e.g., wetlands, forests, grasslands, and shrub lands) and the services they provide (e.g., water storage and treatment, wildlife habitat)

p. Cultural assets

q. Emergency response systems

3. Identify and assess vulnerabilities of each asset or system (exposure, sensitivity, and adaptive capacity).

a. Exposure is 1) the degree to which elements of a climate-sensitive asset or system are in direct contact with climate hazards or sensitive to climate variability, and 2) the degree to which the climate hazard may change over time. More information on how to assess exposure can be found in the “additional resources” section.

b. Sensitivity is the degree to which an asset or system will be affected by a change in climate, either beneficially or detrimentally. More information how to assess sensitivity can be found in the “additional resources” section.

c. Adaptive capacity is the ability of an asset or system to adjust to actual or expected climate stresses or to cope with the consequences. More information on assessing adaptive capacity can be found in the “additional resources” section.

4. Prioritize vulnerable assets and systems.

a. Prioritize assets based on their exposure and sensitivity to the effects of climate hazards and their adaptive capacity.

5. Develop report of vulnerability assessment findings.

6. Establish a timeline for re-assessing vulnerabilities.

C. Timeframe, project costs, and resource needs

The timeframe, costs and resources needed for a vulnerability assessment depend on the size of the study area and the staff resources available to contribute to the assessment. Local governments may also choose to develop an initial, less detailed vulnerability assessment with current resources and refine the assessment in the future. A typical timeline for completing a vulnerability assessment is between six months to one year, depending on staff resources and level of detail required.

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 and all departments. The department or staff that lead climate and sustainability efforts are most likely to be responsible for this action. These responsibilities are typically led by the chief elected official’s office and undertaken by the city manager’s office, the department of the environment or planning, or by a volunteer body, such as the CSC task force. Cross-department involvement and support are recommended, and stakeholder involvement is crucial. The vulnerability assessment could also be developed at a regional level, by the county or a regional organization. Regional organizations or county agencies, like soil and water conservation districts, often have useful data for local assessments. The same departments or representatives listed above should be involved in such a regional effort.

E. How to obtain points for this action

Points are earned for this action by completing a vulnerability assessment that engages staff and the public. The assessment must address at least one climate hazard. Vulnerability assessments completed as part of a community’s participation in the NY Rising program or development of a DOS local waterfront revitalization plan would qualify for this action.

	POSSIBLE POINTS
Vulnerability assessment for 1 climate hazard (scope may be limited to a geographic area or system of concern), including future projections	4
Vulnerability assessment for 2-3 climate hazards (scope may be limited to a geographic area or system of concern), including future projections	6
Comprehensive vulnerability assessment, covering the entire community and all relevant climate hazards, including future projections	16

F. What to submit

Submit a copy of the most recent vulnerability assessment report, created within five years prior to the application date.

The report must describe the individuals or team that conducted the vulnerability assessment, the climate hazards and effects considered and summarize the assessment process used. If the vulnerability assessment was developed more than five years ago, local governments may update it with any new or updated data or projections, and submit the updated report for credit. If the vulnerability assessment was completed through the NY Rising or Local Waterfront Revitalization Program, documentation of DOS approval of the local plan must be submitted.

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

- NYSERDA Responding to Climate Change in New York State (ClimAID Report)
- New York State, NYS 2100 Commission Report
- DOS, Local Waterfront Revitalization Program
- New York Rising Community Reconstruction Program
- US EPA Adapting to Climate Change
- US EPA Adaptation Tools for Public Officials
- US EPA Local Government Climate Adaptation Training
- US EPA Climate Resilience Evaluation and Awareness Tool
- Ecosystem-Based Management Tools Network, Climate Change Vulnerability Assessment and Adaptation Tools
- ICLEI, Preparing for Climate Change-A Guidebook for Local, Regional and State Governments
- Scenic Hudson, Adaptation Planning Resources
- Social Vulnerability Index
- Climate Central - Surging Seas: Sea-level Rise Risk Analysis
- Kingston, NY, Waterfront Flooding Task Force Final Report
- DEC Floodplain Management

H. Recertification Requirements

Local governments do not need to completely update their vulnerability assessment every five years for recertification; only the data and projections should be updated, if any new information exists. Applicants for recertification should also address any significant infrastructure changes since the last vulnerability assessment, if these changes impact the findings and recommendations in the previous version of the vulnerability assessment.

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Climate Resilience Vision

3 Points

A. Why is this action important?

Establishing a vision for what a community could look like when it is resilient to climate change is both important for building community cohesion and for providing a goal from which to gauge progress. An effective vision is established collectively with stakeholders and provides an opportunity for community members to help define local climate adaptation goals.

B. How to implement this action

Local governments can initiate a standalone effort to develop a climate resilience vision and goals with the community, or the vision and goals can be part of an existing effort, such as a vulnerability assessment, climate action plan, or comprehensive plan.

When developing a community-level climate resilience vision and related goals, relevant steps include the following:

1. Use a collaborative, inclusive, and transparent planning process.
    1. Create a diverse task force to coordinate the effort.
    2. Involve a cross-section of community stakeholders and engage with regional organizations.
    3. Perform public outreach.
    4. Develop a website for the planning process.
2. Host public participation sessions to evaluate current and projected climate hazards, discuss and prioritize vulnerabilities (which may have been assessed under *PE7 Action: Climate Vulnerability Assessment*) and develop a vision and goals for community resilience, including the alteration of any existing community visions to ensure they incorporate the concept of climate resilience.
3. Share the draft vision and goals via the community's website and establish a system for receiving public comments.
4. Revise the draft vision and goals based on stakeholder feedback.
5. Facilitate approval of the draft vision and goals by the community's elected officials.
6. Incorporate the vision and goals into local planning documents.

C. Timeframe, project costs, and resource needs

The timeframe for this task depends on the number of public engagement sessions and the staff resources available. For a local government that opts to hold the minimum of two public outreach sessions, it will likely take four to six months to plan for the event, facilitate the event, develop the draft vision, release the draft vision, and then finalize the vision for approval. For those that opt for more intensive stakeholder outreach (which is encouraged), this action could take between six and twelve months.

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

This Climate Smart Communities (CSC) certification action is applicable to all types of local governments. The department, office, or committee that leads local climate and sustainability efforts is most likely to be responsible for implementing this action. Involving the CSC Task Force and getting support across several municipal departments is recommended.

E. How to obtain points for this action

Three points for this action are available for applicants that create a community-wide vision of resilience (including associated goals) that is publicly released, officially supported by the community's elected officials, and incorporated into at least one government plan. To develop the vision and goals, a minimum of two public engagement sessions must have been performed to engage the public and gather input for the vision document.

F. What to submit

Submit an officially adopted version of the community's vision and goals for resilience and documentation of incorporation of the vision and goals into at least one plan produced by the local government. The vision can be a new one or a revised version of an existing community-approved vision.

Additionally, submit documentation summarizing the outreach efforts and the stakeholders involved, including attendance lists from at least two public meetings. The vision and goals may have been developed at any time prior to the application date to be eligible for points.

