City of Poughkeepsie Climate Smart Resiliency Planning

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The Climate Smart Resiliency Planning Tool (CSRP) is a checklist to identify gaps in a community’s planning process.

The Climate Smart Resiliency Planning Tool was used to evaluate opportunities for the City of Poughkeepsie to improve resilience to flooding and climate change. The Planning Tool reviews many long- and short-term aspects of storm and climate change preparedness by reviewing City and County planning documents, municipal codes, activities and management. Documents were reviewed, and municipal staff members were consulted in the process of completing the assessment. The assessment and recommendations have been shared through meeting discussions, with the City Administrator’s office, and presented at the September 25th, 2018 Waterfront Advisory Committee meeting session.

Municipal staff engaged in the City of Poughkeepsie Climate Smart Planning assessment:

Paul Hesse, Community Development Coordinator, Dutchess County Department of Planning and Development and City of Poughkeepsie
Natalie Quinn, City Planner
Judith Knauss, Deputy Zoning Administrator
Jennifer Rubbo, the Environmental Cooperative at the Vassar Barns
Europa McGovern, City of Poughkeepsie Waterfront Advisory Committee

The completed assessment and recommendations highlight areas of opportunity for the City of Poughkeepsie to integrate flood and climate change preparedness into its municipal operations and planning. Recommendations that align with NYSDEC Climate Smart Community Program actions are displayed in bold font.

Areas of Strength

- The City recently hired a Senior City Planner and two new code enforcement officers. This provides the City with increased staffing capabilities and capacity.
- The City has taken interest in community wellness and community development initiatives and received funding (2018) for pedestrian safety through the NYS Pedestrian Safety Action Plan.
  - In 2018, Marist College Environmental Planning students prepared a report on walkability titled, “The Poughkeepsie Northside Pedestrian Needs Assessment.”
- The City has an active Waterfront Advisory Committee which works to strengthen, support and connect the City’s waterfront areas.
• Collaborative community organizations (arts/culture, affordable housing, local jobs).
  • The City received $1 million through the Department of State for rehabilitation of the Poughkeepsie Trolley Barn, located along the Fall Kill to spur revitalization through arts.
  • The newly activated Northside Collaborative (2017).
• The Waterfront Redevelopment Strategy provides a sound overview of City plans, historical context and integration of various local and regional plans and strategies, description of waterfront park conditions, floodplain issues on the waterfront, and property ownership.
• The City has several ongoing initiatives to make the City more pedestrian and bicycle friendly:
  • The City was recently awarded a 75,000 Greenway grant to connect College Hill Park and the Dutchess County Rail Trail1
  • The Kaal Rock Connector Project (in partnership with Scenic Hudson)
• The City’s land use process and procedure project: The City is currently reviewing its development process and administration (in partnership with PACE Land Use Law Center).

Areas of Opportunity

• There is interest and action to form a Conservation Advisory Council (CAC) for the City. The CAC could prove to be a valuable asset in implementing many of the CSRP recommendations and supporting the City in securing funding for them.
• The City has interest in updating its Zoning Code and is currently engaged in the Rezone Downtown Poughkeepsie project Part of the policy framework is to offer a transit-supportive, pedestrian-friendly and bike-able city. This could potentially be an opportunity to incorporate CSRP recommendations when going through updates.
• The City has secured funding for the NYS Department of State Local Waterfront Revitalization Program2 (LWRP) to update their plan with input from their Waterfront Advisory Committee (WAC). The City released an RFP with proposals due 7/27/2018. CSRP recommendations could be referenced in the update.
• The Fall Kill Watershed Management Plan (2006), Fall Kill Plan (2012), and the Fall Kill Watershed Neighborhood Source Assessment (2012) provide substantial data on flooding of the Fall Kill and recommendations to improve its health and that of surrounding neighborhoods.
• Mass Design Group completed an assessment of a City of Poughkeepsie portion of the Fall Kill. This assessment could help inform the Comprehensive Plan update, LWRP, or Resiliency Plan.
• The City will be cutting down 50 Ash Trees due to infestation from the Emerald Ash Borer Beetle. There is an innovative educational campaign to inform residents of why the trees are being cut down and the importance of maintaining healthy city trees. This is a great opportunity to provide education about the value and benefit of green infrastructure in urban environments.
• The City of Poughkeepsie can leverage completion of this CSRP for points towards Climate Smart Communities Program (CSC) certification. **CSC PE7 Action: Climate Smart Resiliency Planning (6 pts)**. For more information on the CSC Program and the actions listed in this document, visit the CSC portal: [https://climatesmart.ny.gov/](https://climatesmart.ny.gov/). CSC Certification is one of the 10 High Impact Actions of the NYSERDA Clean Energy Communities Program (CEC), which the City is actively pursuing.

