

Village of Catskill Waterfront Resilience Task Force Recommendations Update – July, 2020



PROJECT SEQUENCE

In 2013, the Village of Catskill Waterfront Resilience Task Force was launched as an initiative to address coastal flooding risks related to sea level rise. With the help of funders,¹ project partners² and input from the public, the Task Force created a report that could be used as a flood and sea level rise resilience action plan. Completed in 2014, this report was entitled [RESILIENT CATSKILL, Report of the Catskill Waterfront Resilience Task Force](#). In line with a vision of resilient Catskill, a list of recommendations utilizing adaptation strategies was developed for the report. These recommendations were informed by policy and planning updates, capital investments, municipal operations and infrastructure, and future studies that would better position Catskill to begin taking action and to attract future support for waterfront improvements.

In 2019, the Catskill Climate Smart Communities Task Force was formed by the Village to pursue certification in the New York State Climate Smart Communities Program.³ As part of their review of completed, in-progress, and recommended actions for this program, the [RESILIENT CATSKILL](#) report was identified as a document that could be updated to reflect changes in policy and infrastructure. This resulting update additionally provides an opportunity to examine the recommended adaptation strategies in the original report and adjust timelines for implementation as appropriate.

This update found that overall, fourteen of the twenty-four original recommendations have been addressed by the Village. Seven of those recommendations were completed, while eight are in-progress and may require ongoing effort to implement. Completed recommendations can be found below, with numbers corresponding to the original 2014 recommendations (*#1, 2, 6, 7, 11, 13, 15*).

2020 Recommendations were developed based on the progress of the 2014 recommendations, and reflect those recommendations that were in-progress, partially complete, or incomplete at the time of this update.

This update was completed by Cornell Cooperative Extension of Columbia and Greene Counties in partnership with the NYSDEC Hudson River Estuary Program, NY Water Resources Institute and Cornell University with support from the NYS Environmental Protection Fund.

¹ The original report was prepared for the Village of Catskill and the Hudson River Estuary Program, New York State Department of Environmental Conservation, with support from the New York State Environmental Protection Fund, in cooperation with the New England Interstate Water Pollution Control Commission.

² Additional support and technical assistance for this project was provided by Scenic Hudson, the Lincoln Institute of Land Policy, the Consensus Building Institute, and the Dyson Foundation.

³ <https://climatesmart.ny.gov/>

COMPLETED RECOMMENDATIONS

2. Improve emergency communications.

- ▶ *The Village began participation in the County's Swift 911 program. This computerized telephone calling system is used to notify residents of an emergency situation.*

6. Create a flooding best practices manual for distribution to village residents and businesses.

- ▶ *The Village of Catskill has created a Flood Preparedness Guide for Residents and Businesses. The guide offers preparedness and recovery tips and provides a directory of local resources available during a flood. The guide was delivered to Village residents upon completion and is also housed on the Village website.*

7. Post key information on flood risks and emergency plans on the Village website.

- ▶ *The Village of Catskill actively manages a [Planning and Preparedness](#) page on the Village Website.*

11. Work through the Greene County Multi-Hazard Mitigation Plan to position Catskill for resiliency actions and funding opportunities.

- ▶ *Through the County's MHMP, waste water treatment plant upgrades occurred. In the 2017 MHMP update, implementation of Waterfront Resiliency Task Force recommendations were included.*

13. Maintain an inventory and stock all necessary replacement parts for sewage treatment plant and pump stations.

15. Consider applying to participate in the National Flood Insurance Program (NFIP) Community Rating System (CRS), to reduce flood insurance rates and improve flood resilience.

- ▶ *This recommendation was considered by the Village Board, but deemed not cost effective to participate given the relatively low number of floodplain properties.*

2020 RECOMMENDATIONS

1. Create a Village Comprehensive Emergency Management Plan (CEMP) that complements the County AEHOP (reviewed and updated 2/2017) that includes:

- ▶ *Evacuation plan (including routes, defined mandatory evacuation conditions)*
- ▶ *Emergency communications procedures before, during, and after storms (building in redundancy where possible)*
- ▶ *Emergency shelters - designate, supply (including alternate power source) and staff; one shelter on each side of the creek to accommodate people and pets*
- ▶ *Designated loose asset (e.g. boats, cars) storage locations*
- ▶ *Recovery plan (including debris removal, short-term housing options)*

LEAD IMPLEMENTER: FIRE COMMISSIONER (HEAD OF EMERGENCY SERVICES)

2. Design and install high-watermark signs in the waterfront area to educate the community about flood risk and sources of flood preparedness informational resources.