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

- Kingston, NY, Waterfront Flooding Task Force Final Report
- Tompkins County Comprehensive Plan – Planning for Our Future 2015, Section on Climate Change Adaptation and Appendix B, Public Comments and Responses
- Vision 2020, New York City Comprehensive Waterfront Plan, New York, NY, Climate Resilience Goal

H. Recertification Requirements

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

PE7 Action: Climate Smart Resiliency Planning

6 Points | BRONZE PRIORITY | SILVER PRIORITY

A. Why is this action important?

Local government decision makers often have the greatest capacity to influence the resiliency of their communities to climate change. Typically, they are the first to respond to emergencies and they understand the physical and social characteristics of their communities. With climate change brining more extreme weather, local decision makers have the responsibility to examine vulnerabilities and take action to protect community assets. Some strategies utilized in local plans and projects may help to build a community's resilience to climate change, while others may fail to consider how climate change will affect their implementation. Sometimes slight modifications to existing policies or projects can help a community more effectively prepare for climate change. Conducting a survey of existing plans, policies, and projects will expose gaps and vulnerabilities, and ultimately, help ensure that they will either help reduce or, at a minimum, not increase vulnerability. The Climate Smart Communities (CSC) program developed a procedure to conduct such a survey: Climate Smart Resiliency Planning. Climate Smart Resiliency Planning (CSRP) is procedure for holding a facilitated discussion and completing a questionnaire that is designed to stimulate ideas and collaboration among local government staff and officials. Implementing CSRP helps local decision makers understand the importance of climate action and creates an opportunity to integrate climate considerations into local government operations.

B. How to implement this action

Conduct a self-evaluation of local plans, policies, and projects using the Climate Smart Resiliency Planning procedure. This action can be accomplished as a standalone project, or as part of another effort such as a climate action plan, a vulnerability assessment, a comprehensive plan, or climate adaptation plan. CSRP is designed to help municipal staff and officials work collaboratively to recognize the opportunities to enhance community resilience in existing plans and begin to create a set of integrated planning documents that identify vulnerabilities, assess risk, and describe appropriate adaptation strategies. Because it is focused on existing government policies and projects, CSRP is often one of the first steps in climate adaptation planning and should be followed by the development of strategies, as per PE7 Action: Climate Adaptation Strategies.

To implement CSRP, put together a team to plan the effort and identify the most knowledgeable and relevant staff members that will contribute to the self-evaluation. A person should be appointed as a facilitator to elicit participation in discussions, oversee documentation of the CSRP process, and ensure that every question is answered. Although not necessary, local governments may find it useful to appoint someone not associated with the municipality to serve as the facilitator, e.g., a contractor who is familiar with the region and with climate change adaptation strategies, a knowledgeable volunteer from the CSC task force, or a NYSERDA Clean Energy Communities regional coordinator.

To be eligible for points under this CSC action, CSRP must have been implemented within five years of the application date. Applicants must follow the steps in the CSRP guide and fill out the CSRP tool. The CSRP tool is the Excel spreadsheet that contains the questions and checklists for each of the six sections; it provides a place to take notes and identify gaps or deficiencies in local plans, policies and projects. Applicants must also provide a summary report of the findings and show that they engaged municipal staff and officials across departments in the discussion of climate vulnerabilities as they relate to local plans, policies, and projects.

C. Timeframe, project costs, and resource needs

The timeframe for this action largely depends on the size of the local government and the number of plans, policies, and projects evaluated. A typical timeframe is one to three months. The costs are mainly related to staff time, although some

local governments may choose to hire a contractor to act as a facilitator, document the process, and help produce the summary report.

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 and all departments. The department or office that leads climate and sustainability efforts is most likely to be responsible for this action. This action is typically led by the chief elected official's office and undertaken by the city manager's office, or the department of the environment or planning. Volunteer groups, such as the CSC task force may assist, but detailed input from knowledgeable municipal staff and officials is necessary.

E. How to obtain points for this action

Six points are available for local governments that implement CSRP and provide the required documentation.

F. What to submit

Submit a copy of the completed CSRP tool and the summary report of the findings. At minimum, the summary report must describe the evaluation process (including a record of engaging municipal staff and officials across departments) and the gaps that were identified in local plans, policies, and projects as they relate to community vulnerability to climate change. The CSRP process must have been implemented within five years of the application date.

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

- CSC Climate Smart Resiliency Planning – A Planning Evaluation Tool for New York State Communities
- Piermont, NY, Climate Smart Resilience Planning: Results and Recommendations (2014) (posted on a Scenic Hudson webpage)

H. Recertification Requirements

For recertification, local governments must provide updated CSRP documentation every five years that reflects any infrastructure changes or any new plans, policies, or projects that were not addressed in the initial report.

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Climate Adaptation Strategies

2 Points | 4 Points | 6 Points | 8 Points

A. Why is this action important?

When local leaders work with their communities to adapt to climate change, they build the capacity to evolve with changing conditions and protect the places and people they love most. After evaluating the vulnerability of their communities to climate hazards, local governments should develop strategies that enhance local resiliency using a collaborative, transparent, and inclusive decision-making process. This will ensure local support for implementation of plans. Moreover, working with a diverse array of stakeholders will likely increase the quality of potential adaptation strategies and provide opportunities for new partnerships. A variety of resources are available to help communities develop outreach and adaptation strategies through the Climate Smart Communities (CSC) program.

B. How to implement this action

Developing climate adaptation strategies can be part of an existing effort, such as the development of a climate action plan or sustainability plan, or it can be a standalone effort. Local governments should develop a vulnerability assessment first for at least one climate hazard (as per *PE7 Action: Climate Vulnerability Assessment*), and then develop climate adaptation strategies to address identified vulnerabilities. Local governments should take a watershed approach when developing strategies that address flooding, water quality and quantity, and water infrastructure. A watershed approach will help the community understand uphill and upstream sources of flooding and assist in being strategic in prioritizing actions.

A typical process for developing climate adaptation strategies includes the following steps:

1. Use a collaborative, inclusive, and transparent planning process.

a. Engage with an existing regional planning group and/ or create a subcommittee of the local CSC task force focused on climate adaptation.

b. Involve a cross-section of community stakeholders.

c. Perform public outreach.

d. Develop a website for the planning process.

2. Research potential actions to address vulnerabilities caused by the effects of climate hazards on community assets and systems for at least one climate hazard as defined in *PE7 Action: Climate Vulnerability Assessment*. For some issues, like flooding, where a watershed assessment can highlight the most strategic actions, specific studies may be necessary. Useful website information and case studies from other communities can be found on the NYS DEC Hudson River Climate Resilience Case Studies webpage.

3. Develop strategies and identify specific actions or projects associated with at least one climate hazard that will help your community achieve its resilience vision and goals. Such goals may have been developed under PE7 Action: Climate Resilience Vision.

4. Identify lead entities responsible for implementing each strategy and develop implementation plans for each recommended action or project. Consider the timing and construction of other improvements in the community.

5. To the extent appropriate, identify co-benefits of potential actions (e.g., urban forestry reduces the urban heat island effect and helps with stormwater management; water efficiency reduces the demand for water and reduces the amount of energy used to treat and pump water).

6. Develop and publicly release the climate adaptation strategies.

7. Create timeline and process for regularly revisiting and updating the climate adaptation strategies.

C. Timeframe, project costs, and resource needs

The timeframe and costs of this effort depend on whether the approach taken is a standalone effort or part of a larger planning process. Local governments can anticipate a timeline of approximately nine months to a year to develop a comprehensive and representative set of climate adaptation strategies.

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 and all departments. The department or office that leads climate and sustainability efforts is most likely to be responsible for this action. These responsibilities are typically led by the chief elected official's office and undertaken by the city manager's office, the department of the environment or planning or by a volunteer body, such as a Conservation Advisory Council. Cross-department involvement and support are critical, along with support and involvement from stakeholders and the interdisciplinary climate adaptation task force (as identified in PE1 Action: *CSC Task Force*) since a variety of staff and local stakeholders will be involved in their implementation. It may be helpful to engage local watershed groups and coordinate with neighboring municipalities. The climate adaptation strategies could also be developed at a regional level, by the county or a regional organization. The same departments or representatives listed above should be involved in such a regional effort.

E. How to obtain points for this action

Points are obtained for this action through creation or update of a standalone climate adaptation plan or through development of adaptation strategies within a climate action plan, sustainability, or comprehensive plan, or another adoptable document. The strategies must have been created or updated within five years prior to the application date.

