Putnam County:

Climate Change Adaptation & Resilience Plan

(Appendix)

Final Draft Report

November 2026



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Appendix A: Meetings with the CCARP Leadership Team

Meeting #	Date	Meeting Participants	Meeting Agendas

1	9/26/25	Barbara Barosa—*Commissioner and Climate Smart Task Force (CSTF) Member, Putnam County Planning Department*
		Matthew Covucci—*Deputy Commissioner, Putnam County Planning Department*
		Ilona Campo—*Planner/Climate Smart Communities Coordinator, Putnam County Planning Department*
		Sofie diTommaso— *former Resilience & Adaptation Coordinator, HVRC*
		Mary Lambert—*former Climate Action Planning Manager, HVRC*
			Agenda
			• Project Overview
			  ○ Climate Smart Communities PE7 Requirements
			• Project Components
			  ○ Evaluate policies for climate resilience
			  ○ Climate Vulnerability Assessment
			  ○ Climate Adaptation Plan
			• Proposed Timeline
			• Framework for Collaboration
			  ○ Roles and Expectations
			• Aligning Processes
			  ○ Hazard Mitigation Plan
			• Next Steps

2	10/6/25	Barbara Barosa
		Matthew Covucci
		Ilona Campo
		Sofie diTommaso
		Mary Lambert
			Agenda
			• Requirements
			  ○ CSC Stakeholder Engagement Requirements
			• Stakeholder Engagement Overview
			  ○ Benefits and Key Considerations
			• Strategies
			  ○ "Spectrum of Community Engagement and Outreach"
			• Project Planning

			○ Public Outreach and Engagement Template
3	10/20/25	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Mary Lambert	**Agenda** • Check Ins ○ Forming a Working Group ○ Presenting at a Council/Legislative Meeting ○ Website Updates • Climate Vulnerability Assessment ○ Purpose ○ Requirements • Revisit Stakeholder Engagement Plan ○ Add vulnerability assessment stakeholder engagement dates • Next Steps ○ Work Plan ○ Website ○ Survey ○ Adaptation Strategies
4	11/3/25	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso	**Agenda** • CSRP Workshop (11/20) ○ Confirm schedule and invitations ○ Walkthrough of CSRP Tool ○ Agenda and Format • Vision Statement Process • Planning CVA Stakeholder Engagement • Working Group ○ Updates • Next Steps ○ CSRP Review and Event logistics ○ Survey research

5	11/17/25	Barbara Barosa
		Matthew Covucci
		Ilona Campo
		Sofie diTommaso
			Agenda
			• CSRP Workshop (11/20)
			  ○ Materials walkthrough
			• Survey
			  ○ CVA Survey Draft 1 Walkthrough
			  ○ Purposed Timeline
			• Stakeholder Engagement
			  ○ Introduction to Scenario Planning
			  ○ Calendar for Nov-Feb events

6	12/26/25	Barbara Barosa
		Matthew Covucci
		Ilona Campo
		Sofie diTommaso
		Spencer Greenfield— *former Resilience & Adaptation Intern, HVRC*
			Agenda
			• Introductions
			  ○ Climate Adaptation & Resilience Intern
			• Evaluate Policies for Climate Resilience Next Steps
			  ○ Draft & Next Steps
			• CVA Process
			• Adaptation Working Group
			  ○ Schedule first meeting
			  ○ Plan Scenario Planning 2-Part Workshop
			• Partnerships
			  ○ Partner Survey and Distribution

7	1/5/26	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Spencer Greenfield	**Agenda** • Working Group Kick-Off Meeting + Scenario Planning Part 1 • Scenario Planning Part 2 • Climate Vulnerability Assessment • Survey Next Steps • Partnership Survey • Photos

			• CSRP Tool Complete + Evaluate Policies for Climate Resilience
8	1/26/26	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Spencer Greenfield	**Agenda** • Evaluate Policies for Climate Resilience o Updates and next steps • Climate Vulnerability Assessment o Draft 1 and Next Steps • CCARP Webinar o Proposed Agenda and Format • Scenario Planning Part 1 o Proposed Agenda and Intended Participants • Partnerships o Additional Outreach Strategies/Extending Deadline
9	2/24/26	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso	**Agenda** • Scenario Planning Part 2 o Draft Agenda and Workshop Logistics • Climate Vulnerability Assessment o Draft 1 + Review Process
10	3/16/26	Barbara Barosa Ilona Campo Matt Covucci Sofie diTommaso	`**Agenda** • Vision Statement Survey o Logistics and Next Steps • CVA Check-In • Scenario Planning and Climate Adaptation Plan o CCARP components • Next Steps
11	3/23/26	Barbara Barosa Matthew Covucci Ilona Campo	**Agenda** • Public Engagement Event(s) • Indicators & Metrics Overview and Next Steps

		Sofie diTommaso
		Spencer Greenfield
			• Working Meeting on Adaptation Plan Sections
			  ○ CCARP Governance Structure
			  ○ Process for Updating the CCARP

12	4/6/26	Barbara Barosa Matthew Covucci Ilona Campo Victoria DiLonardo—*Public Health Educator, Putnam County Department of Health* Sofie diTommaso Spencer Greenfield Nancy Montgomery—*Legislator (District 1), Putnam County Legislator* Joseph Montuori—*Executive Director, Sustainable Putnam* Gary Redlon—*Coordinator of Engineer Projects, Putnam County Department of Public Works*	**Agenda** • Public Engagement Session: April 21, 2026 • CCARP Indicators and Metrics ** The CCARP Working Group was invited to attend this meeting.*
13	4/20/26	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Spencer Greenfield	**Agenda** • Lunch & Learn Pre-Event Check-Ins • Adaptation Plan Next Steps • Public Engagement • Vision Statement
14	5/5/2026	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Spencer Greenfield	**Agenda** • Previous Meeting Follow Ups • Lunch & Learn Next Steps • CCARP Implementation Meeting • Vision Statement • Stakeholder/Public Engagement next steps
15	5/18/2026	Matthew Covucci	**Agenda**

		Ilona Campo Sofie diTommaso Amanda Peçanha Hickey, *Deputy Executive Director, HVRC* Gary Redlon	• Adaptation Plan Progress To-Date • Implementation & Monitoring • Indicators and Metrics ** The CCARP Working Group was invited to attend this meeting.*
16	6/4/2026	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso	**Agenda** • Updates • Draft CCARP Walkthrough • Next Steps • Website Updates
17	6/15/2026	Barbara Barosa Matthew Covucci Ilona Campo Sofie diTommaso Amanda Hickey	**Agenda** • Public Comment • Remaining Next Steps • (Future) Meeting scheduling

Appendix B: Climate Smart Resiliency Planning Workshop Supplemental Information

Climate Smart Resiliency Planning Summary Report: Putnam County

March 2026

Prepared by Hudson Valley Regional Council & Putnam County



Background

Putnam County participates in the New York Climate Smart Communities (CSC) program and is currently a bronze certified community. As part of its ongoing climate work, Putnam County signed a resolution in September 2025 to partner with Hudson Valley Regional Council (HVRC) to create a county-level Climate Change Adaptation and Resilience Plan, inclusive of a Climate Vulnerability Assessment and Climate Adaptation Plan. This project is funded by the New York State Department of Environmental Conservation as part of the Climate Smart Communities Coordinator Services Program. As a first step in the process, Putnam County and HVRC conducted a Climate Smart Resiliency Planning (CSRP) process in order to assess existing policies and plans in the County for climate resilience.

The CSRP process involves compiling plans and policies in the County and inventorying their resiliency measures using a spreadsheet-based tool. Specifically, the CSRP Tool asks communities to compile relevant plans using a Plans Checklist and to assess them using a series of resiliency metrics across five categories: (1) Vulnerability and Risk Assessment, (2) Public Outreach, (3) Plans Integration, (4) Preparedness and Recovery, and (5) Hazard Mitigation. The tool is designed to be a "self-assessment," completed through facilitated conversations with relevant stakeholders.

Rationale for Climate Smart Resilience Planning

The Climate Smart Resiliency Planning guidance document highlights that the purpose of this planning tool is to foster conversation amongst stakeholders and to locate opportunities to improve resiliency planning within communities (p. 5). Putnam County and HVRC elected to facilitate a CSRP planning process in order to align ongoing planning efforts with the County's existing plans and policies. The CSRP process also provided a valuable opportunity to bring together stakeholders across the County for discussions and shared learning about resiliency planning opportunities.

Climate Smart Resiliency Planning Process

Putnam County completed the Climate Smart Resiliency Planning (CSRP) assessment process from September 2025-February 2026. A final draft was completed in March 2026. The assessment process included background research, a collaborative workshop, opportunities for email feedback, and 1:1 meetings/emails. The CSRP Tool and Guidance Document were used to organize the assessment process, in accordance with guidance from the New York State CSC program.

Specifically, the County collaborated with HVRC to complete the CSRP Tool. Core members of the CSRP Assessment Team included:

- Barbara Barosa, Commissioner/CSTF Member, Putnam County Planning Department, Putnam County
- Ilona Campo, Planner/Climate Smart Communities Coordinator, Putnam County Planning Department, Putnam County
- Matthew Covucci, Deputy Commissioner, Putnam County Planning Department, Putnam County
- Sofie diTommaso, (Former) Resilience & Adaptation Coordinator, HVRC

- Mary Lambert, (Former) Climate Action Planning Manager, HVRC

Background research was completed on existing plans, documents, and resources in the County. Research included publicly available documents. Additional documents were also requested from County staff/departments. HVRC completed an initial draft of the CSRP Tool using this research, which was subsequently shared with the Putnam County Team for revisions.

As a next step, a Climate Smart Resiliency Planning Workshop ("the Workshop") was held on November 20th from 2:00-4:00 pm in a hybrid format at the Bureau of Emergency Services Classroom at the Donald B. Smith Campus in Carmel, NY. The workshop was attended by:

- Barbara Barosa, Commissioner/CSTF Member, Putnam County Planning Dept.
- Marlene Barrett, Director, Putnam County Office of Senior Resources
- Joseph Bellucci, Deputy Commissioner/CSTF Member, Putnam County Dept. Of Public Works
- Ilona Campo, Planner/Climate Smart Communities Coordinator, Putnam County Planning Dept.
- Jennifer Caruso, Director of Compliance & Intergovernmental Relations/CSTF, Putnam County Executive's Office
- Matthew Covucci, Deputy Commissioner, Putnam County Planning Dept.
- Robert Cuomo, Director of EMS, Putnam County Bureau of Emergency Services
- Sofie diTommaso, (Former) Resilience & Adaptation Coordinator, Hudson Valley Regional Council
- Ralph Falloon, Deputy Commissioner, Putnam County Bureau of Emergency Services
- Brian Hildenbrand, Engineer/Supervisor of Planning & Design, Putnam County Dept of Public Works
- Mary Lambert, (Former) Climate Action Planning Manager, Hudson Valley Regional Council
- Thomas Lannon, Director of I.T./Fire Chief-Brewster, Putnam County I.T./Brewster Fire Department
- Nancy Montgomery, Legislator—District 1, Putnam County Legislature
- Joe Montouri, Executive Director, Sustainable Putnam
- Rian Rodriguez, Public Health Director, Putnam County Health Department
- Shanna Siegel, Supervising Public Health Educator/Public Information Officer, Putnam County Health Dept.
- Neal Tomman, Project Manager/CSTF Member, Putnam County Dept. of Public Works
- John Tully, Director of Purchasing, Putnam County Purchasing Dept.
- Savannah Usher, Solid Waste Program Manager, Putnam County Dept. of Health

The Workshop started with opening remarks from the County Executive, Kevin Byrne, who joined virtually at the start of the workshop. Next, HVRC presented on the CSRP process, its connection to additional adaptation and resilience projects in the County, and the key climate hazards facing the County. The presentation format drew from the four steps outlined in the CSRP Guidance Document (p. 5).

Following the presentation, HVRC facilitated a collaborative discussion on each of the six sections of the CSRP Tool. Feedback was tracked in real time on the CSRP tool, and additional meeting minutes were collected. Following the workshop, participants had the option to share additional comments until Dec 3, 2025. During this feedback window, one meeting was scheduled for additional feedback on Dec 1, 2025.

A second draft of the CSRP tool was circulated amongst the Workshop participants for feedback on December 8, 2025, with the feedback window open until December 19, 2025. One participant provided written feedback.

During this time, email outreach was conducted to the Health Department to inquire about additional plans and a resource mentioned at the workshop. HVRC also met with the Bureau of Emergency Services and the GIS/IT Department for follow-up. Dates and times for 1:1 meetings are below:

- Bureau of Emergency Services: December 15, 2025: 2-2:30 pm
- GIS/IT Department: December 18, 2025: 11-11:30 am

These meetings were to follow up on questions/comments raised during the Workshop, to discuss current resiliency-related resources and potential resiliency planning efforts moving forward, as well as to identify resources that could support both the CSRP tool and subsequent resiliency planning efforts in the County.

An updated draft of the CSRP tool was completed in January 2026 and was shared with the core members of the CSRP Assessment Team for final review. Additional revisions were incorporated into a final draft.

Summary of Findings

The CSRP process resulted in the identification of existing resiliency strengths as well as opportunities for growth within Putnam County. The following section summarizes key findings and a list of potential opportunities based on gaps identified in the CSRP process. Additional notes for each section can be found within the CSRP tool itself.

Plans Checklist

Putnam County has many existing plans, policies, and documents relevant to resilience planning, including the following. Links are provided for documents that are publicly available online.

- Putnam County Hazard Mitigation Plan (2021)
- Hurricane Emergency/Tropical Storm Action Plan (2024)
- Putnam County Comprehensive Emergency Management Plan Revision 2 (2023)
- Putnam County Six Year (FY 2025-FY 2030) (FY 2025-FY 2030) and One Year Capital Plans (FY 2025)
- Disaster Debris Management and Removal Plan
- Public Health Emergency Preparedness and Response Plan (Revised 2024), and

- Putnam County Department of Health Integrated Preparedness Plan (2025).

On a regional-level, Putnam County is included in the Comprehensive Economic Development Plan for the Mid-Hudson Region (2025-2030), and the Moving Forward 2055: New York Metropolitan Transportation Council Regional Transportation Plan (2026-2055).

Additional plans that are either upcoming or in-progress will potentially influence county resilience. There are current intentions to create Continuity of Operations Plans on a department-by-department basis. An update to the 2004 Agriculture and Farmland Protection Plan (2004) is an objective, pending funding availability; and the Local Solid Waste Management Plan (2025-2034) and Stormwater Management Plan are pending final approval, with adoption anticipated in 2026. Furthermore, the Hazard Mitigation Plan (2021) is in the process of being updated.

While many existing plans further county-level resilience, there are opportunities to expand resilience planning through additional plans and documents. For example, the County does not currently have a Local Waterfront Revitalization Plan, Climate Action Plan, or Comprehensive Plan. While the County created a Comprehensive Park and Open Space Plan in 1988 and a Natural Resources Inventory in the early 2000s, the plan and inventory have not been updated and are no longer in use. The County also does not have a Floodplain Management Plan, although it references the Lower Hudson Coalition of Conservation District's Flood Preparedness and Response Guide (2014).

Based on these findings, potential opportunities to expand resilience planning in Putnam County include:

- Updating the Comprehensive Park and Open Space Plan and/or the County-level Natural Resources Inventory.
- Exploring the feasibility and need for new plans relevant to resiliency planning, such as a Local Waterfront Revitalization Plan, Climate Action Plan, or Floodplain Management Plan.

Vulnerability & Risk Assessment

Putnam County has taken a number of steps to assess its vulnerability and risks resulting from climate hazards. For example, the most recent version of the Hazard Mitigation Plan includes extensive climate information on climate hazards, expected climate impacts, and assets at risk. The County also has access to many maps and map layers that can support planning and assessment projects. However, there are potential opportunities to expand mapping projects to better identify risks and vulnerabilities, including by mapping vulnerable populations, buildings, infrastructure, natural resources, and cultural resources in relationship to projected climate hazards.

Putnam County staff also have access to skillsets and data that can support risk and vulnerability assessment capacities. For example, the County has HAZUS-MH capacity and staff familiar with mapping tools like the DEC Natural Resources Mapper and NY State Department of Health Heat Vulnerability Indices. In general, staff are aware of locations prone to flooding the County, particularly

in Philipstown and Cold Spring. The Hazard Mitigation Plan also currently cites expected sea level rise using data from NYDEC and NYSERDA (Section 5.4.5 p. 13-14).

While Putnam County has many existing strengths related to vulnerability and risk assessment capacities, data gaps were uncovered through the CSRP process. For example, the County does not currently track repetitive loss properties and has identified information on dams as a potential data limitation. The County also does not currently have a build-out analysis of potential development. Furthermore, while county departments may be aware of and reference the results of risk and vulnerability assessments, there is not currently a formalized process for sharing this information across County departments.

Based on these findings, potential opportunities to expand vulnerability and risk assessment capacities in Putnam County include:

- Expanding vulnerability and risk assessment mapping projects to map county infrastructure, vulnerable populations, buildings, cultural resources, and natural resources in relationship to the County's top climate hazards.
- Implementing a procedure for sharing vulnerability and risk assessment projects with relevant stakeholders, including the Department of Planning and Transportation and Department of Public Works.
- Conducting a build-out analysis for Putnam County and comparing results to projected climate hazards.
- Starting to track data on repetitive loss properties.
- Incorporating NY DEC sea level rise projections into relevant planning efforts.

Public Outreach

Putnam County has conducted stakeholder and public outreach, including by leveraging participatory mapping, public meetings, and stakeholder meetings. Current outreach strategies focus on project-related engagement (i.e. public outreach for the Hazard Mitigation Plan) or on responding after an emergency event. While the County employs some proactive outreach and communications strategies through its PREADY website, Putnam County staff noted that there is often a window of opportunity for outreach following a hazard event, and less engagement at other times. Proactive communication about storm preparedness and resilience could be an area for continued growth.

During the CSRP process, outreach in Spanish was also identified as an area for improvement. Approximately 15.5% of people in Putnam County speak Spanish according to the 2024 American Community Survey one-year estimates. While Putnam County does conduct some outreach in Spanish, additional outreach could be implemented.

Based on these findings, potential opportunities to expand public outreach in Putnam County include:

- Sharing FEMA's "Are You Ready Guide" with residents through the County website.
- Increasing outreach materials about storm preparedness and hazard mitigation.

    - Potential strategies include sharing information on evacuation kits; FEMA's guidance for storm and wind damage prevention; and ASPCA's disaster preparedness steps for domesticated animals.
- Increasing public-facing educational materials, including information about flood mitigation and on "the beneficial functions of floodplains, wetlands, and green infrastructure."
- Exploring the possibility of installing a high-water mark sign in riverfront communities.
- Expanding effective outreach efforts to vulnerable communities, as recommended in the CSC's Inclusive Engagement Primer.

Plan Integration

According to the Climate Smart Resilience Planning Guidance Document, "municipal planners should ensure that their local planning documents reflect existing vulnerability and risk assessments. Additionally, planning efforts should coincide with one another by including the insight of various planning documents, previous hazard-mitigation recommendations and stakeholder input" (p. 32). Many of Putnam County's existing plans and policies integrate resiliency considerations and/or building off insights from other planning documents or stakeholder feedback. For example, Putnam County's Hazard Mitigation Plan references other plans and documents in the County, involved collaboration with other local governments, and includes resilience-related data and recommendations.

Using the CSRP Tool, additional areas for plan integration were identified. For example, the County currently does not have a certified floodplain manager on staff, which could provide a valuable planning perspective in planning efforts across county departments. There are also additional areas where resilience planning considerations could be more thoroughly incorporated into planning documents. For example, Putnam County's Hazard Mitigation Plan could consider adding information on the cost effectiveness of past hazard mitigation projects or including recommendations on transportation for vulnerable populations.

Based on these findings, potential opportunities to expand plans integration in Putnam County include:

- Exploring the feasibility of hiring a certified floodplain manager or training existing staff within Putnam County to support planning efforts across departments.
- Increasing resilience-related considerations in Capital Planning efforts by incorporating climate hazard data into decision-making processes.
- Encouraging new and or updated plans—such as the Hazard Mitigation Plan—to integrate climate resilience components and reference existing plans and documents.

Disaster Preparedness & Recovery

Putnam County has ongoing strengths in its disaster preparedness and response efforts. For example, it has an Emergency Operations Center to coordinate disaster responses and has access to a variety of warning systems including Putnam County Storm Watch, NY-Alert, Code Red, and the Emergency Alert System. The County has formed relationships with many organizations to potentially offer storm shelters when needed. It also has the ability to share preparedness and recovery information via social media, including through the Bureau of Emergency Services and Health Department.

The CSRP process also identified opportunities for continued growth in disaster preparedness and responses, primarily related to evacuation, storm preparedness, outreach, and data/planning. Based on these findings, potential opportunities to expand disaster preparedness and recovery in Putnam County include:

- Becoming a Storm Ready Community.
- Expanding existing evacuation planning efforts by mapping evacuation routes in relationship to risks, planning evacuation strategies for vulnerable communities, collaborating with neighboring counties, and planning options for residents reliant on public transportation.
- Maintaining a special needs registry to support disaster preparedness planning. According to Westchester County, a special needs registry is "a list of county residents who may require additional assistance, transportation and/or sheltering in the event of a major emergency or disaster."
- Consider implementing an early flood warning system for locations along the Hudson River.
- Collecting data on whether and where routes to waste-disposal facilities are prone to flooding.
- Creating a Short- and Long-Term Recovery Plan.
- Collaborating with farmers and landowners on disaster preparedness strategies.
- Incorporating climate projections into emergency response plans.

Hazard Mitigation

Putnam County has taken existing steps to support hazard mitigation in the County. For example, it is a Bronze certified community through the New York State CSC program; and The Department of Public Works has ongoing projects to retrofit and/or harden infrastructure. Putnam County has previously considered collaborating with municipalities to prepare for the relocation of housing out of the floodplain as a goal within its Hazard Mitigation Plan, but that project has been discontinued, and there are no current projects focus on relocation strategies. Putnam County has previously received grant funding through FEMA's pre-disaster Mitigation Grant Program and the Federal Highway Administration for resilience-related projects.

There are potential areas to improve hazard mitigation in Putnam County. The County currently does not run programs related to transfer of development rights, purchase of development rights, land acquisition, or buyout programs to acquire or manage land in vulnerable locations—although it does sometimes acquire vulnerable properties during foreclosure. Notably, New York City and conservation organizations own and manage a significant amount of property in Putnam County, which impacts land management in vulnerable areas.

Based on these findings, potential opportunities to expand hazard mitigation efforts in Putnam County include:

- Exploring opportunities to support the relocation of buildings/infrastructure out of vulnerable areas.
- Assessing the feasibility or need for County-level land acquisition strategies for properties in vulnerable areas.

- Creating a strategy to address invasive species, prioritizing locations near the Hudson River or flood prone areas.
- Continuing to review potential grant funding opportunities for hazard mitigation and/or resilience-related projects.

Next Steps

The CSRP tool represents the first step in a broader resilience planning effort. Reviewing existing plans, policies, and projects will help identify gaps and vulnerabilities and ensure that all relevant materials are considered before climate-related changes to local government operations are recommended.
The findings of this Climate Smart Resiliency Planning process will be used to inform Putnam County's Climate Change Adaptation & Resilience Plan, inclusive of a Climate Vulnerability Assessment and Climate Adaptation Plan. The findings uncovered through this process will be used to inform potential adaptation planning strategies.

Supplemental Information: Supporting Outreach and Engagement Materials

I. CSRP Workshop Invitation

The following invitation to the CSRP workshop was sent to 35 people, including the core CSRP planning team.

Good Morning,

As part of Putnam County's commitment as a Climate Smart Community (CSC), please join us for a Climate Smart Resiliency Planning Workshop on November 20th from 2:00-4:00 pm.

The workshop will work to identify resiliency progress and gaps in existing plans and policies across the County by hosting active conversations across Putnam County's departments. By participating in this workshop, you will be invited to share your departmental expertise, learn from colleagues about work in other departments, and play a pivotal role in shaping ongoing adaptation and resiliency planning in Putnam County.

- Date: November 20, 2025
- Time: 2:00-4:00
- Location: Hybrid Option: Bureau of Emergency Services Classroom or Virtually on Microsoft Teams
- RSVP: Kindly either accept the Teams invite or if attending in person, please email [redacted] by November 14th at
- Purpose: Putnam County is currently a Bronze certified community through the NY State Climate Smart Communities (CSC) Program. The outputs from this workshop will be used to complete the PE7 Evaluate Policies for Climate Resilience action through the Climate Smart Communities program. By completing this action, Putnam County will further its existing climate progress, generate insights to inform the County's upcoming Climate Change Adaptation & Resilience Plan (CCARP), and work towards a Silver certification.

To learn more about this workshop and the agenda, please see the attachment.

We are looking forward to seeing you!

Please Attend the County Climate Resiliency Workshop Summarize

This event occurred **2 months ago** (Thu 11/20/2025 2:00 PM - 4:00 PM) Follow up

Donald B Smith Campus, 110 Old Route 6, Carmel, Bureau of Emergency Services Classroom

[redacted]

Chat

You accepted on 11/7/2025 9:05 AM

[redacted] Reply Reply all Forward

Thu 11/6/2025 9:32 AM

Barbara Barosa sent a meeting request

Climate Resiliency Workshop...

Good Morning,

As part of Putnam County's commitment as a Climate Smart Community (CSC), please join us for a Climate Smart Resiliency Planning Workshop on November 20th from 2:00-4:00 pm.

The workshop will work to identify resiliency progress and gaps in existing plans and policies across the County by hosting active conversations across Putnam County's departments. By participating in this workshop, you will be invited to share your departmental expertise, learn from colleagues about work in other departments, and play a pivotal role in shaping ongoing adaptation and resiliency planning in Putnam County.

- Date: November 20, 2025
- Time: 2:00-4:00
- Location: Hybrid Option: Bureau of Emergency Services Classroom or Virtually on Microsoft Teams
- RSVP: Kindly either accept the Teams invite or if attending in person, please email Ilona Campo by November 14th at Ilona.Campo@putnamcountyny.gov.
- Purpose: Putnam County is currently a Bronze certified community through the NY State Climate Smart Communities (CSC) Program. The outputs from this workshop will be used to complete the P67 Evaluate Policies for Climate Resilience action through the Climate Smart Communities program. By completing this action, Putnam County will further its existing climate progress, generate insights to inform the County's upcoming Climate Change Adaptation & Resilience Plan (CCARP), and work towards a Silver certification.

To learn more about this workshop and the agenda, please see the attachment.

We are looking forward to seeing you!

Best Regards,

Barbara

Barbara Barosa, AICP

[redacted], Development & Public Transportation

[redacted] PUTNAMCOUNTYNY.COM

"Empowering Putnam County through dedicated service."

The below one-pager was sent as part of the CSRP Workshop Invitation.

Climate Smart Resiliency Planning Workshop

November 20, 2025: 2:00-4:00 pm

Hybrid (In person and on Teams)

Agenda

- Opening Remarks from the County Executive
- Overview of the Climate Change Adaptation & Resiliency Planning Process in Putnam County
- Interactive Discussion: Evaluating Policies for Climate Resilience
- Reflections & Debrief

Background

Putnam County has earned recognition as a Certified Bronze Community as part of the New York state Climate Smart Communities (CSC) program. The CSC program is designed to support communities mitigate and adapt to climate change by completing actions for credit. By completing actions, communities can earn points toward certification levels and can increase competitiveness for grant funding.

In September 2025, Putnam County signed a resolution to work with Hudson Valley Regional Council on a Climate Change Adaptation & Resilience Plan (CCARP). This project will involve the completion of three CSC Actions: creating a Climate Vulnerability Assessment, writing a Climate Adaptation Plan, and Evaluating Policies for Climate Resilience.

This workshop is designed to facilitate the completion of the CSC Evaluate Policies for Climate Resilience action. During this workshop, participants will be invited to share plans, policies, and projects in their respective departments. Through collaborative group discussions, participants will support the completion of an inventory-based tool, called the Climate Smart Resiliency Planning (CSRP) Tool, that evaluates existing resiliency progress and gaps across the county.

Following this workshop, feedback will be incorporated into the CSRP tool and a summary report. The workshop's findings will also be incorporated into the county's upcoming Climate Change Adaptation and Resilience Plan.

By participating in this workshop, you will be invited to share your departmental expertise, learn from colleagues about work in other departments, and play a pivotal role in shaping ongoing adaptation and resiliency planning in Putnam County. No prep work is required prior to the workshop, although it will be helpful to be familiar with the plans and policies relevant to your department or office.

II. CSRP Workshop Presentation Slides

See Slides on Putnam County's Climate Change Adaptation & Resilience Plan website.

III. CSRP Workshop Photos





IV. CSRP Tool

Section 1: Community Plan Checklist	Yes	No	Adoption Year	Update Frequency	Notes*
1.1 Municipal Master Plan		x			The Putnam County Vision 2010 Plan (2003) includes a relevant vision and plan for the County, but it is not a current document. Putnam County created a Comprehensive Plan in 1984, but it was not formally adopted. There are some local-level comprehensive plans within the County.
1.2 Zoning Ordinance		x			Zoning is completed at the local-level.
1.3 Subdivision Ordinance		x			Land use decisions are made at the local-level.
1.4 Open Space Plan	x		1988	N/A	Putnam County Comprehensive Park & Open Space Plan
1.5 Natural Resource Conservation Plan		x			Putnam County does not have a Natural Resources Conservation Plan, although it does have a Natural Resources Inventory from the early 2000s. Individual municipalities within the County also have Natural Resources Inventories: https://www.putnamcountyny.gov/climatesmart?highlight=WyJrZW5oliwibmFodXJhbCIsInJlc291cmNlcyIsImludmVudG9yeSJd#/Natural-Resource-Inventories-(NRIs).
1.6 Stormwater Management Plan		x		In Progress	Putnam County has not adopted a current Stormwater Management Plan, but does have a draft plan. Draft plans are not included in this analysis.
1.7 Coastal Plan or Element in Other Plan		x			
1.8 Shoreline Restoration Plan		x			
1.9 Coastal Erosion Hazard Area Ordinance		x			
1.10 Multi-Hazard Mitigation Plan	x		2021	5 years; update in progress	Putnam County Hazard Mitigation Plan: https://www.putnamcountyny.gov/pcbes
1.11 Floodplain Management Plan		x			While not a Floodplain Management Plan, Putnam County references the "Flood Preparedness & Response: A Guide for Municipalities" in its Hazard Mitigation Plan: https://www.lhccd.net/uploads/7/7/6/5/77765286/flood_guide_2014_v2.pdf .
1.12 Flood Damage Prevention Ordinance		x			
1.13 Evacuation Plan	x		2024		Hurricane Emergency/Tropical Storm Action Plan
1.14 Emergency Response & Short-term Recovery Plan	x		2023	Annually	Putnam County Comprehensive Emergency Management Plan Revision 2
1.15 Continuity of Operations Plan		x		In progress	There are current intentions to create COOPs on a department-by-department basis.
1.16 Disaster Recovery Plan		x			While the County does not have a separate Disaster Recovery Plan, the Hazard Mitigation Plan, Comprehensive Emergency Management Plan, and Public Health Emergency Preparedness Plan contain relevant information.
1.17 Long-term Recovery Plan		x			While the County does not have a separate Long-term Recovery Plan, the Hazard Mitigation Plan, Comprehensive Emergency Management Plan, and Public Health Emergency Preparedness Plan contain relevant information.

1.18 Economic Development Plan/Strategy	x		2025	Every 5 years by HVRC	At the regional-level, Putnam County is included in the Comprehensive Economic Development Strategy for the mid-Hudson, created by Hudson Valley Regional Council: https://hudsonvalleyregionalcouncil.org/wp-content/uploads/2025/10/2025-2030HVRC-CEDS-Adopted20250917.pdf.
1.19 Capital Improvements Plan	x				Putnam County: Six Year Capital Plan FY 2025-2030: https://county-putnam-ny-budget-book.cleargov.com/16373/capital-improvements/capital-plan-six-year-plan Putnam County: One Year Capital Plan FY 2025: https://county-putnam-ny-budget-book.cleargov.com/16373/capital-improvements/capital-plan-one-year-plan
1.20 Metropolitan Transportation Plan	x				At a regional level, Putnam County is part of the draft Moving Forward 2055: New York Metropolitan Transportation Council Regional Transportation Plan: https://www.nymtc.org/movingforward2055/.
1.21 Historic Preservation Plan		x			
1.22 Local Waterfront Revitalization Plan		x			There is no County-level LWRP. Within Putnam County, Cold Spring has a LWRP from 2011.
1.23 Climate Action Plan		x			
1.24 Other: Agriculture & Farmland Protection Plan for Putnam County	x		2004	There are plans to update this document; currently awaiting grant to open for funding	Putnam County Agriculture & Farmland Protection Plan: https://www.putnamcountyny.gov/images/Departments/Planning_Dev_Transport/kpf/pdf/PC%20Farming%20Plan%202004.pdf
1.25 Other: Disaster Debris Management Plan	x				While not a formally adopted plan, Putnam County has standard operating procedures outlined in their Disaster Debris Management and Removal Plan.

Section 2: Vulnerability & Risk Assessments	Yes	No	Notes	Definitions	References
2.1 Does the municipality have a localized hazard risk and vulnerability assessment?	x		Putnam County's HMP (2021) Section 5.3 assesses risk and vulnerability for a variety of hazards in the County using multiple methodologies. Severe storms and severe winter storms received the highest risk score (p. 7), although the plan specifies that there will be varying impacts from hazards amongst different locations (p. 1). Putnam County's CEMP Revision 2 (2023) Attachment 1 references the Comprehensive Emergency Preparedness Assessment (CEPA) completed in 2021. Relevant hazards in the risk assessment include ice storms, severe wind/tornadoes, severe winter snowstorms, hurricanes/tropical storms, wildfires, flooding, landslides, extreme temperature, and drought (listed in descending risk level based on likelihood and consequence) (p. 18). The Public Health Emergency Preparedness Plan also references the 2021 CEPA risk assessment (p. 19).		
2.2 Have current and future **climate hazards** been identified?	x		Putnam County's HMP (2021) Section 5.3 evaluates both climate risk and adaptive capacity for a variety of potential hazards (p. 3-4 include methods & p. 7 includes climate hazard scoring results). Climate Adaptive Capacity for the County is also summarized in Putnam County's HMP (2021) Section 9.1 (p. 9).	**Climate hazards** include higher temperatures, heavy precipitation, sea-level rise, storm surge & flooding, disruption of natural resource life cycles and a variety of human health risks.	Impacts of climate change
2.3 Have potential risks been prioritized as follows?					
2.3.1 Likelihood of a given effect, e.g. virtually certain/already occurring, high, moderate, low	x		Putnam County's HMP (2021) Section 5.3, Table 5.3-5, indicates the likelihood of different hazards. Flood, harmful algal blooms, severe storms, and severe winter storms are ranked as the most probable hazards in the County (p. 4-5). Putnam County's CEMP Revision 2 (2023) Attachment 1 ranks different hazard based on their likelihood (High, Medium, and Low) and consequence (p. 18).		
2.3.2 Magnitude of consequence, e.g., disruption of internal operations, capital and operating costs, number of people affected, public health, economy, and environment.	x		Putnam County's HMP (2021) Section 5.3, Table 5.3-6, includes a weighted table of potential hazard impacts based on the affected population, property impacts, and economic ramifications (p. 6). The weighted calculation methodology is available on p. 2-3. Severe storms and severe winter storms have the highest impact score when factoring in all three categories (p. 6). Putnam County's CEMP Revision 2 (2023) Attachment 1 ranks different hazards based on their potential consequences (High, Medium, or Low) (p. 18).		
2.3.3 Are conditions identified that could amplify the effect of a hazard, e.g. storm surge inundation at a high tide or erosion of stabilized shorelines?	x		Putnam County's HMP (2021) includes information on "Cascading Impacts" for different hazard areas including: Drought (Section 5.4.2 p. 7), Extreme Temperature (Section 5.4.4 p. 10), Flood (Section 5.4.5 p. 27), Severe Storms (Section 5.4.7 p. 22), Severe Winter Storm (Section 5.4.8 p. 11), and Wildfire (Section 5.4.10 p. 16).		
2.4 Have municipal employees utilized any of the following vulnerability assessment modalities?					
2.4.1 **HAZUS-MH**	x		Putnam County's HMP (2021) Section 5.1 states that "Hazus was used to estimate potential impacts to the flood, wind, and seismic hazards" (p. 4). Putnam County's HMP (2021) Section 5.3.1 also mentions that HAZUS-MH supported hazard risk ranking throughout the assessment (p. 1).	**HAZUS-MH** - a tool developed by FEMA to help communities estimate potential losses from natural disasters.	HAZUS-MH
2.4.2 Other:		x			
2.5 Are municipal employees trained in the use of FEMA's HAZUS-MH?	x		Putnam County's HMP (2021) Section 9.1 indicates that the County has capacities for "GIS and/or Hazard United States (HAZUS)--Multi-Hazards (MH) applications" (p.8).		
2.6 Have adaptation strategies been identified and categorized as follows:					

2.6.1 Type	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-12 categorizes mitigation actions based on the specific goal they support (p. 23-28).		
2.6.2 Administration	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-12 lists the "Lead Agency" for each proposed action (p. 23-28).		
2.6.3 Condition	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-12 categorizes mitigation actions based on their "Mitigation Category" and Community Rating System Category ("CRS Category") (p. 23-28). The key for categorization acronyms can be found on p. 29.		
2.6.4 Timing	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-12 lists an "estimated timeline" for each proposed action (p. 23-28).		
2.6.5 Geography	x		Putnam County's HMP (2021) Section 9.2-9.10 includes hazard mitigation strategies separated by local community. Section 9.1 details county-level strategies for Putnam County.		
2.7 Have adaptation strategies been evaluated and prioritized as follows:					
2.7.1 Strategy cost	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-12 includes a list of potential Hazard Mitigation Strategies. Within the table, costs are evaluated by using direct estimates, a "High, Medium, Low" scoring system, or qualitative descriptors (p. 23-28). Benefits are also included using qualitative descriptors (p. 23-28). Putnam County's HMP (2021) Section 6.5.4 includes methodological information for the CBA analysis (p. 39-40) and mentions "cost-effectiveness" as a prioritization consideration (p. 38).		
2.7.2 Strategy feasibility	x		Putnam County's HMP (2021) Section 6.5.3 indicates that technical considerations related to feasibility and project prioritization were considered in assessing potential strategies. Additional feasibility considerations were also assessed such as political will, legal capabilities, potential barriers, and presence of a "local champion" (p. 38). Putnam County's HMP (2021) Section 9.1, Table 9.1-12 includes information on whether potential strategies raise concerns about Environmental Planning & Historic Preservation, whether critical facilities are involved, and potential funding options (p. 23-28). Putnam County's CEMP Revision 2 (2023) Section II (C) mentions that feasibility is considered in risk reduction strategies (not necessarily just adaptation related) (p. 16).		
2.7.3 Timing of Implementation	x		Putnam County's HMP (2021) Section 6.5.3 lists "timeline" as a prioritization metric (p. 38). Putnam County's HMP (2021) Section 9.1, Table 9.1-12 includes an estimated timeline for proposed strategies (p. 23-28).		
2.7.4 Efficacy	x		Putnam County's HMP (2021) Section 6.5.3 mentions that potential strategies were evaluated based on their ability to "protect[] lives and prevent[] injuries" (p. 38). Putnam County's CEMP Revision 2 (2023) Section II (C) mentions that resulting outcomes are considered in risk reduction strategies (not necessarily just adaptation-related) (p. 16).		
2.7.5 Co-benefits	x		Putnam County's HMP (2021) Section 6.5.3 mentions that potential strategies were evaluated based on their alignment with "other local objectives" (p. 38).		
2.8 Have stakeholders linked adaptation strategies to the capital budget and rehabilitation cycles?	x		Putnam County: Six Year Capital Plan FY 2025-2030 includes budget line items for some resiliency-related actions (i.e. "Ludingtonville Rd. Reconstruction & Resiliency Improvements (2026-2030 TIP)," "Repair and Replacement of Various Bridges & Culverts/BRIDGENY Program Local Match," etc.) The Department of Public Works works with the Capital Review Process to align any hardening efforts/critical infrastructure replacement projects with all the new local laws.		

2.9 Are maps used to spatially define the following vulnerabilities in relationship to risks?					
2.9.1 Populations, e.g., elderly, children, poor, disabled		x	Putnam County's HMP (2021) does not include maps that highlight vulnerable populations in relationship to risks. However, Putnam County's HMP (2021) Section 4 includes maps of relevant factors. For example, Figure 4.6-1 includes spatial locations for schools and senior facilities (p. 32). Figure 4.4-5 also includes maps illustrating the "distribution of vulnerable populations in Putnam County" including children, seniors, people with disabilities, low-income populations, and non-English speaking populations (p. 15).		
2.9.2 Buildings, e.g., business and residential		x	Putnam County has GIS maps of buildings in the County, but they are not mapped in relationship to risk.		
2.9.3 Infrastructure, e.g. roads, schools, wastewater treatment facilities, hospitals, public works, power plants, drinking water treatment facilities	x		Putnam County's HMP (2021) Sections 5.4.5 (Flood) and 5.4.10 (Wildfire) map hazard risks in comparison to expected new development (see p. 28 and p. 17 respectively). Putnam County's HMP (2021) Sections 5.4.5 (Flood); 5.4.6 (Harmful Algal Bloom); and 5.4.10 (Wildfire) document hazard exposure in relationship to roads, rail lines, and bike paths (see p. 7, p. 8, and p. 6 respectively). While not on a county-scale, maps are available for municipalities within Putnam County that illustrate roads, schools, drinking water, medical and additional facilities in relation to flood risk. For example, Putnam County's HMP (2021) Section 9.6 (Nelsonville) includes a map on p. 33.		
2.9.4 Natural resources, e.g. wetlands, critical habitats, rare species, dunes, beaches, bluffs		x	Putnam County has GIS maps of natural resources in the County, but not in relationship to risk.		
2.9.5 Cultural resources, e.g., historic districts, properties, and landmarks, libraries, museums, recreational areas		x	This information is available through the State Clearing House, but is not publicly available. Facilities are not currently mapped in relationship to risk.		
2.10 Have the following been identified as climate risks to the community?					
2.10.1 Extreme precipitation and riverine flooding	x		Putnam County's HMP (2021) Section 5.4.5.1 identifies "coastal, riverine, flash, stormwater/urban, ice jam, and dam failure" as potential sources of flooding in the county (p. 1). Further details on riverine flooding are available on p. 2. Putnam County's CEMP Revision 2 (2023) Attachment 1 lists flooding as a hazard with medium risk and consequence levels for the county based on a 2021 Risk Assessment. Specific references to riverine flooding and extreme precipitation are not present. This report does not look specifically at climate-related risks (p. 18).		