LEAD IMPLEMENTER: DEPARTMENT OF PUBLIC WORKS
IMPLEMENTATION TIMEFRAME GOAL: NEXT 12 MONTHS

3. Create a Permanent Joint Village and Town Conservation Commission.

- ▶ *The Village has created a variety of committees since 2014 to address conservation, including:*
 - *co-hosting a training on Conservation Advisory Councils in 2015*
 - *forming an Local Waterfront Revitalization Program committee in 2018*
 - *forming a Climate Smart Communities committee in 2019.*

- ▶ These committees could be absorbed into a more permanent group to advance and track progress in implementing these recommendation and continue the long-term process of planning for a resilient waterfront.

LEAD IMPLEMENTER: VILLAGE AND TOWN BOARDS

IMPLEMENTATION TIMEFRAME GOAL: NEXT 6 MONTHS

4. Invite agencies or experts to give public outreach presentations on storm preparedness and flood-mitigation options for families, businesses, institutions, structures and facilities, including funding opportunities when applicable.

- ▶ FEMA: flood mitigation strategies, the Community Rating System, Base Flood Elevations, and resilient construction techniques in the Coastal Construction Manual

- ▶ Scenic Hudson: sea level rise inundation maps, cumulative risk assessments, NYHOPS

LEAD IMPLEMENTER: JOINT CONSERVATION COMMISSION

5. On an annual basis, direct property owners and residents of current and projected future floodplains to the Village's informational resources about flooding and emergency preparedness.

LEAD IMPLEMENTER: JOINT CONSERVATION COMMISSION, WITH VILLAGE CLERK AND FLOODPLAIN MANAGER

IMPLEMENTATION TIMEFRAME GOAL: NEXT 6 MONTHS

6. Support regular training for the village floodplain manager (Code Enforcement Officer).

LEAD IMPLEMENTER: VILLAGE BOARD

7. Continue to work with other communities in the Catskill Creek watershed to better manage storm water and runoff.

- ▶ *Meetings held in October, 2015 and May, 2016.*

- ▶ The Catskill Creek Watershed Protection Plan is to be completed in 2020 by Cornell Cooperative Extension of Columbia and Greene Counties.

LEAD IMPLEMENTER: CORNELL COOPERATIVE EXTENSION AND NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION HUDSON RIVER ESTUARY PROGRAM
IMPLEMENTATION TIMEFRAME GOAL: NEXT 12-18 MONTHS

9. Conduct a risk and engineering review of key municipal infrastructure in addition to the Waste Water Treatment Plant to identify adaptation needs/options/plans.

- ▶ *A risk and engineering review, funded by the Hudson River Estuary Program grant (awarded 2015), was completed for Waste Water treatment infrastructure by Crawford and Associates in 2017.*
- ▶ *Key municipal infrastructure includes: Pump stations, primary roadways, water supply, MainCare (oil terminal), Greene County Highway Department, municipal facilities.*

LEAD IMPLEMENTER: VILLAGE BOARD (WITH CONSULTANT)

10. Continue to convene a working group including representation from Village boards, committees, officials and municipal planners to review the Task Force Report and identify which/how local codes can be modified to better weather and adapt to future storms and account for sea level rise.

- ▶ *As a component of an update to the Village's Local Waterfront Revitalization Program, Crawford and Associates are to conduct review of local codes and make recommendations for improvement. This is funded through the Hudson River Estuary Program grant, awarded 2015.*

LEAD IMPLEMENTER: VILLAGE BOARD

16. Continue to ensure that all proposals and plans address projected sea level rise and are responsive to flood resilience issues.

- ▶ *Adopt a policy that requires all new proposals and plans to demonstrate how they incorporate projected sea level rise and flood resilience issues*
- ▶ *Since 2014, projected sea level rise has been addressed in Brownfield Opportunity Area visioning, the Local Waterfront Revitalization Program process, and the 2019 Comprehensive Plan update.*

LEAD IMPLEMENTER: VILLAGE AND PLANNING BOARDS

IMPLEMENTATION TIMEFRAME GOAL: NEXT 9 MONTHS

17. Promote the use of Green Infrastructure techniques throughout the village to reduce flooding from runoff and minimize stormwater treatment burdens.

- ▶ *Participated in Cornell Landscape Architecture Climate Adaptive Design studio, but projects were not advanced beyond the design stage.*

LEAD IMPLEMENTER: JOINT CONSERVATION COMMISSION

18. Become certified in NYS DEC's Climate Smart Communities program in order to receive free technical assistance and eligibility for future grant applications.