	POSSIBLE POINTS
Form an adaptation taskforce/subcommittee and draft strategies that cover at least one climate hazard for an area or system within the community	2
Perform public outreach / public review of draft adaptation strategies	2
Incorporate and respond to public comments and publicly release the climate adaptation strategies, ideally as part of a climate action plan or other planning process	4

F. What to submit

Submit a copy of the climate adaptation strategies and/or plan, including information on the taskforce/subcommittee and the public outreach/review process. The plan can be a standalone climate adaptation plan, or a section of a another plan which addresses the criteria described above. The strategies must have been created or updated within five years prior to the application date

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

- Planning for Rising Waters: Final Report of the City of Kingston Waterfront Tidal Flooding Task Force (2013)
- Mid-Hudson Regional Sustainability Plan (2013)
- DEC CSC Increasing Local Climate Resilience
- New York, NY, Special Initiative for Rebuilding and Resiliency Report (2013)
- New York Rising Community Reconstruction Program

H. Recertification Requirements

Local governments do not need to completely overhaul their adaptation strategies or plan every five years for recertification, but they must describe how strategies within the prior plan have been implemented, update the climate science data and projections, address any changes in policy or infrastructure since the last plan, and modify the existing strategies or add new recommendations as appropriate.

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Hazard Mitigation Plan Updates

3 Points

A. Why is this action important?

Hazard mitigation—the effort to reduce loss by lessening the impact of disasters—is what keeps natural hazards from becoming natural disasters. According to the Federal Emergency Management Agency (FEMA), hazard mitigation is most effective when implemented under a long-term mitigation plan, which is why states and local governments are required to have hazard mitigation plans in order to receive FEMA aid. Throughout New York State (NYS), changing climate conditions will increase the frequency and magnitude of natural hazards, such as flooding, drought, and extreme temperatures. To prepare, the Climate Smart Communities (CSC) program encourages local governments to integrate climate projections (e.g., changes in future precipitation, sea-level rise, and extreme weather) into their hazard mitigation plans and identify specific actions to reduce vulnerability.

B. How to implement this action

For a local government to receive funds from the NYS Division of Homeland Security and Emergency Services (DHSES) for hazard mitigation projects, it is required to have a multi-hazard mitigation plan in place. And the plan must have been adopted or updated within five years and approved by DHSES and FEMA. Such jurisdictions should already meet the requirements for CSC points under this action.

Jurisdictions that do not have a State-approved hazard mitigation plan may create or update such a plan for State approval (thereby implementing this action) by undertaking the process and adhering to the requirements outlined in the most current NYS Hazard Mitigation Planning Standards. These standards augment FEMA's requirements and include both process specifications and content-related requirements. Among other steps required by the standards, local governments will need to take the following steps:

- Convene a group of key stakeholders familiar with past damages to local infrastructure or with knowledge of projected future problems.
    - Please note: The hazard mitigation plan may be developed and updated at a regional level (by a county or a regional organization); see Section D for more information. So long as the plan identifies the local government as a participating jurisdiction, that local government is eligible for CSC points under this action.
- Identify and assess the hazard vulnerability of critical facilities (i.e., facilities that provide services and functions essential to a community—like those needed to support emergency, government, and sheltering functions—especially during and after a disaster, such as police and fire stations, critical vehicle and equipment storage facilities, emergency operations centers, public and private utilities and power generating stations, drinking water and wastewater treatment plants, communications centers, medical facilities, schools, and homeless shelters).
- Develop and prioritize hazard mitigation actions to address identified vulnerabilities (such as incorporating mitigation retrofits for public facilities into the annual capital improvements program; engineering or retrofitting roads and bridges to withstand hazards and ensure access; relocate or bury/underground electrical infrastructure; and building water tanks or wells for use in times of potable water interruption).

Consider utilizing the results of local or regional vulnerability and watershed assessments and heat and other emergency management plans, if they exist, to identify assets and systems particularly vulnerable to natural hazards and to prioritize mitigation actions, such as maintaining or removing dams and enlarging undersized culverts. Watershed assessments are

particularly useful for prioritizing flood vulnerabilities and water quality and quantity issues and how they are likely to change over time. Identifying water bodies, wetlands, and floodplains and the upstream sources of flooding is critical to understanding the watershed context of flooding issues.

The State's Hazard Mitigation Planning Standards specifically require that jurisdictions include climate change as part of their hazard vulnerability assessment and mitigation actions. To do this, communities will need to document how climate change projections may affect (through increased frequency, severity in exposure, etc.) the vulnerability of critical facilities to flooding, wildfire, drought, extreme temperatures, and sea level rise, such as increased peak electricity loads and power outages in summer; increased street, basement, and sewer flooding; and increased structural damage and impaired operations of critical infrastructure. Local governments will then need to develop mitigation actions that specifically address this increased vulnerability from climate change. When incorporating climate change into hazard mitigation plans, communities may find it helpful to review the following documents, among others:

- The most recent State Hazard Mitigation Plan (SHMP). The SHMP serves as a guide for identifying potential mitigation activities for local jurisdictions and for linking these activities to the impacts of climate change.
- Responding to Climate Change in New York State (ClimAID) is an analysis of seven NYS regions. ClimAID provides adaptive strategies that could protect the State's critical infrastructure and reduce the potential for loss of services resulting from climate change impacts. The report also includes a Climate Adaptation Guidebook that can be used as a guide for local mitigation planning to assess the vulnerability of multiple sectors and identify mitigation actions.
- Regional sustainability plans can be valuable resources and may address climate change projections, regional vulnerabilities, and suggested mitigation strategies that can be useful in developing or updating local hazard mitigation plans.

C. Timeframe, project costs, and resource needs

Updating a municipal or county multi-hazard mitigation plan can take anywhere between four and six months, depending on the amount of time and resources available to help with plan creation. DHSES and FEMA recognize that many jurisdictions have inherent constraints and certain information may be difficult to provide. Both agencies will work with jurisdictions throughout the planning process to ensure successful development of the hazard mitigation plan.

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 department or people with the responsibility for leading emergency management (who have information on past occurrences and existing preparedness measures and have a direct line of communication with DHSES) are most likely to lead the implementation for this action. If no emergency management staff exists, this action can be implemented by those responsible for environmental issues or planning (who can help understand past, current, and future development trends, policies or activities that affect development, how development affects vulnerability to hazards, and how hazard mitigation can be incorporated into various planning mechanisms).

Cross-department involvement and support are recommended, such as staff responsible for public works, transportation planning, and engineering (who can help identify current or projected infrastructure problems that can be addressed through capital improvements supported by the plan); floodplain management (who can provide information on local flood hazard maps, floodplain ordinances, repetitive loss properties, and actions to continue compliance with the National Flood Insurance Program and reduce flood losses); and geographic information systems (who can analyze and map data to support the planning process and communicate complex information, such as the locations of assets at risk in hazard-prone areas and estimates of damage for a particular disaster scenario). Elected and executive officials (who have an understanding of overall community needs and are able to communicate how the mitigation plan can support social, economic, or environmental conditions) should also be involved. Where gaps in expertise exist, FEMA recommends that local governments look for technical experts that live or work in their community, such as a climate change specialist at a local college or a retired planning professional who is willing to contribute. Municipal committees, such as CSC task forces, conservation advisory councils, environmental conservation committees, and watershed groups may also be able to contribute expertise where needed.

The hazard mitigation plan may be developed and updated at a regional level, by the county or a regional organization, so

long as the plan identifies the CSC applying for credit under this PE7 Action as a participating jurisdiction. DHSES strongly recommends multi-jurisdictional plans as they produce better results in a more cost-effective manner. The same departments or representatives listed above should be involved in such a regional effort.

E. How to obtain points for this action

Three points are available for obtaining State approval for the creation of or update to a multi-hazard-mitigation plan that adheres to the NYS Hazard Mitigation Planning Standards.