2.10.2 Landslides	x		Putnam County's HMP (2021) Section 5.4.3 addresses earthquakes and mentions that climate change could lead to increased landslide risk (p. 22). Putnam County's CEMP Revision 2 (2023) Attachment 1 lists landslides as a hazard with medium risk and medium consequence levels for the County based on a 2021 Risk Assessment. This report does not look specifically at climate-related risks (p. 18). While not mentioned in these plans, extreme storms and construction have caused sinkholes in the County.		
2.10.3 Sea-level rise	x		Putnam County's HMP (2021) Section 5.4.5 identifies flooding as a risk and includes information on sea level rise under "coastal flooding" (p. 1).		
2.10.4 Coastal storms, storm surge, and coastal flooding	x		Putnam County's HMP (2021) Section 5.4.5.1 identifies "coastal, riverine, flash, stormwater/urban, ice jam, and dam failure" as potential sources of flooding in the County (p. 1). Further details on coastal flooding are available on p. 1-2. However, Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) mentions that storm surge is not as severe of a concern in the County compared to "other coastal communities" (p. 9). Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) does mention hurricanes as a risk to the community, especially during hurricane season from June 1-Nov 30 (p. 9).		
2.10.5 Extreme temperatures and heat waves	x		Putnam County's HMP (2021) Section 5.4.4 addresses "Extreme Temperature" and includes a section on climate change on p. 6. Putnam County's CEMP Revision 2 (2023) Attachment 1 lists extreme temperatures as a hazard with medium risk and medium consequence levels for the county based on a 2021 Risk Assessment. This report does not look specifically at climate-related risks (p. 18).		
2.10.6 High winds	x		Putnam County's HMP (2021) Section 5.4.7 addresses "Severe Storms" and mentions that climate change will increase wind-related concerns (p. 23). Putnam County's CEMP Revision 2 (2023) Attachment 1 lists severe wind/tornadoes as a hazard with high risk and high consequence levels for the county based on a 2021 Risk Assessment. This report does not look specifically at climate-related risks (p. 18). Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) mentions high winds from hurricanes/tropical storms as a hazard facing the County (p. 9).		
2.10.7 Heavy snow and/or ice storms	x		Putnam County's HMP (2020) Section 5.4.8 addresses "Severe Winter Storms" and mentions that climate change impacts on p. 7-8. Putnam County's CEMP Revision 2 (2023) Attachment 1 lists ice storms as a hazard with high risk and high consequence levels for the County based on a 2021 Risk Assessment. This report does not look specifically at climate-related risks (p. 18).		
2.11 Are municipal planners and emergency managers trained in the use of the following risk-mapping tools?					
2.11.1 Flood insurance rate maps		x	Putnam County's HMP (2021) Section 9.1 highlights that "management and regulation of the regulatory floodplains are done at the local level" (p. 10).	**Flood Insurance Rate Maps**, or FIRMS, are official maps produced by FEMA that identify areas at risk of flooding, as well as National Flood Insurance risk premium zones in a community.	FIRMs

2.11.2 Sea, Lake and Overland Surges from hurricanes		x	Information Not Found	Storm Surge is an abnormal rise of water generated by a storm, often a hurricane.	SLOSH
2.11.3 Shoreline change analysis		x	N/A	Shoreline changes through erosion or accretion can be analyzed in geographic information system (GIS).	NOAA Shoreline website
2.11.4 Cumulative risk assessments		x		A tool to assist communities in understanding the aggregation of risks from multiple environmental stressors.	USEPA Cumulative Risk Assessment Framework
2.11.5 Sea level rise inundation maps		x		Mapping tools to help communities visualize impacts from coastal flooding and sea-level rise.	NOAA Sea Level Rise Viewer
2.11.6 Other:	x		Department of Public Works frequently uses the DEC Environmental Resource Mapper for mapping streams, species, land use, wetland boundaries etc. The Department of Public Health uses the NY State Department of Health Heat Vulnerability Indices.		
2.12 Have vulnerability and risk assessments been directly shared with municipal planners, public work officials, transportation planners, and other appropriate municipal, county or state officials?		x	There is no formal process for sharing county-level vulnerability and risk assessment outcomes across County departments.		
2.13 Has inland (riverine) flooding been identified as a hazard in this community? If yes, complete the following:	x		Putnam County's HMP (2021) Section 5.4.5 addresses flooding, including riverine flooding (p. 1).		
2.13.1 Are emergency managers and planners aware of potential riverine flooding extents in the community?	x		Within Putnam County, staff are aware of the areas along the Hudson River most prone to flooding, especially in Cold Spring & Philipstown.		
2.13.2 Are local planners, emergency managers and public works officials aware of the location of riverine repetitive loss properties?		x	Putnam County's HMP (2021) Section 9.1 highlights that there are opportunities to increase awareness of repetitive loss properties. For example, Table 9.1-12 states: "Enhancements and capacity building are needed to advance professional development and local officials' education about flooding and other hazards. Municipal officials reported being unaware of repetitive loss properties in their jurisdictions and their locations." (p. 27).		
2.13.3 Does the community track riverine repetitive loss properties within the **National Flood Insurance Program?**		x	Putnam County's HMP (2021) Section 9.1 states that "Management and regulation of the regulatory floodplains are done at the local level" for the National Flood Insurance Program (p. 10). Adjacent to this topic, Putnam County staff are aware that there are challenges related to dams and culverts. However, many dams in the area do not fall under Putnam County jurisdiction and access to records, maps, or information about private dams can be limited. This can make tracking potential impacts on dams difficult. Dam-related problem areas are not tracked through a formal record keeping process.	**National Flood Insurance Program**, or NFIP, a federally-subsidized insurance program aimed at reducing the impact of flooding on private and public structures.	NFIP

2.13.4 Do any plans or reports describe the damage and cost of previous storms, riverine floods, or erosion?	x		Putnam County's HMP (2021) Section 5.4.7, Table 5.4.7-2 details property and crop damage from severe storms (p. 10). Putnam County's HMP (2020) Section 5.4.5, Table 5.4.5-4, details costs resulting from flashfloods, floods, dam failures, and ice jams between 1950-2019 (p. 11). In the same section, Table 5.4.5-6 qualitatively describes flood damage between 2015-2019 (p. 12). Putnam County's HMP (2021) Section 5.4.7 also includes information on storm damage costs between 1950-2020 (p. 10).		
2.13.5 Do any plans or reports estimate future financial losses that may result from riverine flooding?	x		Putnam County's HMP (2021) Section 5.4.5 includes tables of potential costs associated with buildings under 1% flood events (p. 20-21).		
2.14 Have seal-level rise, coastal storms, storm surge and coastal flooding been identified as hazards? If so, answer the following:	x		Putnam County's HMP (2021) Section 5.4.5-1 lists coastal flooding as a hazard and includes information about expected sea level rise and potential for impacts from storm surge (p. 1-2). Putnam County's HMP (2021) Section 9.1 also includes resources about sea level rise and mentions its importance in County projects (p. 10). Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) mentions that storm surge is less of a concern, but that Hurricane's pose a risk to the community (p. 9).		
2.14.1 Are emergency managers and planners aware of potential coastal flooding extents in the community?		x	N/A		
2.14.2 Are local planners, emergency managers and public works officials aware of the location of coastal repetitive loss properties?		x	Putnam County's HMP (2021) Section 5.4.5 states thar "specific locations of repetitive loss properties were not made available fort this Plan," but there are goals to improve data access (p. 21).		
2.14.3 Does the community track riverine coastal loss properties within the National Flood Insurance Program?		x			
2.14.4 Do any plans or reports describe the damage and cost of previous coastal storms, floods, or erosion?	x		Putnam County's HMP (2020) Section 5.4.5, Table 5.4.5-4 includes data on the damage caused by flooding between 2050-2019 (p. 11).		
2.14.5 Is a significant part of the community in a V-zone or A-zone as defined on a FEMA flood insurance rate map?	x		Based on maps on FEMA's Flood Map Service Center, there are areas classified as Zone A within Putnam County: https://msc.fema.gov/portal/search?AddressQuery=Putnam%20County%2C%20NY.		
2.14.6 Does the community contain lands within the **Coastal Erosion Hazard Area**?		x	Putnam County is not mapped as being within a Coastal Erosion Hazard Area: https://extapps.dec.ny.gov/fs/projects/coastal/.	**Coastal Erosion Hazard Area**s are coastal shoreline areas that are vulnerable to erosion, and are identified in maps produced by NYS DEC. Coastal Erosion Hazard Areas are regulated and permits are required for construction and other activities.	NYS DEC Coastal Erosion Hazard Management Program
2.14.7 Have areas of the coastline most prone to erosion hazards been identified?		x			
2.14.8 Has the community used all available authorities to restrict or prohibit any activities, development or other actions in such erosion hazard areas, in order to minimize damage to property, and to prevent the exacerbation of erosion hazards?		x			
2.14.9 Has the community developed a build-out analysis using existing zoning ordinances? If so, answer the following:		x	Putnam County's HMP (2021) does not include a build-out analysis. However, Putnam County's HMP (2021) Section 5.1 indicates that new development was evaluated in the hazard mitigation process (p. 3).		

2.14.9.1 Has the build-out analysis been compared to the extent of storm surge scenarios?		x	N/A		
2.14.9.2 Has the build-out analysis been compared to projected sea-level rise scenarios?		x	N/A		
2.14.10 Do any plans or reports describe the damage and cost of previous coastal storms, floods, or erosion?	x		Putnam County's HMP (2021) Section 5.4.5, Table 5.4.5-4 includes data on the damage caused by flooding between 1950-2019 (p. 11).		
2.14.11 Are emergency managers and planners aware of potential storm-surge heights in the community?		x	Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) mentions that storm surge is not as severe of a threat in the County as in "other coastal communities" (p. 9).		
2.14.12 Do any plans or reports estimate future financial losses that may result from sea-level rise?		x			
2.14.13 Has the community undertook a vulnerability and risk assessments using the **Department of State Asset Inventory Worksheet and Risk Assessment Tool**?		x	Reference to the Department of State Asset Inventory Worksheet and Risk Assessment Tool were not present in planning documents. However, Putnam County's HMP (2021) Section 5.1 .1 provides an overview of an asset inventory process used in the HMP process.		Governor's Office of Storm Recovery
2.14.14 Has the community adopted the **projections of sea-level rise** from the **State Sea Level Rise Task Force report** or more recent studies for planning purposes?		x	No direct references to the State Sea Level Rise Task Force report was found. However, Putnam County does included SLR projections within the Putnam County HMP (2021) Section 5.4.5 using data from the NYDEC (p. 13). Projections for "increase in acreage in the floodplain due to Sea Level Rise" are also included using information from NYSERDA (p. 14). It is not clear if these projections have been formally adopted by the community.	NYS has adopted official sea-level rise projections.	NYS DEC Official SLR Projections
					NYS Sea Level Rise Task Force Report

Section 3: Public Outreach and Engagement	Yes	No	Notes	Definitions	References
3.1 Has the public been involved in the identification of historic storm effects, such as storm-surge elevations, flood-prone streets, beach erosion and over wash, or property loss through any of the following means?					
3.1.1 Participatory mapping	x		Participatory mapping has been used by the County. For example, mapping exercises were used for engineers assessments and a participatory mapping exercise was used at a meeting on Continental Village dam rehabilitation.	**Participatory mapping** is a process in which stakeholders create maps that indicate important environmental, cultural social and economic features. Often used in land use decision-making.	NOAA Participatory Mapping Guide
3.1.2 Public surveys	x		A survey that assesses community perspectives on climate hazards and vulnerable assets was distributed during Putnam County's current Climate Adaptation and Resilience Planning process. Survey analysis is in progress. Putnam County's Hazard Mitigation Plan (2021) also included citizen and stakeholder surveys as part of the planning process (see Appendix D-Public & Stakeholder Outreach).		
3.1.3 Stakeholder meetings	x		Putnam County has conducted stakeholder meetings, including those listed in Section 3.1.2. A full list of meetings conducted for Putnam County's Hazard Mitigation Plan (2021) can be found in Appendix C.		
3.2 Does the municipality have publicly visible **high water mark signs**?		x		**High Water Mark signs** are a public awareness tool that indicate how high the water reached on a building, bridge or other infrastructure under flood conditions.	NOAA High Water Mark signs
3.3 Has the public been involved in defining an overall acceptable level of natural-hazard risk?		x	Putnam County has conducted outreach adjacent to this topic. For example, Putnam County's HMP (2021) Section 3.3.3 indicates that the County fostered public participation throughout their Hazard Mitigation planning process through a website, meetings available to the public, and a "Citizen Survey" designed to understand public hazard vulnerability and mitigation awareness (p. 14). See Putnam County's HMP (2021) Appendix D p. 7-95 for additional information and results. Putnam County's HMP (2021) planning process also included a "Stakeholder Survey" to gauge "general needs for hazard mitigation and resiliency" and "identify specific projects that may be included in the mitigation plan," although this was sent to a targeted group of stakeholders rather than to the public (Section 3.3.3 p. 10). See Putnam County's HMP (2021) Appendix D p. 96-163 for additional information and results. Within the County, there is often a window of opportunity to engage the community about natural hazards directly following a storm/emergency and less engagement at other times.		
3.4 Does the municipality provide the public with information on the natural and beneficial functions of floodplains, wetlands and green infrastructure?	x		This information is available through the Putnam County Soil and Water Conservation District, although it is not currently advertised on the website.		
3.5 Does the municipality provide access to floodplain maps?	x		This information is available through the Putnam County Soil and Water Conservation District, although it is not currently advertised on the website.		
3.6 Does the municipality publicize the availability of floodplain information to property owners and businesses?	x		This information is available through the Putnam County Soil and Water Conservation District, although it is not currently advertised on the website.		
3.7 Does the municipality publicize the availability of floodplain information to insurance agents, real estate agents, and lenders?	x		This information is available through the Putnam County Soil and Water Conservation District, although it is not currently advertised on the website.		

3.8 Does the municipality conduct storm-preparedness outreach to floodplain residents and businesses using the following methods?					
3.8.1 Website	x		Putnam County's PREADY webpage provides public-facing guidance on disaster preparedness, but it is not geared specifically to floodplain residents and businesses.		
3.8.2 Brochures and newsletters	x				
3.8.3 Community meetings	x		Putnam County Bureau of Emergency Services webpage mentions that: "The (TOPS) Training and Operations building also hosts a variety of Emergency Management training courses, planning workshops and informational events aimed at enhancing citizen preparedness and community resilience" https://www.putnamcountyny.gov/pcbes.		
3.8.4 Television or radio		x			
3.8.5 Other:		x	The Putnam County Bureau of Emergency Services Facebook page includes weather-related outreach, although it is not specifically geared toward floodplain residents and businesses. The Health Department can conduct outreach via social media.		
3.9 Does the community provide easy access to coastal erosion area hazard maps?		x	N/A: The DEC has a link to CEHA maps on its "Coastal Areas Regulated By The CEHA Permit Program" webpage: https://dec.ny.gov/environmental-protection/water/water-quantity/dam-safety-coastal-flood-protection/coastal-management/areas-regulated-by-ceha. Maps are available by County here: https://extapps.dec.ny.gov/fs/projects/coastal/. No maps for Putnam County were found.		
3.10 Does the community provide residents with guidance on the development of personal or family evacuation plans?	x		Putnam County's PREADY webpage provides public-facing guidance for emergency preparedness. The website does not include detailed evacuation planning guidance, but it does recommend creating a family emergency and a community emergency plan.		
3.11 Does the municipality provide property owners information on what to include in the following?					
3.11.1 At-home emergency kit	x		Putnam County's PREADY webpage "12 Ways to Prepare Before a Disaster" subsection includes recommendations for an emergency kit under the "Assemble or Update Supplies" tab: https://putnamcountyny.gov/pready. The Putnam County Department of Health Website also links to Ready.gov's Basic Disaster Supplies Kit webpage: https://www.ready.gov/kit.		

3.11.2 Emergency supplies	x		Putnam County's PREADY webpage includes a checklist with recommended emergency supplies: https://form.jotform.com/233344895103153.		
3.11.3 Evacuation kit		x	Putnam County's Indian Point Emergency Guide includes an Emergency Supplies Checklist for evacuation or shelter in place needs, but this plan is no longer in use (p. 20).		
Section 3 – Public Outreach and Engagement					
3.12 Does the community have public-information plans in place to provide residents with the following information prior to the threat of a storm?					
3.12.1 Expected inundation areas	x		NY ALERT system provides this information.		
3.12.2 Evacuation routes	x		Putnam County's Hurricane Emergency/Tropical Storm Action Plan (2024) indicates that the County will inform residents of storms/potential impacts and provide information on transportation that could support evacuation decisions (p. 8).		
3.12.3 Evacuation bus pick-up locations		x	Putnam County's CEMP Revision 2 (2023) states that if a Public Information Officer role is created, they can provide information about "appropriate protective actions to be taken by the public, to the broadcast media and press, including specific information about the accessibility of evacuation transportation options and shelters" (p. 31). Putnam County's Hurricane Emergency/Tropical Storm Preparedness Plan (2024) also indicates that the County will share information about "mechanisms to support evacuation (transportation/shelters)" to assist residents in their decision to/not to evacuate (p. 8).		
3.12.4 Location of severe weather shelters	x		The County sends alerts about warming and cooling shelters. All Senior Centers are warming centers. The Donald B Smith Campus has a designated storm shelter, although it is not a full-time shelter. Most shelters are available through partnerships with towns and organizations. Specific shelter locations with partner organizations are coordinated by the Red Cross and Putnam County.		
3.12.5 Location of pet shelters		x	Putnam County's HMP (2021) Section 9.1, Table 9.1-12 indicates that the County has goals to improve pet facilities in an emergency through a facility at Tilly Foster Farm (p. 26). Currently the County has a trailer that can be deployed to a shelter if needed, during a storm/emergency event.		
3.13 Has the community informed residents of ASPCA's **disaster preparedness steps** for domesticated animals?		x	While information about ASPCA's disaster preparedness steps is not provided, the Health Department links to information on Ready.gov about emergency preparedness and mentions pets as a consideration in planning for emergencies. See https://www.putnamcountyny.gov/health/community-health#Emergency. There is an animal rescue trailer for bare necessities that can be deployed to shelters.	Tips for including pets in your family's disaster preparedness efforts.	ASPCA Disaster Preparedness
3.14 Has the community informed residents of FEMA's "Are You Ready?" Guide?		x	While Putnam County does not directly refer residents to the "Are You Ready Guide," Putnam County's Department of Health's website links to a page on Ready.gov, the website houses the "Are You Ready Guide."		FEMA "Are You Ready?" Guide

3.15 Does the community actively inform property owners of FEMA suggested means to protect their homes against **storm and wind damage**?		x	While direct references to FEMA's guidance on preparing for storms and wind damage was not found, Putnam County's PREADY website does have information on preparing for storms and wind. This information is not specifically about protecting homes from damage.		FEMA Guidance on Protecting Homes from Storms
3.16 Does the municipality provide the public with flood mitigation information?		x			
3.17 Does the municipality refer home builders to **FEMA's coastal construction manua**l?		x			FEMA Guidance on Coastal Construction
3.18 Does the municipality employ multilingual and culturally sensitive approaches while providing residents with essential information?		x	While Putnam County provides some information in Spanish, there are opportunities for improving outreach with Spanish brochures/postures. Putnam County's CEMP Revision 2 (2023) Section III (B) mentions that emergency preparedness education materials should be designed for accessibility, including by having copies available in multiple languages (p. 21). Putnam County's CEMP Revision 2 (2023) mentions that warnings delivered through pamphlets/posters should be translated when appropriate (p. 31).		

Section 4: Integration of Municipal Plans	Yes	No	Notes	Definitions	References
4.1 Has the community adopted a comprehensive plan?		x	Putnam County's HMP (2021) Section 9.1-4 indicates that the County does not have a Comprehensive Plan. According to the HMP, the Putnam County Vision 2010 Plan (2003) includes relevant goals for the County (p. 4). Putnam County did create a Comprehensive Plan in 1984, but it was not formally adopted. There are some Comprehensive Plans available on the local-level within Putnam County.		
4.1.1 Does the comprehensive plan reference the local multi-hazard mitigation plan and disaster recovery plans?		x	N/A--Putnam County does not have a Comprehensive Plan.		
4.1.2 Does the comprehensive plan explain the support and involvement of emergency managers, floodplain managers, coastal managers and public works officials?		x	N/A		
4.1.3 Does the planning process documentation describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information, e.g., the multi-hazard mitigation plan, capital improvement plan?		x	N/A		
4.1.4 Did the preparation of the comprehensive plan involve a broad base of the community, such as public officials, civic organizations, businesses, and citizens?		x	N/A		
4.1.5 Does the comprehensive plan provide a clear explanation of participation techniques used in its development?		x	N/A		
4.1.6 Does the comprehensive plan identify resilience within its mission, vision, or goals?		x	N/A		
4.1.7 Are hazards addressed among the elements of the municipal master plan?		x	N/A		
4.1.8 Does the plan identify potential coastal-hazard effects on infrastructure, land uses, housing and community facilities?		x	N/A		
4.1.9 Does the plan make recommendations to reduce hazard vulnerability through land-use planning?		x	N/A		
4.1.10 Does the plan identify how often it should be updated?		x	N/A		
4.1.11 Does the comprehensive plan identify flood-prone areas and discourage development in those areas or require strategies to reduce flood damage to buildings?		x	N/A		
4.1.12 Does the comprehensive plan encourage using green infrastructure techniques to help prevent flooding?		x	N/A		
4.1.13 Does the comprehensive plan emphasize non-structural pre-disaster mitigation measures such as acquiring flood-prone lands and adopting No Adverse Impact flood plain regulations?		x	N/A		

4.1.14 Does the comprehensive plan or hazard mitigation plan discuss strategies to determine whether to relocate structures that have been repeatedly flooded, including identifying an equitable approach for community involvement in relocation decisions and potential funding sources?		x	N/A		
4.2 Is the community planning for development (e.g. parks, river-based recreation) along the river's edge that will help connect people to the river AND accommodate water during floods?	x		While not a County-run project, the Hudson Highland Fjord Trail is planned along a portion of the Hudson River, including areas within Putnam County.		
4.2.1 Are floodways and other frequently flooded areas zoned for open space or recreation?		x	N/A: Zoning is not completed at the county-level.		
4.2.2 Does the community use subdivision regulations to ensure low densities within the floodplain?		x	N/A: Zoning is not completed at the county-level.		
4.2.3 Have non-conforming use and structure standards been revised to encourage safer rebuilding in flood-prone areas?		x	N/A: Zoning is not completed at the county-level.		
4.2.4 Do zoning or floodplain regulations require elevation of two or more feet above Base Flood Elevation?		x	N/A: Zoning is not completed at the county-level.		
4.2.5 Has the community adopted the International Building Code or American Society of Civil Engineers (ASCE) standards that promote flood-resistant building?		x	N/A		
4.2.6 Does the community plan for costs associated with the follow-up inspection and enforcement of land development regulations and building codes?		x	N/A		
4.2.7 Does the local comprehensive plan or hazard mitigation plan clearly identify safer growth areas in the community?		x	Putnam County's HMP (2021) Section 4.5.3 highlights where growth is expected in the County, but it does not outline safer growth areas (28-29). The plan indicates that there are not major concerns about safety and development patterns due to the expected location of development, local-level regulations, NFIP participation, and state requirements (p. 28-30).		
4.2.8 Has the community adopted policies to encourage development in these areas?		x	N/A: Putnam County's HMP (2021) does not identify safer growth areas.		
4.2.9 Has the community planned for new development in safer areas to ensure that it is compact, walkable and has a variety of uses?		x	N/A: Putnam County's HMP (2021) does not identify safer growth areas.		
4.2.9.1 Has the community changed its land-use codes and regulations to allow for this type of development?		x	N/A		
4.2.9.2 Have land development regulations been audited to ensure that development in safer areas meets the community's needs for off-street parking requirements, building height and density, front yard setbacks and that these regulations do not unintentionally inhibit development in these areas?		x	N/A		

4.2.9.3 Do capital improvement plans and budgets support development in preferred safer growth areas (e.g., through investment in wastewater treatment facilities and roads)?		x	N/A: Putnam County's HMP (2021) does not identify safer growth areas.		
4.2.9.4 Have building codes been upgraded to promote more flood-resistant building in safer locations?		x	N/A		
Section 4 – Integration of Municipal Plans					
4.3 Has the community adopted the concepts of **No Adverse Impact** of the Association of State Floodplain Managers?		x		**No Adverse Impact**, or NAI, is a floodplain management approach recommended by the Association of State Floodplain Managers that aims to help coastal communities achieve disaster resilience. "NAI is an approach by which the action of any community or property owner, public or private, is not allowed to adversely affect coastal resources or the property rights of others."	NAI Handbook
4.3.1 Does the community have a local ordinance to protect dunes, bluffs or eroding cliffs from development or disturbance?		x	N/A		
4.3.2 Does the community have a local ordinance to protect wetlands?		x	N/A		
4.4 Does the community have an open space or other natural resources management plan?		x	A significant amount of open space in Putnam County is managed by NYC DEP and by organizations like the Open Space Institute and Scenic Hudson. This impacts the level to which the County is involved in Open Space planning. Putnam County does have a Comprehensive Parks and Open Space Plan (1988). However, Putnam County's HMP (2021) Section 9.1 specifies that the County does not have a Open Space Plan, suggesting that the plan may no longer be in use/up-to-date (p. 5).		
4.4.1 If so, does the plan identify floodplain management as a priority?		x	N/A: The Comprehensive Parks and Open Space Plan (1988) focuses primarily on parks and open space protection in light of increased use/population. Floodplain management is not included as a main priority (p. 1). However, Chapter 4 mentions that protecting floodplains is a potential benefit of and motivation for open space conservation (p. 48).		
4.4.2 Is actively managed open space maintained in a manner that provides flood protection?		x	N/A: The Comprehensive Parks and Open Space Plan (1988) does not include open space management goals specifically related to flood protection in Chapter 4: Open Space & Park Development Plan (p. 39-54).		
4.4.3 Is the plan adopted as part of the municipal comprehensive plan?		x	N/A: Putnam County does not have a Comprehensive Plan.		
4.4.4 Is the local **open space plan** updated in coordination with the state open space plan?		x	N/A: The Comprehensive Parks and Open Space Plan (1988) has not been updated.		NYS Open Space Plan
4.4.5 Does the community participate in the state open space plan updates?	x				

4.5 Does the municipality have a FEMA-approved **multi-hazard mitigation plan?**	x		Putnam County's HMP (2021) can be found on the Bureau of Emergency Services webpage: https://www.putnamcountyny.gov/pcbes?highlight=WyJoYXphcmQiLCJtaXRpZ2FoaWguliwicGxhbiJd#miti.	FEMA **Hazard Mitigation Plan,** or HMP, formalizes community efforts to reduce loss of life and property from natural disasters. A FEMA-approved HMP is a condition for receiving certain types of non-emergency disaster assistance.	FEMA Hazard Mitigation Planning
4.5.1 Does the multi-hazard mitigation plan cross-reference with the local comprehensive plan?		x	N/A: Putnam County's HMP (2021) Section 9.1 specifies that the County does not have a Comprehensive Plan (p. 4)		
4.5.2 Was a certified floodplain manager included in the hazard-mitigation planning process?		x	Putnam County does not have a Certified Floodplain Manager. Putnam County's HMP (2021) Section 9.1 indicates that the County is interested in furthering its floodplain management capabilities, and intends to offer trainings like the Floodplain Manager (CFM) Training and Certification (p. 10).		
4.5.3 Does the multi-hazard mitigation plan describe the support and involvement of local government departments and offices?	x		Putman County's HMP (2021) Section 3 indicates that multiple departments and officers were represented in the HMP Steering Committee (p. 3; p. 7-8).		
4.5.4 Does the multi-hazard mitigation plan provide a clear explanation of public participation used during its development?	x		Putnam County's HMP (2021) Section 3.3.4 includes information about public participation (p.14). Additional information about public participation is available in Appendix D: Public & Stakeholder Outreach.		
4.5.5 Does the multi-hazard mitigation plan identify critical facilities and infrastructure that are located in vulnerable areas and should be protected, repaired or relocated (e.g., town facilities, bridges, roads, and wastewater facilities)?	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-1 includes a critical facility at risk of flooding, although does not explicitly state that it should be repaired, relocated, or protected (p. 13).		
4.5.6 Does the multi-hazard mitigation plan identify projects that could be included in pre-disaster grant applications and does it expedite the application process for post-disaster Hazard Mitigation Grant Program acquisitions?		x	Putnam County's HMP (2021) Section 9.1 identifies projects that could be funded using the Hazard Mitigation Grant Program in Table 9.1-12, although they are geared toward hazard mitigation/preparation rather than expediting post-disaster application processes (p. 23-28).		
4.5.7 Does the multi-hazard mitigation plan describe past mitigation efforts e.g., shoreline stabilization and land acquisition, along with their costs and effectiveness?		x	Putnam County's HMP (2021) Section 9.1, Table 9.1-11 summarizes past/ongoing mitigation activities. Costs associated with projects are not listed (p. 15-21). While some qualitative information related to effectiveness is included in the table, a formal evaluation of effectiveness is not included in the report.		
4.5.8 Does the multi-hazard mitigation plan provide a general explanation of the environmental, social and economic consequences of failing to address natural hazards?	x		Putnam County's HMP (2021) Section 1.1.2 summarizes the "Benefits of Mitigation Planning" (p. 2).		
4.5.9 Does the multi-hazard mitigation plan include municipal maps that indicate local hazard risks, such as flood zones, storm-surge inundation and erosion rates?	x		Putnam County's HMP (2021) Section 5.4.5 includes maps depicting 1% and 0.2% chance flood events in relation to different community features (i.e. roads, stream gauges, dams, development) on p. 7, p. 8, p. 11, and p. 28.		
4.5.10 Does the plan consider inland riverine erosion as a hazard?		x			

4.5.11 Does the plan identify shoreline erosion as a hazard?		x			
4.5.12 Does the plan identify sea-level rise enhanced storm surges as hazards?		x			
4.5.12.1 Are zoned land uses compatible with coastal hazards?		x	N/A: Land use planning occurs at the local level.		
4.5.13 Does the plan identify landslides as a hazard?		x			
4.5.14 Does the multi-hazard mitigation plan consider high winds and tornadoes as hazards?	x		Putnam County's HMP (2021) Section 5.2.3 identifies severe storms as a hazard (p. 10). Section 5.4.7 provides more in depth information on storm-related risks including high winds and tornadoes.		
4.5.15 Does the plan identify drought as a hazard?	x		Putnam County's HMP (2021) Section 5.2.3 identifies drought as a hazard (p.10). Section 5.4.2 provides more in depth information on drought risks.		
4.5.15.1 Does the plan identify specific conservation measures for acknowledged drought thresholds?		x			
4.5.16. Does the plan identify extreme temperatures and heat waves as hazards?	x		Putnam County's HMP (2021) Section 5.2.3 identifies extreme temperatures as a hazard (p. 10). Section 5.4.4 provides more in depth information on temperature-related risks.		
4.5.17 Does the plan identify heavy snowfall as a hazard?	x		Putnam County's HMP (2021) Section 5.2.3 identifies severe winter storms as a hazard (p. 10). Section 5.4.8 provides more in depth information on severe winter storm risks.		
4.5.18 Does the plan identify tropical storms, hurricanes and Nor'easters as hazards?	x		Putnam County's HMP (2021) Section 5.2.3 identifies severe storms as a hazard (p. 10). Section 5.4.7 provides more in depth information on storm-related risks including hurricanes and tropical storms.		
4.5.19. Does the plan address transportation and other needs of particularly vulnerable populations, such as homeless, low income, elderly, special needs and disabled?		x			
4.5.20. Does the plan specify timelines for completing projects and achieving goals?	x		Putnam County's HMP (2021) Section 9.1 Table 9.1-12 includes a timeline for recommended actions by indicating a year number, year range, or qualitative descriptor (i.e. short) (p. 23-28).		
4.5.20.1 Do mitigation goals correspond with measurable mitigation objectives?	x		Putnam County's HMP (2021) Section 6 outlines high-level goals and specific objectives to support hazard mitigation in the County (p. 4-5). Specific projects in Putnam County's HMP (2021) Section 9.1 are organized by which goal(s) they support (p. 23-28).		
4.5.21 Is a process for intergovernmental coordination explained for mitigating natural hazards?	x		Putnam County's HMP (2021) Section 6.4 includes a capabilities assessment that indicates roles, responsibilities, and capacities at the local, county, state, and federal levels (p. 5-28).		
4.5.22 Does the plan identify critical facilities and infrastructure that are located in vulnerable areas and should be protected, repaired or relocated?	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-9 lists a facility under "potential flood losses to critical facilities" (p. 13).		
4.5.23 Have neighboring local governments been consulted to coordinate disaster responses and hazard-mitigation strategies?	x		Putnam County's HMP (2021) Section 3 indicates that Putnam County competed a "Neighboring County Survey" during its planning process (p. 13).		

Section 4 – Integration of Municipal Plans					
4.5.24 Does the plan identify opportunities to incorporate hazard mitigation into existing planning mechanisms, e.g., land-use planning, capital investments, shoreline restoration projects?	x		Yes: See Putnam County's HMP (2021) Section 6.4.1 (p. 6-8).		
4.5.25. Does the multi-hazard mitigation plan identify projects that could be included in pre-disaster grant applications and does it expedite the application process for post-disaster Hazard Mitigation Grant Program acquisitions?		x	No: See 4.5.6		
4.6 Does the municipality have an adopted floodplain management plan?		x	Putnam County does not have a formally adopted floodplain management plan. However, the Putnam County's HMP (2021) Section 9.1 identifies the Lower Hudson Coalition of Conservation Districts' "Flood Preparedness and Response" Guide as it's Floodplain Management Plan (p. 4). The Guide is available here: https://www.lhccd.net/uploads/7/7/6/5/7765286/flood_guide_2014_v2.pdf.		
4.6.1 Is it incorporated as an element of the comprehensive plan?		x	N/A: Putnam County's HMP (2021) Section 9.1 indicates that the county does not have a Comprehensive Plan (p. 4).		
4.6.2 Is the floodplain plan incorporated in the open space plan?		x	N/A: Putnam County's HMP (2021) Section 9.1 indicates that the county does not have an Open Space Plan (p. 5).		
4.6.3 Is it incorporated in the stormwater management plan?		x			
4.6.4 Is it incorporated in the multi-hazard mitigation plan?	x		Putnam County's HMP (2021) Section 9.1 references the Coalition of Conservation Districts' Flood Preparedness and Response Guide as its Floodplain Management Plan (p. 4).		
4.6.5 Does the municipality have a **certified floodplain manager** on staff?		x	Putnam County does not have a certified floodplain manager on staff.	**Certified Floodplain Manager**, or CFM, is a program of the Association of State Floodplain Managers that recognizes continuing education and professional development of floodplain management professionals.	CFM Program Information
4.6.6 Was a certified floodplain manager included in the planning process?		x	N/A: Putnam County does not have a floodplain management plan.		
4.6.7 Was a licensed professional planner included in the planning process?		x	N/A		
4.6.8 Does the municipality participate in the **National Flood Insurance Program**?	x		Putnam County's HMP (2021) Section 6.4.2 states that "all municipalities in Putnam County actively participate in the NFIP" (p. 9).		NFIP
4.6.9 Does the municipality have a flood damage prevention ordinance?		x	Putnam County's HMP (2021) Section 9.1 indicates that it does not have a flood damage prevention ordinance (p. 3).		
4.7 Does the municipality have a **stormwater management plan**		x	Putnam County participates in the MS4 program. A stormwater management plan has not been adopted recently. Putnam County's HMP (2021) Section 9.1 indicates the status of its plan to "Complete and adopt a Countywide Stormwater Management Plan" as "Discontinue."		NYS Stormwater Management Design Manual

4.7.1 Was a certified floodplain manager included in the planning process?		x	N/A		
4.7.2 Does the stormwater management plan include green infrastructure and low-impact development regulations to decrease runoff, e.g., tree protection ordinances, impervious cover limits, riparian buffers, vegetated drainage channels and cluster development?		x			
4.7.3 Does the plan identify runoff and drainage problems due to impervious surfaces?		x			
4.7.4 Has the community implemented strategies to reduce storm water runoff from roads, driveways, and parking lots?		x			
4.7.5 Does the plan identify constraints if the municipality reaches impervious coverage levels allowed by land-use and zoning designations?		x			
4.7.6 Has the community coordinated with neighboring jurisdictions to explore a watershed-wide approach to storm water management?		x			
4.7.7 Do storm water management regulations apply to areas beyond those that are regulated by federal or state storm water regulations?		x			
4.7.8 Does the plan describe the municipal responsibilities for inspection and maintenance of stormwater facilities?		x			
4.7.9 Has the community developed a storm water utility to serve as a funding source for storm water management activities?		x			
4.7.10 Does the plan identify how often it should be updated?		x			
4.8 Does the community have a capital improvements plan?	x		Putnam County has a Capital Plans with 1 and 6-year planning horizons. See Putnam County: Six Year Capital Plan FY 2025-2030 and Putnam County: One Year Capital Plan FY 2025.		
4.8.1 Were a licensed professional planner, engineer, and certified floodplain manager involved in the planning process?		x	Putnam County does not have a Certified Floodplain Manager.		
4.8.2 Does the plan consider the risk of flooding and coastal hazards and sea level rise when upgrading existing municipal infrastructure?		x			
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4.8.3 Does the capital improvement plan consider the risk of flooding and coastal hazards and sea-level rise on proposed infrastructure projects?		x			
4.8.4 Does the capital improvement plan incorporate projections of flooding and sea-level rise into risk assessments over the expected service life of municipal infrastructure?		x			
4.8.5 Does the plan incorporate, if appropriate, existing plans, studies, reports, and technical information?		x			

4.8.6 Does the plan identify how often it should be updated?	x		While not explicitly stated, the Putnam County: Six Year Capital Plan FY 2025-2030 and Putnam County: One Year Capital Plan FY 2025 are created using 6 and 1-year planning horizons respectively.		
4.9 Does the municipality have an economic development plan or strategy?	x		While not at the county-level, Putnam County is included in the Comprehensive Economic Development Strategy (CEDS) (2025) produced by the Hudson Valley Regional Council.		
4.9.1 Does the plan identify economic vulnerabilities due to coastal hazards?	x		The CEDS (2025) identifies "coastal flooding from storm surge" as a "regional risk" within the mid-Hudson region (p. 56).		
4.9.2 Does the plan incorporate sea level rise and other climate change effects into its assessment of economic vulnerabilities?		x			
4.10 Does the community have a **local waterfront revitalization plan**, special area management plan, beachfront management plan or shoreline management plan?		x		**Local waterfront revitalization plan,** or LWRP, is a plan devised by a community for preferred and accepted land uses on their waterfront. This program is supported by NYS Department of State.	LWRP
4.10.1 Do these plans identify the threat of coastal storms and erosion?		x	N/A		
4.10.2 Do these plans identify the threat of sea level rise and other climate related hazards?		x	N/A		
4.10.3 Do these plans identify the vulnerability of wildlife and habitat to coastal hazards?		x	N/A		
4.11 Has the municipality developed a coastal resilience plan?		x	N/A		
4.11.1 Has the municipality strived to reduce vulnerability in coastal zones through non-structural measures wherever possible?		x	N/A		
4.11.2 Have 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 been identified?		x	N/A		

Section 5: Disaster Preparedness and Recovery	Yes	No	Notes	Definitions	References
5.1 Is the municipality recognized as a **Storm Ready Community**?		x		Storm Ready is a program offered through the National Weather Service to help communities to take a proactive approach to preparing for extreme weather and natural disasters.	https://www.weather.gov/stormready/
5.2 Does the community have a general emergency warning system?	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-4 indicates that the County has multiple warning systems (p. 7). Putnam County's CEMP Revision 2 (2023) also includes information about warning systems and methods (p. 30-32). For example, the County has access to media broadcast, phone, text, email, and door-to-door alert communications methods. Emergency service vehicles can be used for "siren and public address capabilities." While not county-specific, NOAA Weather Ready also broadcasts weather information/warnings, and Putnam County participates in the NY Alert system (p. 31).		
5.3 If the community is located along a river, does it have an early flood-warning system?		x	Putnam County does not have early detection river flooding sensors. Putnam County's HMP (2021) Section 9.1, Table 9.1-4 indicates that the County has multiple warning systems, although it does not specify if the warning systems are for river communities (p. 7). The Putnam County Alert System has the ability to sign up for flood and additional warnings: https://www.putnamcountyny.gov/pca.		
5.4 Are emergency responders aware of real-time ocean and estuarine observing systems and stream gauging information?		x	NOAA has stations with current maps but the County does not control any storm gauges and no information is directly shared with County staff.		
5.5 Does the community relay weather related threats to the public in at least two forms of communication?	x		Putnam County's HMP (2021) Section 9.1, Table 9.1-4 lists multiple warning systems and services, including Putnam County Storm Watch, NY-Alert, Code Red, and the Emergency Alert System (p. 7). There are standard procedures for how to communicate about hazards. For example, the Bureau of Emergency Services and Health Departments both indicated an ability to post on social media (https://www.facebook.com/PutnamNYEmergencyServices/ and https://www.instagram.com/putnamhealthny/). For more severe events, there are procedures for reverse 911, Emergency Alert System (EAS) communication etc.		
5.6 Does the community have an emergency response and short-term recovery plan and/or a flood response plan that includes coastal flooding?		x	Putnam County's CEMP Revision 2 (2023) includes response information for hazards, but is not specific to coastal flooding (p. 24-44). It does mention flooding as a risk (p. 18).		
5.6.1 Does the plan describe a hierarchy of authority during emergencies?	x		Putnam County's CEMP Revision 2 (2023) includes information about the hierarchy of authority during emergencies (p. 22-28)		
5.6.2 Does the plan identify first responders?		x			
5.6.3 Does the plan include a list of contacts for operators of municipal facilities?		x			
5.6.4 Is the plan a municipal plan (rather than county or state)?		x	N/A: Putnam County is a county.		
5.6.5 Does the plan indicate the required update frequency?		x	While certain aspects of Putnam County's CEMP Revision 2 (2023) include information about update frequency, the "Response" and "Recovery" sections do not have a mandated update timeline. The "Response" section does require that updated personnel lists for those assigned to work on the EOC must be submitted on a yearly basis at minimum/whenever there is a relevant update (p. 28).		
5.6.6 Does the plan include steps for emergency protective measures e.g., sandbagging, erecting warning devices, and search and rescue?		x	Putnam County's CEMP Revision 2 (2023) does not focus on flooding in particular and does not include recommendations related to sandbagging. The CEMP does include an intention to "test readiness of warning and communications equipment" under Section III-Preparedness (p. 20). The CEMP also indicates that the Fire Service is responsible for search and rescue responsibilities under Section IV-Response, but does not outline concrete steps (p. 26).		
5.6.7 Does the plan include organizational framework to conduct a preliminary damage assessment?	x		Putnam County's CEMP Revision 2 (2023) Section V--Recovery outlines Damage Assessment responsibilities. In Putnam County, local governments are responsible for damage assessments, but the plan outlines steps for how the County will support these assessments (p. 38).		
5.6.8 Are the best available projections concerning the frequency and severity of extreme storm events incorporated into the municipality's emergency response/operations plan?		x			

5.6.9 Does the emergency response/operations plan include coordination and communication among critical stakeholders such as community-based organizations, local businesses, local health departments, utilities and local government leaders?	x		Putnam County's HMP (2021) included a stakeholder survey as part of its process (See Appendix D).		
5.7 Does the community have a designated emergency operations center?	x		Putnam County's HMP (2021) Section 9.1 indicates that prior goals related to the Emergency Operation Center (EOC) have been completed (p. 16). Putnam County's Bureau of Emergency Services website includes additional information about the EOC: https://www.putnamcountyny.gov/pcbes. Putnam County's CEMP Revision 2 (2023) Section IV describes the EOC (see p. 22-28).		
5.7.1 Is it located outside of flood-hazard areas?	x		Putnam County's HMP (2021) Section 9.1 does not list the EOC as a critical facility at risk of flooding (p. 13). Putnam County's CEMP Revision 2 (2023) Section IV includes the EOC address (p. 27), which is not in a flood zone according to the FEMA Flood Map Service Center.		
5.7.2 Is it designed to withstand high winds?	x				
5.7.3 Does it have elevated back-up power?	x				
5.8 Does the community have adequate designated storm shelters?	x		Putnam County has an emergency shelter in their Donald B. Smith Campus and trailers available. Additional shelters are coordinated with towns, villages, and community organizations (see 5.8.1)		
Section 5 – Disaster Preparedness and Recovery					
5.8.1 If the community does not have a designated storm shelter within the community, is there an established memorandum of agreement with a neighboring community or county to provide constituents shelter?	x		Putnam County can enter into agreements with organizations to have storm shelters. The County has agreements with many organizations in the County including the German American Club, St. James, Brewster Cares Group, Carmel Knights of Columbus, and the Red Cross. It also agreements with several agencies and consortiums of churches. The County can provide generators to shelters at partner organizations, but the County does not have control over these storm shelters. There may be restrictions on operating times and who can use shelters at shelters run by partner organizations.		
5.8.2 Are storm shelters located outside flood-hazard areas, including storm-surge inundation areas?	x		At least a portion of the storm shelters are located outside of flood-hazard areas.		
5.8.3 Are storm shelters designed to withstand high-wind effects?		x	Information not found.		
5.9 Does the community have an evacuation plan?	x		While Putnam County does not have a general evacuation plan, it does have an evacuation plan for hurricanes and tropic storms. Specifically, Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024) includes information about evacuation, responsibilities, and communications (see p. 33, p. 37, p. 39, p. 42, p. 44). Additionally, Putnam County has designated evacuation routes. Within Putnam County's HMP (2021) Section 9.1, Table 9.1-12 there is a goal to create an "Emergency Transportation Plan," furthering evacuation planning in the County (p. 27). Furthermore, the County's past Putnam County Indian Point Emergency Guide contains evacuation-related information, although the plan is no longer in use and the services described are no longer available.		
5.9.1 Are responsibilities for municipal evacuation clearly defined?		x	Detailed information about evacuation procedures is available in Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024), but specific roles are not defined.		
5.9.2 Does the plan identify the necessary time frame to evacuate residents and vacationers from storm-hazard areas?		x			
5.9.3 Does the plan identify where evacuation routes are prone to flooding?		x			
5.9.4 Is there more than one route identified to evacuate the community?	x		See Putnam County HMP (2021) Section 9.1 p. 11		
5.9.5 Does the evacuation plan consider the possibility of evacuation of neighboring jurisdictions occurring concurrently?		x			
5.9.6 Does the evacuation plan identify and provide for groups that rely on public transportation (or lack private vehicles) for emergency evacuations?		x	Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024) recognizes people without access to private transportation in their evacuation planning. For example, the plan includes the following as a "pre-Hurricane Watch activity:" "Advise the following residents to consider evacuation based on anticipated post-storm conditions [...] People without private vehicle transportation" (p. 37).		
5.9.7 Does the plan identify the conditions that would initiate a traffic lane reversal?		x			

5.9.8 Does the plan identify local and state evacuation assistance programs for the following special needs?		x	References to some of the following groups is included in the County Hurricane/Tropical Storm Emergency Action Plan. Specific evacuation assistance programs are not identified.		
5.9.8.1 Hospitals		x			
5.9.8.2 Nursing Homes		x			
5.9.8.3 Prisons		x			
5.9.8.4 Residents without personal transportation		x	No relevant local/state evacuation assistance programs found: The Putnam County Hurricane/Tropical Storm Emergency Action Plan (2024) indicates that within 36 hours or less time prior to an expected hurricane, the County should "advise [certain] residents to consider evacuation based on anticipated post-storm conditions" including those without access to personal transportation (p. 37).		
5.9.8.5 Elderly		x	No relevant local/state evacuation assistance programs found: The Putnam County Hurricane/Tropical Storm Emergency Action Plan (2024) indicates that "DOH receives "vulnerable client" lists from Home-based Care Agencies" (p. 33). The Office of Senior Resources can currently reach about ~10% of the senior population in Putnam County, although no programs specifically related to evacuation identified.		
5.9.8.6 Disabled		x	No relevant local/state evacuation assistance programs found. Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024) indicates that within 36 hours or less time prior to an expected hurricane, the County should "advise [certain] residents to consider evacuation based on anticipated post-storm conditions" including people with disabilities (p. 37). The County also maintains some relevant data through the Department of Planning and Transportation and Department of Social Services, but there are opportunities to improve.		
5.9.8.7 Schools		x	No relevant local/state evacuation assistance programs found. Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024) includes information about school closure announcements prior to a storm event, but there is no specific information about evacuation assistance (p. 36). However, in general, Putnam County has strong communication with schools while they are in session. The County also previously maintain information on all daycare centers as part of the Indian Point Evacuation Guide, but this is no longer in place.		
5.10 Does the community maintain and promote a special needs registry?	x				
5.11 Does the municipality inform residents of the **NY-Alert** program?	x		The NY-Alert program is mentioned in Putnam County's HMP (2021) Section 9.1 (p. 7), on Putnam County's Bureau of Emergency Services website, and in Putnam County's CEMP Revision 2 (2023) (p. 31).	**NY-Alert** is a service offered by NYS to alert citizens of hazards and emergencies via email or telephone.	https://www.nyalert.gov/
5.12 Does the municipality have a volunteer **community emergency response team**?	x		Putnam County's Medical Reserve Corp "front-line volunteers" take part in CERT training: https://www.putnamcountyny.gov/mrc.	**Community emergency response team**s, or CERT is a program offered by FEMA to train volunteers in basic response skills so that they can assist others in their communities following a disaster when professional emergency responders are not immediately available to help.	https://www.fema.gov/community-emergency-response-teams
5.13 Does the community have a portable communications system that can operate under poor weather conditions and when electrical power is not available?	x		Putnam County's Hurricane/Tropical Storm Emergency Action Plan (2024) indicates that essential employees should prepare a "Hurricane Kit" equipped with a "portable radio/batteries" prior to a hurricane watch (approximately 72-48 hours prior to a watch)" (p. 34).		
5.14 Is there an adequate heat-warning system in place?	x		Heat warning information is available through NOAA. If there is a heat concern, information can be posted through social media. If the warning is more severe, additional avenues can be used to push the message.		