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• The City is partnering with the Environmental Cooperative at Vassar Barns to complete a Natural Resources Inventory. This could open up opportunities for conserving beneficial land areas such as floodplains and urban tree canopy, and inform a Natural Resource Management Plan or an update to the current Open Space Plan (1976)

• The City recently started an engagement campaign with residents through promoting a Parks Improvement survey. This is part of an initiative to create a Parks Improvement Plan. This is a great opportunity for resiliency planning and green infrastructure practices to be incorporated.

• The City has a newly activated Anti-Blight Initiative headed by the City Administrator and built from the Poughkeepsie Distressed Property Initiative. The Anti-Blight Initiative aims to inventory properties and determine strategies for beneficial active use. Resilient building and land use practices could be incorporated when determining beneficial uses and restoration efforts.

• The City has been actively applying for grant funding for resiliency related topics:
  o NYS Consolidated Funding Application 2018 (CFA) to update Comprehensive Plan and create an Emergency Preparedness Plan through New York State Department of Environmental Protection (NYSDEC) CSC Program funding.
  o CFA 2018 to implement green infrastructure in a city owned parking lot.
  o NYSDEC Urban and Community Forestry Grant to conduct a tree inventory and management plan.

Recommendations
The following opportunities emerged as a result of the CSRP assessment and are organized according to priority projects and department specific recommendations:

Priority Projects
Comprehensive Plan Update:

CSC PE6 Action: Comprehensive Plan with Sustainability Elements (3-21 pts.) *CSC Grant Funding Available.
  o Reference and integrate plans and initiatives such as the Fall Kill Watershed Management Plan (2006), the Fall Kill Plan (2012), and the Fall Kill Watershed Neighborhood Source Assessment (2012). Incorporate content from the Natural Resources Inventory.
  o Update the Open Space Plan (1976) and adopt plan as part of the comprehensive plan. Coordinate plan with the New York State Open Space Plan.
  o Involve emergency managers, floodplain manager, and public works officials in the process and other community stakeholders. Clearly explain participation techniques.
  o Incorporate resilience within the mission, vision, and goals.
  ▪ Identify flood-prone areas and discourage development in those areas as well as require strategies to reduce flood damage to building, roads, driveways, and parking lots.
    o Implement green infrastructure installation projects at strategic locations to relieve stress on combined sewers during heavy rain events.
  ▪ Include strategies to reduce stormwater runoff from roads, driveways and parking lots (i.e. green infrastructure techniques to help prevent flooding.)
o Emphasize non-structural pre-disaster mitigation measures such as acquiring flood-prone lands and adopting No Adverse Impact floodplain regulations.

o Identify strategies to determine whether to relocate structures that have been repeatedly flooded. Include an equitable approach for community involvement in relocation decisions and potential funding sources.

o Identify safer growth areas in the City. Include recommendations and policy updates to encourage development in such areas.

- Ensure plan has a recommended update frequency, even if it is just a goal for when the plan should be updated or reviewed and not an official, mandated update frequency.

Zoning Code Update/Downtown Rezoning Initiative:
- Update codes to promote more flood resistant building.
- Review the use of impact fees, accommodation taxes, or user fees to manage development in hazard-prone areas.
- When planning new development, ensure that it is compact, walkable and has a variety of uses.
  - Refer to the City Center Revitalization Plan. Consider drawing content from the Poughkeepsie Northside Pedestrian Needs Assessment (2018).
- Encourage green infrastructure and low impact development strategies and regulations.
  - Tree protection ordinances, impervious cover limits, riparian buffers, vegetated drainage channels, cluster development
  - Implement green infrastructure installation projects at strategic locations to relieve stress on combined sewers during heavy rain events.