F. What to submit

Submit a copy or web address of the community's hazard mitigation plan, updated or created within five years prior to the application date, along with proof that the plan has been formally adopted by the local government and approved by the State. Also provide an explanation, including page references, of how the plan addresses climate change projections. If the county led the plan development process, the State-approved plan must identify the local government as a participating jurisdiction.

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

- DHES, Hazard Mitigation Planning Standards and Guidance Documents
- FEMA, Multi-hazard Mitigation Planning
- FEMA, Local Mitigation Planning Handbook
- Responding to Climate Change in NYS (ClimAID)
- 427 report, "Assessing Exposure to Climate Change in U.S. Municipalities"
- Beyond the Basics: Best Practices in Local Mitigation Planning
- Natural Hazard Mitigation Association

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Heat Emergency Plan

6 Points

A. Why is this action important?

Climate change is increasing temperatures, leading to more frequent and more intense heat waves. Heat waves are often considered silent killers as they can last for multiple days and slowly wreak havoc on a community. They are particularly dangerous for the elderly, the sick, the socially isolated, non-English speaking populations, and the young. Developing a heat emergency plan helps reduce the number of mortalities and hospitalizations that take place during high-heat events.

B. How to implement this action

This action can be implemented by undertaking the following steps:

1. Convene a group of key stakeholders to discuss current heat emergency management systems, their effectiveness, and applicability to high-heat events.
2. Create a heat emergency plan that identifies and maps vulnerable populations and specifically outlines what your community will do in the case of a heat wave, including an assessment of the capacity of existing programs and barriers to their use. Have the plan approved by local elected officials and the county emergency management office.
3. Work with local and state organizations, including regional offices of the National Weather Service, to determine appropriate trigger levels of key indicators for implementing the heat emergency plan.
4. Identify existing cooling centers and determine if they have adequate capacity. If necessary, expand existing or designate new geographically distributed cooling centers and a diversity of transportation options to get stakeholders to these cooling centers.
5. Work with existing social networks such as neighborhood-based associations, the Salvation Army, Meals on Wheels, the Boy Scouts and Girl Scouts, and religious institutions to create a system to check on the most vulnerable people during heat waves.
6. Coordinate with utilities to address public health needs resulting from power disruptions associated with extreme heat events.
7. Coordinate with relevant local, regional, and state agencies to determine appropriate trigger levels of key indicators to implement the plan.
8. Develop and implement a plan to use existing telecommunications technology and social networking systems to improve early warning and evacuation systems.
9. Develop a plan and materials for communicating to non-English speaking populations.
10. Review and update the plan after extreme weather events or on a regular basis to ensure its effectiveness.

C. Timeframe, project costs, and resource needs

If the community does not already have a heat emergency plan, creating a new one can take from six to 10 months, depending on the amount of time and resources available to help with plan creation. If your community already has a plan, updating it (e.g., to incorporate strategies that can handle existing heat waves as well as future heat waves that could potentially be longer and more intense) should take between two to three months.

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, but is particularly important for urban centers and communities with large vulnerable populations such as the elderly. The department or office that leads public health efforts is most likely to be responsible for this action. In many cases, the county health department may assume the lead role for this action. Stakeholder involvement is important to understand needs of vulnerable populations.

E. How to obtain points for this action

Six points are available for submitting a new or a revised heat emergency plan that is consistent with the guidelines above.

F. What to submit

Submit a copy of the new or updated community heat emergency plan and demonstrate that it has been approved by local elected officials and the county emergency management office. The plan must have been developed or updated within five years prior to the application date, and it must be actively in use.

G. Links to additional resources or examples

- New York State Department of Health Extreme Heat Advice
- New York State Department of Health Heat Vulnerability Index
- State of Maryland, Heat Emergency Plan
- American Red Cross, Heat Wave Safety Tips
- FEMA, Extreme Heat
- Philadelphia, PA, Excessive Heat Safety & Emergency Preparedness

H. Recertification Requirements

The recertification requirements are generally the same as the initial certification requirements. But every five years (at minimum), applicants must describe how strategies within the prior plan have been implemented, update the climate science data and projections, address any changes in policy or infrastructure since the last plan, and modify the existing strategies or add new recommendations as appropriate.

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Shade Structures in Public Spaces

4 Points

A. Why is this action important?

When public spaces have shade structures, it provides relief for residents and pets during times of heat. Local governments can lead by example by having a policy to require shade structures on properties they own, such as public parks. Shade structures can include gazebos, trees, or covered outdoor facilities. The presence of shade structures is particularly important for individuals that do not have access to air conditioning, especially in urban areas. Moreover, shade structures in public spaces provide opportunities for social networking and public gatherings. Conserving existing forest cover and planting trees and green spaces can moderate temperatures and reduce the urban heat island effect, along with managing stormwater and improving habitat.

B. How to implement this action

To implement this action, local government should consider the following steps:

1. Identify areas in the community that are particularly vulnerable to high heat or the urban heat island effect or lacking significant shade. The NYS Department of Health Heat Vulnerability Index may be helpful in highlighting regions that are vulnerable to extreme heat.
2. Evaluate the opportunities to install shade structures on municipally owned properties and assess community support for a policy to include shade structures on municipal properties.
3. Work with local municipal building and planning commissioners, local boards (i.e., planning and zoning), and internal staff to educate them about the goals of the policy, and get their input on the design of the policy.
4. Create a policy requiring that development projects on municipally owned properties integrate shade structures. Determine whether the policy only applies to new construction/development or whether it also applies when making upgrades to existing properties. Develop appropriate exemptions and include them in policy, if applicable.
5. Have the policy approved by local elected officials.
6. Track implementation of the policy.

C. Timeframe, project costs, and resource needs

The costs of implementing this action are minimal and will consist primarily of staff time. The policy can likely be drafted and approved in three to six months.

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

This Climate Smart Communities (CSC) certification action is applicable to all types of local governments, but is particularly important for highly urbanized communities. The department, office, or committee that leads local climate and sustainability efforts should work on this action in partnership with the building and planning departments. Involving the CSC Task Force is also recommended.

E. How to obtain points for this action

Four points are available to local governments that adopt a formal policy that is consistent with the requirements described here.

F. What to submit

Submit a copy of the policy requiring that development projects on municipally owned properties integrate shade structures. Include evidence that the policy was approved by local elected officials. The policy may have been adopted at any time prior to the application date. If available, also provide any documentation on implementation of the policy and the increase in shade structures in the community.

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 Department of Health Heat Vulnerability Index
- Creating Shade at Public Facilities- Policy & Guidelines for Local Government, Australian Institute of Environmental Health
- US EPA, Trees and Vegetation
- NRDC, The Multiple Benefits of Green Infrastructure Solutions, Rooftops to Rivers II (2011, p. 13-16)

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Watershed Assessment

2 Points | 4 Points | 6 Points

A. Why is this action important?

Changing precipitation patterns in the northeast region of the United States are resulting in increased flooding. Water quantity is affected not only by flooding, but also by drought and depletion of groundwater resources. Water quality is affected by increased erosion and transport of sediment from high flows, increased stormwater pollution, increased sewage overflows from wastewater systems, and higher stream temperatures. These conditions can affect drinking water supplies, infrastructure, recreational opportunities, and stream habitat.

Implementing high-priority strategies and projects to mitigate water quantity and quality impacts requires an understanding of hydrology, land use, infrastructure, and changing conditions in and around the community. Watersheds are the framework best suited to managing water resources, and can be delineated at a scale that is appropriate to the community. Understanding how water flows through a community can help ensure that resources are spent on the most strategic and cost-effective actions. Conducting a watershed assessment helps identify key projects and strategies to minimize impacts and build community resilience to climate change.