5.15 Is a cooling-center program established that considers potential problems such as transportation obstacles, effects of power outages or flooding and other needs of vulnerable populations/communities?	x		Cooling Center Program: Putnam County's HMP (2021) Section 5.4.4.1 indicates that cooling shelters are provided when needed (p. 1). However there may be places to improve. For example, Putnam Lake is a community that experiences moderate heat vulnerability according to the New York State Department of Health's Heat Vulnerability Index map, but does not have a cooling center. According to the map, Putnam Lake's heat vulnerability is 4 out of a possible 7 on the Heat Vulnerability Index Scale: https://www.health.ny.gov/environmental/weather/vulnerability_index/docs/nys_hvi.pdf. Power Outages: A 2023 News and Press Release from the Department of Public Health indicates that there were two cooling centers that could withstand power outages during a particular heat event. The current status of backup power sources at cooling centers was not found: https://www.putnamcountyny.gov/component/200/item/get-ready-hot-weather-will-soon-be-here?Itemid=101. Vulnerable Populations: A 2025 News and Press Release from the County Executive indicates that senior centers serve as cooling shelters: https://www.putnamcountyny.gov/county-executive-articles/item/byrne-to-declare-state-of-emergency-in-putnam-due-to-extreme-heat. Cooling facilities at senior centers are typically intended for senior populations. Transportation: Putnam County's Climate Smart Community's profile indicates that there are public transportation stops near cooling centers: https://climatesmart.ny.gov/actions-certification/participating-communities/certification-report/?tx_sjcert_certification%5Bcertification%5D%5B__identity%5D=224&tx_sjcert_certification%5Baction%5D=show&tx_sjcert_certification%5Bcontroller%5D=Certification&cHash=a69ec2d15bd73f68aa4f1abd826c0c34. Flooding: Information not found.		
5.16 Does the community have a continuity of operations plan?	x		There are current intentions to create COOPs on a department-by-department basis.		
5.16.1 Does the plan provide guidance on post-disaster waste management and debris removal?		x	Putnam County has a Disaster Debris Management and Removal Plan that operates like standard operating procedures.		
5.16.1.1 Is machinery for debris removal located outside of flood hazard areas?	x		Machinery and stockpiles are located outside of the floodplain.		
5.16.1.2 Are routes to waste-disposal facilities passable in the event of a flood?		x	N/A: There are no County-run waste disposal or transfer stations. The three town-owned transfer stations in Patterson, Kent, and Philipstown are not located within the floodplain, although it is unknown if transportation routes to the facilities are passable during flood events.		
5.16.1.3 Are temporary waste-disposal staging areas identified in the event of a disaster?	x		Yes, in designated areas.		
Section 5 – Disaster Preparedness and Recovery					
5.17 In the event of a disaster, are procedures defined to conduct habitability and substantial damage assessments?		x	Habitability and substantial damage assessments are not mentioned. However, Putnam County's CEMP Revision 2 (2023) outlines responsibilities for damage assessments more broadly (p. 37).		
5.18 Does the community store **FEMA elevation certificates** outside of flood-hazard areas?			Information not found.	**FEMA elevation certificates** provide documentation that buildings located in Special Flood Hazard Areas are properly elevated. Elevation certificates can be used by the property owner to obtain flood insurance.	https://www.fema.gov/elevation-certificate
5.19 Does the community have a **long-term recovery plan**?			Information not found.	A **long-term recovery plan** provides guidelines on steps the community will take to re-establish a pre-disaster condition or better, and enable to community to sustain itself.	http://www.dhses.ny.gov/planning/cemp/documents/NYS-CEMP-Vol.3-Long-Term-Recovery-2017.pdf
5.19.1 Does the plan identify redevelopment opportunities outside of flood-hazard areas?		x	N/A		
5.19.2 Does the plan advocate the use of advisory flood maps to define post-disaster redevelopment building elevations?		x	N/A		
5.19.3 Does the plan identify opportunities to retrofit or relocate existing structures or infrastructure in hazard-prone areas?		x	N/A		
5.19.4 Does the plan utilize risk and vulnerability mapping to determine the location of future development?		x	N/A		

5.19.5 Has the community identified the lines of coordination in transitioning from short-term to long-term recovery?		x	N/A		
5.19.6 Does the plan include an organizational framework that facilitates the effective coordination and use of state, federal, and NGOs resources in a manner that provides maximum benefit for the disaster area?		x	N/A		
5.19.7 Does the plan identify roles and functions of elected and appointed officials, state and federal agencies, and NGOs?		x	N/A		
5.19.8 Does the recovery plan include provisions to reduce greenhouse gas emissions from reconstructed areas through improved energy efficiency, use of renewable sources of energy and application of smart-growth principles?		x	N/A		
5.20 Has the community adopted floodplain development limits that prohibit or reduce any new encroachment and fill in river corridors and fluvial erosion hazard areas?		x	N/A: land use decisions are made at the local level		
5.21 Has the community encouraged agricultural and other landowners to implement pre-disaster mitigation measures, such as the following?					
5.21.1 Storing hay bales and equipment in areas less likely to be flooded?		x	The County does not do outreach to farms about implementing pre-disaster mitigation measures. The "Agricultural & Farmland Protection Plan For Putnam County" (2004) report does not included pre-disaster mitigation measures.		
5.21.2 Installing ponds or swales to capture storm water?		x	The County does not do outreach to farms about implementing pre-disaster mitigation measures. However, on the Tilly Foster Farm property (County-owned), the County has installed ponds, swales, and rain gardens. The "Agricultural & Farmland Protection Plan For Putnam County" (2004) report does not included pre-disaster mitigation measures.		
5.21.3 Planting vegetation that can tolerate inundation?		x	The County does not do outreach to farms about implementing pre-disaster mitigation measures. The "Agricultural & Farmland Protection Plan For Putnam County" (2004) report does not included pre-disaster mitigation measures.		
5.21.4 Using land management practices to improve the capability of the soil on their lands to retain water?		x	The County does not do outreach to farms about implementing pre-disaster mitigation measures. The "Agricultural & Farmland Protection Plan For Putnam County" (2004) report does not included pre-disaster mitigation measures.		
5.21.5 Have long-term recovery plans been developed for areas vulnerable to flooding and coastal storms?		x	There are not specific long-term recovery plans for areas vulnerable to flooding. However, related information is available in the Putnam County Hazard Mitigation Plan (2020), Putnam CEMP Revision 2 (2023), and Public Health Emergency Preparedness and Response (PHEPR) Plan (2024)		
5.22 Does the local government have the authority to establish a temporary post-disaster building moratorium?		x	N/A		

Section 6 – Hazard Mitigation Implementation	Yes	No	Notes	Definitions	References
6.1 Has the municipality taken the **Climate Smart Communities Pledge?**	x		Putnam County's Climate Smart Communities profile indicates that it is "bronze" certified. Putnam County's HMP (2021) Section 9.1, Table 9.1-7 indicates that it took the CSC pledge in 2019 (p. 9).	**Climate Smart Communities** is a network of NY communities engaged in reducing greenhouse gas emissions and improving climate resilience.	http://www.dec.ny.gov/energy/50845.html
6.2 Has the municipality created a local **Climate Action Plan**?		x		A **Climate Action Plan** describes the policies and measures that a local government will enact to reduce greenhouse gas emissions and increase the community's resilience to climate change.	http://www.dec.ny.gov/energy/67101.html
6.3 Is the municipality active in the National Flood Insurance Program's **Community Rating System**?		x	Putnam County's HMP (2021) Section 9.1, Table 9.1-7 indicates that the county does not participate in the CRS program (p. 9).	The FEMA **Community Rating System** is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceeds the minimum National Flood Insurance requirements.	https://www.fema.gov/national-flood-insurance-program-community-rating-system
6.4 Has the municipality proposed the relocation of public buildings, critical facilities, or infrastructure out of flood hazard areas as a result of the multi-hazard mitigation plan or other planning tools?		x	Putnam County's HMP (2021) Section 9.1, Project PCBES-12 indicates that the County had a plan to work with municipalities to prepare for the relocation of houses out of the floodplain, but the project status is "discontinue[d]" (p. 18). Within the HMP, Putnam County does not include a specific goal pertaining to relocation of "public buildings, critical facilities or infrastructure."		
6.5 Has the municipality used its multi-hazard mitigation plan to propose retrofitting public buildings, critical facilities and other infrastructure to withstand flood damage?	x		Putnam County's HMP (2021) Section 9.1 states that the "County Department of Highway and Facilities continues to undertake risk reduction projects such as retrofits and hardening of existing structures, including bridges, roads, and abutments" (p. 10).		
6.6 Do municipal building codes exceed the state's 2-foot freeboard above base flood elevation requirement?		x	N/A: Building Codes are not completed at the county-level		
6.7 Have building and permitting officials completed **training** on retrofitting flood-prone residential buildings?		x	N/A	**Training** on retrofitting flood-prone buildings is available through FEMA.	- https://training.fema.gov/emicourses/crsdetail.aspx?cid=E279&ctype=R
6.8 Have building and permitting officials completed **training** in FEMA's **Coastal Construction Manual**?		x	N/A	Training on Residential Coastal Construction is available through FEMA.	Coastal Construction Manual
6.9 Have community officials competed post-flood stream intervention training?		x			
6.10 Does the community provide property owners with guidelines to retrofit existing development for flood and wind risks?	x		The Soil and Water Conservation District can support property owners with flooding concerns by conducting an inspection and providing advice on how to improve.		
6.11 Does the municipality utilize any of the following tools to manage development in hazard-prone areas?					
6.11.1 Transfer of development rights or purchase of development rights		x	"An Agricultural & Farmland Protection Plan for Putnam County" (2004) Goal 5 recommends using "purchase of development rights" tools. However, this recommendation does not necessarily aim to address hazard prone areas, instead focusing on agricultural protection (p. 6).		
6.11.2 Conservation overlay districts or cluster development		x	N/A: Overlay districts and cluster development not determined at the county-level.		
6.11.3 Zoning for open or recreational space		x	N/A: Zoning is not completed at the county-level.		
6.11.4 Protective coastal, riparian and/or wetland buffer ordinances		x	N/A: Not determined at the county-level.		
6.11.5 Rolling easements		x	N/A: Not determined at the county-level.		

6.11.6 Buyouts of vulnerable properties		x	While the County does not conduct buyouts, vulnerable properties are sometimes acquired during foreclosure.		
6.11.7 Other:	x		The NYCDEP owns a substantial amount of land in Putnam County for the purpose of watershed protection.		
6.12 Does the municipality use land-acquisition programs to purchase land-conservation easements in hazard-prone areas?		x	While the County does not use land-acquisition programs, NY DEP, nonprofits (i.e. Scenic Hudson, Open Space Institute, Friends of the Great Swamp), and land trusts (i.e. Hudson Highlands & Putnam Land Trust) do acquire land in hazard-prone areas.		
6.13 Does the community utilize impact fees, accommodation taxes or user fees to acquire properties in hazard areas?		x			
6.14 Does the municipality have a plan for **shoreline stabilization**?		x	Putnam County's HMP (2021) Section 9.1 indicates that the County does not have a Shoreline Management Plan (p. 5).	**Shoreline stabilization -** protecting or restoring natural shorelines have many ecological and resilience benefits.	http://www.dec.ny.gov/permits/50534.html
Section 6 – Hazard Mitigation Implementation					
6.15 Is the automatic replacement of hardened structures prohibited?		x	Putnam County's County Code does not include provisions prohibiting the replacement of hardened structures.		
6.16 Are sustainable enhanced methods of shoreline protection encouraged through incentives or regulation?		x	N/A: Putnam County's HMP (2021) Section 9.1 indicates that a Shoreline Management Plan is "not applicable" to the County (p. 5).		
6.17 Does the community inform property owners of preferred sustainable shoreline protection techniques, including non-structural and ecologically enhanced methods?		x	N/A: see 6.16		
6.18 Does the municipality have a plan in place to control invasive plant species, especially near the shoreline?		x			
6.19 Does the community engage in dune, wetland or shoreline restoration?	x		There are wetland restoration projects in Putnam County including at the Putnam County Golf Course in Mahopac and Lake Gleneida in Carmel.		
6.20 Has the community established special area ordinances for habitat preservation?		x	N/A: Zoning is not completed at the county-level.		
6.21 Does the community utilize impact fees, accommodation taxes or user fees to pay for shoreline protection and restoration, wetland restoration or riparian buffers?		x			
6.22 Are community flood control or other protective structures (e.g., levees, flood or sea walls) inspections on schedule?		x	N/A		
6.23 Has the community used any of the following grant programs to implement mitigation projects?					
6.23.1 FEMA Hazard Mitigation Grant Program		x	The HMGP program was identified as a potential source of funding. For example, Putnam County's HMP (2021) Section 9.1 lists the HMGP program as a potential funding source for a highways generator project (p. 33), a materials storage project (p. 41), a gas station generators project (p. 23), and a capacity-building project (p. 27) within its "Proposed Hazard Mitigation Initiatives."	The purpose of the FEMA Hazard Mitigation Grant Program is to help communities implement hazard mitigation measures following a Presidential major disaster declaration.	https://www.fema.gov/hazard-mitigation-grant-program
6.23.2 FEMA Pre-disaster Mitigation Grant Program	x		Putnam County has been awarded a grant to complete a 5-year update of their Hazard Mitigation Plan with Tetra Tech. Putnam County's HMP (2021) Section 3 mentions that FEMA Pre-disaster Mitigation funding "supported the development of this update of this multi-jurisdictional HMP" (p. 2).	The FEMA Pre-disaster Mitigation Grant Program is designed to assist States, U.S. Territories, Federally-recognized tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program.	https://www.fema.gov/pre-disaster-mitigation-grant-program
6.23.3 FEMA Flood Mitigation Assistance Program		x	Putnam County is not typically a partner on the types of projects funded by this source.	The FEMA Flood Mitigation Assistance Grant Program provides resources to assist states, tribal governments, territories and local communities in their efforts to reduce or eliminate the risk of repetitive flood damage to buildings and structures insurable under the National Flood Insurance Program.	https://www.fema.gov/media-library-data/1455713459393-9488467786258093783cd6d9a8024a953/FY16_FMA_Fact_Sheet.pdf
6.23.4 HUD Community Development Block Grants		x	No projects found funded by this source. Putnam County is typically not eligible for this funding source.	The Community Development Block Grant, or CDBG, program provides annual grants on a formula basis to 1209 general units of local government and States.	https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs
6.23.5 Other:	x		Federal Highway Administration (FHWA) grants are often used for infrastructure projects and are designed with flooding and resilience in mind.		

Appendix C: Putnam County Partnership Survey

Background Information

A partner organization survey was sent to local organizations and community groups in Putnam County. The survey was also available on Putnam County's CCARP webpage for organizations to fill out. The survey collected information on the existing resilience capacities within organizations in Putnam County and how/if organizations would like to be included in the CCARP process. See below for information on the survey and outreach conducted.

Survey Questions



Putnam County Partnership Survey

Putnam County is currently working on a Climate Change Adaptation & Resilience Plan that will include the following components:

- The Climate Vulnerability Assessment will evaluate the climate hazards impacting the County and the social, environmental, and infrastructural assets at risk. Climate hazards are the physical climate effects that Putnam County is facing, such as extreme heat, changing precipitation, and sea level rise.
- The Climate Adaptation Plan will outline strategies for the County to address these hazards and to build safer, more resilient communities as these hazards increase in the future.

While developing these plans, the County will rely on community input in order to:

- Prioritize the local assets and climate hazards the community finds most important.
- Develop a shared community vision for a climate resilient Putnam County.
- Ensure that recommendations for climate adaptation support County priorities and work toward the community vision.

Community partners are a core part of our process. This 5-minute survey is intended to provide a chance for you to tell us whether and how your organization may want to be involved.

Involvement might include sharing information with your network, filling out surveys, and/or participating in events. Participation is flexible, and we welcome involvement at the level you are most comfortable with.

We particularly encourage organizations that are not directly related to climate and resilience topics to fill out this survey. Please share as much information as you are comfortable.

1. Organization name *

Enter your answer

2. Are you a resident of Putnam County, or does your organization conduct work within Putnam County? *

- ◯ Yes
- ◯ No

3. Please share a few words about your organization (50 words max.): *

Enter your answer

4. This question will help us assess how your organization's work intersects with climate resiliency planning. Mark your organization's functions below, if any apply.

Note: Climate adaptation planning aims to reduce risks from climate hazards and build resilience to those hazards. It requires practitioners and knowledge across many areas, including emergency preparedness, connecting with and providing services to stakeholders, understanding the local environment/infrastructure, etc.

Climate hazards can also impact many parts of community life. For example, hazards can disproportionately impact vulnerable communities, affect local jobs, influence health and well-being, etc. As such, resiliency planning touches on many focus areas, not just those directly related to the environment. *

	Primary part of our organization's work	Regular part of our organization's work	Minor part of our organization's work	Not a function of our organization
Targeted social services for underserved community members (e.g., case management, outreach, or advocacy on behalf of low-income households, people with disabilities, people facing language barriers, etc.)	◯	◯	◯	◯
Emergency preparedness, response, or long-term recovery (including warming/cooling centers or other shelter during extreme weather)	◯	◯	◯	◯
Food or other basic needs assistance	◯	◯	◯	◯
Residential services for unhoused people or animals	◯	◯	◯	◯
Residential healthcare or rehabilitation services	◯	◯	◯	◯
Crisis shelter, safety, or survivor support services	◯	◯	◯	◯
Public health, physical health, or mental health services	◯	◯	◯	◯

Environmental conservation, restoration, or maintenance	○	○	○	○
Sustainability or climate mitigation initiatives	○	○	○	○
Education or youth services	○	○	○	○
Spiritual guidance or faith-based support	○	○	○	○
Career assistance or job training	○	○	○	○
Utilities (e.g., home electricity, water)	○	○	○	○
Research or data analysis related to environmental, social, infrastructural, or community resilience	○	○	○	○
Historic preservation	○	○	○	○
Artistic preservation or art-related community activities	○	○	○	○

5. Please mark your interest in the following, so we can reach out to you with relevant opportunities. Responses are non-binding and will be used to inform the planning process; you may opt in or out at any time. *

	Very interested	Potentially interested	Not interested/Don't have the capacity to support
Receive information about the climate adaptation & resilience planning process	○	○	○
Share information about the Climate Change Adaptation & Resilience Plan with your network.	○	○	○
Share links/information about surveys and upcoming events with your network.	○	○	○
Provide technical feedback on specific aspects of the plan.	○	○	○
Provide input through county-hosted virtual events and workshops.	○	○	○
Provide input through county-hosted in-person events and workshops.	○	○	○

Provide input on drafts of the plan.	◯	◯	◯
Partner on events/projects (i.e., tabling at events, handing out flyers, or directly co-hosting events).	◯	◯	◯

6. Do you have any upcoming events where information about the Climate Change Adaptation & Resilience Plan process could be shared? *

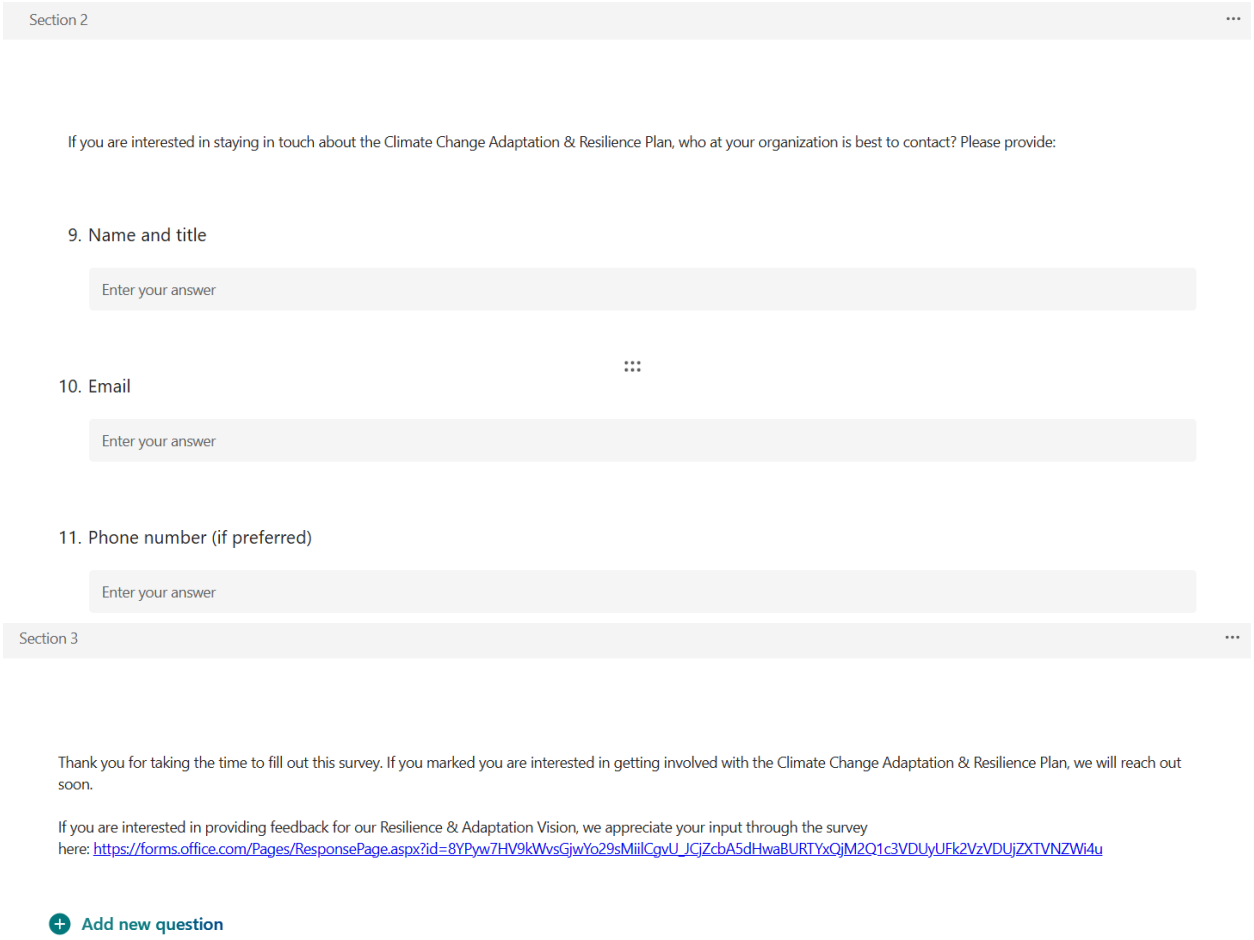
- ◯ Yes, please provide information that we can hand out at the event
- ◯ Yes, we are open to inviting the adaptation and resilience planning team to table at the event
- ◯ No
- ◯ Not sure

7. Please describe the event and provide the scheduled date and time, if available.

Enter your answer

8. Organizations are invited to submit a letter of support for the Climate Change Adaptation & Resilience Plan. Would your organization be interested in contributing a letter of support? If so, the planning team will follow up with a letter template. *

- ◯ Yes, we would be interested in contributing a letter
- ◯ Not sure, please follow up with more information
- ◯ Not at this time



List of Organizations

The following organizations were invited to participate in the Partner Organization Survey by email.

Organization
Putnam Service Dogs Inc
Pegasus Therapeutic Riding Inc
Saw Mill River Kennel Club
Putnam Humane Society
SNARR Northeast Animal Rescue
Putnam Felines Inc.
Haldane Arts Alliance
Arts on the Lake
Garrison Art Center
Magazzino Italian Art
Hudson Valley Interarts
Town of Southeast Cultural Arts Coalition
Tomkins Corner Cultural Center

Cold Spring Fire Co No 1
Philipstown Volunteer Ambulance Corps Inc
Patterson Fire Department No 1
Putnam Lake Fire Department
Putnam Valley Volunteer Fire Department
Putnam Valley Volunteer Ambulance Corp Inc
Brewster Fire Department
Brewster Cares Inc
United Way of Westchester and Putnam County
Carmel Volunteer Ambulance Corp
Continental Village Fire Department
Garrison Volunteer Fire Company, Inc
Kent Volunteer Fire Department
Lake Carmel Fire Department
Carmel Fire Department
Mahopac Volunteer Fire Department
Mahopac Falls Volunteer Fire Department
North Highlands Engine Company #1
CoveCare Center
Red Cross
St. Christopher's Inn
Prevention Council of Putnam
Walter Hoving Home
Putnam Highlands Audubon Society
Protect the Highlands
Kent Conservation Foundation
Hudson Valley Trust Inc
Putnam County Land Trust
Constitution Marsh Audubon Sanctuary
Hudson Highlands Land Trust
Rotary Club of Patterson
Rotary of Southeast
Stonecrop Gardens Inc
East of Hudson Watershed Corporation
Lake Oscawana Civic Association Inc
Cornell Cooperative Extension Putnam County
Little Stony Point Citizens Association
Philipstown Garden Club
Putnam Community Action partnership
Putnam Valley Community Food Pantry Ltd

Brewster Food Pantry
Second Chance Foods
Glynwood Center for Regional Food and Farming
Cold Spring Farmers Market
Philipstown Behavioral Health Hub
Orentreich Foundation for the Advancement of Science
The Putnam Valley Historical Society
Landmarks preservation society of Southeast
Putnam History Museum
Southeast Museum
Boscobel House and Gardens
Julia L Butterfield Memorial Library
Patterson Library
Putnam Valley Free Library
Reed Memorial Library
Brewster Public Library
Mahopac Public Library
Kent Public Library
Friends of Kent Library
Desmond-Fish Public Library
Putnam Valley Boosters
Holmes Camp and Retreat Center
Camp Herrlich
Chuang Yen Monastery
Reform Temple of Putnam Valley
Grace Life Community Church
Gilead Presbyterian Church
First Presbyterian Church of Philipstown
Patterson Community Church
St. Luke's Lutheran Church
Franciscan Friars of the Atonement
Franciscan Sisters of the Atonement
Sustainable Putnam County
Garrison Institute
Knights of Columbus (Our Lady of the Lakes - Council No. 631)
German American Club of Peekskill
Hamlet of Carmel Civic Association
Hastings Center for Bioethics
Longview School
Putnam Area Arts Council

Child Care Council of Dutchess and Putnam Inc.
CAREERS Support Solutions
ARC of Putnam/Mid-Hudson
Putnam Independent Living Services
Putnam/Northern Westchester Women's Resource Center
Putnam/Northern Westchester Boards of Cooperative Educational Services (BOCES)
Drew Thrift Shop
Green Chimneys Brewster Campus (Main office)
St. John the Evangelist Catholic Church
Table of Grace Community Food Kitchen at First United Methodist Church
CasaServir
People USA Putnam Rose House
Open Door Family Medical Center
Affiliated Home Care of Putnam, Inc.
Putnam County Housing Corporation
Hudson Valley Regional Community Health Centers
Putnam Hospital Center
Hudson Valley Cerebral Palsy Association
Mental Health Association in Putnam County, Inc.
NAMI (National Alliance on Mental Illness) Putnam Chapter
Carmel Recreation & Parks Department
Kent Recreation & Parks
Philipstown Recreation Department
Putnam Valley Parks & Recreation Department
Town of Patterson Recreation & Parks
Town of Southeast Parks & Recreation
Girl Scouts Heart of the Hudson
Central Hudson
NYSEG
Child Advocacy Center of Putnam County
Nelsonville Village Historian
Philipstown Town Historian
Carmel Town Historian
Kent Town Historian
Patterson Town Historian
Putnam Valley Town Historian
Southeast Town Historian
St. Mary's Episcopal Church
Friends of the Great Swamp

Partnership Survey on County CCARP Website

The partnership survey was also advertised on the Putnam County CCARP Website.



Outreach

Partner organizations were contacted throughout the development of the CCARP to share outreach materials and event information. Examples of outreach strategies/materials are included below:

- March 12, 2026: Emailed an outreach flyer to three partner organizations and asked them to share at upcoming events based on survey responses to question 7.
- March 30, 2026: Emailed an outreach flyer to two partner organizations and asked them to share at upcoming events based on survey responses to question 7.

Putnam County is developing a

CLIMATE ADAPTATION AND RESILIENCE PLAN (CCARP)

Putnam County is partnering with the Hudson Valley Regional Council (HVRC) to create a CCARP that assesses risks from a changing climate and identifies **targeted adaptation strategies** to prepare for these risks.

Projections suggest that the County could see **higher temperatures, more intense & frequent precipitation, and rising sea levels** in the coming decades. Planning for these possibilities can help Putnam County remain safe and resilient under a range of future conditions.

THE PUTNAM COUNTY CCARP

- Analyzes Putnam County's current plans and policies related to emergency preparedness, operations, management of County assets, etc.
- Reviews temperature, precipitation, and sea level projections.
- Identifies risks to physical infrastructure, people, local economies, and environmental resources.
- Provides recommendations to improve county-wide resilience and adaptive capacity.

The plan will be created through stakeholder input, public feedback, and research.

Timeline: The planning process started in September 2025 and is expected to be completed in Summer 2026.



Putnam County, NY | Image from NYG&B

GET INVOLVED & LEARN MORE

Visit the CCARP website for additional information about the CCARP project and current engagement opportunities:

https://putnamcountyny.gov/ccarp

For questions, contact:
sditommaso@hudsonvalleyrc.org

CCARP AND CLIMATE SMART COMMUNITIES

Climate Smart Communities (CSC) is a New York State certification program to support communities to mitigate and adapt to a changing climate. Putnam County can submit the completed CCARP for credit through the CSC program. Doing so will increase Putnam County's competitiveness for grant funding and build on its existing leadership as a CSC Bronze Certified community.

The CCARP is fully funded by the New York State Department of Environmental Conservation as part of the Climate Smart Communities Coordinator Services Program.

- April 6, 2026: Email outreach to 14 organizations to invite them to either attend the CCARP Lunch & Learn on April 21st, share information about the event with their networks, or both, depending on their survey responses to Question 5.



Appendix D: CCARP Working Group

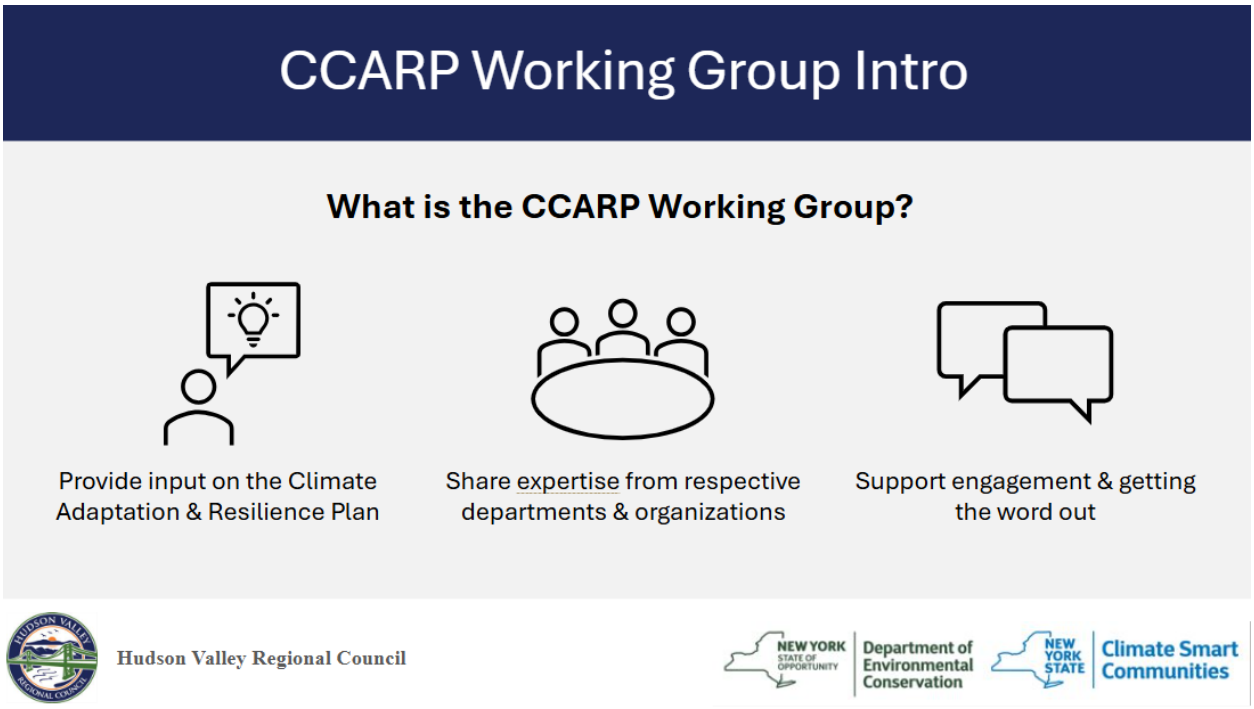
CCARP Working Group Members

Name	Affiliation	Title
Ilona Campo	Putnam County Planning Dept.	Planner / Climate Smart Coordinator
Barbara Barosa	Putnam County Planning Dept.	Commissioner / CSTF Member
Matt Covucci	Putnam County Planning Dept.	Deputy Commissioner
Sofie diTommaso	Hudson Valley Regional Council (HVRC)	Resilience & Adaptation Coordinator
Mary Lambert	Hudson Valley Regional Council (HVRC)	Climate Action Planning Manager
Ralph Falloon	Putnam County Bureau of Emergency Services (BES)	Deputy Commissioner
Joe Bellucci	Putnam County Dept. of Public Works (DPW)	Deputy Commissioner / CSTF Member
Gary Redlon	Putnam County Dept. of Public Works (DPW)	Coordinator of Engineering Projects
Shanna Siegel	Putnam County Health Dept.	Supervising Public Health Educator / Public Information Officer
Marlene Barrett	Putnam County Office of Senior Resources (OSR)	Director
Nancy Montgomery	Putnam County Legislature	Legislator – District 1 (Philipstown, Cold Spring, Garrison, Continental Village, Nelsonville, North Highlands, Putnam Valley)
Joe Montuori	Sustainable Putnam	Executive Director / CSTF Member

CCARP Working Group Kick-Off at Scenario Planning Workshop Part 1 (Feb 9, 2026)

The CCARP Working Group was assembled to support the adaptation plan component of the CCARP. The first official meeting of the CCARP working group occurred on February 9, 2026 as part of Putnam County's Scenario Planning Workshop Part 1 on February 9, 2026.

The slide below was used to introduce the CCARP Working Group during the Workshop on February 9th. Additional documentation about the meeting can be found in Appendix E.



CCARP Working Group & Scenario Planning (March 9, 2026)

Members of the CCARP Working group were invited to join the second Scenario Planning Part 2 Workshop on March 9, 2026, along with additional participants. Members of the CCARP Working

Group in attendance include the following:

- Barbara Barosa, Commissioner, Putnam Planning Dept.
- Marlene Barrett, Director, Putnam Office of Senior Resources
- Ilona Campo, Planning/CSC Coordinator, Putnam Planning Dept.
- Matt Covucci, Deputy Commissioner, Putnam Planning Dept.
- Sofie diTommaso, (Former) Resilience & Adaptation Coordinator, HVRC
- Nancy Montgomery, Legislator—District 1, Putnam County Legislature
- Gary C. Redlon II, Coordinator of Engineering Projects, Putnam Dept. Of Public Works

A full list of the Scenario Planning Part 2 Workshop Participants can be found in Appendix E.

Indicators & Metrics Internal Meeting

Members of the CCARP Working Group were invited to participate in a meeting to discuss the Indicators and Metrics Section of the CCARP on April 6, 2026 from 2:00-3:00 pm. Members in attendance included: Barbara Barosa, Ilona Campo, Matt Covucci, Victoria DiLonardo, Sofie diTommaso, Spencer Greenfield, Joe Montuori, Nancy Montgomery, Gary Redlon.

- Additional information about this meeting can be found in Appendix A (See Meeting 12).

CCARP Implementation Internal Meeting

Members of the CCARP Working Group were invited to participate in a meeting to discuss the Implementation and Monitoring sections of the CCARP on May 18, 2026 from 10:30-11:30 am. Working Group members in attendance included: Ilona Campo, Matthew Covucci, Sofie diTommaso, and Gary Redlon II.

- Additional information about this meeting, and the full attendance list, can be found in Appendix A (See Meeting 15).

Additional Outreach & Engagement

April 6, 2026: The CCARP Working Group was encouraged to spread the word about Putnam County's CCARP Lunch & Learn Event by email (See Appendix I for additional information about the Lunch & Learn).

Appendix E: Exploratory Scenario Planning Workshop Documentation

Scenario Planning Workshop Part 1

Logistics:

- **Date + Time:** February 9, 2026, 2:00-3:00 pm (in-person)
- **Location:** In-person: Planning Dept. Conference Room - 841 Fair St., Carmel, NY 10512

Event Details:

The Scenario Planning Workshop Part 1 opened with a short presentation by HVRC. The presentation included:

- A project overview and update on the CCARP process;
- An introduction to the CCARP working group and purpose;
- An overview of exploratory scenario planning;
- A summary of the climate hazards facing Putnam County; and
- An introduction to the workshop activity.

Following the presentations, participants broke into two small group discussions, each with an HVRC facilitator and a notetaker. Each group discussed two potential future scenarios for Putnam County. Scenarios included various combinations of high/low climate impacts and high/low County capacity—referring to staff time, funding availability, community buy-in, competing priorities, and volunteer support.

A copy of the worksheet/discussion prompts used to guide the conversations can be found below under "Sample Worksheet Packet." The workshop concluded with a short debrief and overview of next steps.

A link to the County's Resilience & Adaptation Vision Statement Survey was also shared. At the end of the workshop, participants were given a copy of the County's Draft Climate Smart Resilience Planning Summary Report as optional pre-reading before the next scenario planning workshop.

Following the workshop, comments/feedback were synthesized to write four, narrative scenarios. The narratives generated can be found below under "Scenario Narratives." The narrative scenarios will be used in the subsequent scenario planning workshop.

Workshop Invitation

Dear CCARP Working Group Members,

As part of Putnam County's commitment as a Climate Smart Community (CSC), please join us for **Part 1 of the Scenario Planning Workshop series** on **Monday, February 9, from 2:00-3:00 pm**.

The purpose of this workshop is to generate a set of scenarios through collaborative discussions. The outputs will be used in a subsequent workshop (tentatively scheduled for March 9th) to evaluate potential adaptation strategies for inclusion in Putnam County's CCARP.

Scenario planning is a tool that will be used to evaluate potential adaptation strategies for inclusion in Putnam County's Climate Change Adaptation and Resilience Plan (CCARP). **The scenario planning process involves crafting narrative-based "scenarios" that outline possible futures for the County.** These scenarios will be used to generate and assess potential adaptation strategies in order to evaluate their effectiveness under a variety of conditions.

· **RSVP: Please accept or decline this calendar invite.**

· Date: Monday, February 9, 2026

· Time: 2:00-3:00pm

· Location: Planning Dept. Conference Room, 841 Fair St., Carmel, NY 10512

Looking forward,

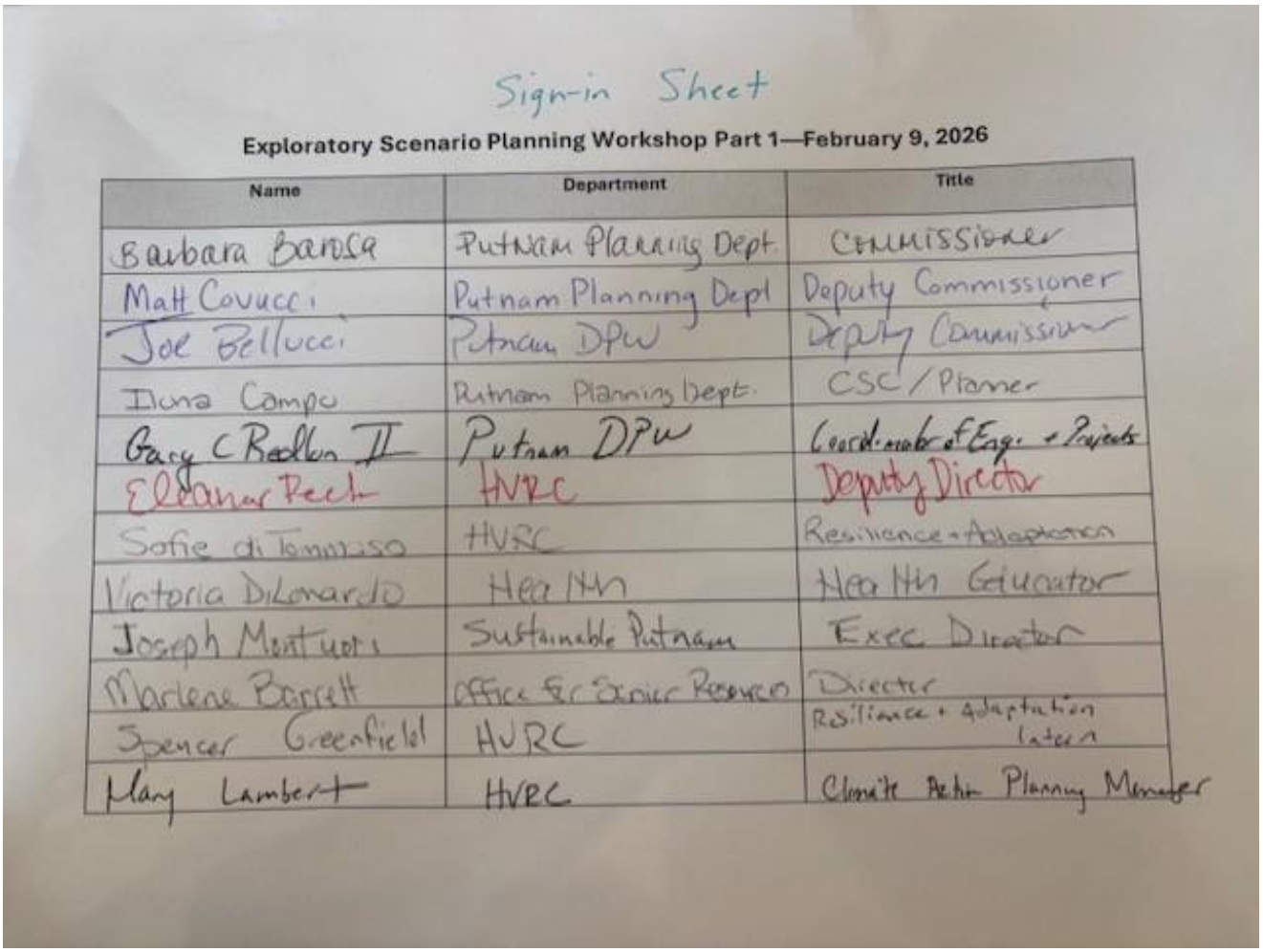
Ilona Campo
Planner / Climate Smart Coordinator
Department of Planning, Development, and Public Transportation
PHONE | (845) 878-3480 **EXT** | 48104
WEBSITE | PUTNAMCOUNTYNY.GOV
ADDRESS | 841 Fair Street, Carmel, NY 10512
PUTNAM COUNTY GOVERNMENT NEW YORK
Think green before printing your screen!