Create a Resiliency Plan that includes:
- Community visioning through involving the public in opportunities to identify historic storm effects including storm-surge elevations, flood-prone streets, or property loss.
  - Install publicly visible high water mark signs. Consider collaboration with local artists.
- Content from various other plans, reports, assessments and initiatives such as the Natural Resources Inventory, Fall Kill reports, and Anti-Blight Initiative
- Climate change trends and predictions
- Environmental/social/economic consequences of failure to address natural hazards
- Riverine and waterfront flooding concerns and floodplain/stormwater management
- Identification of areas of significant public investment, water dependent uses, and critical infrastructure that require structural protection because options for relocation, elevation, or employment of non-structural measures are not feasible
- A full Climate Vulnerability Assessment **CSC PE7 Action: Climate Vulnerability Assessment (4-16 pts.)** *CSC Grant Funding Available*. Include;
  - Identification of climate hazards, past events, and details such as magnitude of consequences, operations disruptions, operating costs, number of persons affected.
  - Information from the Hazard Mitigation Plan (municipal annex) Section 9.3.4 Hazard Risk/Vulnerabilities and Ranking.
Future estimates of losses that may result from hazards using the Department of State’s Asset Inventory Worksheet and Risk Assessment Tool\(^3\) to identify vulnerabilities.

Categorized adaptation strategies prioritized by cost, type, administration, geography, feasibility, timing of implementation, efficacy, and co-benefits. Include strategies to reduce vulnerability through non-structural measures where possible. **CSC PE7 Action: Climate Adaptation Strategies (2-8 pts.)**

- Maps of vulnerabilities in relationship to risks; vulnerable populations, natural resources, cultural resources, landslides, sea-level rise. The City could work with Dutchess County to complete these maps.
- A procedure for coordinating with neighboring jurisdictions to explore a watershed-wide approach to stormwater management.
- Ensure plan has a recommended update frequency, even if it is just a goal for when the plan should be updated or reviewed and not an official, mandated update frequency

**Local Waterfront Revitalization Project (LWRP) Update:**

- Consider engaging in sustainable wetland or shoreline restoration, including non-structural and ecologically enhanced methods. **CSC PE7 Action: Restoration of Floodplains and Riparian Buffers (1-10 pts.) or PE7 Action: Nature-based Shoreline Protection (under review).**
  - Include guidance to control invasive plant species, especially near riparian buffers and shorelines of the Fall Kill and Hudson River.
  - Inform property owners of preferred sustainable shoreline protection techniques.
- Use all available authorities to restrict or prohibit any activities, development or other actions in erosion hazard areas, in order to minimize damage to property, and to prevent the exacerbation of erosion hazards.
- Adopt the projections of sea-level rise from the State Sea Level Rise Task Force report or more recent studies for planning purposes.

**Create an Emergency Preparedness Plan:**

- Include a procedure for public outreach on;
  - Storm preparedness including expected inundation areas, evacuation routes, evacuation bus pick-up locations, severe weather shelter locations, and pet shelters.
  - What to include in an at-home emergency kit, emergency supplies and in an evacuation kit. Guide residents on the development of personal or family evacuation plans.
- Become a Storm Ready Community
- Create an Emergency Response and Short-term Recovery Plan.
  - Include a hierarchy of authority during emergencies and identify first responders.
  - Include a list of contacts for operators of municipal facilities.
  - Include steps for emergency protective measures (sandbagging, erecting warning devices, search and rescue).
  - Include organizational framework to conduct preliminary damage assessments.
  - Incorporate best available projections for extreme storm frequency and severity.

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\(^3\) [https://stormrecovery.ny.gov/community-regions/hudson-valley-and-westchester](https://stormrecovery.ny.gov/community-regions/hudson-valley-and-westchester)
Include guidance on coordination among critical stakeholders such as local community organizations, businesses, health departments, utilities, and local government leaders.

- Identify a designated emergency operations center and designated storm shelters that are located outside of flood-hazard areas; designed to withstand high winds; and have an elevated back-up power source.