B. How to implement this action

This Climate Smart Communities (CSC) action can be implemented by undertaking the following steps:

1. **Scope**: Identify an area or areas on which to focus within the municipality and delineate watersheds that flow to that water body or location. 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 who may want to complete this action together. This action can be implemented at a regional or intermunicipal level by the county or a regional or intermunicipal organization. Since watersheds often cross municipal boundaries, this often makes sense. Local governments claiming credit for participation in regional or intermunicipal assessments will be required to demonstrate substantial involvement in that process to be eligible for points.
2. **Baseline Information**: Review existing baseline information on floodplains, water quality, quantity, land use, intact natural areas, water infrastructure, transportation infrastructure (including stream-road crossings), and existing watershed management or planning documents. Develop baseline information if none exists.
3. **Assessment**: Create or update a watershed assessment that outlines existing conditions in the community's watershed(s) and describes potential future vulnerabilities to the watershed(s) based on climate hazards and projections of climate change. Identify areas vulnerable to flooding, drought, and poor water quality. To the extent possible, identify causes of vulnerabilities and potential mitigation options by assessing conditions upstream of problem areas and within the watershed that drains to those areas.
4. **Priority Project List**: Create or update a list of priority projects based on specific locations, causes of flooding or water quality issues, their watershed context, and the community's needs. The project list should identify responsible parties. Additional research or studies should be undertaken to evaluate specific priorities, if desired. The development of an assessment will be useful for the implementation of many other actions in CSC Pledge Element (PE) 7. Priority projects may include projects to implement adaptation strategies that are listed elsewhere in PE7, including the following CSC certification actions:
    - *PE7 Action: Multi-Hazard Mitigation Plan Updates*
    - *PE7 Action: Floodplain Restoration*
    - *PE7 Action: Conservation of Natural Habitats*
    - *PE7 Action: Green Infrastructure for Stormwater Management*
    - *PE7 Action: Nature-based Shoreline Protection*

- *PE7 Action: Remove Dams & Rightsize Bridges and Culverts*

Local governments may want to combine this effort with *PE7 Action: Climate Vulnerability Assessment* and other adaptation planning actions under PE7 (*Climate Resilience Vision*, *Climate Smart Resiliency Planning*, *Climate Adaptation Strategies*, *and Climate Resilience in Local Plans & Projects*).

C. Timeframe, project costs, and resource needs

Depending on the amount of time and resources available to help with the assessment and priority project list creation, this action could take a year or more.

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. Staff who are responsible for emergency management, engineering, public works, planning, or climate and sustainability efforts are most likely to help implement this action. In some cases, outside expertise is useful. Cross-department involvement and support are recommended, along with involvement with local or regional watershed groups, neighboring municipalities in the watershed, and county agencies (such as county planning departments, Soil and Water Conservation Districts, etc.). Municipal committees, such as CSC task forces, conservation advisory councils, and environmental conservation committees may also be valuable partners.

E. How to obtain points for this action

Points are obtained for this action are tiered based on whether the assessment covers more or less than 75% of the community's geographic area and whether assessment identifies priority projects.

	POSSIBLE POINTS
Create or update a watershed assessment document that identifies areas vulnerable to flooding, erosion, and/or water quality or quantity problems that covers less than 75% of the community area.	2
Create or update a watershed assessment document that identifies areas vulnerable to flooding, erosion and/or water quality or quantity problems that covers 75% or more of the community area.	4
Create or update a list of specific priority projects that identifies responsible parties	2

F. What to submit

Submit a new or revised watershed assessment that is consistent with the guidelines described above and that was completed within the last five years. Specify whether the assessment covers more or less than 75 percent of the community area. If applicable, indicate where in the assessment to find the list of priority projects.

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

- US EPA Handbook for Developing Watershed Plans to Restore and Protect Our Waters
- NYS DEC Nine Element Watershed Plans
- Hudson River Watershed Alliance Watershed Plans
- Moodna Creek Watershed and Flood Mitigation Assessment Final Report, Orange County, NY
- Quassaick Creek Watershed Plan Report and Maps, Orange County, NY
- NYS DOS Watershed Plans - Protecting and Restoring Water Quality
- Center for Watershed Protection, Resources on Watershed Planning

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Restoration of Floodplains & Riparian Buffers

1 — 10 Points

A. Why is this action important?

Riparian buffers include floodplains and other natural areas between streams or other water bodies and human land uses. Expanding riparian buffer areas and restoring vegetation, especially native trees and shrubs, in buffer areas can help reduce some of the impacts of existing and projected future flooding. Vegetation along streams, wetlands, and other water bodies can protect or restore those water bodies and contribute a natural buffer around flood zones. Healthy vegetated riparian buffers can intercept rainfall, filter runoff, capture sediment, absorb excess floodwaters, provide shade and reduce stream temperatures, reduce erosion, and slow down the flow of the water. They also offer benefits to habitat and contribute to ecosystem resiliency. Riparian buffers can help reduce the effects of heavy precipitation events and store water through droughts. Restoring vegetated buffers is important in flood-prone areas, but also in areas upstream of those places to reduce the speed and potentially the volume of floodwaters.

In general, the wider the buffer, the more effective it can be in providing all of the benefits described above. To address flooding, the most effective buffers should include the entire width of the floodplain. A minimum riparian buffer of at least 100 feet is recommended by the US EPA to provide a wide range of stream protection functions.

It is also critical to ensure that streams are connected to their floodplains, so that floodwaters have a place to go. Removing berms, levees, or other built barriers that block floodwaters from accessing floodplains may allow those areas to once again collect, store, and slow water movement during and after storm events.

B. How to implement this action

This Climate Smart Communities (CSC) action is focused on implementation efforts to conserve, revegetate, and reconnect floodplains and riparian buffers to protect streams and minimize the effects of flooding. Steps taken to implement this action may include the following:

1. Examine available information about the extent of local floodplains, the condition of local riparian areas and watersheds, the history of flooding, and climate change projections regarding precipitation patters and stream flows. Sources of relevant information include local knowledge, FEMA flood insurance rate maps, historic maps, aerial photos, watershed assessments (*PE7 Action: Watershed Assessment*), and the New York Statewide Riparian Opportunity Assessment.
2. Evaluate opportunities to work with neighboring municipalities to implement this action, or participate in a county-led process. (Each local government will need to demonstrate substantial involvement in an intermunicipal or county-led process to be eligible for CSC points.)
3. Identify potential areas for conservation, reconnection, restoration, and/or revegetation of floodplains and riparian buffers. Set priorities. Identify ways to track progress in implementing projects and to measure improvements in the condition of floodplains and riparian areas. Create an assessment report that describes priority floodplain and riparian areas.
4. Conserve (or work with partners to conserve) priority riparian or floodplain areas through conservation easements, or through land purchase to create parks, nature preserves, or other types of protected areas.
5. Coordinate with state and federal agencies, to the extent required, to ensure adherence with state and national policies in restoring floodplain connectivity to the waterway.
6. Incorporate stream buffer protection into local land regulations.
7. Protect and revegetate riparian buffers with native trees, shrubs, and grasses.

8. Reconnect a stream to a floodplain area.

To be eligible for CSC points for this action, local governments are not required to incorporate these policies into their zoning or comprehensive plans; however, they are encouraged to do so to establish the legal basis for implementation.

C. Timeframe, project costs, and resource needs

This action contains both short-term and long-term strategies with varying degrees of implementation costs. In general, a community can expect to make progress on this measure in between six to twelve months.

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 parks/recreation or planning/zoning departments is likely to be responsible for this action. If these departments do not exist, the department, office, or committee with the responsibility for leading climate and sustainability efforts may be responsible for this action. For this effort to be successful, cross-department involvement and support are recommended. Municipal committees, such as CSC task forces, conservation advisory councils, environmental conservation committees, and watershed groups may also be involved and can help with outreach to local landowners. County Soil and Water Conservation Districts may be able to provide technical assistance with riparian buffer revegetation, especially in agricultural areas.