Workshop Agenda Slide



Attendance List + Sign-In Sheet

- Barbara Barosa, Commissioner, Putnam Planning Dept.
- Marlene Barrett, Director, Putnam Office of Senior Resources
- Joe Bellucci, Deputy Commissioner, Putnam Dept. of Public Works
- Ilona Campo, Planning/CSC Coordinator, Putnam Planning Dept.
- Matt Covucci, Deputy Commissioner, Putnam Planning Dept.
- Victoria DiLonardo, Health Educator, Putnam Dept. of Health
- Sofie diTommaso, Resilience & Adaptation Coordinator, HVRC
- Spencer Greenfield, Resilience & Adaptation Intern, HVRC
- Mary Lambert, Climate Action Planning Manager, HVRC
- Joseph Montuori, Executive Director, Sustainable Putnam
- Eleanor Peck, Deputy Director, HVRC
- Gary C. Redlon II, Coordinator of Engineering Projects, Putnam Dept. Of Public Works



Sign-in Sheet

Exploratory Scenario Planning Workshop Part 1—February 9, 2026

Name	Department	Title
Barbara Barosa	Putnam Planning Dept	Commissioner
Matt Covucci	Putnam Planning Dept	Deputy Commissioner
Joe Bellucci	Putnam DPW	Deputy Commissioner
Dana Campo	Putnam Planning Dept.	CSC / Planner
Gary C Bodkin II	Putnam DPW	Coordinator of Eng. + Projects
Eleanor Peck	HVRC	Deputy Director
Sofie di Tommaso	HVRC	Resilience + Adaptation
Victoria DiLonardo	Health	Health Educator
Joseph Montuori	Sustainable Putnam	Exec Director
Marlene Barrett	Office for Senior Resources	Director
Spencer Greenfield	HVRC	Resilience + Adaptation Intern
Mary Lambert	HVRC	Climate Action Planning Manager

Sample Worksheet Packet

Scenario #1

Scenario Title: _____

Overview: This worksheet packet is designed to facilitate the creation of exploratory future scenarios for Putnam County's Climate Change Adaptation and Resiliency Planning process. It includes (1) background information on your assigned scenario, (2) a list of prompts and questions to consider, (3) a copy of the exploratory scenario planning matrix, (4) a handout on climate projections, and (5) places to take notes.

Instructions: Spend 15-20 minutes discussing your assigned scenario with your group. During the discussion, you are encouraged to take notes and jot down comments. The more feedback provided, the more robust the scenario planning process will be. You are also encouraged to give your scenario a creative title.

This worksheet is designed to provide inspiration for your conversation. You are not required to fill out every section of this worksheet, and your conversation does not need to be limited to just the questions listed below.

- As you craft your scenarios, consider this key question: How do future conditions related to the **degree of expected climate impacts** and **Putnam County capacity** influence climate resilience and adaptation in Putnam County, NY?

Scenario 1 Background: It's 2035 in Putnam County. In this version of the future, the degree of expected climate impacts is high. This means that expected sea level rise, changes to precipitation patterns, and increases in temperatures have followed high climate projections. At the same time Putnam County capacity is low. This means that funding availability, staff time, and volunteer support is low. There may also be a lot of competing priorities within Putnam County or a lack of buy-in from the community.

Questions to Consider

Prompt	Questions	Notes
A: You are determining your office's priorities...	What are the main conversations happening in the office? What challenges are you facing? Which are the highest priority challenges? What resources do you have? What do you need? Who are you collaborating with? What is your #1 priority?	
B: Assess County conditions in your future scenario & describe your day-to-day observations.	How does this combination of climate impacts + capacity affect the County? What do you notice about the infrastructure, environmental resources, or social conditions in Putnam County?	
C: You are hearing from residents, businesses, board members, & organizations.	What are they concerned/excited about? Who is benefiting from current conditions? Who is most impacted?	

Team Name: _____

Additional Notes:

Scenario Planning Matrix

SCENARIO 1:

LOW CAPACITY + HIGH CLIMATE IMPACTS

SCENARIO 2:

HIGH CAPACITY + HIGH CLIMATE IMPACTS

CLIMATE IMPACTS

CAPACITY

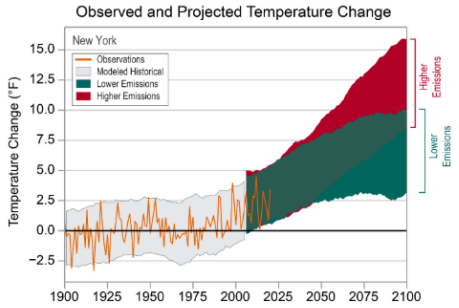
SCENARIO 3:

LOW CAPACITY + LOW CLIMATE IMPACTS

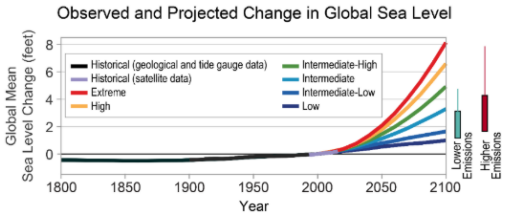
SCENARIO 4:

HIGH CAPACITY + LOW CLIMATE IMPACTS

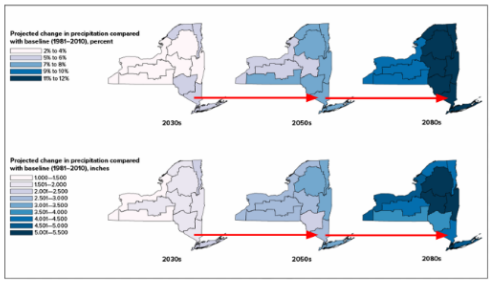
Climate Projections: Increasing Temperatures, Rising Sea Levels, Changing Precipitation



Observed and Projected Temperature Change in New York State; NYS Climate Summary



Observed and Projected Change in Global Sea Level; New York State Climate Summaries



Projected annual precipitation in New York State during the 21st century, relative to the 1981–2010 baseline; NYS Climate Impacts Assessment

Workshop Photos













Scenario Narratives

Scenario 1: Doing more with less… (High Climate Impacts, Low Capacity)

It's 2035 in Putnam County… Daily life has been heavily impacted by climate change. Rising sea levels, increasing temperatures, and changing precipitation patterns have all followed the highest projections forecasted by climate models. Sea level rise has caused substantial flooding along the Hudson River; several severe storms have passed through the County, with increasing force and intensity; summer temperatures have become warmer; and overall temperatures have risen. At the same time Putnam County capacity is low. Funding opportunities have dwindled locally and in the state. Project lists of necessary infrastructure upgrades, ecosystem restoration projects, and social programs are growing, but it is not clear how they will be implemented. Staff members are juggling many competing priorities and needs. Time available to allocate to individual projects is limited.

With limited resources and many competing priorities, the County is on "triage mode." Efforts are made to prioritize projects based on expected impacts: the more damage expected, the higher the priority. County staff are skilled at navigating lower resourced situations but must manage shifting schedules and priorities. Fortunately, many actions have already been put in place to help the County navigate this moment. The County is also collaborating with external organizations and building relationships to try to stretch scarce resources further.

While County staff and organizations are dedicated to finding creative solutions, climate impacts are still impacting residents, businesses, and local organizations. Flooding has led to mold exposure in homes. Power outages are becoming more frequent. Heavy rains and sea level rise have saturated soils, causing some septic systems to fail and residents to face costly repairs. The County is increasingly worried about the condition of its dams and their ability to withstand precipitation levels. Following a 2032 fire in Fahnestock Park, water infrastructure has also become a topic of concern. The fire started small. However, because water needed to be brought in, hundreds of acres burned. Residents were advised to evacuate, and many were confused about where to go and which roads to take. People without access to personal transportation relied on neighbors and friends to help with evacuation.

High heat days have caused increased rates of heat exposure and heat related illnesses. Putnam County's single hospital is facing high wait times, and some residents are starting to turn to health facilities in surrounding communities. Costly home repairs, physical stressors, and resource scarcity are taking a toll on mental health. Nonetheless, Putnam County is faring better than other places in the country. Climate migration is driving residents from the south to Putnam's cooler climate, causing a population increase and a shifting social/political environment.

The effects of these changes are not evenly distributed. For example, some residents in more isolated areas do not have access to the internet to receive communications and warnings on the County website/social media. Seniors express concern about power outages, and some, with limited mobility, are concerned about evacuation plans. Costs from home repairs and health impacts reduce the amount County residents can spend on other topics, particularly impacting low-income communities. The County is grappling with how to reach every community, prioritize necessary projects, and stay within limited budgets.

Scenario 2: Full Steam Ahead! (High Climate Impacts, High Capacity)

It's 2035 in Putnam County… Daily life has been heavily impacted by climate change. Rising sea levels, increasing temperatures, and changing precipitation patterns have all followed the highest projections forecasted by climate models. Sea level rise has caused substantial flooding along the Hudson River. Several severe storms have passed through the County, with increasing force and intensity. Summer temperatures have become warmer and overall temperatures have risen substantially. At the same time, Putnam County has high capacity to work on climate resilience. It has secured millions of dollars in grant funding to upgrade infrastructure, invest in social programs and services, and enhance or restore parks and ecosystems. Community residents, organizations, and local businesses are excited by the opportunities they see in their community and frequently reach out to volunteer their time and support.

With abundant resources and serious risks, infrastructure upgrades have become a top priority for the County. Due to increasing precipitation, culverts are frequently overwhelmed, and increased attention is being directed to dams at risk of overtopping or failing. County staff are particularly concerned about flooding potential downstream of dams and must navigate working with both County and non-County dam owners. Following a 2032 fire in Fahnestock Park, water infrastructure has also become a topic of concern. The initial fire started small. However, because water needed to be brought in, hundreds of acres ended up burning. Residents nearby were advised to evacuate, and many were confused about where to go and which roads to take. People without access to personal transportation relied on neighbors and friends to help with evacuation.

With so many assets at risk and so many resources available, prioritization has become a challenge. County staff currently use grant funding schedules and timelines to help organize and prioritize projects. If there are assets particularly at risk or directly impacted by a climate event, they are also prioritized. While the County is facing significant roadblocks, it also has

existing strengths. For example, the County's storm shelter systems, coordinated with partner organizations, has been tremendously valuable in navigating the new frequency of events.

Amongst Putnam County residents, the frequency of storms, high heat days, and other climate events has become a common talking point, especially amongst vulnerable populations. For example, the majority of seniors live at home in the County, and are concerned about disruptions to services, power, and access to evacuation routes. Frequent power outages have made providing alerts over telecommunications or online more difficult. The County has been spending some of its abundant resources to try to understand where vulnerable populations live, and how to provide accessible resources. Additionally, some industries have been particularly impacted. Local farmers face challenges from changing weather patterns, and tourism has become more sporadic as tourists try to plan around heat, storms, and changing winter conditions. Despite these challenges, residents and local businesses are optimistic about the future. They are invested in the County implementing projects to build resilience to climate hazards and are eager to help where they can. The County is working to determine the most impactful way to use its ample resources to build resilience.

Scenario 3: Out of sight…Out of mind… (Low Climate Impacts, Low Capacity)

It's 2035 in Putnam County… The County is adjusting to a changing climate with slight increases in temperatures, sea level rise, and precipitation. Storms are continuing to impact Putnam County, with noticeable increases in frequency and intensity, but the climate has not changed drastically. While climate impacts are currently modest, they are expected to increase in the future. At the same time Putnam County capacity is low. Funding opportunities have dwindled locally and in the state. Project lists of necessary infrastructure upgrades, ecosystem restoration projects, and social programs are growing, but it is not clear how they will be implemented. Staff members are juggling many competing priorities and needs. Time available to allocate to individual projects is limited. Residents, organizations, and local businesses are noticing these impacts and have raised concerns.

With lower climate impacts and resources, the County is in "planning" mode, and is focused on understanding its vulnerabilities, updating plans and policies, and identifying strategies that could be implemented once resources increase. Since capacity is low, external partners and volunteers have become particularly important. For example, the County is actively working to further its relationships with the United Way, Red Cross, National Guard, FEMA, and schools. It is also considering leveraging County assets—like senior centers—for emergency preparedness.

Because climate impacts are lower, keeping climate top of mind can often be challenging. Efforts often involve keeping existing services running—like cooling centers and public transportation. Given limited resources, recruiting volunteers has also become a priority. However, because climate impacts are not as imminent as other needs, interest in volunteering for resiliency programs is low.

In general, attitudes toward climate resilience are mixed. Some communities are already experiencing the impacts of climate change, especially in lake communities and areas near the Hudson River. Some vulnerable populations, including seniors, have also expressed concern about the climate impacts already being felt. Yet, for most of the County, climate change is not a top concern. Many are invested in other topics like affordability, food security, public health, and providing resources for seniors/youth. Climate change is expected to worsen in the future. As such, Putnam County must strike a balance between spending its scarce resources on proactive preparation and meeting immediate needs.

Scenario 4: Lots of resources…but where to start? (Low Climate Impacts, High Capacity)

It's 2035 in Putnam County… The County is adjusting to a changing climate with slight increases in temperatures, sea level rise, and precipitation. Storms are continuing to impact Putnam County, with noticeable increases in frequency and intensity, but the climate has not changed drastically. While climate impacts are currently modest, they are expected to increase in the future. At the same time, Putnam County has high capacity to work on climate resilience and related topics. It has secured millions of dollars in grant funding to upgrade infrastructure, invest in social programs and services, and enhance or restore parks and ecosystems. Community residents, organizations, and local businesses are excited by the opportunities they see in their community and frequently reach out to volunteer for their time and support.

Within Putnam County, this windfall of funding provides opportunities and challenges. Since climate impacts have followed a more gradual progression, the County can implement proactive rather than reactive strategies. Staff discuss leveraging the opportunity to invest in major infrastructural upgrades and transportation projects; participate in larger-scale public health projects; and/or leverage staff time to expand outreach and education.

The County also has the capacity to work on projects with co-benefits that could build future resilience while advancing social, health, economic, infrastructure, and clean energy goals. While this presents exciting opportunities, prioritization becomes a major challenge for the County as it navigates the best use for the abundant funding. Since climate impacts are lower,

keeping climate resilience top of mind can also be challenging, even though climate impacts are projected to increase, and many projects are still needed to build short and long-term resilience.

Within the community, attitudes toward climate resilience are mixed. Vulnerable populations are facing disproportionate impacts from the climate effects that are already occurring. Additionally, lake communities are affected by rising temperatures and flooding from precipitation. Areas along the Hudson River are already facing impacts from rising sea levels. Some industries have also started to experience challenges from changing temperatures. For example, ski slopes are impacted by rising temperatures, consequently affecting winter tourism, and local farms are contending with changing weather conditions that impact soil and crops.

Yet, for most of the County, climate change is not a top concern, and there may even be some pushback to prioritizing resiliency projects over other priorities. Emergency preparedness, safety, food security, transit, walkable communities, and other priorities are frequently discussed amongst residents and stakeholders. In this context, Putnam County must balance the competing objectives of addressing community concerns, spending funding in the most effective way, building long-term resilience, and juggling short-term needs.

Scenario Planning Workshop Part 2

Logistics:

- **Date/Time:** March 9, 2026, 2:00-4:00 pm
- **Location:** In-person, Donald B Smith Campus, 110 Old Route 6, Carmel, Bureau of Emergency Services Classroom #1

Event Details

The Scenario Planning Workshop Part 2 opened with a short presentation by HVRC. The presentation included:

- A project overview and update on the CCARP process;
- An overview of adaptation, resilience, and mitigation
- A summary of the climate trends facing Putnam County;
- An introduction to scenario planning and scenario narratives from Part 1; and
- An introduction to the workshop activities.

Following the presentations, participants broke into four small group discussions, each with an HVRC facilitator and a notetaker. Each group participated in two guided discussions using one of the scenarios created following the Scenario Planning Workshop Part 1.

- During the first discussion, participants used the scenario narratives generated to prioritize a list of adaptation strategies that were already identified throughout the CCARP process.
- During the second conversation, participants used their assigned scenario to brainstorm additional adaptation strategies for inclusion in the CCARP.

To conclude, participants regrouped for a full-group Vision Statement exercised and were asked to provide input on the Resilience & Adaptation Vision Statement for Putnam County. To capture feedback, participants completed two, word cloud exercises, included below. A QR code to the Vision Statement survey was also shared.

Workshop Invitation

Good Afternoon,

As part of Putnam County's commitment as a Climate Smart Community (CSC), please join us for **Part 2 of the Scenario Planning Workshop series** on Monday, March 9th from 2:00-4:00 pm.

Scenario planning is a tool that will be used to evaluate potential adaptation strategies as they relate to extreme weather events for inclusion in Putnam County's Climate Change Adaptation and Resilience Plan (CCARP). The scenario planning process involves crafting narrative-based "scenarios" that outline possible futures for the County. **The purpose of this workshop will be to generate and assess potential adaptation strategies in order to evaluate their effectiveness under a variety of conditions.**

Draft Agenda:

- Introductory presentation
- Two facilitated exercises:
  - Activity 1: Prioritize existing adaptation strategies
  - Activity 2: Generate additional adaptation strategies
- Visioning exercise
- Debrief/next steps

· **RSVP: Please accept or decline this calendar invite.**

· Date: Monday, March 9th, 2026

· Time: 2:00-4:00pm

· Location: BES Classroom #1

Thank you and looking forward,

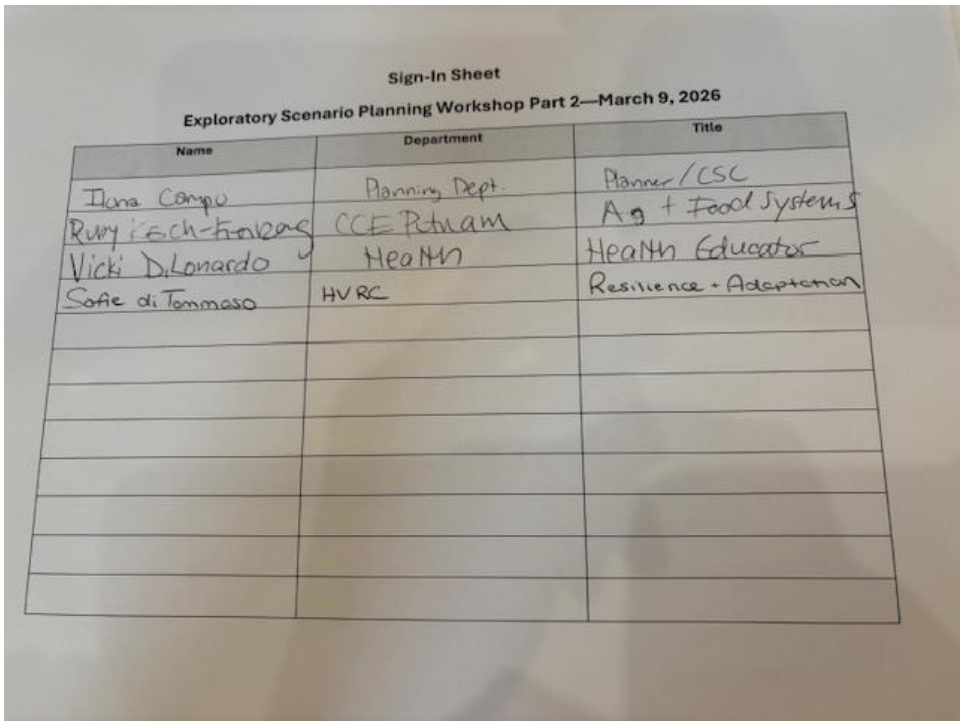
Ilona Campo
Planner / Climate Smart Coordinator
Department of Planning, Development, and Public Transportation
PHONE | (845) 878-3480 **EXT** | 48104
WEBSITE | PUTNAMCOUNTYNY.GOV
ADDRESS | 841 Fair Street, Carmel, NY 10512
PUTNAM COUNTY GOVERNMENT NEW YORK
Think green before printing your screen!

Workshop Agenda Slide



Attendance List + Sign-In Sheet

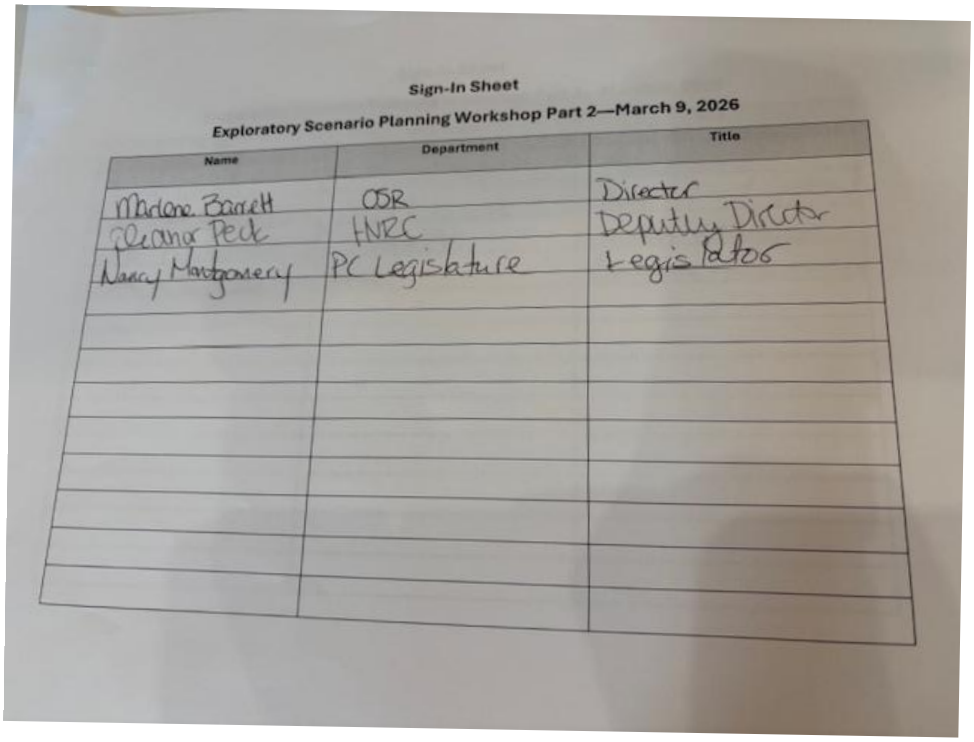
- Barbara Barosa, Commissioner, Putnam Planning Dept.
- Marlene Barrett, Director, Putnam Office of Senior Resources
- Ilona Campo, Planner/CSC Coordinator, Putnam Planning Dept.
- Matt Covucci, Deputy Commissioner, Putnam Planning Dept.
- Victoria DiLonardo, Health Educator, Putnam Dept. of Health
- Sofie diTommaso, Resilience & Adaptation Coordinator, HVRC
- Ruby Koch-Fienberg, Agriculture & Food Systems Coordinator, Cornell Cooperative Extension
- Nancy Montgomery, Legislator—District 1, Putnam County Legislature
- Eleanor Peck, Deputy Director, HVRC
- Gary C. Redlon II, Coordinator of Engineering Projects, Putnam Dept. Of Public Works
- Liz Sun, Clean Energy & Climate Smart Communities Coordinator, HVRC
- Neal Tomman, Project Manager, Putnam County Dept. of Public Works
- Brandon Toye, Climate Smart & Clean Energy Communities Coordinator, HVRC
- Savannah Usher, Solid Waste Program Manager, Putnam County Dept. of Health



Sign-In Sheet

Exploratory Scenario Planning Workshop Part 2—March 9, 2026

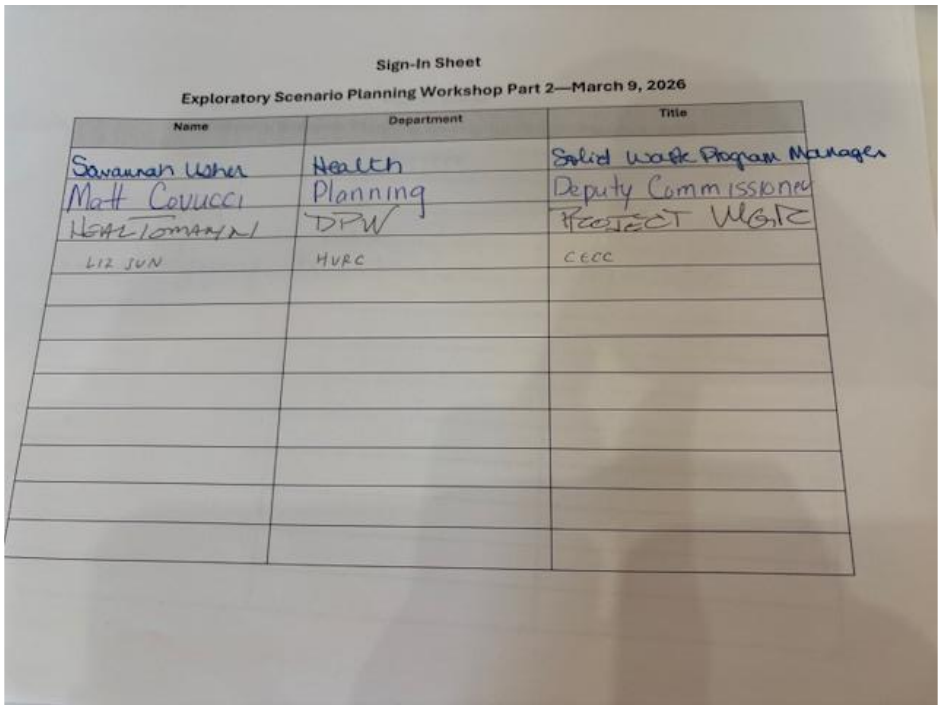
Name	Department	Title
Ilana Campo	Planning Dept.	Planner / CSC
Rudy Esch-Forbes	CCE Putnam	Ag + Food Systems
Vicki DiLonardo	Health	Health Educator
Sofie di Tommaso	HVRC	Resilience + Adaptation



Sign-In Sheet

Exploratory Scenario Planning Workshop Part 2—March 9, 2026

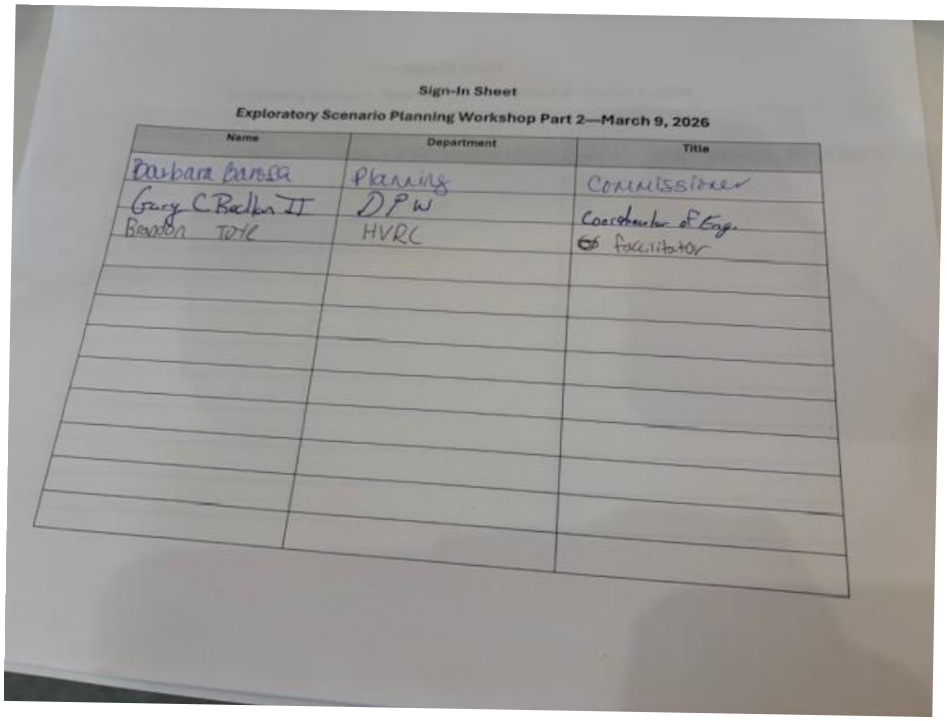
Name	Department	Title
Marlene Barrett	OSR	Director
Eleanor Peck	HNRC	Deputy Director
Nancy Montgomery	PC Legislature	Legis Rep 06



Sign-In Sheet

Exploratory Scenario Planning Workshop Part 2—March 9, 2026

Name	Department	Title
Savannah Usher	Health	Solid Waste Program Manager
Matt Covucci	Planning	Deputy Commissioner
[illegible]	DPW	PROJECT MGR
LIZ JUN	HVRC	CECC



Sign-In Sheet

Exploratory Scenario Planning Workshop Part 2—March 9, 2026

Name	Department	Title
Barbara Barosso	Planning	Commissioner
Gary C Bachus II	DPW	Coordinator of Eng.
Brandon Doyle	HVRC	& facilitator

Sample Worksheet Pack

Scenario Planning Workshop Activity 1

March 9, 2025

Scenario 1: Doing more with less… (High Climate Impacts, Low Capacity)

Group Names _____

Instructions: The tables in this packet list potential infrastructure, social, environmental, or cross-cutting strategies to further resilience and adaptive capacity in Putnam County. Each strategy includes a list of example actions that the County could implement in the subsequent column. These strategies and example actions were sourced from Putnam County's Evaluation of Policies for Climate Resilience or Hazard Mitigation Plan. Additional strategies were also generated based on meetings/conversations held throughout the CCARP process.

In groups of 2-3, review each strategy and the example actions. Indicate if the strategy should be a high, medium, or low priority for the County. In the notes column, add any comments, including considerations about how the strategy would function in a scenario with **high climate impacts** and **low capacity.** For instance, if a strategy would be beneficial for County resilience but has high costs, this could be beneficial to note.

If there are any example actions that you think the County should *not* consider, or that are already in place, please cross them out on your worksheet and add a note. If you would recommend modifying the strategy, please also include comments on the proposed changes.

Note that this activity will focus just on evaluating strategies that have already been identified. The next activity will provide space to propose new strategies for inclusion in the CCARP.

Infrastructure					
Strategy	**Example Actions**	**Priority**			**Notes**
General description	Cross out any actions/portions of actions that you recommend omitting or that are already in place in the County.	H	M	L	In this scenario, climate hazards are **high** and capacity is **low**. • Would this strategy be feasible/successful in this scenario? • What are the benefits? What are the challenges? • Should any strategies be modified?
I.1 Secure & Incentivize Backup Power at Critical Facilities	a. Create an incentives program to support fuel distributors/gas stations secure backup power for emergency situations.* b. Secure backup power at the Carmel Friendship Center. c. Work with all cooling centers to ensure backup power is available.				b. The Carmel Friendship Center currently does not have backup power.
I.2 Expand Evacuation Planning	a. Expand existing evacuation planning efforts by creating an Emergency Transportation Plan.* b. Map evacuation routes in relationship to flood risks. c. Plan evacuation strategies for vulnerable communities. d. Collaborate with neighboring counties to coordinate evacuation routes. e. Provide evacuation options for residents reliant on public transportation. f. Get pre-approval from the NY State bus system to use buses during emergencies. g. Maintain a current list of volunteer drivers to support evacuation/emergency transportation needs.				c. Example: Coordinate with schools, daycares, and senior centers to plan evacuation strategies for youth/seniors.

I.3 Build out Cooling Center Program	a. Coordinate with Putnam Lake to establish a cooling center. b. Ensure all cooling centers are registered with NY State Department of Health.				a. Putnam Lake is one of the highest heat exposed areas in the County, but it does not have a cooling center.
I.4 Expand Storm & Emergency Shelters	a. Create a location for people with pets and service animals to shelter during a disaster through preparations at the Tilly Foster Farm property.*				
I.5 Asses & Right-Size Stormwater Infrastructure	a. Continue assessing all culverts for potential flood risks. b. Seek funding opportunities to replace/right-size culverts.				
I.6 Assess + Mitigate Dam-Related Risks	a. Map potential flood impacts for all dams in the County, including dams owned by the County and outside entities. b. Establish regular channels of communication with non-County landowners about the status of dam maintenance & condition. c. Build on existing emergency preparedness to address potential response and recovery to dam failure events.				
I.7 Improve Septic Maintenance and Education	a. Provide outreach/education to community members about septic maintenance and remediating poor drainage.				a. Saturated soils from increasing precipitation/sea level rise can negatively impact septic drain fields, leading to pollution and site contamination.

I.8 Assess & Protect Building Stock	a. Start tracking repetitive loss properties* b. Work with local municipalities to identify and assess areas suitable for relocating or building housing outside of the floodplain.* c. Conduct a build-out analysis for Putnam County and compare results to projected climate hazards. d. Assess the feasibility or need for County-level land acquisition strategies for properties in vulnerable areas. e. Map public buildings and lands in relationship to flood risks to identify priority areas.				b. Strategy discontinued in Putnam County's Hazard Mitigation Plan
I.9 Assess waste management concerns	a. Map potential flooding on routes to waste disposal facilities.				a. While Putnam County does not own active waste disposal facilities or operate waste collection services, flooding on County roads could potentially disrupt waste pick-up routes.

* Strategies with an asterisk align with existing or discontinued goals in Putnam County's Hazard Mitigation Plan.

Social					
Strategy	**Example Actions**	**Priority**			**Notes**
General description	Cross out any actions/portions of actions that you recommend omitting or that are already in place in the County.	H	M	L	In this scenario, climate hazards are **high** + capacity is **low**. • Would this strategy be feasible/successful in this scenario? • What are the benefits? What are the challenges? • Should any strategies be modified?
S.1 Expand Outreach + Programs for Vulnerable Communities	a. Maintain a special needs registry to support disaster preparedness planning. b. Improve accessibility of outreach materials by offering all resilience-related outreach in multiple languages. c. Expand effective outreach efforts to vulnerable communities. d. Expand outreach to seniors and people with disabilities by establishing an "Are You Okay" program.				a. A special needs registry is "a list of county residents who may require additional assistance, transportation and/or sheltering in the event of a major emergency or disaster." (Westchester County). d. Are You Okay programs typically set up a regular way to check-in with vulnerable populations to ensure they are safe. Example programs are available in Dutchess County and Hastings-On-Hudson, NY.

* Strategies with an asterisk align with existing or discontinued goals in Putnam County's Hazard Mitigation Plan.

Environment					
Strategy	**Example Actions**	**Priority**			**Notes**
General description	Cross out any actions/portions of actions that you recommend omitting	H	M	L	In this scenario, climate hazards are **high** + capacity is **low**. • Would this strategy be feasible/successful in this scenario? • What are the benefits? What are the challenges? • Should any strategies be modified?
E.1 Reduce Poor Air Quality Exposure	a. Open clean air centers during low air quality days. b. Create an inventory of equipment available to the County to fight forest fires in order to identify potential gaps.				a. Clean air centers are similar to cooling centers. They are climate controlled and seek to minimize smoke exposure (NYS Dept of Health).
E.2 Increase Ecosystem Management + Data Collection for Climate Resilience	a. Create a strategy to address invasive species, prioritizing locations near the Hudson River or flood prone areas. b. Increase public-facing educational materials about nature-based solutions to flooding. c. Update the Comprehensive Park and Open Space Plan and/or the County-level Natural Resources Inventory. d. Work with State Parks to clear underbrush in order to proactively address wildfire risks.				c. This action could increase the availability of data/information about ecosystems in the County, consequently improving the ability to assess potential climate risks.
E.3 Enhance Agricultural Resilience	a. Collaborate with farmers and landowners on disaster preparedness/climate resilience strategies. b. Include climate resilience considerations in the anticipated update of the Putnam County Farmland Protection Plan.				

* Strategies with an asterisk align with existing or discontinued goals in Putnam County's Hazard Mitigation Plan.

Cross-Cutting Strategies					
Strategy	**Example Actions**	**Priority**			**Notes**
General description	Cross out any actions/portions of actions that you recommend omitting or that are already in place in the County.	H	M	L	In this scenario, climate hazards are **high** + capacity is **low**. • Would this strategy be feasible/successful in this scenario? • What are the benefits? What are the challenges? • Should any strategies be modified?
C.1 Increase Storm + Emergency Preparedness + Education	a. Expand proactive outreach about storm/emergency preparedness through website, social media, mailings, and/or newsletters. b. Install a high-water mark sign in riverfront communities. c. Implement an early flood warning system for locations along the Hudson River. d. Become a Storm Ready Community.				a. Potential outreach materials include: information on evacuation kits; FEMA's guidance for storm and wind damage prevention; ASPCA's disaster preparedness steps for domesticated animals; and FEMA's "Are You Ready Guide". d. The StormReady community program is run by the National Weather Service. Registered communities must implement a series of steps that help prepare for storm impacts.
C.2 Expand Data + Data Collection	a. Adopt the NY DEC sea level rise projections. b. Incorporate climate projections into County Planning, including emergency response plans + capital plans. c. Map county infrastructure, vulnerable populations, buildings, cultural resources, and natural resources in relationship to the County's top climate hazards. d. Compile local zoning maps along the Hudson River for a County-wide view of land uses near a high flood-risk area.				
C.3 Align Internal Processes + Plans	a. Establish a group to continue to review potential grant funding opportunities for hazard mitigation and/or resilience-related projects. b. Implement a procedure for sharing vulnerability and risk assessment projects with relevant stakeholders, including the Department of Planning and Transportation and Department of Public Works. c. Explore the feasibility and need for new plans relevant to resiliency planning, such as a Local Waterfront Revitalization Plan, Climate Action Plan, Floodplain Management Plan, Short- and Long-Term Recovery Plan.				
C.4 Increase Volunteer Capacity	a. Recruit additional volunteers to support in the event of an emergency. b. Collaborate with school districts to recruit volunteers and/or expand community outreach and education.				

* Strategies with an asterisk align with existing or discontinued goals in Putnam County's Hazard Mitigation Plan.

Scenario Planning Workshop Activity 2

March 9, 2026

Scenario 1: Doing more with less… (High Climate Impacts, Low Capacity)

Name: _____

Instructions: Adaptation strategies aim to proactively prepare for expected climate impacts. They can address vulnerabilities related to infrastructure, social/economic conditions, or environmental assets. Spend a few minutes reviewing your assigned scenario. Use the scenario to generate a list of adaptation strategies that you would recommend for the County. For inspiration, consider reviewing the DRAFT Climate Vulnerability Assessment matrix to gauge which assets/services may be vulnerable to a changing climate.

Strategy	Priority			Notes
Recommendations for CCARP	*H*	*M*	*L*	*Consider capacity + climate hazards*

Additional Notes:

Word Cloud Exercise

What are the top 3 words you would use to describe a resilient and adaptive future for Putnam County?



What are 1-3 top priorities for increasing Putnam County's climate resilience?



Workshop Photos









Post-Scenario Planning Workshop Survey



Post-Scenario Planning Workshop Part 2 Survey

* Required

Prioritizing Adaptation Strategies

Thank you for participating in Putnam County's Scenario Planning Workshop on March 9th, 2026! The workshop started conversations about the adaptation strategies that will be included in Putnam County's Climate Change Adaptation & Resilience Plan (CCARP).

As a recap, the workshop included two adaptation planning activities and a short visioning exercise.

- During Activity 1, participants reviewed and prioritized a pre-identified list of potential adaptation strategies.
- During Activity 2, participants brainstormed additional adaptation strategies.

Following the workshop, all feedback was synthesized to create an updated list of potential strategies to further Putnam County's resilience and adaptive capacity. This involved removing, adding, or modifying strategies discussed during the workshop. Additional feedback will help narrow the resulting list of potential strategies and ensure that the recommendations in the CCARP align with County priorities.

Please complete this survey to provide additional input on the proposed adaptation strategies. Responses will play an important role in determining which strategies will be included in the CCARP.

Note: Putnam County staff are encouraged to complete this survey, regardless of whether you participated in the scenario planning workshop.

Thank you in advance for your participation!

1. Name

2. Department/Organization/Municipality

3. Did you participate or were you invited to participate in at least one of Putnam County's Scenario Planning Workshops on February 9, 2026 and March 9, 2026. *

- ◯ Yes
- ◯ No

4. If not, do you work for Putnam County? *

- ◯ Yes
- ◯ No

5. If not, what is your affiliation? *

Infrastructure

The following questions list potential adaptation strategies and actions for Putnam County related to infrastructure. When relevant, notes or comments shared during the Scenario Planning workshop are included in italics to provide additional clarity/context. At the end of this section, there is also space to add comments/notes if you would like to explain or add additional information to your selections.

Please select the strategies and actions you think Putnam County *should* include in its CCARP related to infrastructure.

6. Secure & Incentivize Backup Power at Critical Facilities

- [ ] Support backup power for fuel distributors and gas stations by directly providing backup power/alternative fuels or by providing incentives for private entities to secure backup power.
- [ ] Work with all cooling centers to ensure backup power is available.

7. Expand Evacuation Planning

Notes: It was noted that many of the actions recommended under this strategy could be included within an Emergency Transportation Plan.

- [ ] Expand existing evacuation planning efforts by creating an Emergency Transportation Plan.
- [ ] Map evacuation routes in relationship to flood risks.
- [ ] Plan evacuation strategies for vulnerable communities.
- [ ] Collaborate with neighboring counties to ensure evacuation routes have appropriate capacity for all counties.
- [ ] Provide evacuation options for residents reliant on public transportation.
- [ ] Secure prior approval to use Putnam County Office of Senior Resources buses for emergencies and recruit volunteer drivers with CDL licenses with passenger endorsement.
- [ ] Collaborate with health facilities and emergency services on evacuation planning.
- [ ] Increase outreach and education about evacuation routes.
- [ ] Update evacuation planning for the County, drawing from the insights in the Indian Point Emergency Guide.

8. Increase Cooling Center Program Awareness and Accessibility

- [ ] Coordinate with Putnam Lake to establish a cooling center.
- [ ] Continue to publicize information about cooling centers and advertise transportation options for accessing centers.
- [ ] Prioritize high-need census tracts for future cooling center projects/outreach.

9. Expand Storm & Emergency Shelters for Pets/Animals

Notes: The Dutchess County animal response team, mentioned in the third option below, was created to support emergency response and proactive preparation related to pets/livestock during disaster events—coordinated by the Dutchess County Medical Reserve Corps.

- [ ] Identify locations for people with pets, service animals, and/or farm animals to shelter during a disaster, prioritizing at least one shelter in the eastern and one shelter in the western side of the County.
- [ ] Explore collaborations with veterinary networks to identify existing facilities that can be used to shelter pets and animals.
- [ ] Explore the feasibility of creating an animal response team, similar to Dutchess County's program, which supports emergency response and proactive preparation related to pets/livestock during disaster events.

10. Expand on Existing Storm & Emergency Shelter Programs

- [ ] Coordinate with storm shelters to offer food, water, and ice pick-up points post-storms/natural disasters.

11. Assess & Right-Size Stormwater Infrastructure

- [ ] Continue assessing all culverts for potential flood risks.
- [ ] Continue exploring FHWA, Bridge NY, and other funding opportunities for stormwater projects.
- [ ] Encourage any new County infrastructure projects to incorporate green infrastructure to reduce flooding, when relevant.

12. Assess & Mitigate Dam-Related Risks

Notes: In general, many comments during the workshop supported including dams as a resiliency priority, but challenges were raised related to the feasibility of working with non-County dams and implementing response/recovery emergency preparedness efforts.

- [ ] Map potential flood impacts for all dams in the County, separating out which dams are owned by County and by non-County entities.
- [ ] Establish regular channels of communication with non-County landowners about the status of dam maintenance & condition.
- [ ] Build on existing emergency preparedness to address potential response and recovery to dam failure events.
- [ ] Encourage dams, culverts, and bridges be built to accommodate 200- or 500-year storms, higher than the State requirement for designing to accommodate 100-year storms.
- [ ] Assess and prioritize dams for potential dam removal/decommissioning projects.
- [ ] Seek out State funding for dam improvements, repairs, or removals.

13. Expand Septic Outreach, Education, & Programs

- [ ] Continue and expand community outreach/education about septic maintenance.
- [ ] Establish a program to support funding or incentives for septic replacement projects.

14. Assess & Protect Building Stock

Notes: There was some uncertainty about whether the County is already exploring land acquisition strategies.

- [ ] Start tracking repetitive loss properties.
- [ ] Work with local municipalities to identify and assess areas suitable for relocating or building housing outside of the floodplain.
- [ ] Continue County-level land conservation strategies for properties in vulnerable areas.
- [ ] Map public buildings and lands in relationship to flood risks to identify priority areas.
- [ ] Assess options for the County Records Building, which currently floods frequently.
- [ ] Repair or upgrade County buildings susceptible to water damage.

15. Expand Public Transportation

- [ ] Increase public transportation options—particularly on the west side of the County—to increase connectivity to trains, healthcare, and food resources, and to increase transportation options during emergencies.

16. Please provide any feedback on the above adaptation strategies and actions related to infrastructure.

Potential questions to consider: Are any of these programs already in place? Are there additional strategies missing from this list or should any strategies be modified? Do any actions stand out as particularly important to include or exclude?