- ▶ *The Village is a registered Climate Smart Community and is actively pursuing certification.*

LEAD IMPLEMENTER: CLIMATE SMART COMMUNITIES TASK FORCE

19. Promote the long-term persistence of natural storm buffer areas, particularly Ramshorn-Livingston Marsh, Catskill Point, and undeveloped riparian areas along Catskill Creek (e.g. Goat Island, Pelican Island).

- ▶ *In-Progress. Scenic Hudson acquired creek-side property upstream of the Village and created a 144 acre park in 2018, which is managed by the Greene Land Trust. Scenic Hudson also enlarged its Ramshorn Livingston Marsh holdings in 2016/17.*

LEAD IMPLEMENTER: JOINT CONSERVATION COMMISSION

20. Consult Task Force report for neighborhood/asset specific recommendations and begin developing strategies to address them (e.g. developing an alternate access to the school complex via West Bridge Street).

LEAD IMPLEMENTER: LOCAL WATERFRONT REVITALIZATION COMMITTEE

21. Take advantage of training opportunities from federal, state and local partners to improve staff and volunteer understanding of tools available to help plan for and respond to flood emergencies.

- ▶ *Staff attended local trainings and participated in Hudson Valley Flood Resilience Network meetings.*

LEAD IMPLEMENTER: ALL VILLAGE DEPARTMENTS

22. Integrate departmental funding requests into a village-wide Capital Improvement Plan that incorporates and prioritizes the needs of all departments, along with phased adaptation of infrastructure to flooding and sea level rise.

LEAD IMPLEMENTER: VILLAGE BOARD, VILLAGE CLERK, AND ALL VILLAGE DEPARTMENTS

23. Incorporate cost-benefit analyses and long-term flood risk due to sea level rise and stronger storms into asset design and the prioritization of strategies to manage key municipal assets.

LEAD IMPLEMENTER: VILLAGE BOARD

24. Create an orientation packet or a presentation on flood hazards and municipal plans for all newly elected/appointed municipal representatives, to ensure that new personnel are well-informed on the issues and procedures in the village.

LEAD IMPLEMENTER: JOINT CONSERVATION COMMISSION

ADDITIONAL RESOURCES

CLIMATE SUMMARY FOR COMMUNITIES

This summary was completed to provide information for community-level land use planning and decision-making. It identifies historic climate trends and introduces future projections and strategies to address the climate hazards most likely to affect Hudson Valley communities.

https://www.dec.ny.gov/docs/remediation_hudson_pdf/csfc2.pdf

Implementation Status

Observed and Projected Climate Change in New York State: An Overview - This document provides a summary of observed and projected climatic conditions, and potential effects of changes in these conditions, for New York State. https://www.dec.ny.gov/docs/administration_pdf/climbkgncrra.pdf

Model Local Laws

The New York State Department of State has released Model Local Laws to Increase Resilience (<https://www.dos.ny.gov/opd/programs/resilience/>). These model laws, which local governments may adopt voluntarily to be more resilient to sea-level rise, storm surge, flooding and erosion cover five general topics:

- Basic Land Use Tools for Resiliency
- Wetland and Watercourse Protection Measures
- Coastal Shoreline Protection Measures
- Management of Floodplain Development
- Stormwater Control Measures

Implementation Guidance

Natural resilience measures are actions that conserve, restore or mimic natural landforms and processes to reduce climatic risks. DEC and DOS have prepared Using Natural Measures to Reduce the Risk of Flooding to serve as a guide to selection and planning of natural resilience measures.

https://www.dec.ny.gov/docs/administration_pdf/crranaturalmeasuresgndc.pdf

ONLINE MAPPING TOOLS

Hudson Valley Natural Resource Mapper

The Hudson Valley Natural Resource Mapper is an online, interactive tool designed to help identify and understand important habitat and water resources, the connections between them, and their broader regional context.

<https://gisservices.dec.ny.gov/gis/hvnrm/>

Natural Resource Navigator

The Natural Resource Navigator is an on-line, interactive map tool designed to help natural resource managers make climate smart decisions to sustain natural resources. With adaptation decision support functions, the Natural Resource Navigator can facilitate the development of actionable site-specific strategies.

<https://maps.naturalresourcenavigator.org/#>

GENERAL FUNDING RESOURCES

- NYSDEC Grant Applications: <https://www.dec.ny.gov/pubs/grants.html>
- NYSDEC Hudson River Estuary Program Grants: <https://www.dec.ny.gov/lands/5091.html>
- FEMA 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>
- FEMA Flood Mitigation Assistance Grant Program: <https://www.fema.gov/flood-mitigation-assistance-grant-program>
- NYS Department of State Grants (including Local Waterfront Revitalization Program): <https://www.dos.ny.gov/funding/> NYS Greenway Compact Program Grants: <https://hudsongreenway.ny.gov/grants-funding>