E. How to obtain points for this action

Tiered points are available for this Climate Smart Communities (CSC) action by implementing the following projects within ten years prior to the application date:

	POSSIBLE POINTS
Complete a new or revised assessment of floodplain and riparian areas, and identify and prioritize sites for conservation, restoration and reconnection of floodplains and conservation or revegetation of buffers.	1
Conserve floodplains or vegetated buffers through conservation easements or land acquisition.	2
Incorporate stream buffer protection into zoning or other land-use regulation.	3
Revegetate a floodplain or riparian buffer area for at least the mapped floodplain width or 100 feet and a length sufficient to reconnect existing vegetated buffer areas.	2
Reconnect a stream to floodplain area.	2

F. What to submit

Submit documentation that demonstrates completion of at least one of the tiers of this action that are described above. As per the tiers above, documentation may include reports, copies of conservation easements, updated zoning or other regulations, maps, photographs, and other records related to projects protecting or restoring riparian buffers and floodplains, including any associated measurements (location, dimensions of the area, vegetation planted or protected, etc.). Projects must have been completed within ten years prior to the application date.

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

- DEC, NYS Trees for Tribs Program
- US EPA, National Pollution Discharge Elimination System, Forest Roads
- Statewide Riparian Opportunity Assessment (to support the identification and prioritization of riparian sites for restoration or protection)
- NYS DEC Riparian Buffers (including funding options)
- NYS Association of Soil and Water Conservation Districts
- New York, NY, Staten Island Bluebelt: A Natural Solution to Stormwater Management
- PA Department of Environmental Protection Riparian Forest Buffer Policy
- Town of New Paltz, NY, Wetlands and Watercourse Protection Law

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: Conservation of Natural Habitats

4 Points | 8 Points | 12 Points | 16 Points

A. Why is this action important?

Natural systems support life on earth. They purify our water, clean our air, provide habitat for plants and animals, reduce stormwater runoff, provide natural flood protection, and provide a source of recreation and aesthetic beauty. With climate change and other stressors, many of our natural systems and the benefits they provide to humans are at risk. Large, natural areas with diverse physical conditions and little fragmentation by roads or development are most likely to maintain diverse ecosystems and ecological processes important for resiliency. Habitat fragmentation can result in species endangerment and loss of ecosystem services, including carbon sequestration. Sustaining resilient ecosystems in a changing climate requires conserving a sufficient variety and amount of connected habitat through a network of natural areas, corridors, and habitat islands that allow plants and animals to move northward and up in elevation as temperatures increase.

This Climate Smart Communities (CSC) certification action offers points for protecting priority areas (that provide natural habitat connectivity and support ecosystem resilience) through tools like zoning and conservation easements.

B. How to implement this action

Natural areas cross political boundaries. As a result, in the planning phase, local governments should first evaluate opportunities to work with neighboring municipalities to implement this action, participate in a county-led process, and/or collaborate with land trusts or other regional conservation organizations. Throughout the planning and implementation process, local governments should work to increase awareness of climate impacts and other stressors to natural systems, fish, wildlife, and the benefits that healthy natural systems provide human communities.

To plan for and implement this action, local governments should consider the following steps:

- **Identify the natural areas** in the community and region that can contribute most to species migration and ecosystem resilience. This can be achieved by examining existing studies such as natural resource inventories (*PE6 Action: Natural Resources Inventory*) or open space plans, or such identification can be incorporated into new or ongoing inventories or planning efforts (such as *PE6 Action: Comprehensive Plan with Sustainability Elements*). To identify such areas, seek information on the following:
    - Vulnerable ecosystems and populations in the community
    - Large natural areas at the municipal and regional scale
    - Areas with diverse physical geography, e.g., varying geology, soil conditions and topography
    - Naturally vegetated stream corridors and floodplains
    - Local and regional natural corridors connecting larger natural areas, and known migratory pathways
    - Areas where dunes, beaches, and wetlands will migrate as sea levels rise
- **Conduct an analysis** to prioritize the natural areas most important for species migration and ecosystem resilience. This can be done in an open space plan or other local plan or inventory.
- Use the conservation analysis to **identify gaps** in protection or in connectivity between natural areas, especially considering the watershed or regional context. Look for opportunities to reconnect aquatic habitat in a priority watershed by reconnecting a stream to its floodplain, revegetating shorelines, replacing key culverts, or removing dams. For coastal regions, identify areas adjacent to dunes, wetlands, and beaches that may serve as migration zones as sea levels rise.
- Use the conservation analysis to inform **land-use planning and decision-making**, including decisions related to zoning and other regulations. For example, establish an officially designated critical environmental area or identify

areas where conservation development might be used to avoid impacts to a priority natural area.
- Use the conservation analysis to inform **land conservation**. A local government might conserve (or work with a partner to conserve) priority natural areas through conservation easements or through acquisitions that create parks, nature preserves, or other types of protected areas.

C. Timeframe, project costs, and resource needs

The timeframe and costs to implement this action will vary widely, depending on the scope and location of the conservation efforts and whether the planning phase was completed separately. Costs may include volunteer time, staff time, consultant time, land purchases, and marketing and education materials.

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

Most county governments in New York State do not have land-use authority and will therefore not be able to conserve land through zoning or other land-use regulations. The other conservation methods described in this action, however, are applicable to all types of local governments. Planning and zoning or parks and recreation departments will most likely be responsible for this action. For this effort to be successful, cross-department involvement and support are recommended. Municipal committees such as CSC task forces, conservation advisory councils and environmental conservation committees may conduct natural resource inventories and support education efforts. External organizations, especially land trusts, are an excellent partner in conservation planning and implementation. Watershed groups and nature centers may also be important partners, especially for educational efforts.

E. How to obtain points for this action

Four points are available for each separate and distinct priority natural area conserved, up to four different areas in the community (for a maximum of 16 points). The mechanism of conservation may take the form of conservation easements, land acquisition, changes to zoning, or other land-use regulations that provide near permanent protection of the natural area. The area must have value for natural habitat connectivity/species migration and ecosystem resilience under climate change. In addition, to be eligible for points, the conserved area must be identified as a priority in a formally adopted planning document, such as the comprehensive plan, natural resources inventory, or open space plan.

F. What to submit

Submit a documentation demonstrating conservation of each priority natural area. Depending on the mechanism of conservation, submit copies of conservation easements, land acquisition documents, zoning ordinances, or other land-use regulations, as appropriate. Provide documentation that the conserved area was identified as a priority in a formally adopted planning document and has value for natural habitat connectivity and ecosystem resilience under climate change.

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

- DEC, Conserving Natural Areas and Wildlife in Your Community
- DEC, Local Open Space Planning Guide
- DEC and National Wildlife Federation, Assessing the Vulnerability of Key Habitats in New York. A Foundation for Climate Adaptation Planning
- The Nature Conservancy Resilient and Connected Landscapes Project
- US Fish and Wildlife Service, National Fish, Wildlife and Plants Climate Adaptation Strategy
- Red Hook, NY, Planning for Resilient, Connected Natural Areas and Habitats: A Conservation Framework
- North Salem, Lewisboro, and Pound Ridge, NY, Eastern Westchester Biotic Corridor
- Wawarsing, NY, Open Space Inventory (discusses regional habitat connectivity between the Catskills and Shawangunks)

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

PE7 Action: National Flood Insurance Program Community Rating System

3 Points | 5 Points | 7 Points | 9 Points

A. Why is this action important?

The Community Rating System (CRS) is a program of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). Participating in the CRS reduces flood risk, enhances public safety, reduces damage to property and public infrastructure, and reduces insurance rates for a community's property owners. Under the CRS, flood insurance premiums are discounted to reward community actions to minimize exposure to floods. The program also enables communities to evaluate the effectiveness of their flood programs against a nationally recognized benchmark. Ensuring that citizens are aware of potential flood risk and know what to do to prevent or minimize the extent of flooding in their personal lives is critical to ensuring public health and safety are maintained during extreme weather events, and is vital to helping the community enhance its overall resilience to climate change. Moreover, having a well-prepared community can lead to an overall cost savings for both the local government and for residents.