Social

The following questions list potential adaptation strategies and actions for Putnam County related to people and local economies. When relevant, notes or comments shared during the Scenario Planning workshop are included in italics to provide additional clarity/context. At the end of this section, there is also space to add comments/notes if you would like to explain or add additional information to your selections.

Please select strategies and actions you think Putnam County *should* include in its CCARP related to people & local economies.

17. Expand Outreach & Programs for Vulnerable Communities

- [ ] Expand effective outreach efforts to vulnerable communities, including senior populations.
- [ ] Improve accessibility of outreach materials by offering all resilience-related outreach in multiple languages.
- [ ] Encourage participation in the County's existing "Are You Okay" program through campaigns, outreach, giveaways, or additional strategies.
- [ ] Encourage community-based "Are You Okay" programs to provide support for seniors within neighborhoods or apartment complexes in order to augment the existing County program.
- [ ] Support internet connectivity across the County to ensure residents can access timely warnings and updates. Explore offering incentives to or collaborating with private companies.

18. Further Food System Resilience

- [ ] Collaborate with local organizations on preserving the network of farms in the County.
- [ ] Expand/encourage dialogue between County departments, local organizations, and food pantries to identify and address resiliency gaps.

19. Coordinate with Healthcare Facilities

- [ ] Collaborate with Putnam Hospital, Danbury Hospital, urgent care, medical offices, and pharmacies to support emergency planning, particularly for people with at-home medical equipment, modular equipment, or injuries.

20. Coordinate with Local Employers & Businesses

Notes: During the workshop, it was noted that local jobs can reduce traffic associated with commuting, and potentially lead to positive air quality benefits. This could reduce underlying environmental/health vulnerabilities to other climate impacts.

- [ ] Expand conversations with local businesses to support job growth and resiliency.

21. Please provide any feedback on the above adaptation strategies and actions related to people and local economies.

Potential questions to consider: Are any of these programs already in place? Are there additional strategies missing from this list or should any strategies be modified? Do any actions stand out as particularly important to include or exclude?

Environmental

The following questions list potential adaptation strategies and actions for Putnam County related to the environment. When relevant, notes or comments shared during the Scenario Planning workshop are included in italics to provide additional clarity/context. At the end of this section, there is also space to add comments/notes if you would like to explain or add additional information to your selections.

Please select strategies and actions you think Putnam County *should* include in its CCARP related to the environment.

22. Reduce Poor Air Quality Exposure

Notes:

- *Purchasing air purifiers or creating shared service agreements for air purifiers were mentioned as potential additions or alterations to opening clean air centers.*
- *Challenges related to opening clean air centers were also mentioned. For example, older buildings may not be equipped to handle the filtration needed for smoke.*
- *Putnam County currently offers reduced-cost composting bins, which could provide a model for the third option below.*

- [ ] Open clean air centers during low air quality days due to wildfire smoke, potentially leveraging existing cooling centers.
- [ ] Create an inventory of equipment available in the County, region, and state to fight forest fires in order to identify potential gaps.
- [ ] Create or collaborate on an air filter incentives program for residents, potentially by offering reduced cost HEPA filters.

23. Increase Ecosystem Management & Data Collection for Climate Resilience

- [ ] Increase community outreach about identifying and removing invasive species.
- [ ] Increase public-facing educational materials about nature-based solutions to flooding, potentially leveraging existing resources from the NY DEC.
- [ ] Update the Comprehensive Park and Open Space Plan and/or the County-level Natural Resources Inventory.
- [ ] Work with land trusts, nonprofit organizations, DEC, DEP, and other partners on forest management for fire resilience.
- [ ] Expand and collaborate on native planting programs.

24. Enhance Agricultural Resilience

- [ ] Collaborate with partners and local organizations on outreach to farmers about climate resilience and to understand farmers' existing concerns/challenges.
- [ ] Explore including climate resilience considerations in the anticipated update of the Putnam County Farmland Protection Plan.

25. Please provide any feedback on the above adaptation strategies and actions related to the environment.

Potential questions to consider: Are any of these programs already in place? Are there additional strategies missing from this list or should any strategies be modified? Do any actions stand out as particularly important to include or exclude?

Cross Cutting Strategy

The following questions list additional, cross-cutting adaptation strategies and actions for Putnam County. When relevant, notes or comments shared during the Scenario Planning workshop are included in italics to provide additional clarity/context. At the end of this section, there is also space to add comments/notes if you would like to explain or add additional information to your selections.

Please select cross-cutting strategies and actions you think Putnam County *should* include in its CCARP.

26. Increase Storm & Emergency Preparedness Education

Notes:

- *Workshop participants highlighted that some storm/emergency preparedness education is already occurring in the County.*
- *Installing high water mark signs received mixed support during the workshop.*
- *The StormReady Communities program is run through the National Weather Service to help communities prepare for extreme weather events. The program has a set of requirements related to hazardous weather planning, community outreach, monitoring, and warning systems.*

- [ ] Continue and expand existing, proactive outreach efforts about storm/emergency preparedness through website, social media, mailings, newsletters, and/or TV ads.
- [ ] Tailor existing storm/emergency preparedness outreach materials to reflect particular challenges and opportunities in Putnam County.
- [ ] Install a high-water mark sign in areas susceptible to flooding. Potentially prioritize a location near Peekskill Hollow, Cold Spring, and/or at local sleepaway camps.
- [ ] Implement an early flood warning system, potentially using Kingston as an example.
- [ ] Become a Storm Ready Community (see notes above).
- [ ] Assess flash flood risks and need for a flash flood warning system.

27. Expand Data & Data Collection

- [ ] Incorporate NY DEC's sea level rise projections into planning efforts, when relevant.
- [ ] Incorporate climate projections into County Planning, including emergency response plans, capital plans, and infrastructure planning, when relevant.
- [ ] Map County infrastructure, vulnerable populations, buildings, cultural resources, and natural resources in relationship to the County's top climate hazards.
- [ ] Compile local zoning maps along the Hudson River for a County-wide view of land uses near a high flood-risk area.
- [ ] Share relevant data and maps with town councils to increase climate resilience education and awareness.
- [ ] Expand open-source GIS mapping resources related to climate resiliency.

28. Align Internal Processes & Plans

- [ ] Collaborate across departments and partner organizations to continuously review potential grant funding opportunities for hazard mitigation and/or resilience-related projects.
- [ ] Formalize a procedure for sharing climate-related vulnerability and risk assessment projects with relevant stakeholders, including the Department of Planning and Transportation and Department of Public Works.
- [ ] Explore the feasibility and need for new plans relevant to resiliency planning, such as a Local Waterfront Revitalization Plan, Climate Action Plan, Floodplain Management Plan, Short- and Long-Term Recovery Plan, and Biodiversity Study. Prioritize planning efforts with availability of implementation funding opportunities.
- [ ] Expand succession planning procedures for retiring or departing staff to reduce loss of institutional knowledge.
- [ ] Consider County-level comprehensive planning, inclusive of climate considerations.
- [ ] Continue dialogue with towns and villages, including in relation to comprehensive planning, zoning, and land use related to climate risks.
- [ ] Continue encouraging Continuity of Operations Plans across County departments.

29. Increase Volunteer Capacity

Notes: During the workshop, participants mentioned the potential to work with existing volunteers and leverage existing partnerships with local organizations. Staff time may also be necessary to support volunteer coordination.

- [ ] Include volunteers in advancing County resilience by working with existing volunteer networks and relationships with outside organizations.
- [ ] Collaborate with school districts to recruit volunteers and/or expand community outreach and education.

30. Increase Staff Capacity for Adaptation & Resilience Planning

Notes: Increasing staffing for climate resilience was mentioned as a potentially impactful, but resource intensive strategy.

- [ ] Hire a dedicated staff member for resiliency.
- [ ] Fund a dedicated engineer to assess County infrastructure and support towns.
- [ ] Hire a dedicated grant writer to increase capacity and funding opportunities.

31. Expand Partnerships for Climate Resilience

- [ ] Connect with local organizations to align and coordinate adaptation/resilience services and programs.
- [ ] Inventory resources at community centers across the County and support resource sharing across communities

32. Expand Timely Outreach & Education Capacity

- [ ] Across relevant departments, develop outreach materials/press releases about emergency preparedness, climate resilience, or related topics that are preapproved and can be distributed as needed.
- [ ] Create department-specific social media pages, as needed, where information about climate resilience can be shared.

33. Please provide any feedback on the above, cross-cutting adaptation strategies and actions.

Potential questions to consider: Are any of these programs already in place? Are there additional strategies missing from this list or should any strategies be modified? Do any actions stand out as particularly important to include or exclude?

Post-Scenario Planning Workshop Survey Invitation

Good morning,

As a follow-up to our Scenario Planning Workshop series, and as part of the CCARP process, we invite you to participate in the following survey by **Friday, April 3rd even if you were not able to attend the workshops**.

This survey plays an important role in helping us narrow down the list of feasible strategies under consideration for the CCARP. It also ensures that all staff members and partner organizations, especially those who could not attend the workshops, have an opportunity to provide input. Additionally, it allows us to gather feedback on strategies that were refined or newly introduced based on stakeholder discussions.

While the survey is somewhat detailed, it should take approximately **10–15 minutes** to complete. Your perspective is extremely valuable, and we greatly appreciate your time and thoughtful participation in shaping this process.

You can access the survey here: https://forms.office.com/Pages/ResponsePage.aspx?id=8YPyw7HV9kWvsGjwYo29sMiilCgvU_JCjZcbA5dHwaBURUc0NE5KWk0yNDcwRlFaMzE3NlBMN0g3VS4u

Thank you in advance for your engagement and support!

Ilona Campo
Planner / Climate Smart Coordinator
Department of Planning, Development, and Public Transportation
PHONE | (845) 878-3480 **EXT** | 48104
WEBSITE | PUTNAMCOUNTYNY.GOV
ADDRESS | 841 Fair Street, Carmel, NY 10512
PUTNAM COUNTY GOVERNMENT NEW YORK
Think green before printing your screen!

Appendix F: CCARP Webpage on Putnam County's Website

The Putnam County CCARP Website can be found here: https://putnamcountyny.gov/ccarp



Putnam County is increasingly vulnerable to flooding, extreme heat, and severe storms—hazards that can pose a threat to communities, health, property, and local businesses. **To proactively address and plan for these challenges, the County is partnering with the Hudson Valley Regional Council (HVRC) to develop a Community Climate Adaptation and Resilience Plan (CCARP).** This County-wide Plan will encompass both a Climate Vulnerability Assessment and Adaptation Plan, integrating data analysis, community input, and strategic recommendations. Once complete, the CCARP will provide a framework for action to support the County in creating a safer, healthier, and more resilient future.



Graphic: Southern New Hampshire Planning Commission

Background



In September 2025, Putnam County passed and signed a Resolution to partner with HVRC on creating a Climate Vulnerability Assessment & Climate Adaptation Plan.

These plans are foundational actions in the DEC CSC program. As a first step, the County and HVRC will research and evaluate current County policies and plans for climate resilience. These projects build on Putnam County's legacy of climate progress as a Bronze Certified Community through the Climate Smart Communities (CSC) Program. Specifically, throughout this collaboration, Putnam County will complete three CSC Actions that can earn points toward the CSC program.

1. Producing a Climate Vulnerability Assessment
2. Evaluating Policies for Climate Resilience
3. Crafting a Climate Adaptation Plan

HVRC will facilitate the completion of these deliverables **free of charge** for the County through New York State Department of Environmental Conservation grant funding.
Learn more about the CSC Program and Putnam County's ongoing work here.

Vision Statement

Putnam County Resilience & Adaptation Draft Vision Statement:

"Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come."

Feedback

Please share any feedback, ideas, or recommendations about the Draft Vision Statement by completing the survey below or at the top of this page.

CLICK HERE FOR THE DRAFT VISION STATEMENT SURVEY

Appendix G: Vision Statement

Draft Vision Statement

A Draft Vision Statement was created for public input. The initial draft can be found below:
"Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come."

Vision Statement Survey

A Vision Statement Survey was available on Putnam County's website from November 17, 2025-April 3, 2026 for public feedback on the Draft Vision Statement. The same list of questions was also included as an optional component of Putnam County's Climate Vulnerability Assessment Survey (See Appendix H for more information on the CVA Survey).

Copies of both surveys can be found below:

Vision Statement Survey

Putnam County Resilience & Adaptation Vision Statement

Background:

Putnam County is currently working on a Climate Vulnerability Assessment & Climate Adaptation Plan. These projects will form the basis of a county-level Climate Change Adaptation & Resilience Plan (CCARP). This plan will include a guiding Vision Statement that will be informed by community input. A draft Vision statement is included below.

Please share any feedback or recommendations about the Draft Vision Statement. Responses to this survey will be anonymous.

Draft Vision Statement

Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come.

* Required

1. Are there any words or phrases in the Draft Vision Statement that particularly resonate with you, or that you think are important to include in the final Vision Statement?

Please enter at most 600 characters

2. Are there any words or phrases in the Draft Vision Statement that do not resonate with you, or that you think should be altered in the final Vision Statement?

Please enter at most 600 characters

3. Are there any themes, concepts, or words that you feel are missing from the Draft Vision Statement that you think should be considered?

Please enter at most 600 characters

4. Are you a resident of Putnam County *

- ◯ Yes
- ◯ No

5. If yes, which Town or Village are you from? *

- ◯ Town of Carmel
- ◯ Town of Kent
- ◯ Town of Patterson
- ◯ Town of Philipstown
- ◯ Town of Putnam Valley
- ◯ Town of Southeast
- ◯ Village of Brewster
- ◯ Village of Cold Spring
- ◯ Village of Nelsonville
- ◯ Prefer not to answer

Vision Statement Questions within the CVA Survey

Resilience & Adaptation Vision Statement

Putnam County will create a Resilience & Adaptation Vision for the County to guide its Climate Change Adaptation & Resilience Plan. The Resilience & Adaptation Vision will be shaped by community feedback and input. A draft vision statement can be found below.

Draft Vision Statement: Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come.

26. Would you like to provide feedback on the Draft Vision Statement? *

- ◯ Yes
- ◯ No

27. Are there any words or phrases in the Draft Vision Statement that particularly resonate with you, or that you think are important to include in the final Vision Statement?

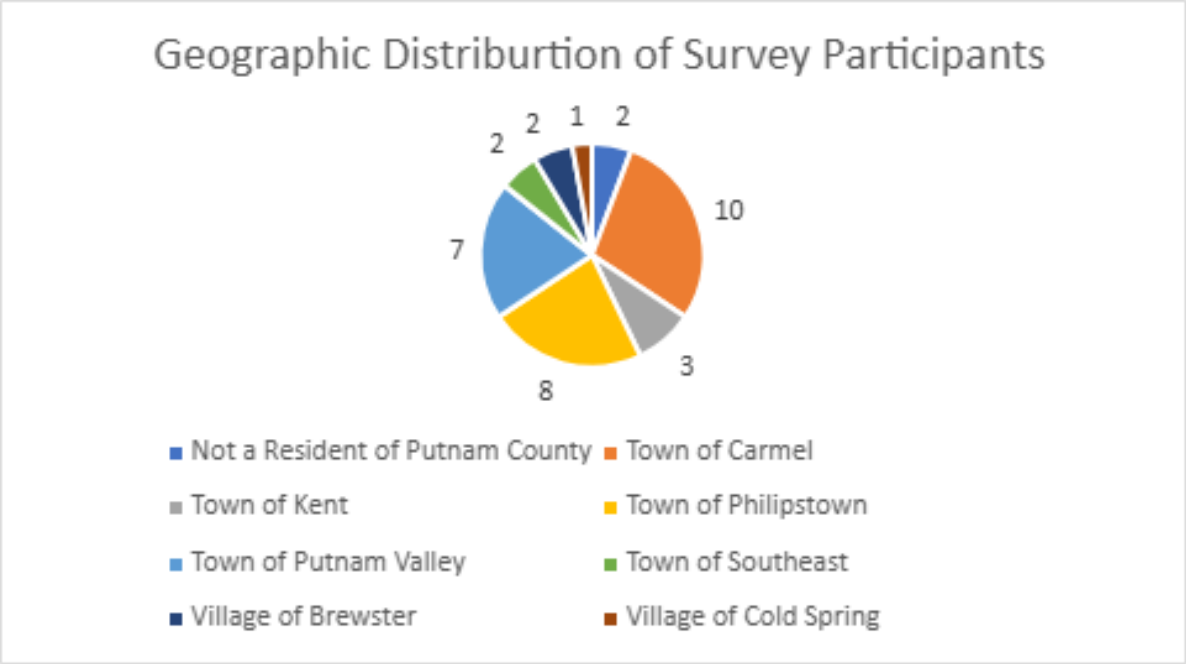
28. Are there any words or phrases in the Draft Vision Statement that do not resonate with you, or that you think should be altered in the final Vision Statement?

29. Are there any themes, concepts, or words that you feel are missing from the Draft Vision Statement that you think should be considered?

Vision Statement Responses

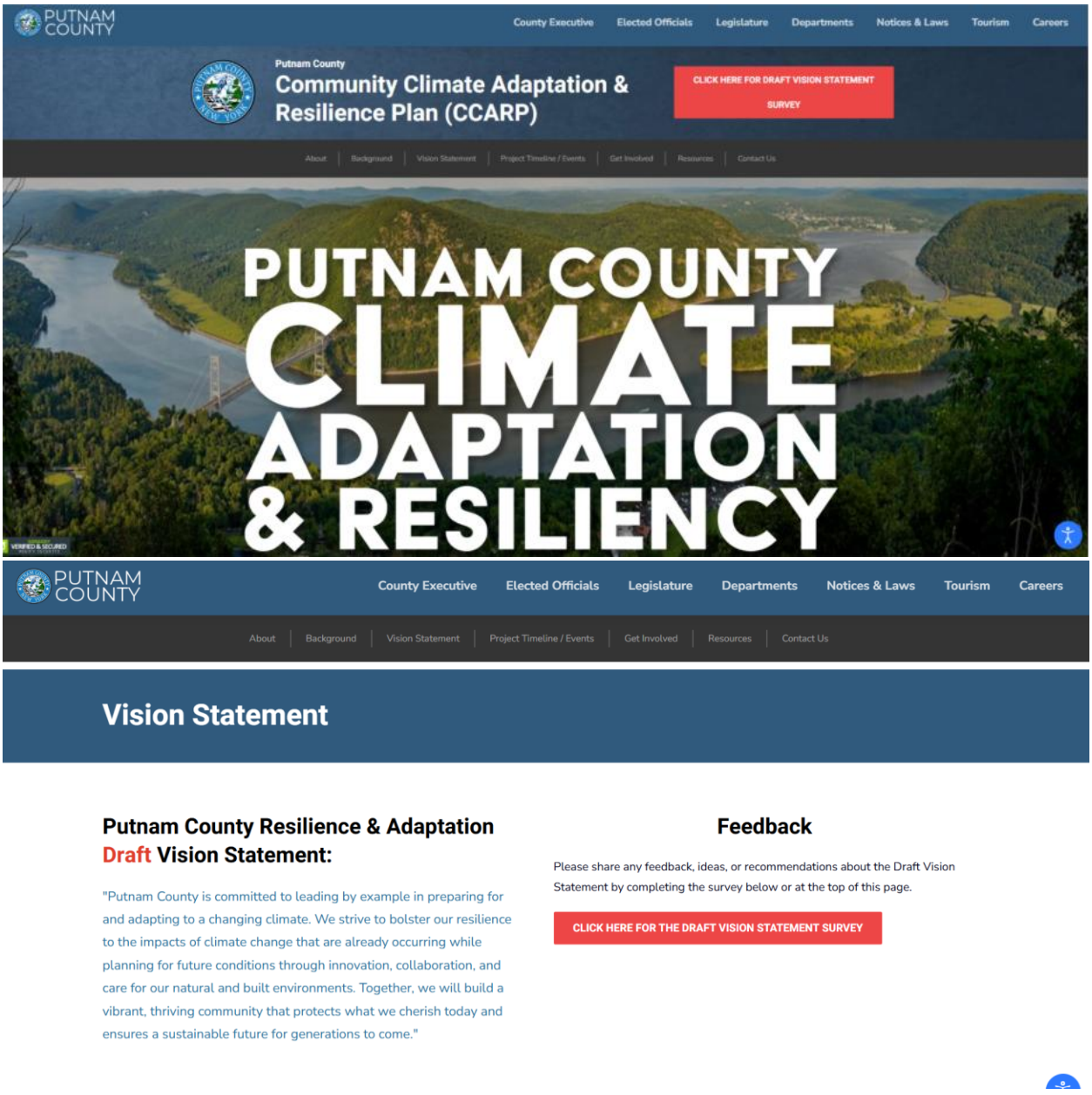
The standalone Vision Statement survey received seven responses, all from Putnam County residents. Within the Climate Vulnerability Assessment survey, 30 participants checked that they would like to provide feedback on the Vision Statement. Of those, 27 left comments/feedback. 25 respondents were residents of Putnam County. Two respondents were not Putnam County residents but did work in the County.

One additional survey response provided feedback following the close of the CVA survey, jointly submitted by 5 individuals (included as one participant in the chart below).



Vision Statement Survey Website Promotion

Website promotion for the Vision Statement Survey



Vision Statement Survey Stakeholder Workshop Promotion

CSRP Workshop

Slides advertising the Vision Statement Survey at the CSRP Workshop-Nov 20, 2025

Vision Statement Activity

Draft Vision Statement

"Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to **bolster our resilience to the impacts of climate change** that are already occurring while planning for future conditions through **innovation, collaboration, and care for our natural and built environments.** Together, we will build a vibrant, thriving community that **protects what we cherish today and ensures a sustainable future for generations to come**."

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Thank You!

Vision Statement Feedback Form

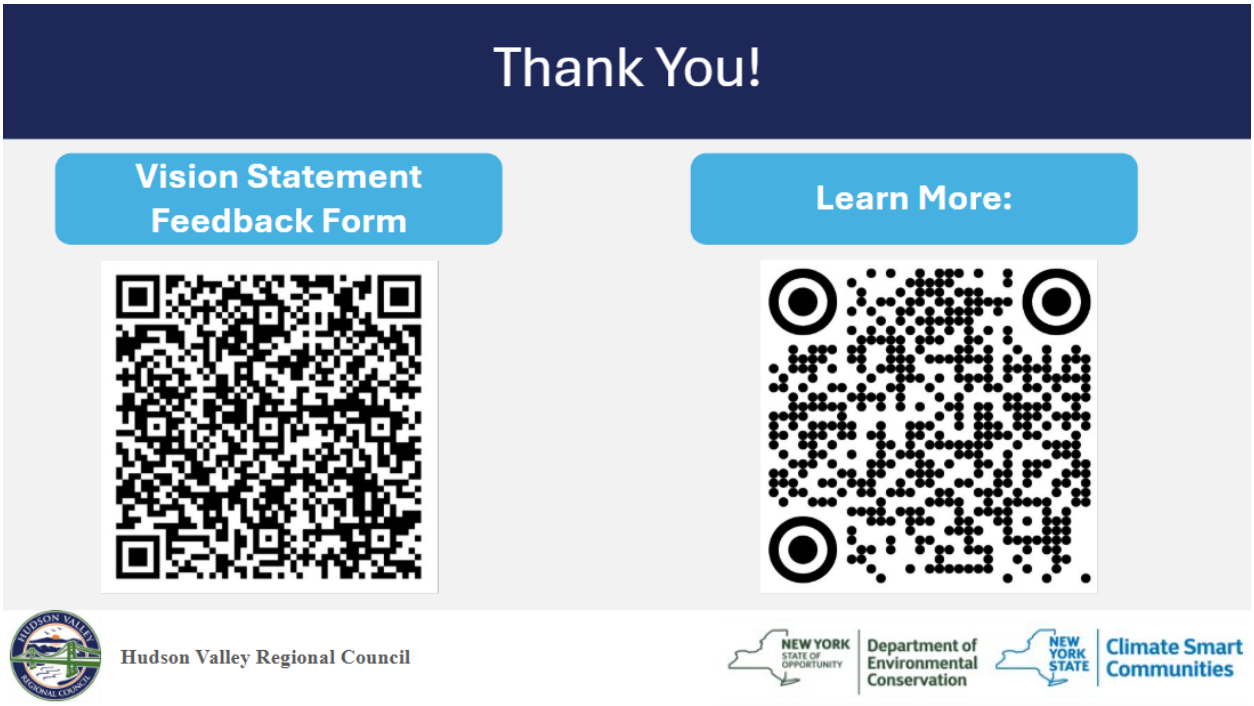
Learn More:

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Scenario Planning Workshop Part 1

Slide included in the Scenario Planning Part 1 Workshop on Feb 9, 2026



Scenario Planning Workshop Part 2

The Vision Statement was discussed during the Scenario Planning Workshop Part 2 on March 9, 2026 (See Appendix E for more information). Participants completed two, word cloud exercises to inform the Draft Vision Statement. The link to the Vision Statement Survey was also shared at the workshops.

Slides included in the Scenario Planning Workshop Part 2 can be found below:

Resilience & Adaptation Vision Statement

"Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come."

What are the top 3 words you would use to describe a resilient and adaptive future for Putnam County?

- **Menti.com**
- **ID:** 2519 9414

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Next Steps

Climate Adaptation Plan Process

- ❑ Synthesize feedback into a draft Climate Adaptation Plan
- ❑ Opportunities for revision/feedback
- ❑ Implementation logistics

Vision Statement Feedback Survey

To share additional comments/feedback, email **sditommaso@hudsonvalleyrc.org**

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The Vision Statement Word Clouds from the Scenario Planning Workshop Part 2 can be found below:





Vision Statement Survey: Partner Organization Survey Promotion

Section 3

Thank you for taking the time to fill out this survey. If you marked you are interested in getting involved with the Climate Change Adaptation & Resilience Plan, we will reach out soon.

If you are interested in providing feedback for our Resilience & Adaptation Vision, we appreciate your input through the survey here: https://forms.office.com/Pages/ResponsePage.aspx?id=8YPyw7HV9kWvsGjwYo29sMiilCgvU_JCjZcbA5dHwaBURTYxQjM2Q1c3VDUyUFk2VzVDUjZXTVNZWi4u

Appendix H: Climate Vulnerability Assessment Survey

Survey Questions

English Version



Putnam County Climate Vulnerability Assessment

Background: Putnam County is currently working on a Climate Vulnerability Assessment and Climate Adaptation Plan.

- The Climate Vulnerability Assessment will evaluate hazards facing the County and the social, environmental, and infrastructural assets at risk.
- The Climate Adaptation Plan will outline strategies for the County to address these hazards and to build safer, more resilient communities.

The assessment and plan will form the basis of a Climate Change Adaptation & Resilience Plan for the County.

Survey: The goal of this survey is to support a safer, more resilient Putnam County. Your contributions will play a pivotal role in shaping the County's Climate Change Adaptation & Resilience Plan and will inform future engagement efforts. This survey is designed to take 10-15 minutes and has three objectives:

1. To collect community feedback on the hazards of highest concern
2. To identify and prioritize social, infrastructural, and environmental assets in the County
3. To collect feedback on a Resilience & Adaptation Vision for Putnam County

Learn more: To learn more about ongoing resilience & adaptation work and to stay up-to-date on engagement opportunities, please visit: https://putnamcountyny.gov/ccarp.

* Required

Identifying Hazards

1. Have you experienced any of the following hazards in Putnam County in the past 5-10 years? Please select all that apply. *

- [ ] Extreme heat (temperature ≥ 90°F)
- [ ] Heat Waves (3+ days with max temperatures ≥ 90°F)
- [ ] Severe winter storms
- [ ] Severe Storm: Hurricanes
- [ ] Severe Storm: Tornados
- [ ] Severe Storm: Precipitation
- [ ] Wildfires
- [ ] Poor air quality
- [ ] Flooding
- [ ] Drought
- [ ] Pests, insects, or invasive species
- [ ] None of the above
- [ ] Other

2. Please briefly describe the hazard events that you experienced

Please enter at most 1000 characters

3. Please indicate your level of concern about each of the following hazards in Putnam County in the next 10-15 years into the future? You may also indicate if you are unsure or need more information.

Context: According to the most recent New York State Climate Impacts Assessment, New York can expect a variety of climate impacts. The average annual temperature is projected to increase 4-6 degrees by 2050, and as much as 11 degrees by 2100. Sea levels are projected to increase by 1 to 2 feet by 2050, and up to nearly 6 feet by 2100 under a newly added "rapid ice melt scenario." Average annual precipitation is expected to increase by up to 6 inches by 2050, with up to a 28% increase by 2100.

*

	High	Medium	Low	Unsure: Need more information
Extreme heat (temperature ≥ 90°F)	○	○	○	○
Heat Waves (3+ days with max temperatures ≥ 90°F)	○	○	○	○
Severe winter storms	○	○	○	○
Severe Storm: Hurricanes	○	○	○	○
Severe Storm: Tornados	○	○	○	○
Severe Storm: Precipitation	○	○	○	○
Wildfires	○	○	○	○
Poor air quality	○	○	○	○
Flooding	○	○	○	○
Drought	○	○	○	○
Pests, insects, or invasive species	○	○	○	○
None of the above	○	○	○	○

4. If there are additional hazards you are concerned about, please list the hazards and your level of concern (high, medium, or low). [Example: Hazard A-Low, Hazard B-Medium, etc.]

Defining Community Assets: Social Assets

Hazards can pose challenges to social, infrastructural, and environmental assets in Putnam County. For example, severe heat can threaten health; flooding can block roadways; and severe storms can damage recreational sites. The following questions aim to understand your opinions about which community assets to prioritize in adaptation planning efforts. **Social assets refer to attributes important for communities and economies. They can include people, services, industries, and experiences.**

5. Please indicate if you think the following social assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. *

	High	Medium	Low
Access to healthcare facilities and services	○	○	○
Access to cultural centers and resources (libraries, museums, etc.)	○	○	○
Maintaining local jobs and businesses	○	○	○
Providing resources and services for seniors	○	○	○
Providing resources and services for youth	○	○	○
Supporting tourism and visitors to the county	○	○	○
Supporting vulnerable communities	○	○	○
Ensuring food access and security	○	○	○
Holding community events or festivals	○	○	○
Supporting historic preservation	○	○	○

6. Are there any additional social/economic assets that you think should be prioritized in Putnam County's adaptation planning efforts? *

- ◯ Yes
- ◯ No

7. If yes, please describe. *

Please enter at most 200 characters

8. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you experienced cancelled events from extreme heat, disruptions to food supplies from a storm etc.?) *

- ◯ Yes
- ◯ No

9. If yes, please describe your experience(s). *

10. Personal stories and experiences can provide valuable information and perspective. Do you give the planning team permissions to use your story from the previous question in Putnam County's Climate Adaptation & Resilience Plan? *

- ◯ Yes
- ◯ No

11. If you answered yes to the previous question, please provide your name and email address *

Defining Community Assets: Infrastructural Assets

Hazards can pose challenges to social, infrastructural, and environmental assets in Putnam County. For example, severe heat can threaten health; flooding can block roadways; and severe storms can damage recreational sites. The following questions aim to understand your opinions about which community assets to prioritize in adaptation planning efforts. **Infrastructural assets refer to the built components of a community. They can include roads, energy & power, waste & water systems, and buildings.**

12. Please indicate if you think the following infrastructural assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. *

	High	Medium	Low
Access to reliable power and energy sources	◯	◯	◯
Access to safe travel and transportation options	◯	◯	◯
Access to public transportation	◯	◯	◯
Access to cooling or warming centers	◯	◯	◯
Availability of evacuation routes	◯	◯	◯
Access to adequate storm/emergency shelters	◯	◯	◯
Maintaining the operation of public buildings	◯	◯	◯
Maintaining reliable waste disposal systems (waste pick up, recycling, etc.)	◯	◯	◯
Maintaining stormwater infrastructure	◯	◯	◯
Protecting homes from property damage	◯	◯	◯
Preventing dam failure	◯	◯	◯
Preventing damage to septic infrastructure	◯	◯	◯

13. Are there any additional infrastructural assets that you think should be prioritized in Putnam County's adaptation planning efforts? *

- ◯ Yes
- ◯ No

14. If yes, please describe. *

Please enter at most 200 characters

15. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you experienced frequent power outages from storms, noticed roads that flood often etc.) *

- ◯ Yes
- ◯ No

16. If yes, please describe your experience(s). *

17. Personal stories and experiences can provide valuable information and perspective. Do you give the planning team permissions to use your story from the previous question in Putnam County's Climate Adaptation & Resilience Plan? *

- ◯ Yes
- ◯ No

18. If you answered yes to the previous question, please provide your name and email address *

Defining Community Assets: Environmental Assets

Hazards can pose challenges to social, infrastructural, and environmental assets in Putnam County. For example, severe heat can threaten health; flooding can block roadways; and severe storms can damage recreational sites. The following questions aim to understand your opinions about which community assets to prioritize in adaptation planning efforts. **Environmental assets refer to the ecosystems and environments in a community and the services they provide. They can include natural areas like parks and forests as well as services like clean water and productive soils.**

19. Please indicate if you think the following environmental assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. *

	High	Medium	Low
Protecting safe drinking water	◯	◯	◯
Protecting clean air	◯	◯	◯
Protecting biodiversity	◯	◯	◯
Protecting ecosystems and habitats	◯	◯	◯
Access to high quality recreation sites	◯	◯	◯
Access to parks and open space	◯	◯	◯
Protecting agricultural land and soils	◯	◯	◯

20. Are there any additional environmental assets that you think should be prioritized in Putnam County's adaptation planning efforts? *

◯ Yes

◯ No

21. If yes, please describe. *

Please enter at most 200 characters

22. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you noticed damage to recreational trails, an increase in days with poor air quality etc.?) *

- ◯ Yes
- ◯ No

23. If yes, please describe your experience(s) *

24. Personal stories and experiences can provide valuable information and perspective. Do you give the planning team permissions to use your story from the previous question in Putnam County's Climate Adaptation & Resilience Plan? *

- ◯ Yes
- ◯ No

25. If you answered yes to the previous question, please provide your name and email address *

Resilience & Adaptation Vision Statement

Putnam County will create a Resilience & Adaptation Vision for the County to guide its Climate Change Adaptation & Resilience Plan. The Resilience & Adaptation Vision will be shaped by community feedback and input. A draft vision statement can be found below.

Draft Vision Statement: Putnam County is committed to leading by example in preparing for and adapting to a changing climate. We strive to bolster our resilience to the impacts of climate change that are already occurring while planning for future conditions through innovation, collaboration, and care for our natural and built environments. Together, we will build a vibrant, thriving community that protects what we cherish today and ensures a sustainable future for generations to come.

26. Would you like to provide feedback on the Draft Vision Statement? *

- ◯ Yes
- ◯ No

27. Are there any words or phrases in the Draft Vision Statement that particularly resonate with you, or that you think are important to include in the final Vision Statement?

28. Are there any words or phrases in the Draft Vision Statement that do not resonate with you, or that you think should be altered in the final Vision Statement?

29. Are there any themes, concepts, or words that you feel are missing from the Draft Vision Statement that you think should be considered?

Demographic Information

30. Are you a resident of Putnam County? *

- ◯ Yes
- ◯ No

31. If not, do you work in Putnam County? *

- ◯ Yes
- ◯ No

32. If so, which town/village do you live in?

- ◯ Town of Carmel
- ◯ Town of Kent
- ◯ Town of Patterson
- ◯ Town of Philipstown
- ◯ Town of Putnam Valley
- ◯ Town of Southeast
- ◯ Village of Brewster
- ◯ Village of Cold Spring
- ◯ Village of Nelsonville

33. Which represents your age bracket?

- ◯ 18-25
- ◯ 26-35
- ◯ 36-45
- ◯ 46-55
- ◯ 56-65
- ◯ 66-75
- ◯ 76+

34. Which of the following best reflects your race or ethnicity?

- ◯ Asian or Pacific Islander
- ◯ Black or African American
- ◯ Hispanic or Latino
- ◯ Native American or Alaska Native
- ◯ White or Caucasian
- ◯ Multiracial or Biracial
- ◯ Other

35. Which of the following best reflects your gender?

- ◯ Male
- ◯ Female
- ◯ Other

Spanish Version

Evaluación de la Vulnerabilidad Climática del Condado de Putnam

Antecedentes: El condado de Putnam está trabajando actualmente en una Evaluación de Vulnerabilidad Climática y un Plan de Adaptación al Clima.· La Evaluación de Vulnerabilidad Climática evaluará los peligros que enfrenta el Condado y los activos sociales, ambientales y de infraestructura en riesgo.· El Plan de Adaptación al Clima describirá estrategias para que el Condado aborde estos riesgos y construya comunidades más seguras y resilientes. La evaluación y el plan formarán la base de un Plan de Adaptación y Resiliencia al Cambio Climático para el Condado.

Encuesta: El objetivo de esta encuesta es apoyar un condado de Putnam más seguro y resiliente. Tus contribuciones jugarán un papel fundamental en la configuración del Plan de Adaptación y Resiliencia al Cambio Climático del Condado y orientarán los futuros esfuerzos de implicación. Esta encuesta está diseñada para durar entre 10 y 15 minutos y tiene tres objetivos:

1. Recoger opiniones de la comunidad sobre los peligros de mayor preocupación.
2. Identificar y priorizar los activos sociales, infraestructurales y ambientales en el Condado.
3. Recopilar opiniones sobre una Visión de Resiliencia y Adaptación para el Condado de Putnam.

Más información: Para saber más sobre el trabajo continuo de resiliencia y adaptación y para mantenerse al día de las oportunidades de participación, por favor visita: https://putnamcountyny.gov/ccarp.

Required

Identificación de Peligros

1. ¿Ha experimentado alguno de los siguientes peligros en el Condado de Putnam en los últimos 5-10 años? Por favor, seleccione todo lo que aplique. *

- [ ] Calor extremo (temperatura ≥ 90°F)
- [ ] Olas de calor (3 días con temperaturas máximas ≥ 90°F)
- [ ] Severas tormentas de invierno
- [ ] Tormenta Severa: Huracanes
- [ ] Tormenta Severa: Tornados
- [ ] Tormenta Severa: Precipitación
- [ ] Incendio Forestal
- [ ] Mala calidad del aire
- [ ] Inundación
- [ ] Sequía
- [ ] Plagas, insectos o especies invasoras
- [ ] Ninguna de las anteriores
- [ ] Other

2. Por favor describa brevemente los eventos de peligro que experimentó. (Por favor, introduzca como máximo 1000 caracteres)

Please enter at most 1000 characters

3. ¿Por favor, indique su nivel de preocupación por cada uno de los siguientes peligros en el Condado de Putnam en los próximos 10-15 años en el futuro? También puedes indicar si tienes dudas o necesitas más información.

Contexto: Según la más reciente Evaluación de Impactos Climáticos del Estado de Nueva York, Nueva York puede esperar una variedad de impactos climáticos. Se proyecta que la temperatura media anual aumente 4-6 grados para 2050, y hasta 11 grados para 2100. Se proyecta que los niveles del mar aumentarán de 1 a 2 pies para 2050, y hasta casi 6 pies para 2100 bajo un nuevo "escenario rápido de deshielo del hielo". Se espera que la precipitación anual promedio aumente hasta 6 pulgadas para 2050, con un aumento de hasta 28% para 2100. *

	Alto	Mediano	Bajo	Inseguro: Necesita más información
Calor extremo (temperatura ≥90°F)	◯	◯	◯	◯
Olas de calor (3 días con temperaturas máximas ≥90°F)	◯	◯	◯	◯
Severas tormentas de invierno	◯	◯	◯	◯
Tormenta Severa: Huracanes	◯	◯	◯	◯
Tormenta Severa: Tornados	◯	◯	◯	◯
Tormenta Severa: Precipitación	◯	◯	◯	◯
Incendio Forestal	◯	◯	◯	◯
Mala calidad del aire	◯	◯	◯	◯
Inundación	◯	◯	◯	◯
Sequía	◯	◯	◯	◯
Plagas, insectos o especies invasoras	◯	◯	◯	◯
Ninguna de las anteriores	◯	◯	◯	◯

4. Si hay peligros adicionales que le preocupan, por favor enumere los peligros y su nivel de preocupación (alto, medio o bajo). [Ejemplo: Peligro A -Bajo, Peligro B -Medio, etc.]

Definiendo los Activos Comunitarios: Activos Sociales

Los peligros pueden plantear desafíos a los activos sociales, infraestructurales y ambientales en el condado de Putnam. Por ejemplo, el calor severo puede amenazar la salud; las inundaciones pueden bloquear las carreteras; y las tormentas severas pueden dañar los sitios recreativos. Las siguientes preguntas tienen como objetivo comprender sus opiniones sobre qué activos comunitarios priorizar en los esfuerzos de planificación de la adaptación. **Los activos sociales se refieren a atributos importantes para las comunidades y las economías. Pueden incluir personas, servicios, industrias y experiencias.**

5. Por favor indique si cree que los siguientes activos sociales en el Condado de Putnam deben ser una prioridad alta, media o baja para los esfuerzos de planificación de adaptación del Condado. *

	Alto	Mediano	Bajo
Acceso a instalaciones y servicios de salud	○	○	○
Acceso a centros culturales y recursos (bibliotecas, museos, etc.)	○	○	○
Mantenimiento empleos y negocios locales	○	○	○
Proporcionando recursos y servicios para personas mayores	○	○	○
Proporcionando recursos y servicios para jóvenes	○	○	○
Apoyando al turismo y a los visitantes del condado	○	○	○
Apoyando a comunidades vulnerables	○	○	○
Garantizar el acceso y la seguridad alimentaria	○	○	○
Organización de eventos y festivales comunitarios	○	○	○
Apoyando la preservación histórica	○	○	○

6. ¿Hay activos sociales/económicos adicionales que usted cree que deberían ser priorizados en los esfuerzos de planificación de adaptación del Condado de Putnam? *

- ◯ Si
- ◯ No

7. Si la respuesta es sí, por favor explique. (Por favor, introduzca como máximo 200 caracteres) *

Please enter at most 200 characters

8. ¿Ha experimentado personalmente interrupciones en cualquiera de los activos anteriores debido a los peligros climáticos? (es decir, ¿ha experimentado eventos cancelados por calor extremo, interrupciones en los suministros de alimentos por una tormenta, etc.?). *

- ◯ Si
- ◯ No

9. En caso afirmativo, por favor describa su experiencia(s)? *

10. Las historias y experiencias personales pueden proporcionar información y perspectiva valiosas. ¿Concede permisos al equipo de planificación para utilizar su historia de la pregunta anterior en el Plan de Adaptación y Resiliencia al Clima del Condado de Putnam? *

- ◯ Si
- ◯ no

11. Si respondió afirmativamente a la pregunta anterior, proporcione su nombre y dirección de correo electrónico. *

Definiendo los Activos Comunitarios: Activos de Infraestructuras

Los peligros pueden plantear desafíos a los activos sociales, infraestructurales y ambientales en el condado de Putnam. Por ejemplo, el calor severo puede amenazar la salud; las inundaciones pueden bloquear las carreteras; y las tormentas severas pueden dañar los sitios recreativos. Las siguientes preguntas tienen como objetivo comprender sus opiniones sobre qué activos comunitarios priorizar en los esfuerzos de planificación de la adaptación. **Los activos de infraestructura se refieren a los componentes construidos de una comunidad. Pueden incluir carreteras, energía, sistemas de aguas residuales, y edificios.**

12. Por favor indique si cree que los siguientes activos sociales en el Condado de Putnam deben ser una prioridad alta, media o baja para los esfuerzos de planificación de adaptación del Condado. *

	Alto	Mediano	Bajo
Acceso a fuentes de energía y energía confiables	○	○	○
Acceso a opciones seguras de viaje y transporte	○	○	○
Acceso al transporte público	○	○	○
Acceso a centros de enfriamiento y calentamiento	○	○	○
Disponibilidad de rutas de evacuación	○	○	○
Acceso a refugios adecuados para tormentas/emergencias	○	○	○
Mantenimiento del funcionamiento de los edificios públicos	○	○	○
Mantenimiento de sistemas de eliminación de residuos fiables (recogida de residuos, reciclaje, etc.)	○	○	○
Mantenimiento de la infraestructura de aguas pluviales	○	○	○
Protegiendo las casas de daños a la propiedad	○	○	○
Prevención del fallo de la presa	○	○	○
Prevención de daños en infraestructuras sépticas	○	○	○

13. ¿Hay algún activo de infraestructura adicional que usted cree que debería ser priorizado en los esfuerzos de planificación de adaptación del Condado de Putnam? *

- ◯ Sí
- ◯ no

14. Si la respuesta es sí, por favor explique. (Por favor, introduzca como máximo 200 caracteres) *

Please enter at most 200 characters

15. ¿Ha experimentado personalmente interrupciones en cualquiera de los activos anteriores debido a los peligros climáticos? (es decir, ¿ha experimentado frecuentes cortes de energía por tormentas, ha notado carreteras que se inundan a menudo, etc.) *

- ◯ Sí
- ◯ no

16. En caso afirmativo, por favor describa su experiencia(s). *

17. Las historias y experiencias personales pueden proporcionar información y perspectiva valiosas. ¿Concede permisos al equipo de planificación para utilizar su historia de la pregunta anterior en el Plan de Adaptación y Resiliencia al Clima del Condado de Putnam? *

- ◯ Sí
- ◯ No

18. Si respondió afirmativamente a la pregunta anterior, proporcione su nombre y dirección de correo electrónico. *

Definiendo los Activos Comunitarios: Activos Ambientales

Los peligros pueden plantear desafíos a los activos sociales, infraestructurales y ambientales en el condado de Putnam. Por ejemplo, el calor severo puede amenazar la salud; las inundaciones pueden bloquear las carreteras; y las tormentas severas pueden dañar los sitios recreativos. Las siguientes preguntas tienen como objetivo comprender sus opiniones sobre qué activos comunitarios priorizar en los esfuerzos de planificación de la adaptación. **Los activos ambientales se refieren a los ecosistemas y ambientes de una comunidad y los servicios que proporcionan. Pueden incluir áreas naturales como parques y bosques, así como servicios como agua limpia y suelos productivos.**

19. Por favor indique si cree que los siguientes activos sociales en el Condado de Putnam deben ser una prioridad alta, media o baja para los esfuerzos de planificación de adaptación del Condado. *

	Alto	Mediano	Bajo
Protección del agua potable	◯	◯	◯
Protección del aire limpio	◯	◯	◯
Mantenimiento de la biodiversidad	◯	◯	◯
Protección de ecosistemas y hábitats	◯	◯	◯
Acceso a sitios de recreación de alta Calidad	◯	◯	◯
Acceso a parques y espacios abiertos	◯	◯	◯
Protección de las tierras agrícolas y los suelos	◯	◯	◯

20. ¿Hay algún activo ambiental adicional que creas que debería priorizarse en los esfuerzos de planificación de adaptación del condado de Putnam? *

◯ Sí

◯ no

21. Si la respuesta es sí, por favor explique. *

22. ¿Ha experimentado personalmente interrupciones en cualquiera de los activos anteriores debido a los peligros climáticos? (es decir, ¿ha notado daños en los senderos recreativos, un aumento en los días con mala calidad del aire, etc.?) *

- ◯ Sí
- ◯ no

23. En caso afirmativo, por favor describa su experiencia(s). *

24. Las historias y experiencias personales pueden proporcionar información y perspectiva valiosas. ¿Concede permisos al equipo de planificación para utilizar su historia de la pregunta anterior en el Plan de Adaptación y Resiliencia al Clima del Condado de Putnam? *

- ◯ Sí
- ◯ no

25. Si respondió afirmativamente a la pregunta anterior, proporcione su nombre y dirección de correo electrónico. *

Declaración de Visión de Resiliencia y Adaptación

El Condado de Putnam creará una Visión de Resiliencia y Adaptación para que el Condado guíe su Plan de Adaptación y Resiliencia al Cambio Climático. La Visión de Resiliencia y Adaptación se determinará a partir de la retroalimentación y las aportaciones de la comunidad. A continuación, se puede encontrar un borrador de declaración de visión.