- Create an Evacuation Plan. **CSC PE7 Action: Early Warning Systems and Evacuation Plans (under review).**
  - Clearly define responsibilities for municipal evacuation
  - Identify a time frame to evacuate residents from storm hazard areas
  - Identify flood prone locations on evacuation routes and identify more than one route.
  - Provide consideration that neighboring jurisdictions could be evacuating concurrently.
  - Identify evacuation options for populations that rely on public transportation.
  - Identify conditions for which a traffic lane reversal would be implemented.
  - Identify local and state evacuation assistance programs for the following special needs: hospitals, nursing homes, prisons, residents without personal transportation, elderly, disabled, schools.

- Maintain and promote a special needs registry for vulnerable populations.

- Establish a volunteer community emergency response team.

- Establish an adequate heat-warning system and cooling-center program for vulnerable populations. **PE7 Action: Cooling Centers (under review).** *CSC Grant Funding Available*

- Create a Continuity of Operations Plan including guidance on post-disaster waste management.

- Define procedures to conduct habitability and substantial damage assessments

- Store FEMA elevation certificates outside of flood-hazard areas.

- Create a Long-Term Recovery Plan. This plan could:
  - Identify redevelopment opportunities outside of flood-hazard areas.
  - Employ advisory flood maps to define post-disaster redevelopment building elevations.
  - Identify opportunities to retrofit or relocate existing structures in hazard-prone areas.
  - Utilize risk and vulnerability mapping to determine the location of future development.
  - Identify clear lines of coordination to transition from short-term to long-term recovery.
  - Include organizational framework for coordination and use of state, federal and NGO resources to provide maximum benefit to the disaster area.
  - Include provisions to reduce greenhouse gas emissions from reconstructed areas through energy efficiency, use of renewable energy and smart growth principles.

- Establish a temporary post-disaster building moratorium, if possessing the authority to do so.

- Ensure plan has a recommended update frequency, even if it is just a goal for when the plan should be updated or reviewed and not an official, mandated update frequency

**Website Updates/Public Outreach Opportunities:**

- Conduct public outreach on the natural and beneficial functions of floodplains, wetlands, and green infrastructure and other flood mitigation practices through webpage content, brochures, educational programs, public art, and increased signage.

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4 Definition of "Under Review": These actions are currently being revised by the Climate Smart Communities interagency team and will be uploaded to the portal within the next few weeks.
• Use the City’s website to conduct outreach to residents and businesses by adding a link to the City’s website directing residents and businesses to Dutchess County’s webpage on storm-preparedness⁵, brochures and newsletters, community meetings, television, radio or on social media pages. **CSC PE9 Action: Social Media (3 pts.)**

• Add a link to the City’s website directing residents to Dutchess County’s webpages⁶ on developing personal and family evacuation plans, at-home emergency kits, emergency supplies, evacuation kits (FEMA’s Ready.gov checklist), and ASPCA’s disaster preparedness steps for domesticated animals. Other public outreach on these topics could be conducted through social media pages, brochures, community newsletters, etc. **CSC PE9 Action: Social Media (3 pts.)**

• Employ multilingual and culturally sensitive approaches when providing outreach to residents.

• Inform residents of the NY-Alert Program

• Consider developing a public outreach plan on climate outreach and engagement comprised of the elements above. **CSC PE9 Action: Climate Change Education and Engagement (4-8 pts.).**

**Conservation Advisory Council:**

• Take the CSC Program Pledge and consider eventually becoming a certified CSC.
  - Establish a Climate Smart Communities Task Force **(CSC PE1.2 (20 Points.)**
  - Appoint a Climate Smart Community Coordinator **(CSC PE1.3 (10 Points.)**

• Create a local Climate Action Plan. **CSC PE2 Action: Government Operations Climate Action Plan (12-16 pts.) or Community Climate Action Plan (16pts.).**

• Review existing tools used to manage development in hazard-prone areas and consider employing the following;
  - Rolling easements
  - Buyouts of vulnerable properties and other land acquisition programs
  - Transfer of development rights or purchase of development rights

• Prohibit automatic replacement of hardened structures impacted by flooding

**Department Specific**

**Engineering/Public Works:**

• Ensure staff capacity for using vulnerability assessment (like FEMA’s HAZUS-MH) and risk-mapping tools (like flood insurance rate maps). If it is beyond the City’s capacity, look to Dutchess County staff who have the capacity to use these resources.