B. How to implement this action

Local governments can implement this action by participating in the CRS program. The CRS uses a class rating system—Classes 10 to 1, with 1 being the best—to determine flood insurance premium reductions for residents. Most communities enter the program at a CRS Class 9 or 8 rating level. (Class 10 provides no premium discount because minimum points are not obtained or a community is not enrolled in the CRS). Then communities gradually improve this rating by earning points for undertaking any of about 15-20 specified mitigation actions organized under four categories public information, mapping and regulation, flood damage reduction, and flood preparedness (i.e., warning and response). Points vary by action. With each improved rating, residents become eligible for greater discounts on NFIP premiums. Examples of such activities include the following:

- Assessing the community's flood problems
- Developing new maps and data
- Mapping special flood related hazards
- Protecting natural floodplain functions
- Developing a floodplain management plan
- Addressing repetitively flooded properties
- Flood warning and response planning
- Developing a master public information program
- Providing detailed information on the potential for flooding and protecting against flood damage

Local governments are encouraged to apply a watershed approach when evaluating and prioritizing projects. The Climate Smart Communities (CSC) program also recommends that local governments seek out support from their regional planning council or knowledgeable contractors when participating in CRS.

To apply for CRS participation, a community must inform the FEMA regional office of its interest and submit a CRS application along with documentation that shows it is implementing the activities for which CRS credit is requested. Once a community's activities and performance are verified, FEMA establishes the Class level / points to be granted. To remain in the CRS program, communities must recertify annually by verifying the continuation of credited activities (and may improve ratings by undertaking new activities to earn additional points).

C. Timeframe, project costs, and resource needs

The specific costs and timeframe associated with this action depend on the size of the community and the amount of pre-existing work that has taken place to help residents and businesses prepare for flooding. In general, a community should be able to complete this action within six to nine months. Some local governments may be eligible to receive support for participating in CRS from their regional planning council. Others might consider hiring a contractor to help them navigate the CRS program, if such resources are available.

FEMA has webinars and training programs and offers free technical assistance for communities in applying for the program and in designing, implementing, and documenting activities.

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 cities, villages, and towns, but the local government must be a participant in the National Flood Insurance Program to be eligible for the Community Rating System. The departments or office that leads planning, zoning, and environmental protection efforts will most likely be responsible for this action. For this effort to be successful, cross-department involvement and support are recommended. Municipal committees, such as CSC task forces, conservation advisory councils, and environmental conservation committees, as well as watershed groups and neighboring municipalities may also be involved.

E. How to obtain points for this action

Points for this action can be obtained by demonstrating active enrollment in the NFIP's Community Rating System. Points are available in tiers based on the CRS Class rating achieved.

	POSSIBLE POINTS
Community Rating System: Class 9, 8, or 7	3
Community Rating System: Class 6 or 5	5
Community Rating System: Class 4, 3, or 2	7
Community Rating System: Class 1	9

F. What to submit

Local governments should submit documentation verifying their current participation in the FEMA Community Rating System program and their rating system class. The class can have been achieved any time in the past but it must be a rating that is valid and current at the point of application.

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

- FEMA, National Flood Insurance Manual
- FEMA, National Flood Insurance Program Community Rating System
- FEMA Community Rating System (Definition)
- FEMA, National Flood Insurance Manual, CRS Coordinator's Manual
- Genesee/Finger Lakes Regional Planning Council – Flood Smart Communities

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

7.17 Conserve Wetlands and Forests to Manage Stormwater, Recharge Groundwater and Mitigate Flooding

1 — 8 Points

Please note: This action is only eligible for points as part of applications submitted before January 10, 2020. It is an older "version 2" action from the 2014 certification manual. The portal website, launched in 2018, replaced this manual. After January 10, 2020, this action will be retired or replaced with an updated "version 3" edition of the action.

A. Why is this action important?

Identifying and protecting natural areas like wetlands and forests is an important first step in managing stormwater and flooding. Wetlands and forests are very effective at holding stormwater and allowing it to slowly infiltrate into the soil. By slowing and filtering excess water across the watershed, wetlands and forests can help protect streams against water quality or quantity issues. It is especially useful to understand wetlands and forests within a watershed context to better assess how they contribute to managing stormwater and mitigating flooding at the local scale. Large, intact wetlands and forests and those that provide connectivity between natural areas also contribute to ecosystem resilience and will facilitate species migration with climate change.

It is far more cost-effective to protect natural areas than to restore them, or the streams they are protecting, after they have been degraded. Conserving wetlands and forests in floodplain areas is particularly important, but conserving these areas throughout the watershed can contribute numerous benefits. These benefits include providing clean water, improving air quality, moderating extreme heat and serving as critical wildlife habitat. These benefits can be maintained by clustering housing units away from wetlands and streams, maintaining or restoring natural riparian buffers, and minimizing the fragmentation of large forest areas by roads or development. Reducing the amount of impervious surface such as roads and driveways is also important to limit the amount of runoff that is produced in developed areas.

In New York State, forests have no legal protection, and wetlands smaller than 12.4 acres in size are not protected by the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law) unless they are determined to be of 'Unusual Local Importance' by DEC. At the federal level, recent Supreme Court decisions have potentially left "isolated" wetlands (those without a permanent surface water connection to larger water bodies) vulnerable to filling, draining and other impacts. Isolated wetlands contribute to groundwater recharge and floodwater retention, and because they serve as nutrient sinks, they help to maintain water quality. They also provide important wildlife habitat. Local governments can play an important role in filling the gap in wetland and forest protection through comprehensive planning, zoning, regulations and land acquisition in fee or conservation easements. Forestry can be compatible with stormwater and other benefits provided it is done in accordance with established guidelines, and can provide economic incentives for forest conservation.

B. How to implement this action

This action can be implemented by undertaking the following:

1. Conduct an analysis to identify and map important forests and wetlands in the community. Map and overlay watersheds, at a scale that is appropriate for the community, to assess which natural areas might be more significant for stormwater management and flooding mitigation on particular streams. This analysis may be completed based on PE6 Action: Natural Resources Inventory or as part of PE7 Action: Watershed Assessment.
2. Use the analysis of forests, wetlands and watersheds to inform land-use planning and improve local protection and conservation, such as through a wetland ordinance. Site plan or subdivision regulations can require identification of these areas and set guidelines to protect them, including identifying areas where

conservation development might be used to protect the integrity of wetlands and forests. Identifying sustainable forestry as a use or adopting a forest zone may help prevent the fragmentation and conversion of forestland to other developed uses.

3. Protect high-priority forests or wetlands through land purchase or conservation easements, working with land trusts or other partners.
4. Conserve forests and wetlands on municipally owned property and develop a management plan that protects stormwater handling capacity and other benefits.
5. Educate residents on the importance of conserving forests and wetlands.

CSCs are encouraged to contact the New York State Department of State Division of Local Services for training, technical assistance and legal guidance on stormwater management and flood mitigation.

C. Timeframe, project costs, and resource needs

This action includes both short-term and long-term strategies with varying implementation costs. In general, a community can expect to make progress on this measure in six to twelve months.

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 department or people with the responsibility for planning and zoning, stormwater or managing open space and natural areas are most likely to be responsible. Cross-department involvement and support are recommended. Municipal committees, such as CSC task forces, conservation advisory councils or environmental conservation committees and watershed planning groups may also be involved. This action could be led by another organization, such as a county, but the local government must demonstrate substantial involvement in the effort to receive points.