Borrador de Declaración de Visión: El Condado de Putnam se compromete a liderar con el ejemplo en la preparación y adaptación a un clima cambiante. Nos esforzamos por reforzar nuestra resiliencia a los impactos del cambio climático que ya están ocurriendo mientras planificamos las condiciones futuras a través de la innovación, la colaboración y el cuidado de nuestros entornos naturales y construidos. Juntos, construiremos una comunidad vibrante y próspera que proteja lo que apreciamos hoy y garantice un futuro sostenible para las generaciones venideras.

26. ¿Te gustaría dar tu opinión sobre el borrador de la Declaración de Visión? *

- ◯ Sí
- ◯ no

27. ¿Hay palabras o frases en el Borrador de la Declaración de Visión que resuenen particularmente con usted, o que usted cree que es importante incluir en la Declaración de Visión final?

28. ¿Hay palabras o frases en el Borrador de la Declaración de Visión que no resuenen con usted, o que usted piensa que debería ser alterado en la Declaración de Visión final?

29. ¿Hay algún tema, concepto o palabras que usted sienta que falta en el Borrador de la Declaración de Visión que usted piensa que debe ser considerado?

Información Demográfica

30. ¿Eres residente del Condado de Putnam? *

- ◯ Sí
- ◯ no

31. Si no, ¿trabajas en el Condado de Putnam? *

- ◯ Sí
- ◯ No

32. Si es así, ¿en qué pueblo o pueblo vives?

- ◯ Pueblo de Carmel
- ◯ Pueblo de Kent
- ◯ Pueblo de Patterson
- ◯ Pueblo de Philipstown
- ◯ Pueblo de Putnam Valley
- ◯ Pueblo de Southeast
- ◯ Aldea de Brewster
- ◯ Aldea de Cold Spring
- ◯ Aldea de Nelsonville

33. ¿Cuál representa su grupo de edad?

- ◯ 18–25
- ◯ 26–35
- ◯ 36–45
- ◯ 46–55
- ◯ 56–65
- ◯ 66–75
- ◯ 76+

34. ¿Cuál de las siguientes opciones refleja mejor tu raza o etnia?

- ◯ Isleños Asiáticos o del Pacífico
- ◯ Negro o Afroamericano
- ◯ Hispano o Latinoamericano
- ◯ Nativo Americano o Nativo de Alaska
- ◯ Blanco o Caucásico
- ◯ Multirracial o Biracial
- ◯ Other

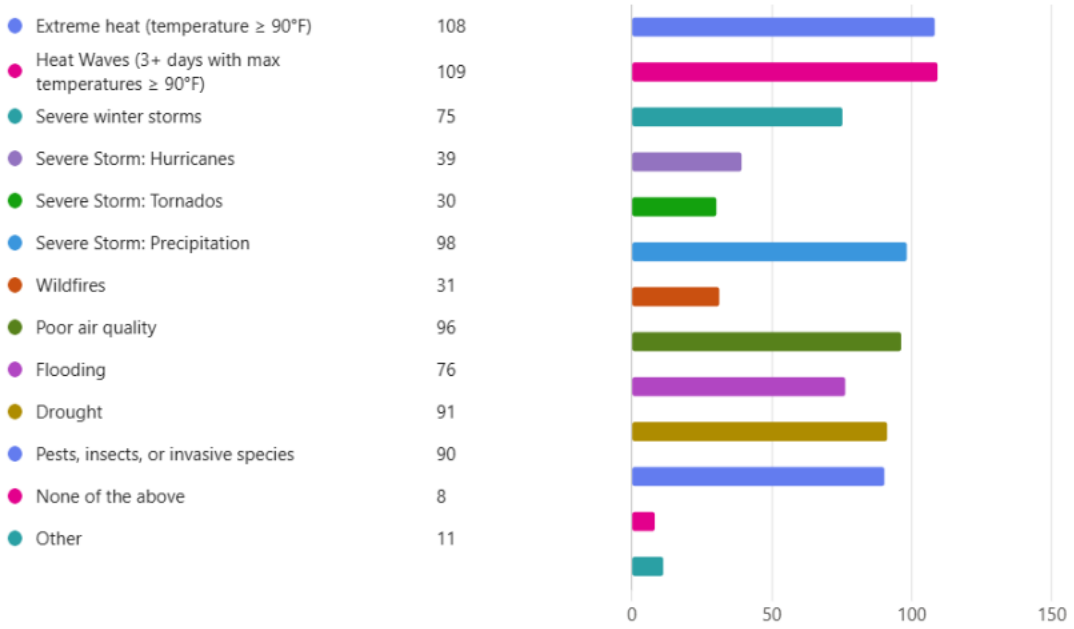
35. ¿Cuál de las siguientes refleja mejor tu género?

- ◯ Hombre
- ◯ Mujer
- ◯ Other

Survey Responses

Survey results for multiple choice questions are included below. All charts and figures were generated by Microsoft Forms. Qualitative responses are excluded from this Appendix to maintain the privacy of survey respondents. Survey participants specifically granted permission to include any long-form responses directly quoted in the Climate Vulnerability Assessment by checking "yes" for the survey question: "Personal stories and experiences can provide valuable information and perspective. Do you give the planning team permission to use your story from the previous question in Putnam County's Climate Adaptation & Resilience Plan?"

1. Have you experienced any of the following hazards in Putnam County in the past 5-10 years? Please select all that apply. More details



3. Please indicate your level of concern about each of the following hazards in Putnam County in the next 10-15 years int o the future? You may also indicate if you are unsure or need more information.

Context: According to the most recent New York State Climate Impacts Assessment, New York can expect a variety of climate impac ts. The average annual temperature is projected to increase 4-6 degrees by 2050, and as much as 11 degrees by 2100. Sea levels are projected to increase by 1 to 2 feet by 2050, and up to nearly 6 feet by 2100 under a newly added "rapid ice melt scenario." Averag e annual precipitation is expected to increase by up to 6 inches by 2050, with up to a 28% increase by 2100. More details

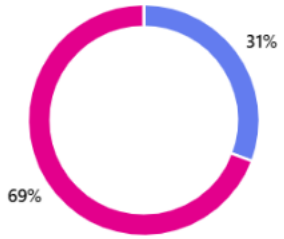


5. Please indicate if you think the following social assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. More details



6. Are there any additional social/economic assets that you think should be prioritized in Putnam County's adaptation planning efforts? More details

Yes	44
No	99

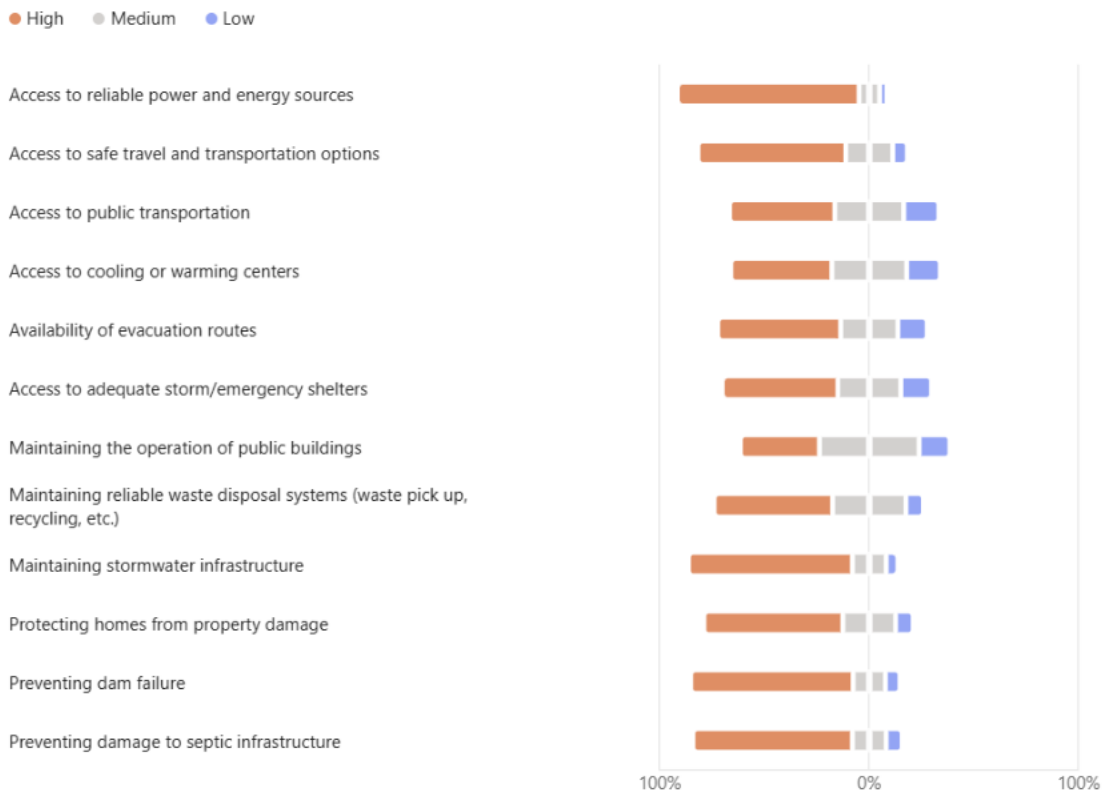


8. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you experienced cancelled events from extreme heat, disruptions to food supplies from a storm etc.?) More details

Yes	58
No	85



12. Please indicate if you think the following infrastructural assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. More details



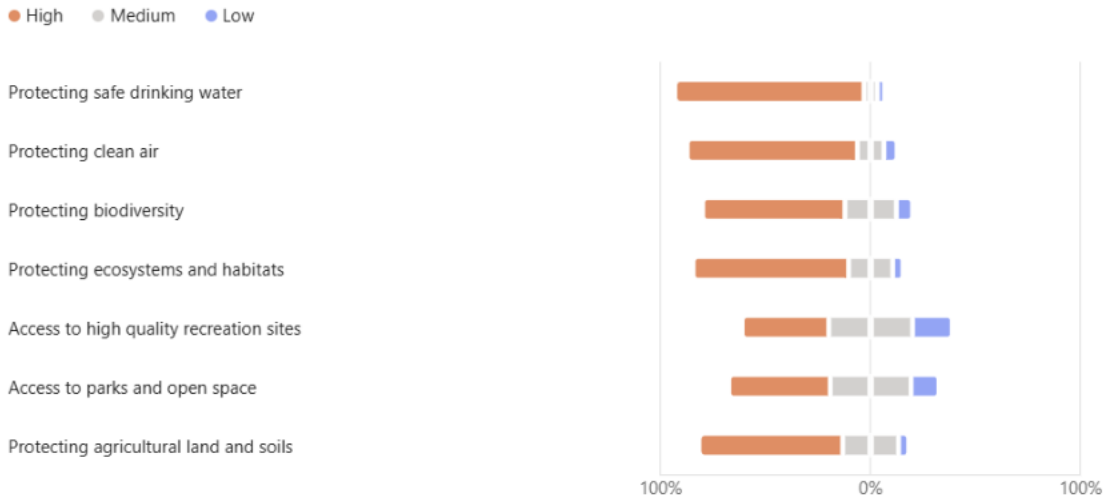
13. Are there any additional infrastructural assets that you think should be prioritized in Putnam County's adaptation planning efforts? More details



15. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you experienced frequent power outages from storms, noticed roads that flood often etc.) More details



19. Please indicate if you think the following environmental assets in Putnam County should be a high, medium, or low priority for the County's adaptation planning efforts. More details

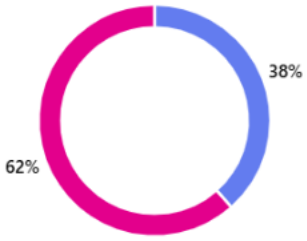


20. Are there any additional environmental assets that you think should be prioritized in Putnam County's adaptation planning efforts? More details



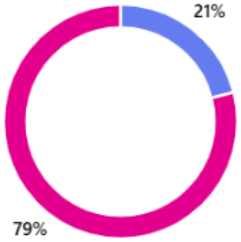
22. Have you personally experienced disruptions to any of the above assets due to climate hazards? (i.e. have you noticed damage to recreational trails, an increase in days with poor air quality etc.?) More details

- Yes 55
- No 88



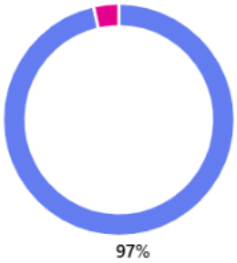
26. Would you like to provide feedback on the Draft Vision Statement? More details

- Yes 30
- No 113



30. Are you a resident of Putnam County? More details

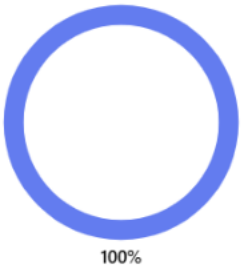
- Yes 138
- No 5



31. If not, do you work in Putnam County?

More details

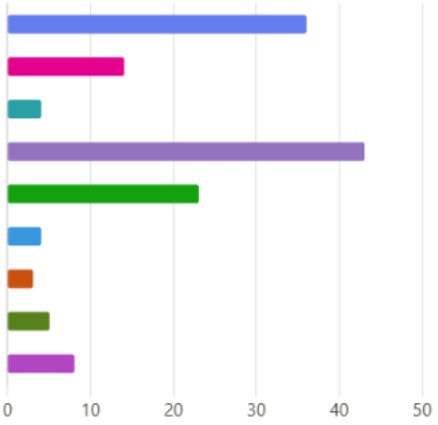
Yes	5
No	0



32. If so, which town/village do you live in?

More details

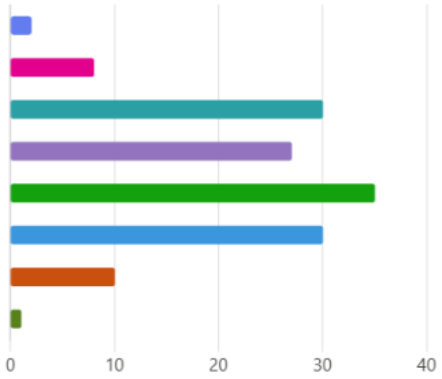
Town of Carmel	36
Town of Kent	14
Town of Patterson	4
Town of Philipstown	43
Town of Putnam Valley	23
Town of Southeast	4
Village of Brewster	3
Village of Cold Spring	5
Village of Nelsonville	8



33. Which represents your age bracket?

More details

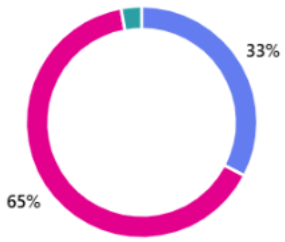
18-25	2
26-35	8
36-45	30
46-55	27
56-65	35
66-75	30
76+	10
Other	1



35. Which of the following best reflects your gender?

More details

Male	46
Female	91
Other	4

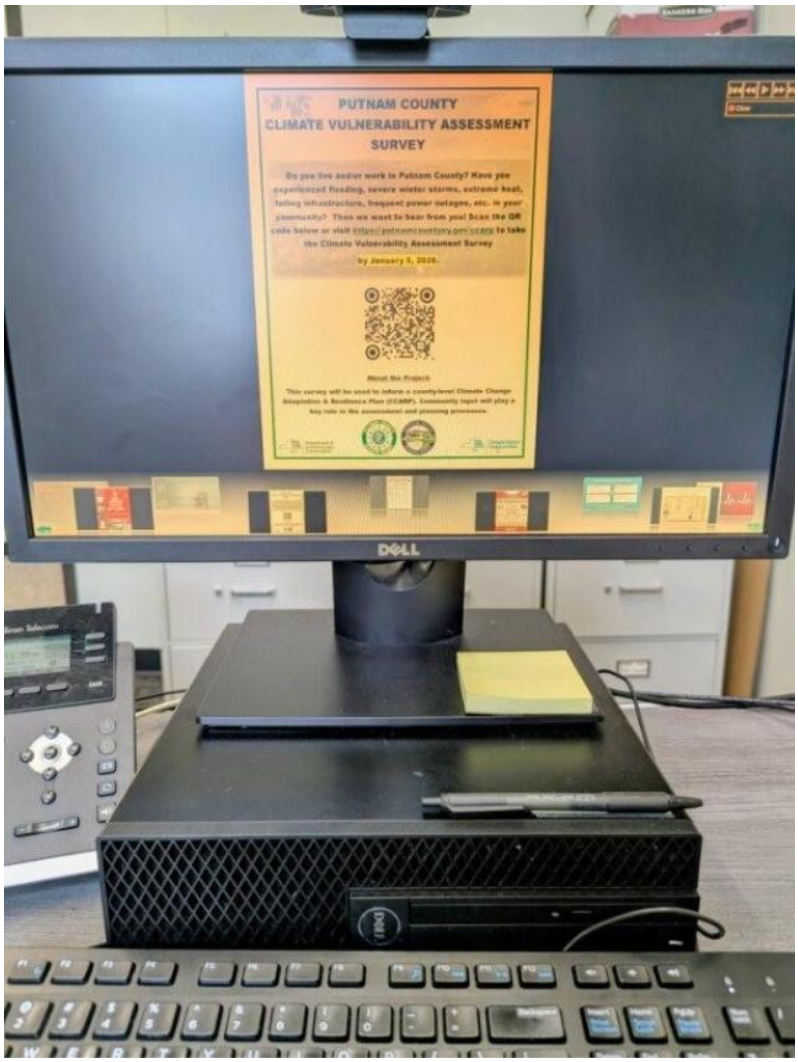


Survey Outreach

Link to CVA Survey on Putnam County's Website



A QR Code to the CVA Survey was included on all Putnam County employee's desktop computers.

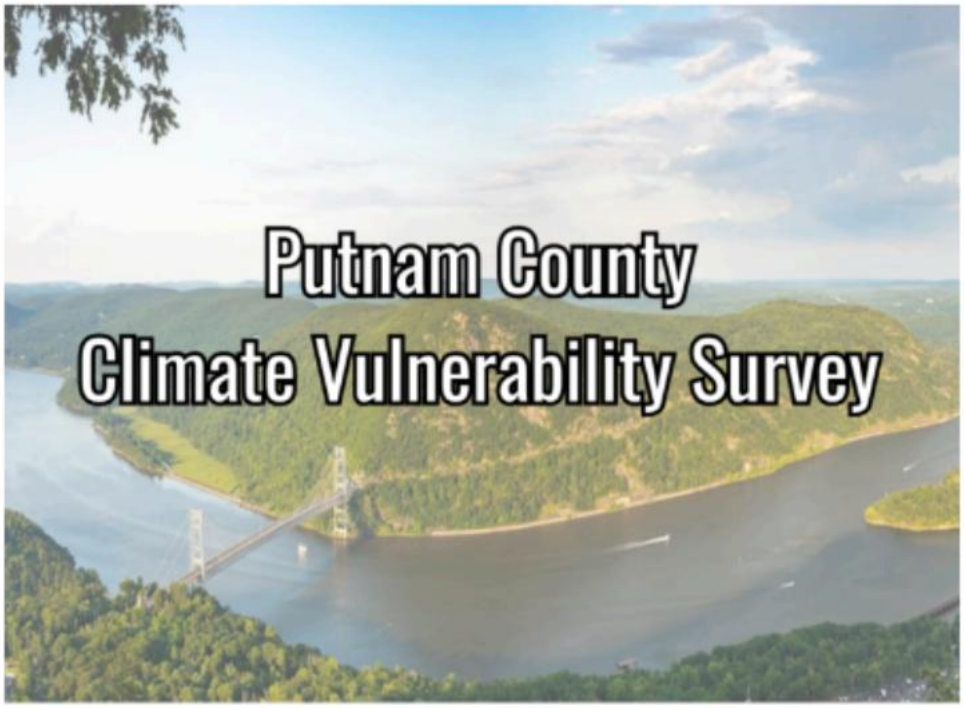


Press Release about Climate Vulnerability Assessment Survey on Putnam County's Website

Planning & Development

News & Press Release

Back to Previous Page



NEW YORK STATE | Department of Environmental Conservation

NEW YORK STATE | Climate Smart Communities

Putnam County Urges Residents to take its Climate Vulnerability Assessment Survey

16 December 2025

Putnam County is seeking residents' input regarding the community impact of extreme weather through its Climate Vulnerability Assessment survey. The survey, which takes 10 minutes to complete and is currently posted on the County's website at https://putnamcountyny.gov/ccarp, is designed to assess hazards facing the County and the key assets at risk.

This survey is part of a broader effort between the Putnam County Planning Department and the Hudson Valley Regional Council to develop a Community Climate Adaptation and Resilience Plan (CCARP). This County-wide Plan will integrate data analysis, community input, and strategic recommendations in order to provide a framework for action to support the County in creating a safer, healthier, and more resilient future. This partnership is supported with funds provided by the New York State Department of Environmental Conservation (NYSDEC).

In June 2024, Putnam County became a Bronze-certified Climate Smart Community through New York State's Climate Smart Communities (CSC) Program. The County's partnership with the Hudson Valley Regional Council will further its existing climate progress and assist in its efforts towards Silver certification.

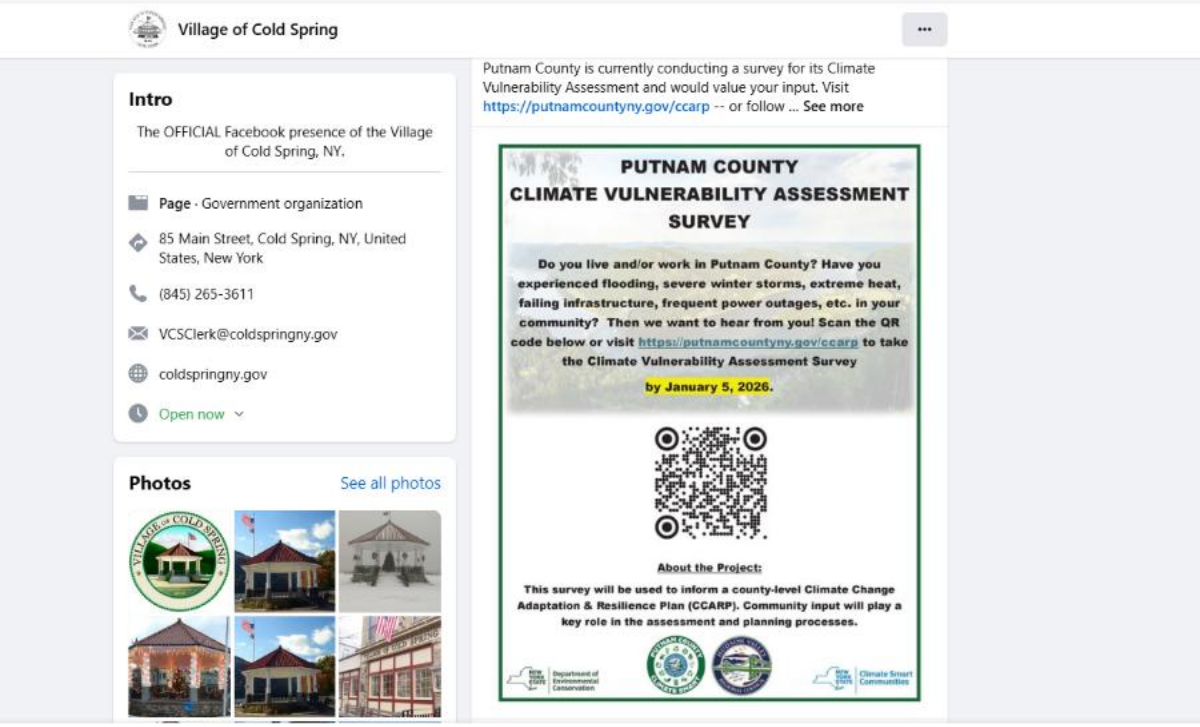
Please share your perspectives and experiences by completing the survey, available in English and Spanish at https://putnamcountyny.gov/ccarp or scan the QR code posted below. Responses will be accepted until January 5, 2026.

Additional Articles

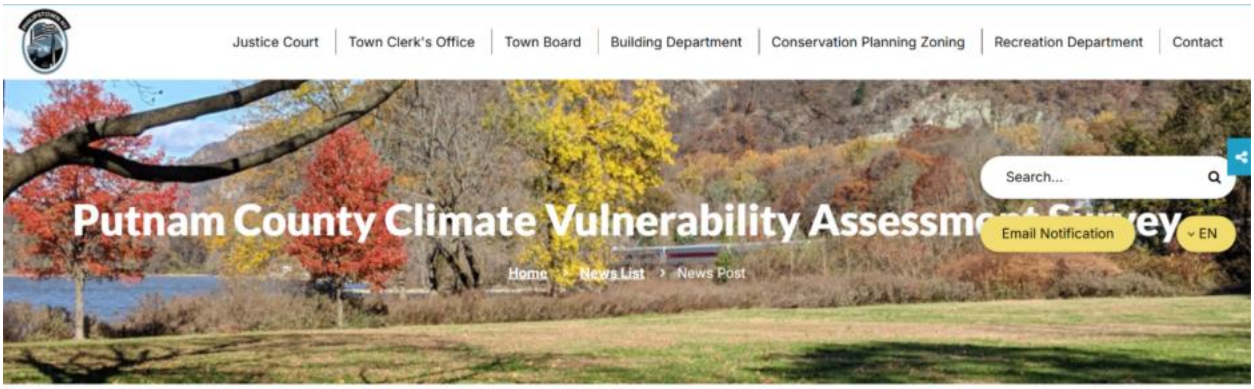
Post on Putnam County's Department of Health's Facebook Page



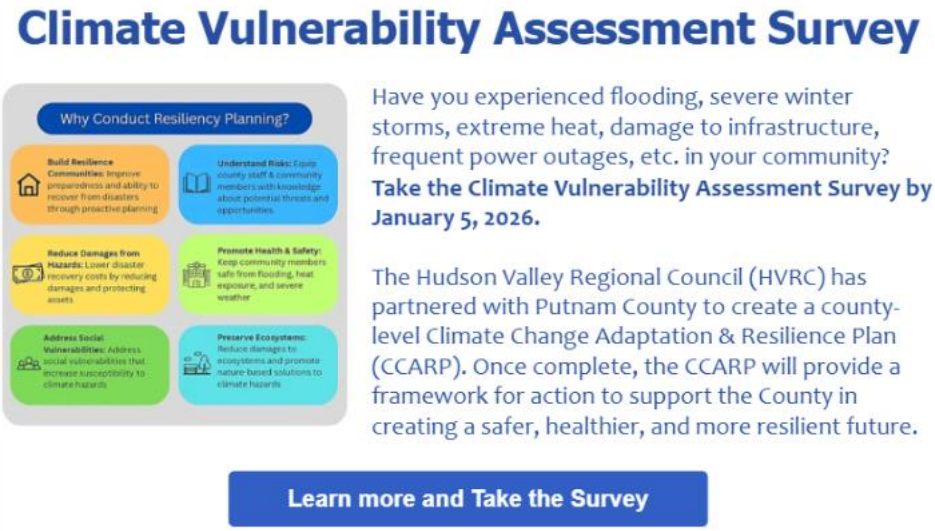
CVA Survey posted on the Village of Cold Spring's Social Media



CVA Survey posted on Philipstown's Website



Survey posted through Sustainable Putnam's newsletter



Putnam County "Keeping Employees Informed" Survey Announcement



Direct outreach email to HVRC's Putnam County contacts

Putnam County Climate Vulnerability Assessment Survey

From Elizabeth Sun <esun@hudsonvalleyrc.org>
Date Mon 12/15/2025 3:26 PM
Cc Sofie diTommaso <sditommaso@hudsonvalleyrc.org>

Hello,

Putnam County, in partnership with HVRC, is currently working on a Climate Vulnerability Assessment and Climate Adaptation Plan. The Climate Vulnerability Assessment will identify climate hazards such as storms, flooding, and severe heat that pose the largest threats to the County and economic, social, and environmental assets most at risk.

The County recently opened a survey to collect community feedback on hazards/vulnerable assets in Putnam County. The findings will be used in the County's Climate Vulnerability Assessment. There are also some questions to provide input on a resilience vision for the County. It is available in both Spanish and English on Putnam County's Climate Change Adaptation & Resilience Plan website. The survey is open to residents/anyone working in the County. Please feel free to share it with your networks.

Elizabeth Sun, MPH | CEC & CSC Coordinator
HVRC | 105 Ann Street #2, Newburgh, NY 12550
Phone: 845-564-4075 | Virtual meeting: Calendly link
Check out HVRC's Newsletter & Facebook page!

Appendix I: Lunch & Learn: Putnam County's Adaptation Plan

Background Information

Putnam County and HVRC hosted a virtual Lunch & Learn event on April 21st from 12:00-1:00 pm. The event included a presentation, poll questions, and a Q&A session. In total, 28 people attended the webinar, including participants who lived/worked in Putnam County and interested participants from outside the County.

This included the Putnam County members of the CCARP Leadership Team:

- Barbara Barosa- Commissioner/CSTF Member, Putnam County Planning Department
- Matthew Covucci-Deputy Commissioner, Putnam County Planning Department
- Ilona Campo-Planner & Climate Smart Coordinator, Putnam County Planning Department

It also included 4 members of HVRC's team

- Sofie diTommaso- (Former) Resilience & Adaptation Coordinator, HVRC
- Liz Sun- Senior Clean Energy & Climate Smart Communities Coordinator, HVRC
- Evelyn Laferriere- Clean Energy & Climate Smart Communities Coordinator, HVRC
- Spencer Greenfield- (Former) Resilience & Adaptation Intern, HVRC

Following the Lunch & Learn event, a version of the presentation was re-recorded and uploaded to the County's CCARP webpage as a resource for the community. A public engagement survey adapted from the poll questions was also posted to allow community members to share their adaptation planning priorities.

Participants who joined the Lunch & Learn and lived/worked in Putnam County were encouraged to fill out the survey by email. Putnam County also shared the survey while tabling at the Boscobel House and Gardens Earthfest on April 25th.

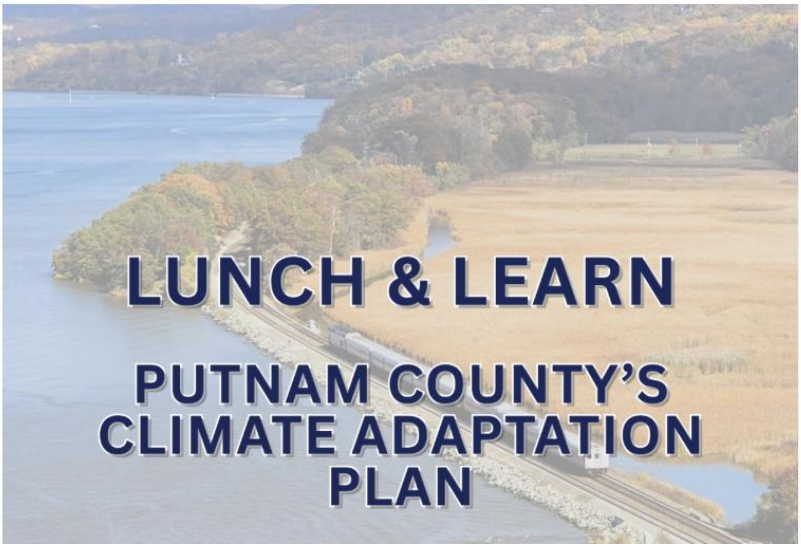
The survey was originally posted from April 23-May 4th. The deadline was then extended to May 11th.

Flyer Advertising the Lunch & Learn Event



News & Press Release on Putnam County's Website







Department of Environmental Conservation | Climate Smart Communities

Lunch & Learn: Putnam County Seeks Input at Climate Adaptation Webinar - Tuesday, April 21, 2026 at 12:00pm

06 April 2026

All residents and employees who live and work in Putnam County are invited to attend an educational webinar about Putnam County's Climate Change Adaptation and Resilience Plan (CCARP). The webinar will provide a beginner-friendly overview of climate adaptation and an opportunity to learn more about the Plan, ask questions, and provide feedback on what Putnam County can do to adapt to a changing climate.

After the event, there will be additional ways to share feedback on the CCARP for those who are unable to attend.

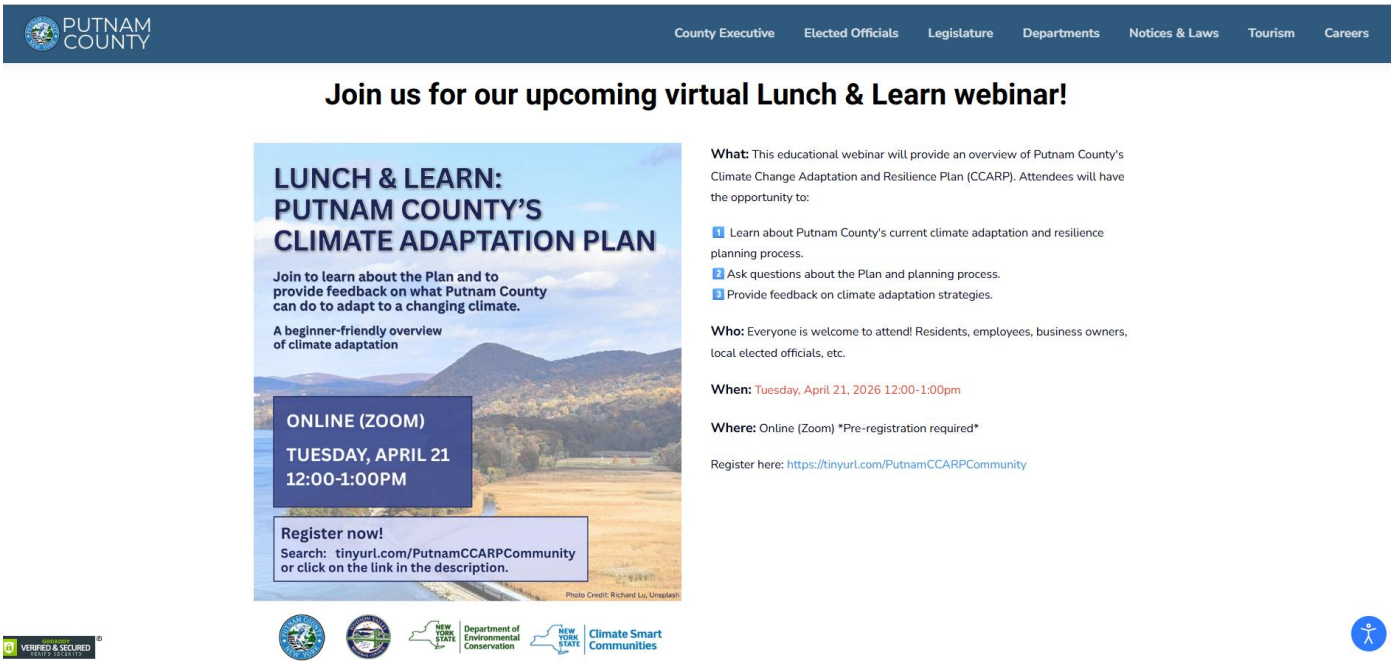
The CCARP is a planning effort between Putnam County and the Hudson Valley Regional Council (HVRC); the project is fully funded by the NYS DEC Climate Smart Communities Coordinator Services Program. The CCARP will help the County plan for a safer, healthier, and more resilient future by identifying climate risks and ways to reduce them.

The CCARP builds on Putnam County's existing work through the New York State Climate Smart Communities Program (CSC). The County is currently a Bronze-Certified Climate Smart Community, and once completed, the CCARP will continue the County's progress towards Silver Certification.

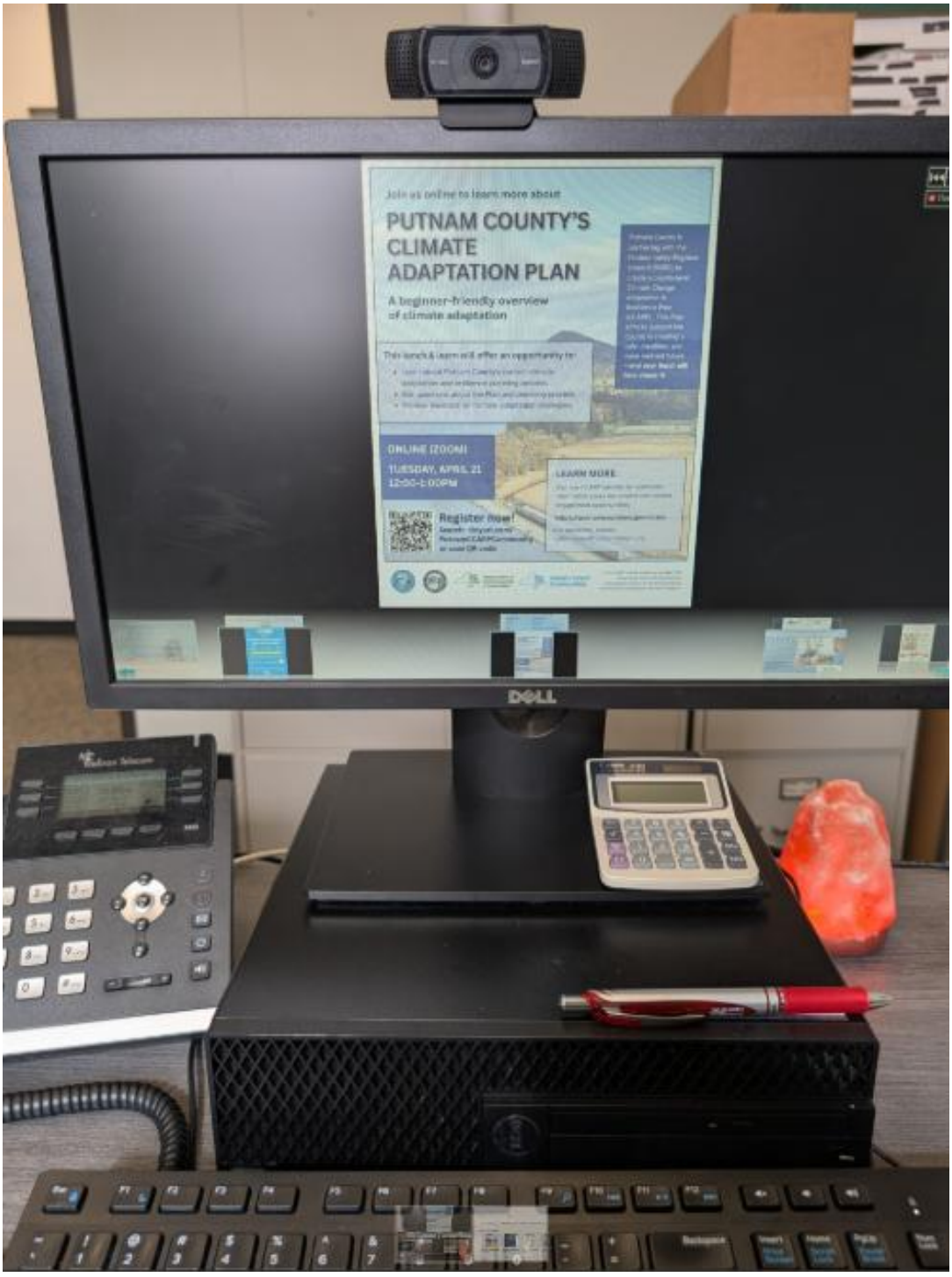
Community input is essential to this planning process. The CCARP has already gathered public feedback through a Climate Vulnerability Assessment Survey and Vision Statement Survey, and we need your help to ensure the Plan reflects the community's priorities. Feedback shared during this event will directly shape the strategies included in Putnam County's CCARP.

The meeting will be held **online** on **Tuesday, April 21st**, from **12:00-1:00 pm**. Please register at https://tinyurl.com/PutnamCCARPCommunity, or by scanning the QR code below.

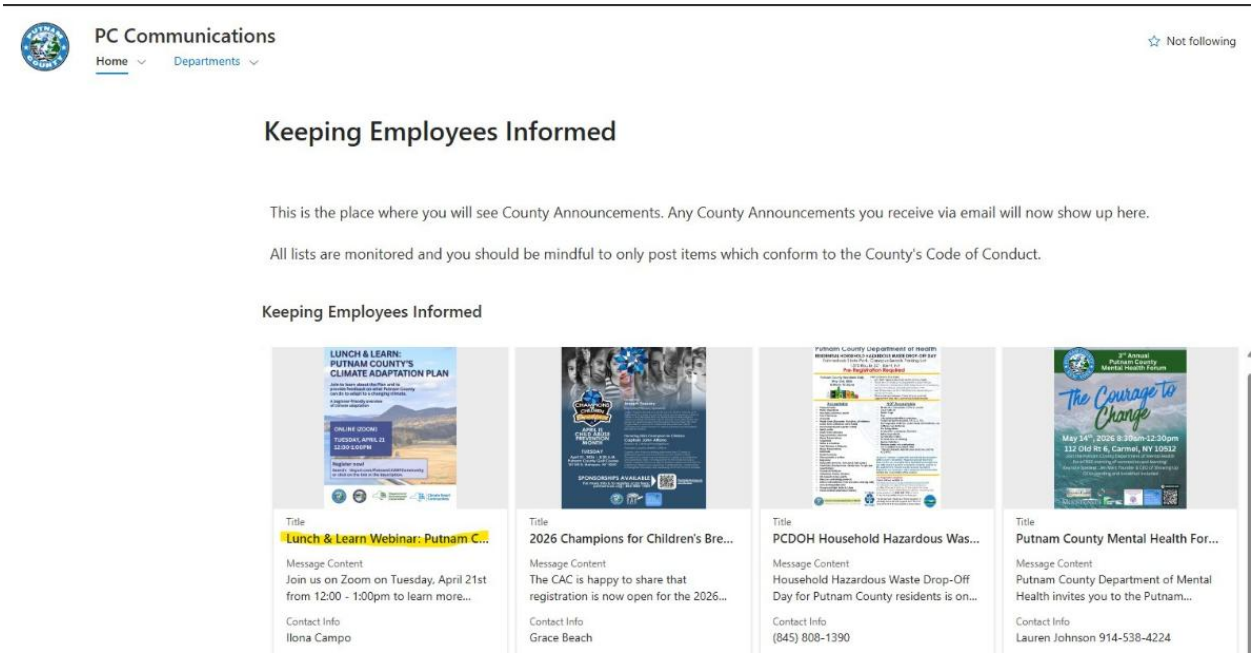
Information on Putnam County's CCARP Website



Flyer Shared via Putnam County Staff Desktop Computers



"Keeping Employees Informed" at Putnam County



Email Outreach

The flyer and information about the event were emailed to the following contacts:

- Putnam County Climate Partners Listserv
- Town/Village Supervisors
- CCARP Working Group
- Partner Organizations interested in attending events/sharing information with their networks
- HVRC Contacts in Putnam County

Social Media


Putnam County Health Depar...
All
Photos
Reels
Events
Mentions
Putnam County Health Department - NY
1d ·
Do you live or work in Putnam County? Then please join us for our virtual Lunch & Learn session on Tuesday, April 21st at 12:00pm!... more
LUNCH & LEARN: PUTNAM COUNTY'S CLIMATE ADAPTATION PLAN
Join to learn about the Plan and to provide feedback on what Putnam County can do to adapt to a changing climate.
A beginner-friendly overview of climate adaptation
ONLINE (ZOOM)
TUESDAY, APRIL 21
12:00-1:00PM
Register now!
Search: tinyurl.com/PutnamCCARPCommunity or click on the link in the description.
Photo Credit: Richard Lu, Unsplash
Department of Environmental Conservation
Climate Smart Communities
6
4


Putnam County Government
All
Photos
Reels
Mentions
Putnam County Government
18h ·
The Putnam County Department of Planning is welcoming all those who live or work in Putnam County to join them for a virtual Lunch & Learn ... more
LUNCH & LEARN: PUTNAM COUNTY'S CLIMATE ADAPTATION PLAN
Join to learn about the Plan and to provide feedback on what Putnam County can do to adapt to a changing climate.
A beginner-friendly overview of climate adaptation
ONLINE (ZOOM)
TUESDAY, APRIL 21
12:00-1:00PM
Register now!
Search: tinyurl.com/PutnamCCARPCommunity or click on the link in the description.
Photo Credit: Richard Lu, Unsplash
Department of Environmental Conservation
Climate Smart Communities
7
3



Mid-Hudson News Article

The Mid-Hudson News published an article about the Lunch & Learn. A link to the article is available here. A screenshot is available below.