• Have staff complete post-flood stream intervention training. For more information on this training, including upcoming scheduled trainings, visit the DEC’s webpage⁷

• Work with The Nature Conservancy through their Community Resilience Building process⁸.

• Increase active participation in the Dutchess County MS4 Committee.

• Describe municipal responsibilities for inspection and maintenance of facilities.

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⁵ [http://www.co.dutchess.ny.us/QuickLinks/17006.htm](http://www.co.dutchess.ny.us/QuickLinks/17006.htm)
⁶ [http://www.co.dutchess.ny.us/QuickLinks/17006.htm](http://www.co.dutchess.ny.us/QuickLinks/17006.htm)
⁷ [https://www.dec.ny.gov/lands/86450.html](https://www.dec.ny.gov/lands/86450.html)
⁸ [www.communityresiliencebuilding.com/crbworkshopguide](http://www.communityresiliencebuilding.com/crbworkshopguide)
Planning:
- Publicize the availability of floodplain information to property owners, businesses, insurance agents, real estate agents, and lenders through trainings on Parcel Access, or other means such as webpages, brochures, or educational trainings.
  - Include a link to Parcel Access and FEMA flood plain information in the application for site plan review checklist.
  - Provide property owners with guidelines to retrofit existing development for flood risks. Consider providing a “new homeowner” package to share this and related information.
- Work with The Nature Conservancy through their Community Resilience Building process9.
- Support land-acquisition programs to purchase land-conservation easements in hazard-prone areas. **CSC PE7 Action: Restoration of Floodplains and Riparian Buffers (2 pts.)**

Building:
- Address flood hazards; including making recommendations to reduce hazard vulnerability through land-use planning.
- Plan for costs associated with inspection and enforcement of building and zoning codes.
- Enhance protocol for assessing older building stock that may be more vulnerable to high winds.

City Administrator:
- When updating the Capital Improvements Plan, consider;
  - Flood risk, coastal hazards and sea-level rise projections into risk assessments over the expected service life of proposed infrastructure projects and municipal infrastructure.
  - Integration of existing plans, studies, reports, and technical information.
  - Identifying threats of coastal storms, erosion, sea-level rise, and other climate hazards.
  - Identifying the vulnerability of wildlife and habitat to coastal hazards.

Potential Funding Sources
- DEC Climate Smart Communities Grant Program: [https://www.dec.ny.gov/energy/109181.html](https://www.dec.ny.gov/energy/109181.html)
- DEC Grant Applications: [https://www.dec.ny.gov/pubs/grants.html](https://www.dec.ny.gov/pubs/grants.html)
- DEC Hudson River Estuary Program Grants: [https://www.dec.ny.gov/lands/5091.html](https://www.dec.ny.gov/lands/5091.html)
- FEMA Hazard Mitigation Grant Program: [https://www.fema.gov/hazard-mitigation-grant-program](https://www.fema.gov/hazard-mitigation-grant-program)
- FEMA Pre-disaster Mitigation Grant Program: [https://www.fema.gov/pre-disaster-mitigation-grant-program](https://www.fema.gov/pre-disaster-mitigation-grant-program)
- FEMA Flood Mitigation Assistance Grant Program: [https://www.fema.gov/flood-mitigation-assistance-grant-program](https://www.fema.gov/flood-mitigation-assistance-grant-program)
- HUD Community Development Block Grants: [https://www.hud.gov/program_offices/comm_planning/communitydevelopment/programs](https://www.hud.gov/program_offices/comm_planning/communitydevelopment/programs)
- NYS Department of State Grants (including Local Waterfront Revitalization Program): [https://www.dos.ny.gov/funding/](https://www.dos.ny.gov/funding/)

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9 [www.communityresiliencebuilding.com/crbworkshopguide](http://www.communityresiliencebuilding.com/crbworkshopguide)

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8 City of Poughkeepsie Climate Smart Planning Assessment
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 bringing 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.