E. How to obtain points for this action

Points are obtained for this action by submitting documentation that demonstrates the planning and implementation of projects to conserve wetlands and forests. To be eligible for points for this action, local governments are not required to incorporate these policies into their zoning or comprehensive plans; however, they are encouraged to do so to establish the legal basis for implementation.

	POSSIBLE POINTS
Incorporate wetland and forest conservation into a comprehensive plan goal	1
Conduct an analysis to identify important forests and wetlands in the community, including watershed boundaries, and prioritize key areas for conservation	1
Incorporate conservation of unprotected wetlands and forests into site plan and subdivision regulations, performance standards, or other land use regulations	2
Develop a local wetland protection ordinance	2
Establish a management plan for municipal forest land that conserves stormwater regulation and other benefits	1
Conserve one high-priority priority wetland or forest areas	1

F. What to submit

Local governments should submit a new or updated plan identifying priorities for wetland and forest conservation, an updated comprehensive plan, zoning or other regulations contributing to wetland and forest conservation, a new wetland protection ordinance, a forest management plan for municipal property, and/or any documentation of land conservation. The projects must have been completed within ten years prior to the application date to be eligible for points. CSCs may receive 1 point for conservation of each separate and distinct high-priority priority wetland or forest area over the 10-year period.

Please note: This action is only eligible for points as part of applications submitted before January 10, 2020. It is an older "version 2" action from the 2014 certification manual. The portal website, launched in 2018, replaced this manual. After January 10, 2020, this action will be retired or replaced with an updated "version 3" edition of the action.

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

- DEC, Hudson River Estuary Program Code and Ordinance Worksheet for Development Rules in New York State
- DEC, Forest Stewardship Program
- DEC, Conserving Natural Areas and Wildlife in Your Community
- DEC, Small Wetlands Conservation
- New York Planning Federation, DEC, Empire State Forest Products Association, *The Municipal Official's Guide to Forestry in New York State*
- US EPA, Natural Infrastructure
- Green Infrastructure Center, *Green Infrastructure Guide for New York:*
- Aspen Institute, *Nature as a Foundation of Economy: Investing in Natural Infrastructure for Conservation Supporting Human Development*
- Climate Solutions, *Natural Infrastructure: A Climate-Smart Solution:*
- Center for Watershed Protection, *Watershed Forestry Resource Guide*
- Cornell Cooperative Extension, Forest Connect
- New York, NY, Staten Island Bluebelt: A Natural Solution to Stormwater Management

H. Recertification Requirements

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

NEW YORK STATE OF OPPORTUNITY. | Climate Smart Communities

7.23 Implement a Water Conservation and Reuse Program

1 Points | 2 Points | 3 Points | 4 Points | 5 Points

Please note: This action is only eligible for points as part of applications submitted before January 10, 2020. It is an older "version 2" action from the 2014 certification manual. The portal website, launched in 2018, replaced this manual. After January 10, 2020, this action will be retired or replaced with an updated "version 3" edition of the action.

A. Why is this action important?

Although New York State is expected to receive on average more annual precipitation, this additional precipitation is likely to come at times when it is needed least (e.g., in late winter) and the frequency of short-term summer droughts is expected to increase. Efforts to reduce water consumption and utilize water more efficiently provide an opportunity to reduce our demand on water resources, reduce our energy consumption, increase resiliency to short-term drought and enhance innovation. Simple actions like adjusting the timing of outdoor sprinkler systems or installation of low-flow showerheads can help to conserve water in dry summer months. Other actions require more investment, such as the investigation and repair of leaky underground water distribution systems. Water conservation often saves money and reduces the need to find new, likely more expensive, sources of freshwater in the future. Climate-smart land-use policies can play an important role in ensuring that drinking water supplies are replenished and streams have sufficient baseflow.

B. How to implement this action

To implement this Climate Smart Communities (CSC) action, local governments can undertake the following:

- Create and implement a water conservation or reuse program within internal government operations.
- Create and implement a water conservation program within the residential, commercial and industrial stakeholders in the community. Incentivize identification and repair of underground water leaks and develop guidelines for efficient timing of sprinkler systems.
- Collaborate with water utilities to provide water conservation devices such as low-flow showerheads to residents.
- Implement a rainwater harvesting and reuse program, including the distribution of rain barrels and the promotion of cisterns and other water harvesting practices. Some water harvesting practices, especially those involving reuse of gray or black water, may be regulated by state or local codes, or industry standards. Local governments are advised to consult with appropriate code officials and other professionals before planning water harvesting and reuse programs. Any amendments to local building codes must be approved by the State Fire Prevention and Building Code Council.
- Replenish groundwater supplies by using green infrastructure practices to infiltrate stormwater, using decentralized wastewater techniques and protecting natural areas.

Local governments can also implement this action by following the steps below to join EPA's WaterSense program as a promotional partner. Local governments can sign up for the WaterSense program relatively quickly, by signing the Promotional Partners Agreement. There is no cost to participate in the WaterSense program; however, local governments must demonstrate some annual promotional activities for the water efficiency. The EPA provides promotional resources and materials for the program, so there should be little or no cost to promote the program:

1. Review WaterSense program guidelines and eligibility requirements.
2. Complete and sign a Promotional Partners Agreement and agree to the partnership pledge, which requires the local government to educate residents, businesses, and institutions about water efficiency, undertake activities and events to achieve WaterSense goals, and provide data to the EPA on an annual basis about promotional activities.
3. Plan and develop marketing materials to promote water efficiency, WaterSense products, and the WaterSense program, using the EPA's materials.

4. Hold one event per year in which water efficiency is promoted.
5. Report to the EPA WaterSense program on an annual basis about promotional activities.

C. Timeframe, project costs, and resource needs

A local government can likely complete this action within six to nine months.

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 water utility is most appropriate entity to undertake this action. If a local government does not have a water utility, the department or people with the responsibility for leading the climate and sustainability efforts are most appropriate to be responsible for this action. These responsibilities are typically led by the chief elected official's office and undertaken by the city manager's office, the department of the environment or planning or by a volunteer body, such as a CSC task force or conservation advisory council. Cross-department involvement and support are recommended, along with support and involvement from the interdisciplinary climate adaptation task force (as identified in PE 1.2). Stakeholder involvement from local organizations such as watershed groups is recommended.

E. How to obtain points for this action

Points are obtained for this action by demonstrating the creation of or enhancement of an existing water conservation program. Local governments can also earn points by demonstrating participation in the EPA WaterSense program as a promotional partner, or committing to purchase only WaterSense labeled products for municipal facilities and operations. Local governments applying for points for participation in the WaterSense program will only be awarded points for development of additional water conservation programs that substantially exceed the requirements of the WaterSense program.

	POSSIBLE POINTS
Promote water efficiency by participating in the EPA WaterSense program as a promotional partner	2
Commit to purchasing only WaterSense-labeled products for municipal facilities	2
Develop a water conservation program for government facilities	1
Develop a water conservation program for the community	1

F. What to submit

Progress reports indicating the number and types of water conservation strategies underway and any metrics on the amount of water reduced. In addition, community outreach materials related to water conservation should be submitted as part of this element. The water conservation program must be currently active to be eligible for points. To demonstrate participation in the WaterSense program, submit a copy of the completed Promotional Partnership Agreement and of the most recent WaterSense partner annual report.

Please note: This action is only eligible for points as part of applications submitted before January 10, 2020. It is an older "version 2" action from the 2014 certification manual. The portal website, launched in 2018, replaced this manual. After January 10, 2020, this action will be retired or replaced with an updated "version 3" edition of the action.

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

- DEC, Water Use & Conservation
- US EPA, Water Sense program
- New York, NY, Water Conservation Programs

H. Recertification Requirements

The recertification requirements are the same as the initial certification requirements. To obtain recertification credit for participation in the WaterSense program, CSCs must provide the WaterSense annual report for the most recent calendar year.