Putnam's Climate Change Adaptation and Resilience Plan to be reviewed

April 21, 2026 6:16 am **Mid-Hudson News Staff**

Facebook Twitter LinkedIn Email Print



MHNN file photo

CARMEL – How is Putnam County adapting to a changing climate? That question and others related to climate change will be discussed today at an online seminar sponsored by Putnam County and the Hudson Valley Regional Council.

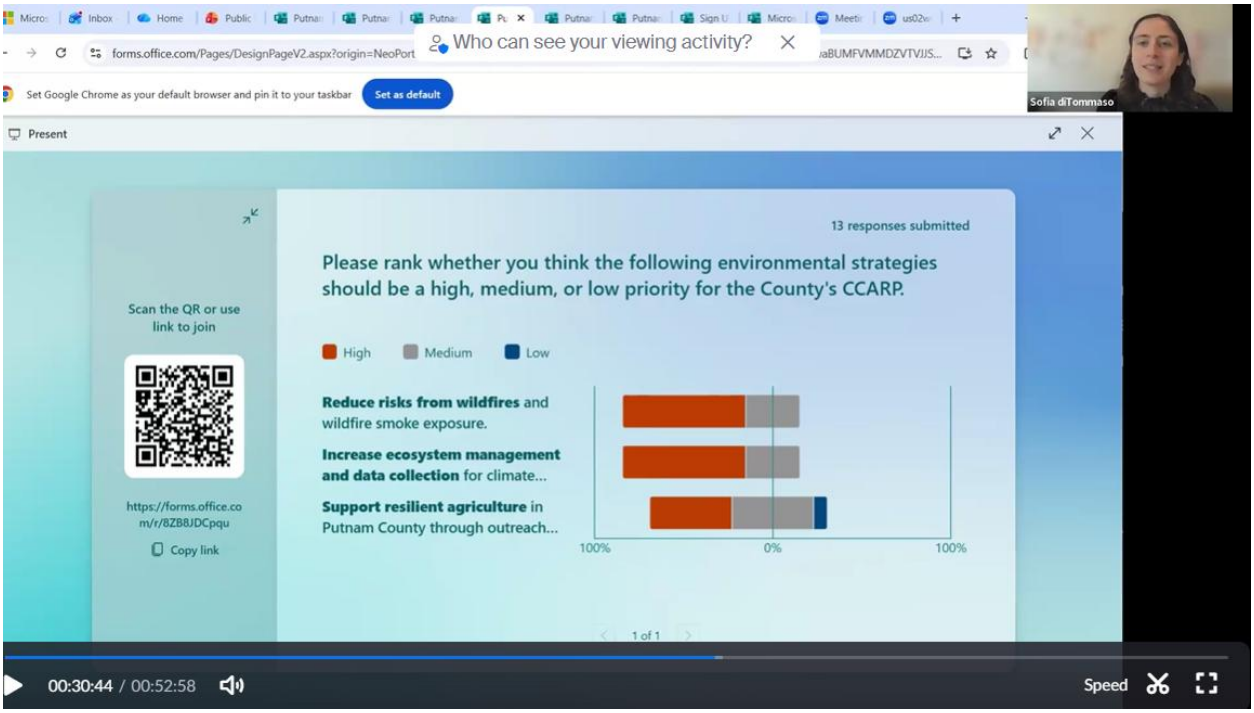
Putnam Commissioner of Planning, Development and Transportation Barbara Barosa explained the project is fully funded by the State Department of Environmental Conservation Climate Smart Communities Coordinator Services Program that will assist the county plan for a “safer, healthier, and more resilient future by identifying climate risks and ways to reduce them.”

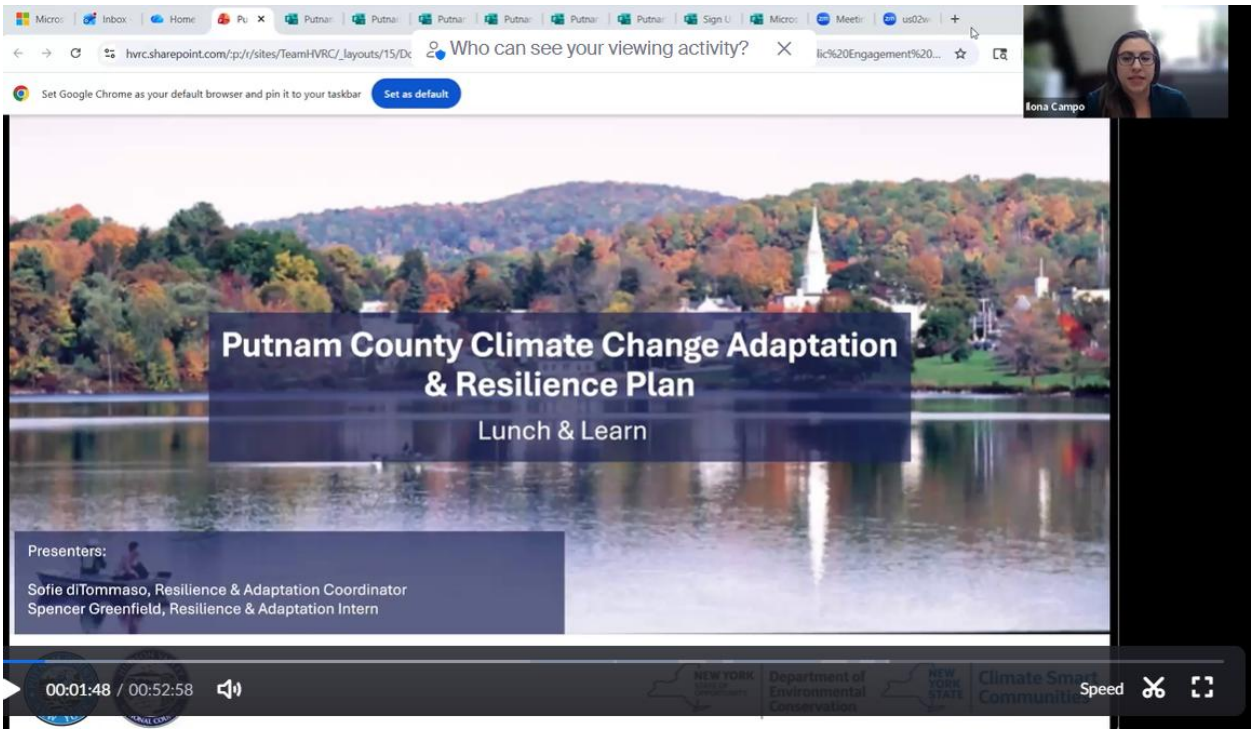
She added that Putnam was currently a Bronze-Certified Climate Smart Community, and once completed, the county will continue its progress towards Silver Certification.

Barosa called community input essential to this planning process. “We need the community’s help to ensure the plan reflects the community’s priorities. Feedback shared during this event will directly shape the strategies included in Putnam County’s proposal,” she said.

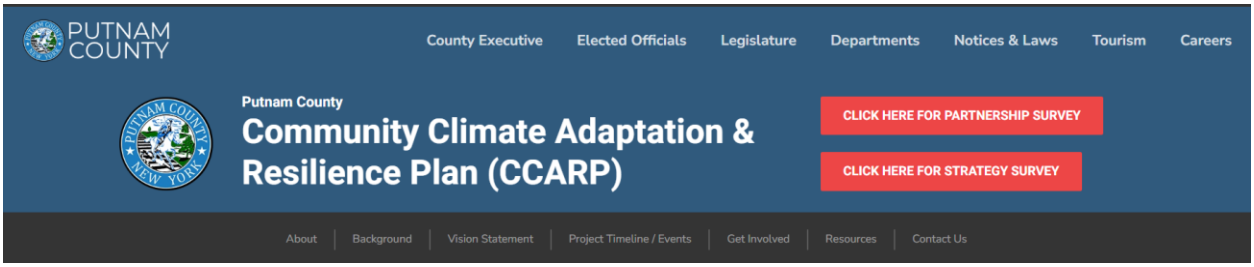
Today’s meeting will be held online from 12 p.m. to 1 p.m**.** Interested individuals may register at: https://tinyurl.com/PutnamCCARPCommunity

Lunch & Learn Documentation





Post-Lunch & Learn: Public Engagement Survey





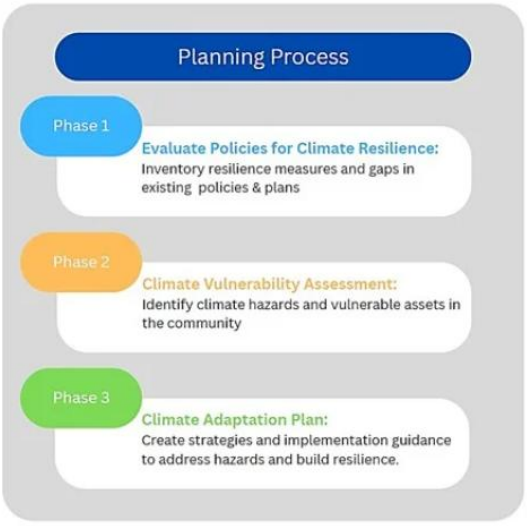
Climate Vulnerability Assessment: Climate hazards like storms, flooding, and severe heat can impact economic, social, and environmental assets across Putnam County. In order to proactively prepare local communities and infrastructure, Putnam County conducted a public Climate Vulnerability Assessment Survey in Winter 2025/2026 to identify the hazards that pose the largest threats to the area and the assets most at risk. Additionally, the County conducted a Draft Vision Statement Survey from November 2025 to April 2026. **The public survey periods for the Climate Vulnerability Assessment Survey and Draft Vision Statement Survey are now closed. If you are interested in an additional public engagement opportunity, please take our online Public Engagement Survey to help shape the final strategies included in the CCARP.** Stay tuned for future opportunities for public involvement!

Miss Our Lunch & Learn Webinar?



Presentation Recording: Please click this link to access a recorded version of the presentation.
(Zoom Meeting Passcode: a1j*W^Hg)

Public Engagement Survey - Deadline Extension: Please take our survey by May 11th to share your perspective on key strategies. Your input will directly influence the strategies included in the Plan!



UPCOMING EVENTS

Public Engagement Survey: Putnam County's Climate Adaptation Plan Strategies

- **When:** Now through May 4, 2026
- **Who:** Everyone is welcome to participate! Residents, employees, business owners, local elected officials, etc.
- **Why:** Please complete this survey to share your perspective on potential strategies for Putnam County's CCARP. Your responses will play an important role in ensuring the adaptation plan reflects community goals and priorities!
- **How:** Please click this link to complete our online survey.

Lunch & Learn: Public Engagement Survey at Earthfest

Putnam County tabled at Earthfest at Boscobel House & Gardens on April 25, 2026 and shared information about the Lunch & Learn Public Engagement Survey.






Putnam County is developing a
CLIMATE ADAPTATION AND RESILIENCE PLAN (CCARP)
THE PUTNAM COUNTY CCARP
GET INVOLVED & LEARN MORE
Please take our Climate Change Adaptation and Resilience Plan (CCARP) Public Survey!
Your input will directly influence the adaptation strategies included in the Plan!
Survey Deadline: May 4, 2026


Putnam County Department of Health
CLIMATE SMART


Putnam County Department of Health
Landfills
Waste Reduction
PUTNAM COUNTY
CLIMATE SMART

Appendix J: Public Comment

Background Information

The Draft Climate Change Adaptation and Resilience Plan (CCARP) was available for public review and comment from July 30, 2026 through September 15, 2026. The Draft Plan was posted on Putnam County's CCARP webpage (see Appendix F) together with a Public Comment Survey. Comments could be submitted in three ways:

- Through the online Public Comment Survey at https://putnamcountyny.gov/ccarp;
- By email to climatesmart@putnamcountyny.gov; or
- By mail to the Putnam County Planning Department

The public comment period was promoted as the final opportunity for community members and stakeholders to provide feedback before the Plan was finalized and considered for adoption. The period closed on September 15, 2026 at 11:59 p.m.

Public Comment Survey

The Public Comment Survey was organized around the main components of the Draft Plan. Questions asked participants to identify the strengths of each section, the assets and services that should be prioritized, any climate trends or vulnerable locations, services, or populations not represented in the Climate Vulnerability Assessment, the recommended actions they viewed as most important, strategies that should be revised or added, the strengths and weaknesses of the monitoring and implementation sections, and any additional feedback for the planning team.

A copy of the survey can be found below.

Putnam County CCARP Public Comment

Putnam County created a Draft Climate Change Adaptation and Resilience Plan (CCARP) in partnership with Hudson Valley Regional Council (HVRC). The plan was fully funded by the NY State Climate Smart Communities Coordinator Services Program. The purpose of this plan is to protect the long-term health, safety, and resilience of Putnam County residents, businesses, infrastructure, and ecosystems. It includes four components:

1. The Place Narrative provides contextual information about Putnam County's socioeconomic characteristics, ecosystems, and experiences of severe weather events.
2. The Climate Vulnerability Assessment evaluates potential risks to key assets and services in the County due to long-term changes in climate and weather patterns.
3. The Vision Statement outlines a shared purpose for the CCARP.
4. The Climate Adaptation Plan outlines recommended strategies and actions for addressing these vulnerabilities.

Stakeholder and public input have played a valuable role in shaping the plan's priorities and recommendations. The draft plan is now available for public comment on Putnam County's CCARP webpage. If you would like to submit general comments directly to Putnam County, you may also email them directly to climatesmart@putnamcountyny.gov.

Otherwise, please complete this form to share your feedback and perspective on the CCARP. If you need any assistance completing this form or have additional questions, please contact ahickey@hudsonvalleyrc.org.

All comments submitted through this form will be reviewed before finalizing the CCARP, and you may opt to participate anonymously.

We are grateful for your feedback and perspective! Public input plays a crucial role in ensuring the CCARP aligns with community goals and priorities.

Background

1. Would you like to share feedback anonymously? *

- ◯ Yes
- ◯ No

2. Please share your full name and/or affiliation below. *

Enter your answer

3. Are you a resident of Putnam County? *

- ◯ Yes
- ◯ No

4. If so, where do you reside? *

- ◯ Town of Carmel
- ◯ Town of Kent
- ◯ Town of Patterson
- ◯ Town of Philipstown
- ◯ Town of Putnam Valley
- ◯ Town of Southeast
- ◯ Village of Brewster
- ◯ Village of Cold Spring
- ◯ Village of Nelsonville

5. If not, do you work in Putnam County?

- ◯ Yes
- ◯ No

6. If so, where do you work? *

- ◯ Town of Carmel
- ◯ Town of Kent
- ◯ Town of Patterson
- ◯ Town of Philipstown
- ◯ Town of Putnam Valley
- ◯ Town of Southeast
- ◯ Village of Brewster
- ◯ Village of Cold Spring
- ◯ Village of Nelsonville

Section

7. Please provide any general comments on Putnam County's CCARP: *

Enter your answer

8. Would you like to provide additional feedback on the four components of the plan? *

- ◯ Yes
- ◯ No

Place Narrative

The CCARP's Place Narrative aims to provide background information and context for the CCARP. It includes the following subsections on page 23.

- Socioeconomic Survey
- Ecosystem Survey
- History of Extreme Weather Events
- Underlying Threats, Challenges, Barriers, and Risks
- Uncertainties and Unknowns

9. Would you like to provide feedback on the Place Narrative? *

- ◯ Yes
- ◯ No

10. In your opinion, what are the main strengths of this section?

Enter your answer

11. In your opinion, where are there opportunities to improve the Place Narrative? Are there any key aspects of the Putnam County community that you feel are missing from this section?

Enter your answer

Climate Vulnerability Assessment

The Climate Vulnerability Assessment aims to summarize how climate and weather patterns may change in Putnam County over time and evaluate potential risks to infrastructure, people, businesses, and environmental resources. It includes the following subsections on page 48.

- Observed and Projected Climate Change Physical Effects in NY State and Putnam County
- Exposure, Sensitivity, and Adaptive Capacity
- Identify Community Uncertainties and Unknowns
- Vulnerability Assessment Matrix
- Climate Impact Chains
- Community Plans Consistency Assessment

12. Would you like to provide feedback on the Climate Vulnerability Assessment? *

- ◯ Yes
- ◯ No

12. Would you like to provide feedback on the Climate Vulnerability Assessment? *

- ◯ Yes
- ◯ No

13. Are there any assets or services that you think are particularly valuable and/or should be prioritized?

- ☐ Energy + Power
- ☐ Travel and Transportation
- ☐ Cooling and Warming Centers
- ☐ Storm and Emergency Shelters
- ☐ Stormwater Infrastructure
- ☐ Dams
- ☐ Septic Infrastructure
- ☐ Homes and Residential Properties
- ☐ Public Buildings
- ☐ Waste Disposal and Collection
- ☐ Healthcare facilities and services
- ☐ Local Jobs and Businesses
- ☐ Vulnerable Communities
- ☐ Food Access and Food Security
- ☐ Historic Preservation
- ☐ Resources for Youth and Older Adults
- ☐ Cultural Resources, Tourism, and Community Events
- ☐ Drinking Water
- ☐ Clean Air
- ☐ Ecosystems, Habitat, and Biodiversity
- ☐ Parks, Open Space, and Recreational Sites
- ☐ Agricultural Lands and Soils

14. In your opinion, are there any vulnerable locations, services, or populations that are not currently represented within the Climate Vulnerability Assessment?

Enter your answer

15. In your opinion, what are the greatest strengths of the Climate Vulnerability Assessment? Are there any sections that particularly resonate with you?

Enter your answer

16. In your opinion, where are the greatest opportunities to improve the Climate Vulnerability Assessment?

Enter your answer

17. Are there any climate or weather-related trends you are concerned about that are not currently addressed in the assessment?

Enter your answer

Resilience & Adaptation Vision Statement

As part of the CCARP process, Putnam County created a Resilience & Adaptation Vision Statement, which can be found on page 128.

18. Would you like to provide feedback on the Vision Statement? *

- ◯ Yes
- ◯ No

19. In your opinion, what are the biggest strengths of the Vision Statement?

Enter your answer

20. In your opinion, are there opportunities to improve the Vision Statement?

Enter your answer

Adaptation Plan

The Climate Adaptation Plan includes the following sections/subsections on page 128.

- Recommendations for Actions
  - Summary of Community Priorities
  - Assessment for Potential Maladaptations
- Monitoring and Evaluation Approach
  - Indicators and Metrics
  - Process for Updating the CCARP
- Plan Implementation Strategy
  - Governance and Management Structure
  - Implementation Methods
  - Budget and Funding Options

21. Would you like to provide feedback on the Adaptation Plan? *

- ◯ Yes
- ◯ No

22. Which recommended actions do you view as the most important to include. Please include the strategy number and recommended action letter for clarity (i.e. Strategy 1.a: Work with all cooling centers to ensure backup power is available).

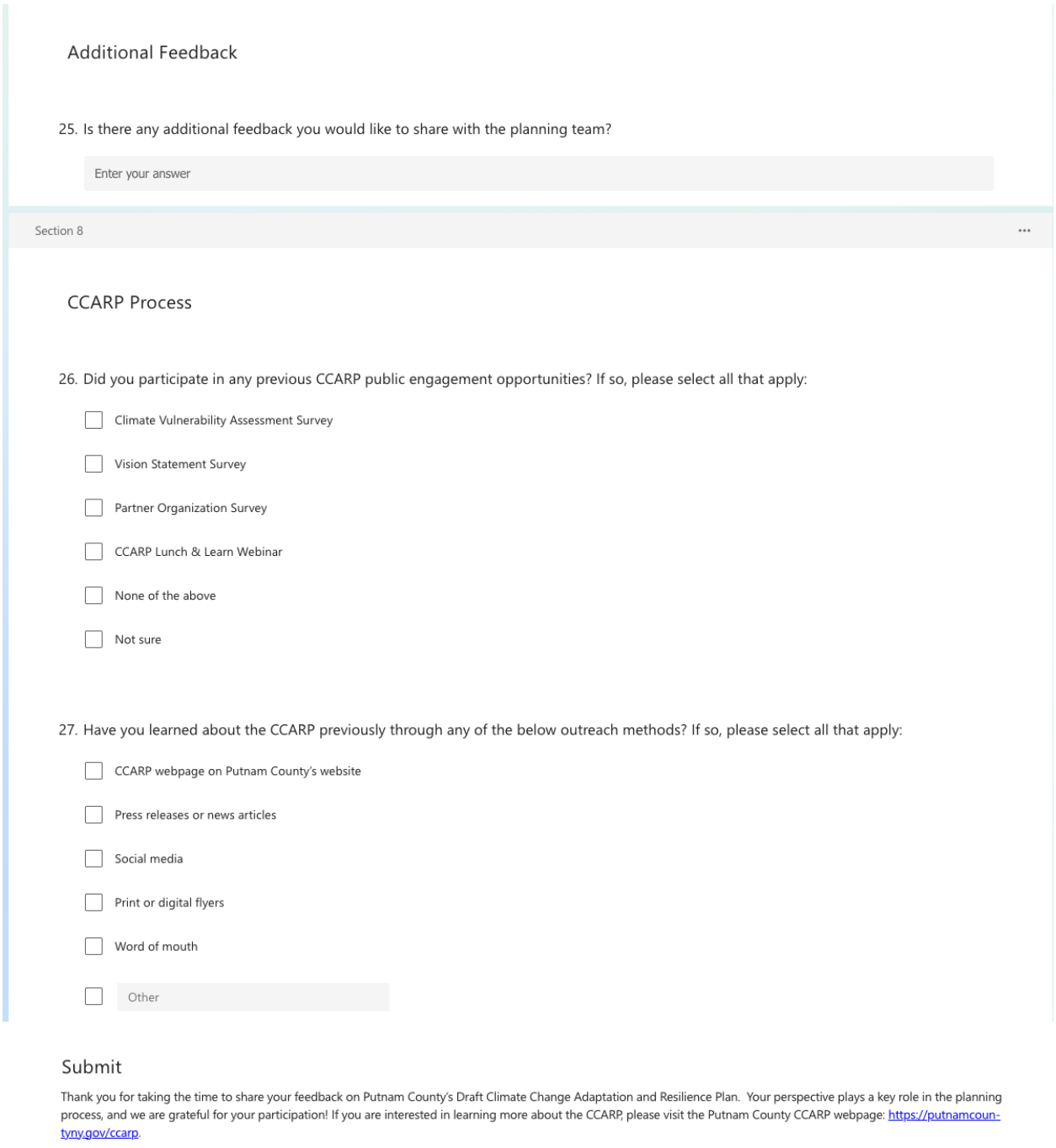
Enter your answer

23. In your opinion, are there any strategies that should be revised or added?

Enter your answer

24. What do you see as the greatest strengths and weaknesses of the monitoring and implementation sections?

Enter your answer



Summary of Comments Received

In total, 11 comments were received during the public comment period: nine through the Public Comment Survey and two by email. Commenters identified their communities as Carmel (2), Cold Spring (2), Kent (1), Patterson (1), Philipstown (2), Putnam Valley (1), and Southeast (2).

Several commenters expressed general support for the Plan and for the County's proactive approach to climate resilience. Substantive comments addressed local land use authority and home rule; the use of the terms "sustainable development" and "housing growth areas"; flood mapping, stormwater management, and coordination with towns and villages; social vulnerability in Brewster and Patterson; wastewater treatment; climate change mitigation and greenhouse gas (GHG) emissions; nature-based solutions; and wildfire risk and forest management. One commenter opposed the Plan.

Each comment and the County's response are summarized in the table below, including any revisions made to the Plan. Consistent with the approach used for the Climate Vulnerability Assessment Survey (see Appendix H), commenter names and contact information are not included.

Public Comments and County Responses

Comment	Summary of Comment	County Response and Plan Revisions
Comment 1 7/31/2026 Survey Kent	Expressed support for the County taking climate change seriously and having a plan in place.	Comment acknowledged. No Plan revisions.
Comment 2 8/2/2026 Survey Carmel	Supports responsible planning and protecting natural resources, but is concerned the Plan could become a pathway for reducing local control over land use and zoning, particularly for utility-scale solar, battery energy storage systems, data centers, and other large developments. Asked the Plan to address home rule, the limits of state preemption, long-term costs to taxpayers, and the impact of large-scale development on a small county.	The authority to regulate land use and zoning in New York State rests with local municipalities under the Municipal Home Rule Law. The CCARP does not supersede municipal plans or authorities. It guides County efforts toward climate risk reduction and focuses on actionable measures within the County's role, particularly planning for County facilities, assets, and infrastructure. Plan revision: this clarification was added to the Introduction and summarized in the Executive Summary.
Comment 3 8/3/2026 Email Southeast	Provided six comments on connecting the Plan's findings to municipal land use decisions: (1) Elevate the finding that FEMA flood maps for the County date to 2013 and pair it with an action item. (2) Carry the higher social vulnerability of Brewster and Patterson forward into the strategies. (3) Define or attribute the term "sustainable development" used in the Development Pressures discussion.	(1) The statement that the FEMA maps are likely underestimated was removed. The Figure 37 and Figure 42 captions now identify the age of the 2013 FEMA mapping as a limitation and note the importance of considering current information when evaluating flood risk. Updating regulatory flood maps is FEMA's responsibility. (2) A paragraph was added to Recommendations for Action identifying the strategies most applicable to Brewster and Patterson. (3) "Sustainable development" and "housing growth areas" were added to Key Terms. The

	(4) Address municipal surface-discharging wastewater treatment plants, not only septic systems. (5) Include village centers with high impervious cover in the countywide stormwater assessment. (6) Make Strategy 22(c) concrete by using existing General Municipal Law § 239-m referrals and SEQRA reviews to share CCARP findings with municipal boards.	Development Pressures discussion now states that these designations are drawn from NYMTC's Moving Forward 2055 Regional Transportation Plan and are not County designations or environmental performance standards. (4) No revision. Municipal wastewater treatment plants and their SPDES permits are regulated by NYSDEC and, where applicable, NYC DEP. The Plan's wastewater discussion focuses on septic systems, which fall within the County's responsibilities. (5) The Stormwater Infrastructure section was revised to note that the County's draft Stormwater Management Plan has not yet been adopted and that towns and villages manage stormwater under NYS MS4 requirements. A clarification on development density and stormwater runoff was added to the Ecosystem Survey, and the development and adoption of a County Stormwater Management Plan was added to Strategy 22(f). (6) Strategy 22(c) now includes sharing the adopted CCARP with towns and villages and sharing relevant climate information through existing land use and SEQRA review processes, when applicable. The description of the Planning Department was updated to reference its review of General Municipal Law § 239 referrals.
Comment 4 8/7/2026 Survey Southeast	Described the Plan as a vital step in identifying problems and ways to help.	Comment acknowledged. No Plan revisions.
Comment 5 8/12/2026 Survey Philipstown	Supports the Plan's science, framework, equity lens, and maladaptation screen. Asked the County to commit, with dates, to a GHG inventory and a Climate Action Plan aligned with state targets; make nature-based solutions and the New York City watershed central strategies; prefer solar-plus-storage and microgrids over fossil-fueled backup power; adopt a five-year update cycle with annual progress reporting; and limit "sustainable	Plan recommendations will be implemented to the fullest extent possible given funding and staff capacity. The Plan was developed within the scope and requirements of the Climate Smart Communities program and focuses on County-owned facilities, assets, and infrastructure. Several existing actions incorporate nature-based approaches, including Strategies 2(c), 3(d), and 5(d). Plan revisions: "sustainable development" was defined in Key Terms and clarified in the Development Pressures discussion; a

	development" to infill rather than greenfield or wetland-adjacent growth.	paragraph referencing the County's Community-wide GHG Emissions Inventory and its goal of creating a Government Operations GHG Inventory was added to the Observed and Projected Climate Change Physical Effects section; and "Update the Countywide GHG Inventory" was added to Strategy 22(f).
Comment 6 9/9/2026 Survey Cold Spring	Shared a personal experience with residential flooding and identified Plan implementation as the most important action. Suggested that landlords and property owners be held accountable.	Comment acknowledged. No Plan revisions.
Comment 7 9/9/2026 Survey Philipstown	Noted that during the July storm that washed out Route 9, NYSDEC appeared to be unaware of long-term daily precipitation monitoring conducted in the Highlands, and that the monitoring station had been mislabeled in National Weather Service precipitation reports.	Comment acknowledged. No Plan revisions.
Comment 8 9/9/2026 Survey Cold Spring	Asked whether the planning team consulted on the Fjord Trail in the Village of Cold Spring and about the County's position on related litigation.	Comment acknowledged. No Plan revisions.
Comment 9 9/15/2026 Survey Carmel	Opposed the Plan and expressed concern about state authority over local decisions. Identified drinking water as a priority and urged forest management on New York City watershed lands to reduce wildfire risks to air quality and drinking water.	Wildfire concerns are addressed in Strategy 16: Reduce risks from wildfires and wildfire smoke exposure, which includes working with land trusts, nonprofit organizations, DEC, DEP, and other partners on forest management for fire resilience (see also Comment 11). Wildfires are also addressed in Section 5.4.10 of the County's Hazard Mitigation Plan, which is currently being updated. No additional Plan revisions.
Comment 10 9/15/2026 Email Putnam Valley	Supports the Plan and urged the County to continue working closely with the Town of Putnam Valley on stormwater management.	Continued coordination is reflected in Strategy 19 and Strategy 22(c). The CCARP complements municipal stormwater programs developed under NYSDEC's MS4 requirements. The County is also coordinating the purchase of two Vactor trucks and two Vacall street sweepers that local municipalities may use through an existing shared services agreement. Plan revision: the Stormwater Infrastructure section now notes that towns and villages are

		undertaking stormwater resilience projects that can contribute to broader County-wide resilience.
Comment 11 9/15/2026 Survey Patterson	Praised the breadth and detail of the Plan. Suggested burying utility lines incrementally, moving wildfire mitigation actions 16(a) through (c) to the near term given increasing wildfire risk and the County's volunteer fire services, and identifying water sources for fire suppression where public hydrants are not available.	Plan revisions: the timeline for Strategy 16(a) through (c) was moved to Near/Medium-term; Strategy 16(a) was revised to include continuing forest management practices on County-owned property; and the Department of Public Works and the Department of Parks and Recreation were added as lead entities. Burying utility lines is largely under the purview of municipalities and utility companies and was not included in the Plan.

Public Comment Period Outreach

Putnam County promoted the public comment period through its website, a press release, local newspapers and news outlets, social media, internal County communications, and direct email outreach to municipal officials, the Climate Smart Task Force, and partner organizations. Outreach activities are summarized below, followed by supporting documentation.

Date	Outreach Method	Audience and Details
7/29/2026 (published 8/5/2026)	Newspaper notice	Putnam County Press & Times, print and digital editions (p. 12)
7/30/2026	CCARP webpage	Draft Plan and Public Comment Survey posted on Putnam County's CCARP webpage
7/30/2026	Press release	Notice of the public comment period posted on the County Planning website
7/31/2026-9/15/2026	County staff computers	Flyer with QR code displayed on County employee screensavers
7/31/2026	Internal announcement	"Keeping Employees Informed" post on the County SharePoint site
7/31/2026	Email	Putnam Climate Partners distribution group and Putnam County Climate Smart Task Force members
7/31/2026	Social media	Putnam County Government Facebook and Instagram pages
8/2/2026 and 9/6/2026	Social media	Putnam County Health Department Facebook and Instagram pages

8/3/2026	Email	Directors of Sustainable Putnam and Cornell Cooperative Extension (CCE) of Putnam County; shared in Sustainable Putnam's Upcoming Events newsletter
8/3/2026	Email	Town Supervisors, Village Mayors, all Town Clerks, and the Putnam County Legislature
8/3/2026	Email	Organizations that responded to the January 2026 Partnership Survey (see Appendix C)
8/4/2026	Online calendar	Carmel Patch local online events calendar
8/4/2026	Email	Local news outlets: The Highlands Current, Mahopac News, Hudson Valley News, Mid-Hudson News, and Mahopac Daily Voice. Articles were published by The Highlands Current (8/5/2026) and Mid-Hudson News (8/10/2026).
8/31/2026	Social media	Putnam County Bureau of Emergency Services Facebook page
9/1/2026	Newsletter	Sustainable Putnam September 2026 email newsletter
9/8/2026	Email	Final reminder to all partner organizations, Town Supervisors and Town Clerks, the County Legislature, Sustainable Putnam, CCE, Climate Smart Task Force members, the Putnam Climate Partners distribution group, and HVRC

Newspaper Notice: Putnam County Press & Times

A notice of the public comment period was requested on July 29, 2026 and published on page 12 of the August 5, 2026 edition of the Putnam County Press & Times. The digital edition is available here.



Private Schools May Still Compete in Section 1 – For Now

Cleary to Coach Brewster Football

Professor Louie & The Crowmatrix

Scribbles on a Notebook
By Rich Thomaselli

What's Fair in the Private vs. Public School Sports Debate?

SEE SOMETHING? SEND SOMETHING.
We've made reporting animal cruelty quicker and easier!
JOIN PUTNAM COUNTY SPCA'S ANIMAL CRUELTY WATCH AND HELP PROTECT ANIMALS IN OUR COMMUNITY FROM ALL FORMS OF CRUELTY.
1 DOWNLOAD THE FREE APP
2 JOIN PUTNAM COUNTY SPCA
3 REPORT A TIP
SAFERWATCH

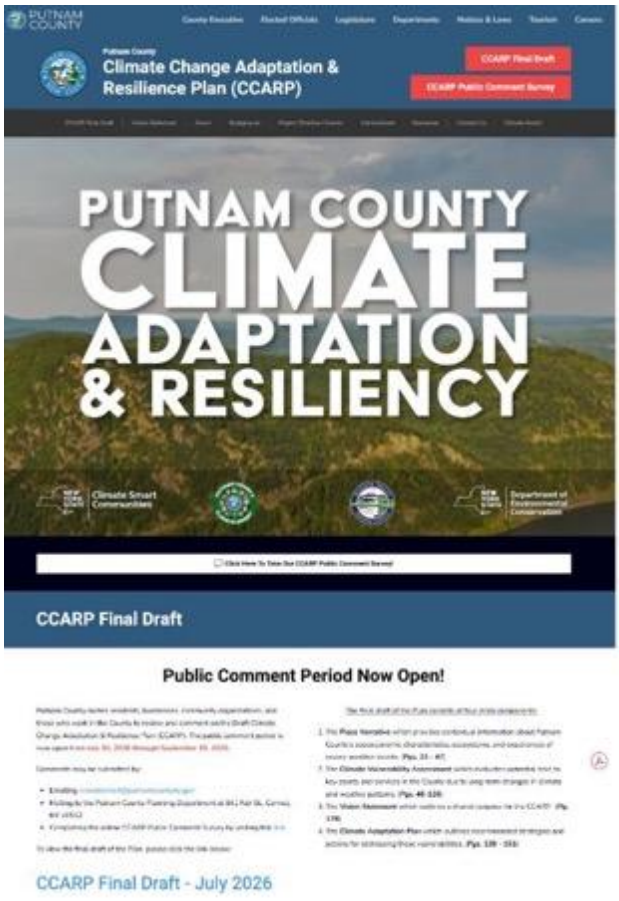
Heitmann is Haldane's New Boys' Soccer Coach

Comment on Climate Resilience Plan

Putnam County Press & Times, August 5, 2026, p. 12

Draft Plan and Public Comment Survey on Putnam County's CCARP Website

The Draft Plan and a link to the Public Comment Survey were posted on Putnam County's CCARP webpage on July 30, 2026.



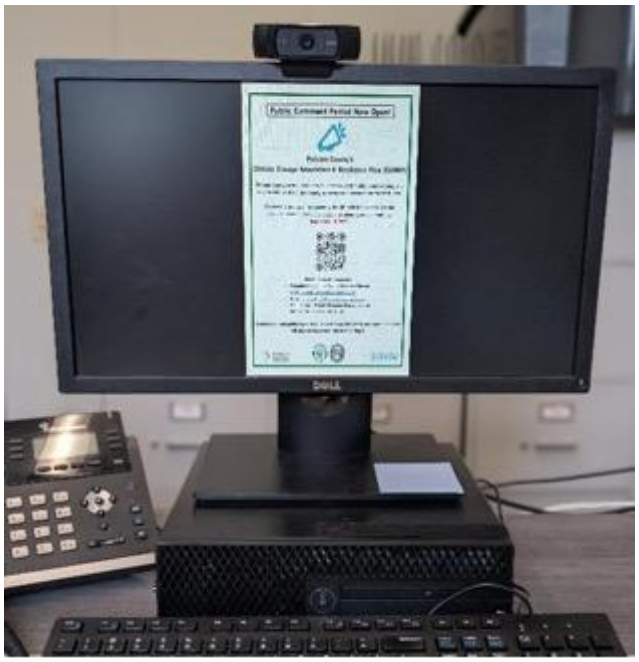
Putnam County CCARP webpage during the public comment period

Press Release on Putnam County's Website

A press release announcing the public comment period was posted on the County Planning website on July 30, 2026 and is available here.

Flyer Shared via Putnam County Staff Desktop Computers

The public comment period flyer was shared with the County's IT Department and displayed on County employee screensavers from July 31, 2026 through September 15, 2026.



Public comment period flyer displayed on a County staff computer

"Keeping Employees Informed" at Putnam County

The public comment period was announced to County employees through the "Keeping Employees Informed" page on the County SharePoint site on July 31, 2026.



"Keeping Employees Informed" announcement, July 31, 2026

Email Outreach

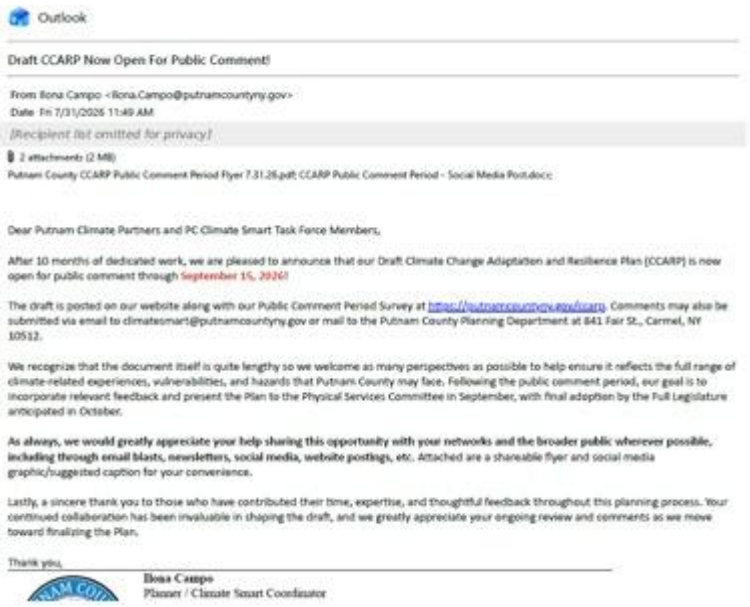
The public comment period flyer, a suggested social media post, and information about how to comment were emailed to the following contacts:

- Putnam Climate Partners distribution group and Putnam County Climate Smart Task Force members (July 31, 2026)
- Directors of Sustainable Putnam and Cornell Cooperative Extension of Putnam County (August 3, 2026)
- Town Supervisors, Village Mayors, all Town Clerks, and the Putnam County Legislature (August 3, 2026)
- Organizations that responded to the January 2026 Partnership Survey (August 3, 2026)
- Local news outlets (August 4, 2026)
- A final reminder to partner organizations, municipal officials, the County Legislature, Sustainable Putnam, CCE, Climate Smart Task Force members, the Putnam Climate Partners distribution group, and HVRC (September 8, 2026)

The following organizations that responded to the January 2026 Partnership Survey (see Appendix C) were invited to share the public comment period with their networks:

- Putnam Valley Food Pantry
- Putnam Community Action Partnership
- Holmes Camp and Retreat Center
- Second Chance Foods
- Putnam Service Dogs
- Mahopac Library
- Garrison Institute
- United Way of Westchester and Putnam County
- Putnam Arts Council
- Constitution Marsh Audubon Sanctuary
- Carmel Civic Association
- Reform Temple of Putnam Valley
- Southeast Museum
- First Presbyterian Church of Philipstown
- Red Cross

Copies of the outreach emails are included below. Recipient lists have been omitted to protect the privacy of individual recipients.



Outlook

Draft CCARP Now Open For Public Comment!

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Fri 7/31/2026 11:49 AM
[Recipient list omitted for privacy]
2 attachments (2 MB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf; CCARP Public Comment Period - Social Media Post.docx;

Dear Putnam Climate Partners and PC Climate Smart Task Force Members,

After 10 months of dedicated work, we are pleased to announce that our Draft Climate Change Adaptation and Resilience Plan (CCARP) is now open for public comment through September 15, 2026!

The draft is posted on our website along with our Public Comment Period Survey at https://putnamcountyny.gov/ccarp. Comments may also be submitted via email to climatesmart@putnamcountyny.gov or mail to the Putnam County Planning Department at 841 Fair St., Carmel, NY 10512.

We recognize that the document itself is quite lengthy so we welcome as many perspectives as possible to help ensure it reflects the full range of climate-related experiences, vulnerabilities, and hazards that Putnam County may face. Following the public comment period, our goal is to incorporate relevant feedback and present the Plan to the Physical Services Committee in September, with final adoption by the Full Legislature anticipated in October.

As always, we would greatly appreciate your help sharing this opportunity with your networks and the broader public wherever possible, including through email blasts, newsletters, social media, website postings, etc. Attached are a shareable flyer and social media graphic/suggested caption for your convenience.

Lastly, a sincere thank you to those who have contributed their time, expertise, and thoughtful feedback throughout this planning process. Your continued collaboration has been invaluable in shaping the draft, and we greatly appreciate your ongoing review and comments as we move toward finalizing the Plan.

Thank you,

Ilona Campo
Planner / Climate Smart Coordinator

Email to the Putnam Climate Partners and Climate Smart Task Force, July 31, 2026



Outlook

Request to Help Share Our CCARP Public Comment Period

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Mon 8/3/2026 10:12 AM
[Recipient list omitted for privacy]
3 attachments (2 MB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf; CCARP Public Comment Period - Social Media Post.docx; CCARP Public Comment Period - Press Release for Website.docx;

Hi Joe and Stefanie,

Hope you're doing well! As you may have already heard, our Draft Climate Change Adaptation and Resilience Plan (CCARP) is now officially open for public comment through **September 15, 2026**, and we're hoping you can help us spread the word.

If possible, would you be willing to include a variation of the attached in your next newsletter and share it through any other relevant listservs or outreach channels you may have? This public comment period is the **last opportunity for community members and stakeholders to provide feedback before the Plan is finalized and considered for adoption**, so we'd love to reach as many people as possible.

I've attached a shareable flyer and social media graphic with suggested caption to make sharing as easy as possible. One small favor - if you share the announcement outside of your regular newsletter (which I believe I already receive), would you mind sending me a quick screenshot or copy of the post or email? It would be greatly appreciated.

As always, thank you for your continued partnership and support. We truly appreciate everything you do to help engage our communities, and we're grateful for your collaboration throughout this planning process.

All the best,

Ilona Campo
Planner / Climate Smart Coordinator

Email to Sustainable Putnam and Cornell Cooperative Extension, August 3, 2026



Outlook

Putnam County's Draft CCARP Now Open For Public Comment!

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Mon 8/3/2026 9:46 AM
(Recipient list omitted for privacy)

2 attachments (2 MB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf; CCARP Public Comment Period - Social Media Post.docx;

Good morning,

After 10 months of dedicated work, we are pleased to announce that our Draft Climate Change Adaptation and Resilience Plan (CCARP) is now open for public comment through **September 15, 2026!**

The draft is posted on our website along with our Public Comment Period Survey at https://putnamcountyny.gov/ccarp. Comments may also be submitted via email to climatesmart@putnamcountyny.gov or mail to the Putnam County Planning Department at 841 Fair St., Carmel, NY 10512.

We recognize that the document itself is quite lengthy so we welcome as many perspectives as possible to help ensure it reflects the full range of climate-related experiences, vulnerabilities, and hazards that Putnam County may face. Following the public comment period, our goal is to incorporate relevant feedback and present the Plan to the Physical Services Committee in September, with final adoption by the Full Legislature anticipated in October.

As always, we would greatly appreciate your help sharing this opportunity with your networks and the broader public wherever possible, including through email blasts, newsletters, social media, website postings, etc. Attached are a shareable flyer and social media graphic/suggested caption for your convenience.

Lastly, a sincere thank you to those who have contributed their time, expertise, and thoughtful feedback throughout this planning process. Your continued collaboration has been invaluable in shaping the draft, and we greatly appreciate your ongoing review and comments as we move toward finalizing the Plan.

Thank you,

Ilona Campo
Planner / Climate Smart Coordinator

Email to Town Supervisors, Village Mayors, Town Clerks, and the County Legislature, August 3, 2026



Outlook

Please Help Share Putnam County's CCARP Public Comment Period

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Mon 8/3/2026 12:55 PM
(Recipient list omitted for privacy)

1 attachment (449 KB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf;

Hello,

You are receiving this email because you expressed interest in staying involved in Putnam County's Climate Change Adaptation and Resilience Plan (CCARP) through the community partnership survey distributed in January 2026 by Sofie DiTommaso, former Resilience and Adaptation Coordinator at the Hudson Valley Regional Council (HVRC).

After months of collaboration between Putnam County, HVRC, community partners, and stakeholders, we're excited to share that the Draft CCARP is **now available for public review and comment through September 15, 2026.**

This public comment period is the **final opportunity for community members and stakeholders to provide feedback before the Plan moves forward for adoption.**

The draft Plan and Public Comment Survey are available at https://putnamcountyny.gov/ccarp. Comments may also be submitted by email to climatesmart@putnamcountyny.gov or by mail to the Putnam County Planning Department, 841 Fair St., Carmel, NY 10512.

Would you be willing to help us spread the word by sharing this opportunity with your network? We've attached a flyer that you are welcome to distribute through newsletters, email lists, social media, or other outreach channels. If there are other organizations in Putnam County that you think may be interested, please feel free to share it with them as well.

Link to press release: https://putnamcountyny.gov/component/rsfiles/item/notice-of-public-comment-period-for-putnam-county-climate-change-adaptation-resilience-plan-ccarp?Itemid=152

Thank you for your consideration,

Ilona Campo
Planner / Climate Smart Coordinator

Email to Partnership Survey organizations, August 3, 2026



Outlook

Community Outreach - Putnam County's CCARP

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Tue 8/4/2026 10:37 AM
[Recipient list omitted for privacy]

2 attachments (2 MB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf; CCARP Public Comment Period Graphic.png;

Hello,

I'm reaching out to ask if you would be willing to help us share information about a notice of public comment period for Putnam County's Draft Climate Change Adaptation and Resilience Plan (CCARP). Link to county's press release: https://putnamcountyny.gov/component/jnsnews/notice-of-public-comment-period-for-putnam-county-climate-change-adaptation-resilience-plan-ccarp?Itemid=152

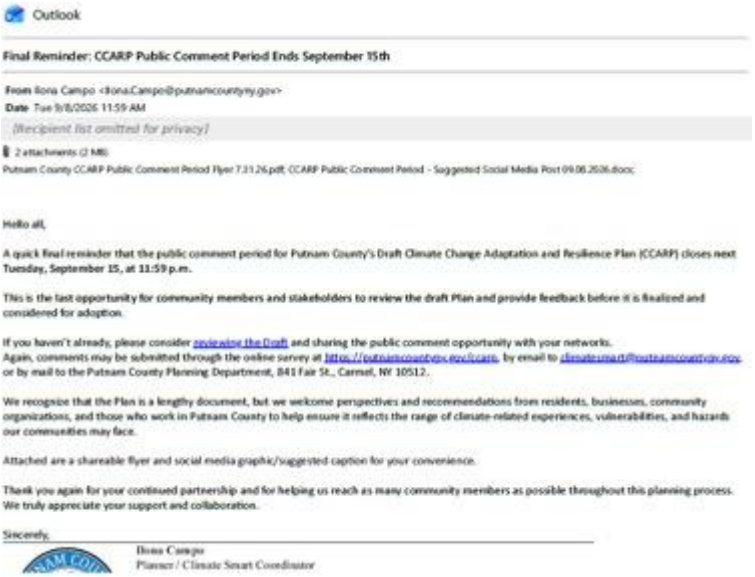
The draft plan is available for public review through **September 15, 2026**. We encourage residents, businesses, community organizations, and those who work in Putnam County to review the plan and submit comments through our online survey at https://putnamcountyny.gov/ccarp. Comments may also be submitted by email to climatesmart@putnamcountyny.gov or by mail to the Putnam County Planning Department, 841 Fair St., Carmel, NY 10512.

I've attached a flyer and graphic that can be shared on your website, in your event calendar, or through other community outreach channels. We are hoping this can be shared as a community announcement, if appropriate, rather than as a paid advertisement. This public comment period is the final opportunity for the public to provide feedback before the Plan is finalized and considered for adoption, so we would greatly appreciate your assistance in helping us reach as many community members as possible.

Thank you for your time and consideration, and please let me know if you have any questions.

Ilona Campo
Planner / Climate Smart Coordinator

Email to local news outlets, August 4, 2026



Outlook

Final Reminder: CCARP Public Comment Period Ends September 15th

From Ilona Campo <Ilona.Campo@putnamcountyny.gov>
Date Tue 9/8/2026 11:59 AM
[Recipient list omitted for privacy]

2 attachments (2 MB)
Putnam County CCARP Public Comment Period Flyer 7.31.26.pdf; CCARP Public Comment Period - Suggested Social Media Post 09.08.2026.docx;

Hello all,

A quick final reminder that the public comment period for Putnam County's Draft Climate Change Adaptation and Resilience Plan (CCARP) closes next **Tuesday, September 15, at 11:59 p.m.**

This is the last opportunity for community members and stakeholders to review the draft Plan and provide feedback before it is finalized and considered for adoption.

If you haven't already, please consider reviewing the Draft and sharing the public comment opportunity with your networks.
Again, comments may be submitted through the online survey at https://putnamcountyny.gov/ccarp, by email to climatesmart@putnamcountyny.gov, or by mail to the Putnam County Planning Department, 841 Fair St., Carmel, NY 10512.

We recognize that the Plan is a lengthy document, but we welcome perspectives and recommendations from residents, businesses, community organizations, and those who work in Putnam County to help ensure it reflects the range of climate-related experiences, vulnerabilities, and hazards our communities may face.

Attached are a shareable flyer and social media graphic/suggested caption for your convenience.

Thank you again for your continued partnership and for helping us reach as many community members as possible throughout this planning process. We truly appreciate your support and collaboration.

Sincerely,

Ilona Campo
Planner / Climate Smart Coordinator

Final reminder email, September 8, 2026

Social Media

The public comment period graphic and suggested caption were posted on the County's main Facebook and Instagram pages, the County Health Department's Facebook and Instagram pages, and the Bureau of Emergency Services' Facebook page.



Putnam County Government Facebook and Instagram posts, July 31, 2026



Putnam County Health Department Facebook and Instagram posts, August 2, 2026



Putnam County Bureau of Emergency Services Facebook post, August 31, 2026



Putnam County Health Department Facebook and Instagram reposts, September 6, 2026

News Coverage and Online Calendars

Following the August 4, 2026 email to local news outlets, the public comment period was covered by the following outlets:

- The Highlands Current, August 5, 2026: Putnam Collecting Input on Climate Plan
- Mid-Hudson News, August 10, 2026: Input Sought on Putnam's Climate Plan
- Carmel Patch online events calendar, August 4, 2026: Putnam County's CCARP Now Open for Public Comment

Sustainable Putnam Newsletters

Sustainable Putnam shared the public comment period in its Upcoming Events newsletter following the August 3, 2026 outreach email, and again in its September 2026 email newsletter on September 1, 2026.



Sustainable Putnam September 2026 email newsletter

Appendix K: History of Extreme Weather Events

Background

Events are categorized by type and source. One weather episode may be logged as multiple distinct events. For example, one extreme storm included in the NCEI may have also been declared as a Disaster or Emergency by FEMA, or it may have also caused flooding and logged in the NCEI as both a Flood and Extreme Storm event.

The source, if a database, for each category of events, is included in the section title. **All descriptions are direct quotes from the titled source unless otherwise cited.**

Most data on events derived from NOAA National Centers for Environmental Information Storm Events Database (NCEI SED) come from the National Weather Service, which retrieves its data from, "county, state and federal emergency management officials, local law enforcement officials, skywarn spotters, NWS damage surveys, newspaper clipping services, the insurance industry and the general public, among others." [1] SKYWARN is a NWS-hosted national network of over 350,000 trained volunteer spotters who provide, "timely and accurate reports of severe weather," mostly on severe thunderstorms.[2] Some data may also be collected by, "media, law enforcement and/or other government agencies, private companies, individuals," and others outside of the National Weather Service.[3]

Extreme Storms - National Centers for Environmental Information Storm Events Database

NCEI SED Episode ID	196402
Reported Property Damage	$0
Description	High Wind
Start Date	8/9/2024
End Date	8/9/2024
Episode Narrative	The pressure gradient tightened over the region as a cold front associated with the remnants of tropical system Debby approached from the west. This produced strong winds over southeastern New York during the afternoon hours of Aug 9, 2024.

[1] "Storm Data FAQ Page," National Oceanic and Atmospheric Administration National Centers for Environmental Information (NOAA NCEI), accessed January 23, 2026, https://www.ncei.noaa.gov/stormevents/faq.jsp.
[2] "NWS SKYWARN Storm Spotter Program," National Oceanic and Atmospheric Administration (NOAA) National Weather Service, accessed January 23, 2026, https://www.weather.gov/skywarn/.
[3] "Storm Data FAQ Page," National Oceanic and Atmospheric Administration National Centers for Environmental Information (NOAA NCEI), accessed January 23, 2026, https://www.ncei.noaa.gov/stormevents/faq.jsp.

Event Narratives	The public reported a tree and wires down with a road closure in both directions on US Route 9, south of Snake Hill Road in Garrison, NY at 3:59 PM Local Standard Time.

NCEI SED Episode ID	195031
Reported Property Damage	KENT CLIFFS: $1,000 CRAFTS: $1,000 CARMEL: $3,000 DYKEMANS: $1,000 MILLTOWN: $1,000
Description	Thunderstorm Wind
Start Date	7/17/2024
End Date	7/17/2024
Episode Narrative	A broad positively tilted upper-level trough approached from the west along with associated surface cold front and pre-frontal trough. The pre-frontal trough moved into an area with high instability (1750-2000 J/kg of MLCAPE). This combined with Effect Bulk Shear values around 25 kt allowed for multiple severe thunderstorms to develop. The storms were able to produce damaging wind gusts across southeast NY, with DCAPE values around 750-1000 J/kg.
Event Narratives	Kent Cliffs: Tree down in Fahnestock State Park blocking the road to campsite. Crafts: Tree down on Shear Hill Road. Carmel: Trees down with wires on Belden Road. Dykemans: Tree down on NY 312 at Garity Boulevard. Milltown: Tree down on NY 312 at Rocco Drive.

NCEI SED Episode ID	191259
Reported Property Damage	BREWSTER: $1,000
Description	Thunderstorm Wind
Start Date	6/26/2024
End Date	6/26/2024
Episode Narrative	Showers and thunderstorms formed west of our area along a cold front and then moved east towards our area. The storms became severe and continued in a warm and moist environment, producing damaging winds across southeast NY.
Event Narratives	Tree down on NY 22 southbound south of Birch Hill Road. Alternate lanes of 2 lanes blocked.

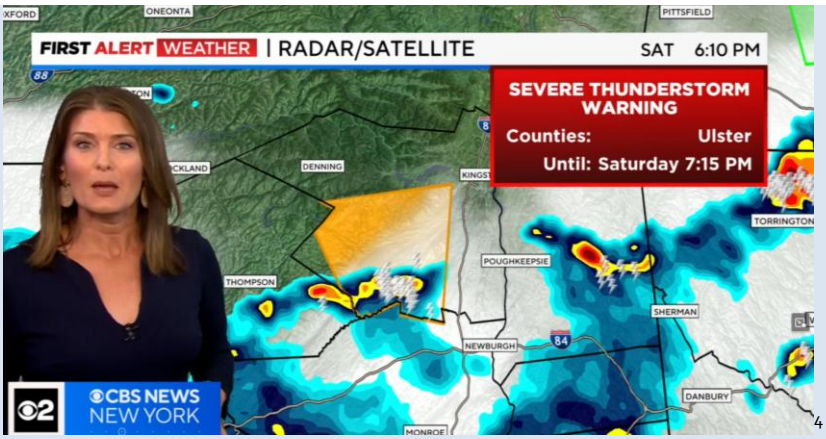
NCEI SED Episode ID	192572
Reported Property Damage	GARRISON: $3,000 GRAYMOOR: $2,000

	LAKE MAHOPAC: $20,000 LAKE MAHOPAC: $2,000 BREWSTER: $10,000 SODOM: $10,000 PUTNAM LAKE: $10,000
Description	Thunderstorm Wind
Start Date	6/23/2024
End Date	6/23/2024
Injury	1
Episode Narrative	The area started off in the warm sector with an approaching cold front and pre-frontal trough from the west. Diurnal heating led to destabilization, with SBCAPE values reaching 2000-3000 J/kg. Thunderstorms fired up along the approaching pre-frontal trough and moved into the area. Given 40 knots of deep-layer shear, some storms were able to organize and become severe. The storms produced damaging winds across southeast NY.
Event Narratives	Garrison: Tree fell on road and partially brought down power line. Graymoor: Large branch down on power lines. Lake Mahopac: A tree fell on a car with three occupants on Route 6N in Mahopac between Secor Road and Parker Drive. One person was taken to a hospital and the other two refused treatment. Lake Mahopac: Wires down on Indian Hill Road. Brewster: Tree on a house on Maple Road. Sodom: Tree on a house at Vales Grove. Putnam Lake: Tree on a house on Lake Shore Drive.
Additional Information	
Photograph	

NCEI SED Episode ID	190661
Reported Property Damage	CRAFTS: $5,000
Description	Thunderstorm Wind
Start Date	5/23/2024
End Date	5/23/2024
Episode Narrative	Isolated thunderstorms formed along and head of an approaching pre-frontal trough and cold front in the early morning hours, some were severe and produced damaging winds and large hail. Behind these storms, an MCV moved through and produced more damaging winds and large hail.
Event Narratives	Multiple trees down across the south portion of town on Stoneleigh Avenue, Drewville Road, Weber Hill Road and Seminary Hill Road near Willow Road.

NCEI SED Episode ID	186886
Reported Property Damage	$0
Description	High Wind
Start Date	12/18/2023
End Date	12/18/2023
Episode Narrative	A strong area of low pressure moved north along the U.S. east coast and passed through the region during the morning of December 18, 2023. The pressure gradient tightened as the center of the storm approached, producing high winds over Southeastern New York during the morning hours.
Event Narratives	The Department of Highways reported downed tree in Patterson, NY at 705 AM Local Standard Time and at Brewster at 717 AM Local Standard Time.

NCEI SED Episode ID	186184
Reported Property Damage	MAHOPAC ARPT: $10,000
Description	Thunderstorm Wind
Start Date	9/8/2023
End Date	9/8/2023
Episode Narrative	Thunderstorms developed along a stalled boundary and moved through southeast NY in an environment with 3000 to 4000 J/kg of SBCAPE. Some of these storms were severe and produced damaging winds and large hail.
Event Narratives	A tree with large branches fell on a school bus on Agor Lane in Mahopac with 25 children and a driver inside. No injuries. Power company and highway department arrived on scene shortly after.
Additional Information	

Photograph	

NCEI SED Episode ID	184672
Reported Property Damage	FARMERS MILLS: $1,000 LUDINGTONVILLE: $5,000 TOWNERS: $1,000 LAKE CARMEL: $1,000
Description	Thunderstorm Wind
Start Date	8/12/2023
End Date	8/12/2023
Episode Narrative	A slow moving front and shortwave trough aloft approached from the west. Surface heating led to moderate instability and a severe thunderstorm was able to develop and produce damaging wind gusts and large hail as it moved through southeastern NY.
Event Narratives	Farmers Mills: Tree down on Farmers Mill Road near Kentview Drive in Lake Carmel NY. Ludingtonville: Tree down on a transformer. Towners: Tree down on Fair Street near Routh 311 in Lake Carmel NY. Lake Carmel: Tree down blocking Terry Hill Road in Lake Carmel NY.

NCEI SED Episode ID	183551
Reported Property Damage	MAHOPAC MINES: $1,000
Description	Thunderstorm Wind
Start Date	7/3/2023
End Date	7/3/2023
Episode Narrative	A slow moving front and shortwave trough aloft approached from the west. Surface heating led to moderate instability and a severe thunderstorm was able to develop and produce damaging wind gusts and large hail as it moved through southeastern NY.

[4] "First Alert Forecast: CBS2 9/9/23 Evening Weather," CBS New York, September 9, 2023, video, 4:00, https://www.youtube.com/watch?v=MmsCMzkt3Hc.

Event Narratives	Tree down on Taconic State Parkway southbound south of exit 25, Peekskill Hollow Road.

NCEI SED Episode ID	180762
Reported Property Damage	$0
Description	Hail
Start Date	6/2/2023
End Date	6/2/2023
Episode Narrative	A shortwave aloft approached from the north along with a surface backdoor cold front. Severe thunderstorms were able to develop ahead of the cold front and produce large hail and damaging winds.
Event Narratives	One inch hail reported via social media near Thunder Ridge in Patterson.

NCEI SED Episode ID	177068
Reported Property Damage	$0
Description	High Wind
Start Date	12/23/2022
End Date	12/23/2022
Episode Narrative	A strong low pressure system centered near the eastern Great Lakes Region continued to strengthen as it moved northeast on December 23, 2022. This brought high winds over southeastern New York that morning as the pressure gradient tightened over the area.
Event Narratives	NY Department of Highways reported a tree down on Route 121 southbound at Red Fox Lane in Peach Lake, NY at 610 AM Local Standard Time. This blocked one lane.

NCEI SED Episode ID	172514
Reported Property Damage	BREWSTER: $1,000
Description	Thunderstorm Wind
Start Date	7/21/2022
End Date	7/21/2022
Episode Narrative	A pre-frontal trough out ahead of a cold front was able to spark severe thunderstorms over an unstable environment in southeast NY.
Event Narratives	Tree down and road closure on NY 22 northbound at Reed Farm Drive. All lanes blocked.

NCEI SED Episode ID	163746

Reported Property Damage	$0
Description	Hail
Start Date	11/13/2021
End Date	11/13/2021
Episode Narrative	A strong and slow moving frontal boundary, along with a potent mid level disturbance triggered strong to severe thunderstorms which impacted Southeastern New York. Six tornadoes also touched down across Long Island with one in Nassau County and five across Suffolk County.
Event Narratives	Hail of 1 inch in diameter was reported.

NCEI SED Episode ID	161960
Reported Property Damage	NELSONVILLE: $3,000
Description	Thunderstorm Wind
Start Date	8/11/2021
End Date	8/11/2021
Episode Narrative	A low pressure trough in a warm and humid air mass triggered severe thunderstorms across the Southeastern New York.
Event Narratives	Police Department reports wires down near Maple Terrace and Ceder Street.

NCEI SED Episode ID	
Reported Property Damage	LAKE MAHOPAC: $10,000 CARMEL: $10,000 BREWSTER: $10,000
Description	Thunderstorm Wind
Start Date	8/27/2020
End Date	8/27/2020
Episode Narrative	An upper level disturbance in close proximity to a departing warm front triggered numerous severe thunderstorms across Southeastern New York. These storms produced a tornado in Montgomery, NY in Orange County.
Event Narratives	Lake Mahopac: Numerous trees snapped and uprooted and power lines down. Carmel: Numerous trees and power lines down through the town. Brewster: Multiple large trees reported down on power lines.
Additional Information	
Photograph	

NCEI SED Episode ID	152384
Reported Property Damage	$0 reported by the NCEI; additional damages reported under FEMA Declared Emergencies and Natural Disasters
Description	Tropical Storm
Start Date	8/4/2020
End Date	8/4/2020
Episode Narrative	Category 1 Hurricane Isaias with maximum sustained winds of 85 mph, made landfall near Ocean Isle Beach, NC at 11:10 pm on August 3rd. Isaias' intensity weakened back to Tropical Storm strength as its forward speed increased to near 30 mph early morning of August 4th. The center of Isaias passed about 65 miles west of New York City at 3 pm on August 4, 2020. Tropical storm force winds extended well east of the center of circulation. The highest sustained wind speeds ranged from 35 to 55 mph, with gusts 60 to 80 mph, across Long Island, NYC and portions of the Lower Hudson Valley, resulting in widespread wind damage and power outages. A storm surge as high as 3 to 5 ft across the Lower NY Harbor and the south shore of western Long Island, occurred during low tide, which only resulted in localized minor coastal flood benchmarks being reached in these spots. Greater impacts were realized along the ocean beachfront from 8 to 12 ft surf causing significant beach erosion and flooding. Additionally, rough surf of 4 to 6 ft on far western Long Island Sound caused damage to marinas across coastal Westchester County. Rainfall amounts of 1/2 to 4 1/2 inches were observed across the Lower Hudson Valley, highest amounts across western areas, with 1/2 to 1 1/2 inches observed across NYC, and generally less than an inch across Long Island. One death resulted from the high winds: A 60 yr old man was killed in the Briarwood section of Queens near the intersection of 84th Drive and 143rd Street near Smedley Street from a tree falling on his vehicle. One injury resulted from the high winds: A woman was critically injured when a falling tree branch hit her while walking on Dumont Avenue in Brownsville Brooklyn. Preliminary damage cost estimates for Public Assistance are: The number of power outages statewide peaked around 920000 on August 4-5th, with many outages lasting several days to a week. The state lost around xx percent of their tree population.

Event Narratives	Nearby, a peak wind gust of 51 mph was recorded at the Stewart Airport AWOS at 420pm LST and a peak wind gust of 57 mph at the NYS mesonet in Somers at 33 ft elevation at 120pm LST. These type of winds across the area resulted in numerous trees and tree limbs being downed, power outages, damages to homes and automobiles, and disruption to mass transit.
Additional Information	See FEMA Declared Emergencies and Natural Disasters
Photograph	See FEMA Declared Emergencies and Natural Disasters

NCEI SED Episode ID	147245
Reported Property Damage	GARRISON: $5,000
Description	Thunderstorm Wind
Start Date	5/15/2020
End Date	5/15/2020
Episode Narrative	A cold front triggered severe thunderstorms which moved through Interior Southeastern New York.
Event Narratives	Sheriff's dispatcher reports multiple trees and power lines down along Route 9 near Garrison, NY. Time estimated by radar.

NCEI SED Episode ID	146125
Reported Property Damage	$50,000
Description	High Wind
Start Date	4/13/2020
End Date	4/13/2020
Episode Narrative	Deep low pressure passed to the west of the area resulting in high winds.
Event Narratives	At 1037 am, social media reported a tree down on US 6 eastbound in Carmel. According to social media reports, a downed tree and wires laid across NY 9D in both directions north of Main Street in Cold Spring at 1110 am.
Additional Information	1.3 million power outages were reported from Texas to Maine,[5] and thousands of outages occurred Countywide.[6]

[5] Allison Dunne, "Power Outage Repairs From A Wind Storm Continue," WAMC Northeast Public Radio, April 14, 2020, https://www.wamc.org/hudson-valley-news/2020-04-14/power-outage-repairs-from-a-wind-storm-continue.
[6] Isabel Keane, "More than 10,000 customers still without power Tuesday after storms pounded area," LoHud, Rockland/Westchester Journal News, last modified April 14, 2020, https://www.lohud.com/story/weather/2020/04/13/westchester-putnam-power-outage-wind-storm/2981620001/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z1184xxe1184xxv003999d--43--b--43--&gca-ft=203&gca-ds=sophi.

Photograph	 [7]

NCEI SED Episode ID	140283
Reported Property Damage	CRAFTS: $1,000
Description	Thunderstorm Wind
Start Date	7/22/2019
End Date	7/22/2019
Episode Narrative	A cold front stalled as a stationary boundary triggering severe thunderstorms that impacted Southeastern New York.
Event Narratives	Tree down on Route 6 (Crane Road) with time estimated by radar.

NCEI SED Episode ID	137446
Reported Property Damage	$0

[7] Central Hudson, included in Allison Dunne, "Power Outage Repairs From A Wind Storm Continue," WAMC Northeast Public Radio, April 14, 2020, https://www.wamc.org/hudson-valley-news/2020-04-14/power-outage-repairs-from-a-wind-storm-continue.

Description	Hail
Start Date	6/30/2019
End Date	6/30/2019
Episode Narrative	A strong upper level disturbance triggered severe thunderstorms across Southeastern New York.
Event Narratives	One inch hail reported.

NCEI SED Episode ID	128365
Reported Property Damage	BREWSTER: $3,000 SODOM: $2,000
Description	Thunderstorm Wind
Start Date	6/18/2018
End Date	6/18/2018
Episode Narrative	A prefrontal trough ahead of a cold front approaching from the west brought severe weather to Southeastern New York.
Event Narratives	Brewster: A tree and wires down on Peaceable Hill Road. Sodom: Wires reported down across Star Ridge road near route 202.
Additional Information	
Photograph	

NCEI SED Episode ID	124185
Reported Property Damage	LAKE CARMEL: $1,000 CARMEL: $2,000 LAKE CARMEL: $5,000 BREWSTER: $0
Description	Thunderstorm Wind
Start Date	5/15/2018
End Date	5/15/2018
Episode Narrative	An approaching cold front triggered numerous severe thunderstorms over southeastern New York. These storms produced 3 tornadoes in the Lower Hudson Valley, as well as microbursts and macroburts.
Event Narratives	Lake Carmel: Bank sign damaged at the Putnam County National Bank on Route 52. Carmel: Trees and wires down along Route 52 with at least one power pole snapped. Lake Carmel: Trees down on Woodstock Road. Brewster: A 65 mile per hour gust was reported by Brewster mesonet station.
Additional Information	

Photograph	

NCEI SED Episode ID	124185
Reported Property Damage	LUDINGTONVILLE-LAKE CARMEL (Kent): $250,000 HAVILAND HOLLOW-PUTNAM LAKE (Patterson): $100,000
Description	Tornado
Magnitude	LUDINGTONVILLE-LAKE CARMEL: EF2 HAVILAND HOLLOW-PUTNAM LAKE: EF1
Start Date	5/15/2018
End Date	5/15/2018
Episode Narrative	An approaching cold front triggered numerous severe thunderstorms over southeastern New York. These storms produced 3 tornadoes in the Lower Hudson Valley, as well as microbursts and macroburts.
Event Narratives	LUDINGTONVILLE-LAKE CARMEL (Kent): Based on a National Weather Service storm survey, done in conjunction with the Putnam County Bureau of Emergency Services, is been determined that an EF2 tornado with estimated peak winds of 115 mph moved through Kent, New York. The tornado originated near apartments at 1213 New York Route 52. It continued down NY State Route 52, damaging some roofs in the strip mall at the intersection of Route 52 and Farmers Mill Road, where it also knocked down portions of the parapet above the Dunkin Donuts, and snapped and uprooted some trees. The tornado lifted near 52 Bowen Road in Kent. The most extensive damage was along Schuykill Court, where dozens of large trees were uprooted and snapped, with a convergent pattern to most of the fallen trees. Based on this damage, the tornado was classified as an EF2, with estimated maximum winds of around 115 mph. HAVILAND HOLLOW-PUTNAM LAKE (Patterson): Based on a National Weather Service storm survey, done in conjunction with the Putnam County Bureau of Emergency Services, is been determined that an EF1 tornado with estimated peak winds of 100 mph moved along a discontinuous path through Patterson, New York. The tornado originated along NY State Route 22, north of the intersection with Haviland Hollow Road, near the Watchtower Educational Center. The tornado then tracked along East Branch Road, turned left toward Putnam Lake, then lifted near the intersection of East Branch Road and Fairfield Drive. The storm snapped multiple trees along its path, not all of it continuous. The most extensive damage occurred in the general vicinity of 706 East Branch Road, where multiple trees were uprooted and snapped,

	lying in a convergent pattern, and where leaves were splattered on three sides of the house. Based on this information, the tornado was classified as an EF1 with estimated maximum winds of 100 mph.
Additional Information	
Photograph	 [8]

NCEI SED Episode ID	120647
Reported Property Damage	$50,000
Description	Strong Wind
Start Date	10/24/2017
End Date	10/24/2017
Episode Narrative	Strong winds occurred ahead of and behind a cold front.
Event Narratives	A downed tree on Route 292 North of Mooney Hill Road was reported, which caused a road closure. This occurred at 630 am in Patterson.
Additional Information	
Photograph	

NCEI SED Episode ID	120717
Reported Property Damage	OSOAWANA CORNERS: $2,500

[8] Anonymous, included in David Propper, "Tornados Devastate Putnam," *The Putnam Examiner* 10, no. 478 (2018): 1, https://examiner-pdf-downloads.s3.amazonaws.com/putnam/2018/PutnamExaminer5-22-18.pdf.

	MANITOU: $1,000 PUTNAM LAKE: $1,000
Description	Thunderstorm Wind
Start Date	9/5/2017
End Date	9/5/2017
Episode Narrative	An approaching cold front triggered isolated severe thunderstorms in Putnam County.
Event Narratives	Osoawana Corners: Trees were reported down on Canopus Hill Road, east of Route 9. Manitou: Trees were reported down on New York State Route 9D, one-quarter of a mile north of Bear Mountain Bridge. Putnam Lake: A tree was reported down near 450 East Branch Road in Putnam Lake.
Additional Information	
Photograph	

NCEI SED Episode ID	118079
Reported Property Damage	OSCAWANA LAKE: $2,000 KENT CLIFFS: $0 PATTERSON: $5,000 BREWSTER HGTS: $1,000 BREWSTER: $7,500
Description	Thunderstorm Wind
Start Date	6/19/2017
End Date	6/19/2017
Episode Narrative	An approaching upper level shortwave and assocaited surface cold front triggered multiple severe thunderstorms across sections of New York City and the Lower Hudson Valley.
Event Narratives	Oscawana Lake: A tree was reported down on wires just southeast of Oscawana Lake at 459 Oscawana Lake Road. Kent Cliffs: A tree was reported down in Fahnestock State Park. Patterson: Trees were reported down on wires along Route 311 in Patterson. Brewster Heights: A tree was reported down along Route 312 in Tilly Foster. Brewster: Many trees and wires were reported down just northwest of Brewster along Drewville Road.
Additional Information	
Photograph	

NCEI SED Episode ID	118076
Reported Property Damage	MILLTOWN: $1,500

Description	Thunderstorm Wind
Start Date	6/13/2017
End Date	6/13/2017
Episode Narrative	A passing cold front triggered isolated severe storms over Orange and Putnam Counties.
Event Narratives	A tree was reported downed northeast of Brewster Hill at the intersection of Routes 312 and 22.

NCEI SED Episode ID	113589
Reported Property Damage	$50,000
Description	Strong Wind
Start Date	2/13/2017
End Date	2/13/2017
Episode Narrative	Low pressure passed to the east and rapidly deepened.
Event Narratives	A mesonet station 1 mile north of Peach Lake measured a wind gust up to 51 mph at 202 pm.
Additional Information	Over 70mph gusts observed in neighboring Westchester County.[9]
Photograph	

NCEI SED Episode ID	110099
Reported Property Damage	MILLTOWN: $5,000
Description	Thunderstorm Wind
Start Date	8/11/2016
End Date	8/11/2016
Episode Narrative	A trough of low pressure helped trigger isolated severe storms, which impacted Putnam and Nassau Counties.
Event Narratives	Trees were reported down on I-84 just west of the New York-Connecticut border.
Additional Information	
Photograph	

NCEI SED Episode ID	109190
Reported Property Damage	LAKE SECOR: $3,000
Description	Thunderstorm Wind
Start Date	7/18/2016
End Date	7/18/2016

[9] "February 13th Wind Event," National Weather Service New York, NY, February 13, 2017, https://www.weather.gov/okx/storm02132017.

Episode Narrative	A passing cold front triggered isolated severe thunderstorms over the Lower Hudson Valley, New York City, and Long Island.
Event Narratives	Trees and power lines were reported down at the intersection of Wood Street and Goldfinch Lane just northeast of Donald J. Trump State Park.
Additional Information	
Photograph	

Extreme Storms – FEMA Declared Emergencies and Natural Disasters

FEMA Declaration Number	DR-4723
Reported Property Damage	$3.5 million[i]
Description	Severe storms and flooding
Start Date	7/9/2023
End Date	7/10/2023
Information	According to a storymap from the NWS, a frontal boundary stalled over the lower Hudson Valley in early July 2023, lifting warm and humid air, becoming part of a wave of low pressure moving slowly off the coast of Long Island and New Jersey.[ii] As the storm moved, it brought devastating flooding from New York to Vermont. The slow-moving showers and thunderstorms brought 4-9 inches of rain in three hours during the afternoon of July 9 in Putnam County and adjacent areas, with Garrison and Cold Spring receiving near 5.0 inches in that time span. A Flash Flood Emergency was declared in eastern Orange, northern Rockland, western Putnam, and northwest Westchester counties. Motorists were stranded and had to be rescued. Flooding impacted the Metro-North Hudson Line. The most devastated locations weren't in Putnam County, but flooding did occur in Cold Spring, Mahopac, and Patterson. One fatality was reported in Fort Montgomery. Areas of Putnam County near the Hudson River hit a 1/500-1/1000 year 3-hour rainfall exceedance event. The following road closures were reported: Popolopen Bridge was closed for a month across Hudson from Southern Philipstown; Route 218 washed out and remained closed for several months; Taconic State Parkway, US9, US6, Route 9D, which go through Putnam County, were impacted.[iii] The following was reported by the NWS text-based Local Storm Reports for New York, NY: Water rushed down E Lake Blvd in Carmel. Fair St closed in Lake Carmel. "DOT reports flooding on NY

	6N both directions at Potter Rd, all lanes blocked" in Mahopac. All lanes flooded on Taconic State in Mahopac near Tompkins Corners. Patterson: Flooding and Road closure on NY 292 in both directions; NY 311; and NY 55.[iv] According to an NWS Public Information Statement, Putnam Valley had reported 8.93 in of rainfall as of July 10.[v] A narrative/timeline of impacts is available on patch.com.[vi]
Photograph	

FEMA Declaration Number	DR-4615, EM-3572
Reported Property Damage	$1.8 million[vii]
Description	Hurricane Ida
Start Date	9/1/2021
End Date	9/3/2021
Information	Hurricane Ida made landfall on August 29 in Louisiana, before weakening to a post-tropical cyclone as it moved northeast, reaching south of Long Island on September 2.[viii] Despite remaining south of Putnam County, the storm caused "extensive damage to roads and drainage systems,"[ix] including Veteran Memorial Bridge in Lake Carmel.[x] In addition to Long Island and New York City Counties, Dutchess, Orange, Putnam, Rockland, and Westchester Counties qualified for Federal Public Assistance as part of a major disaster declaration.[xi] 2 million dollars in emergency funds were made available to individual homeowners in Southern New York whose homes were impacted by flooding from Ida.[xii]
Photograph	

FEMA Declaration Number	EM-3565
Reported Property Damage	Unreported
Description	Hurricane Henri
Start Date	8/21/2021
End Date	8/24/2021
Information	Hurricane Henri made landfall in Rhode Island as a tropical storm on August 22, 2021 before slowing, turning Westward, and moving into southeastern New York as a tropical depression on August 23.[xiii] [xiv] Putnam County faced outages, with Phillipstown being the hardest hit among Central Hudson customers.[xv] Flooding was reported across Putnam, Orange, Rockland, and Westchester Counties, with a Flood Warning issued.[xvi]

Photograph	

FEMA Declaration Number	DR-4567
Reported Property Damage	$82,400[xvii]
Description	Tropical Storm Isaias
Start Date	8/4/2020
End Date	8/4/2020
Information	The night of August 3, 2020, Hurricane Isaias made landfall in North Carolina, before weakening to a tropical depression and moving north. The storm crossed through Orange and Sullivan Counties in New York, west of Putnam County, on August 4.[xviii] Wind gusts of 57 mph were measured in Somers, Westchester County, south of Mahopac.[xix] According to Patch, The Croton Falls Commuters and fixed route PART system were left without power, and the MetroNorth Harlem line, which services the towns of Southeast and Patterson, was closed north of Westchester County.[xx] Over 30,000 customers across the County were left without power the day after the storm. Trees and tree limbs were downed across the County.[xxi] The New York National Guard was called to deliver water, ice, and dry ice to Putnam County residents for three days.[xxii] A state of emergency was declared by the County.[xxiii]
Photograph	

Severe Winter Storms - National Centers for Environmental Information Storm Events Database

NCEI SED Episode ID	198597
Description	Ice Storm
Start Date	2/15/2025
End Date	2/16/2025
Episode Narrative	Low pressure lifted northeast out of the Tennessee Valley and tracked just west of the area with the warm front getting up against south and southeastern portions of the region. A light accumulating snow changed to a prolonged period of freezing rain across northern interior sections.
Event Narratives	With respect to snow, 1 to 2 inches in all likelihood was reached around the county / zone before the change to freezing rain. Poughkeepsie ASOS just to the north reported just a half inch of ice, and there were reports to the west and east of or near a half inch of ice which included Danbury ASOS. Based on radar estimates in and

	around Putnam county warning criteria with respect to ice is estimated to have been reached.
Photograph	

NCEI SED Episode ID	198670
Description	Winter Weather
Start Date	2/8/2025
End Date	2/9/2025
Episode Narrative	A progressive low pressure system emerged out of the Tennessee Valley and quickly moved across the region bringing an accumulating wet snowfall. Most places received an advisory level snowfall with mainly 3 to 4 inches of snow, with some locations getting slightly higher and lower amounts. This was a front end quick thump driven by warm advection snowfall which fell primarily during the evening hours of the 8th. The snow quickly tapered to some light freezing rain and drizzle in spots after the initial thump. Some locations further east changed back to a lighter snow before ending in the early morning.
Event Narratives	Mainly 3 to 4 inches fell across the zone, with not a lot of snowfall reports for the zone. Cocorahs reported 3.5 inches at 0.3 S Nelsonville, and 3.0 inches in Cold Spring.
Photograph	

NCEI SED Episode ID	197966
Description	Heavy Snow
Start Date	1/19/2025
End Date	1/19/2025
Episode Narrative	A cold front pushed through, with a secondary cold frontal boundary lingering back to the west. Low pressure formed along the boundary and began to strengthen as it pulled away quickly to the east and northeast. The accumulating snow was generated mainly from frontogenetical forcing which occurred to the north and west of the developing surface low. Winter Storm criteria was reached in Orange and Putnam Counties, but fell just short of warning criteria across Northern Westchester. The remainder of SE New York either achieved advisory criteria or fell just short of advisory criteria.
Event Narratives	A trained spotter reported 6.5 inches at 3 WNW Fahnestock State Park. Cocorahs reported 6.3 inches at 0.3 S Nelsonville, and 6.0 inches at Cold Spring early the following morning, with a report of 5.6 inches via Newspaper / Media at Putnam Valley.

Photograph	

NCEI SED Episode ID	199146
Description	Winter Weather
Start Date	12/20/2024
End Date	12/21/2024
Episode Narrative	A progressive upper / mid level trough lead to low pressure moving across the Ohio Valley with a secondary low developing just off the coast. Temperatures were warm and above freezing much of the time along the coast, but often at or below freezing for mainly the northwestern interior. This led to an advisory level snowfall across a good portion of Orange and Putnam counties. Also, northern portions of Nassau County on Long Island received around 3 inches.
Event Narratives	Cocorahs observers reported 2.7 inches in Cold Spring and 2.5 inches at 0.3 S Nelsonville.
Photograph	

NCEI SED Episode ID	197306
Description	Winter Weather
Start Date	12/15/2024
End Date	12/16/2024
Episode Narrative	An accumulating and advisory level snowfall occurred across northern portions of the Lower Hudson Valley in Southeastern New York. A departing strong high pressure system at 1048+mb and a weakening mid-level disturbance led to overrunning which resulted in a light accumulating snowfall. There was an expectation that less snow would be observed with less liquid precipitation overall and some freezing rain towards or just after precipitation onset. Thus, snowfall amounts in far northern sections was a bit more than anticipated.
Event Narratives	Cocorahs observers reported 4.5 inches at 0.3 S Nelsonville and 3.5 inches at Cold Spring.
Photograph	

NCEI SED Episode ID	197326
Description	Winter Weather
Start Date	11/22/2024
End Date	11/22/2024
Episode Narrative	An occluded low pressure system brought heavy rain on the front end, with a change to heavy wet accumulating snow in higher

	elevations as the upper level low approached. Their were much lower amounts in lower elevations. The upper low swung through on the back end of the system early on the 22nd resulted in height falls and colder air working in changing the precipitation to mainly wet snow across portions of the interior, especially in elevated locations.
Event Narratives	A cocorahs observer reported 4.5 inches in Cold Spring.
Photograph	

NCEI SED Episode ID	187612
Description	Heavy Snow
Start Date	2/13/2024
End Date	2/13/2024
Episode Narrative	Low pressure across the Tennessee Valley and the Gulf states tracked tracked north, and redeveloped and intensified rapidly off the Mid Atlantic coast. A heavy wet snowfall occurred across much of Southeastern New York, with lesser amounts across portions of the coast, especially along and closer to the south shore and eastern third of Long Island. Marginal surface temperatures precluded higher snow amounts in urban locations and further south and east. A combination of over 250 crashes and accidents were reported across Long Island during the storm from state and county law enforcement officials.
Event Narratives	Heavy wet snow fell across Putnam County with amounts averaging well over warning criteria. Some snowfall totals included; 12.1 inches at 1 N Fahnestock State Park, 11.3 inches in Mahopac, 11.1 inches at 3 NNE Cold Spring, 10.0 inches at 3 N Putnam Valley via broadcast media.
Photograph	

NCEI SED Episode ID	187076
Description	Heavy Snow
Start Date	1/6/2024
End Date	1/7/2024
Episode Narrative	Low pressure pushed northeast from the Tennessee Valley and moved along and off the coast. An accumulating snow took place across portions of the Lower Hudson Valley of Interior Southeastern New York. Orange and Putnam counties reached Winter Storm Criteria, while locations further south did not as snow totals dropped quickly southeast of Orange and Putnam counties as only advisory criteria was reached across portions of Westchester and Rockland

	counties where the snow mixed with, and even changed to rain in places.
Event Narratives	Heavy snow was reported via Cocorahs observers with 6.5 inches reported in Cold Spring and 6.0 inches in Nelsonville. A report of 5.6 inches was submitted via Broadcast Media from Putnam Valley.
Photograph	

NCEI SED Episode ID	177038
Description	Heavy Snow
Start Date	3/13/2023
End Date	3/14/2023
Episode Narrative	A Miller B type storm brought rain which changed over to heavy wet snow across Interior SE NY. The heaviest snow totals were mostly driven by elevation as temperatures were right at freezing. Most places closer to the coast and towards the metro changed to snow but most places had an inch or less mostly on colder surfaces.
Event Narratives	Very heavy wet snow fell across Putnam County resulting in a impactful heavy wet snow into the morning commute. Broadcast media reported 11.9 inches at 3 N Putnam Valley. A Public report came in with 12.0 inches at 1 WSW Lake Carmel. Fire Department and Rescue reported 17.0 inches at 4 NNE Fahnestock State Park. Cocorahs reported 10.5 inches in Cold Spring and Amateur radio reported 6.4 inches in Mahopac. A trained spotter also reported 13 inches in Kent via social media. Accumulations appeared to be greatly impacted by elevation.
Photograph	

NCEI SED Episode ID	176829
Description	Heavy Snow
Start Date	2/27/2023
End Date	2/28/2023
Episode Narrative	Weak high pressure and a marginally cold air mass was locked into the northeast with blocking to the north across Eastern Canada, while low pressure over the Midwest moved east and redeveloped off the Northern Mid Atlantic coast. This led to the first widespread accumulating snowfall across the CWA.
Event Narratives	Heavy snow was reported across the county. Snowfall reports included 6.5 inches at 2W Putnam Valley, 6.0 inches from Cold Spring, and 5.0 inches from COOP at Carmel Hamlet.
Photograph	

NCEI SED Episode ID	165394
Description	Winter Weather
Start Date	2/13/2022
End Date	2/13/2022
Episode Narrative	Weak low pressure developed along a frontal wave along the southeast coastline and moved northeast offshore as 700 mb frontogenesis contributed to sub advisory and advisory level snowfall across Southeastern New York. Impacts were minimal as the snow was wet in nature and had difficulty sticking on cement surfaces. Not all zones are entered as with a warm ground some zones had under 2.5 inches of accumulated snow.
Event Narratives	Snowfall amounts in an around Putnam County were at or close to 3 inches. Broadcast Media reported 2.5 inches in Putnam Valley and Brewster through a trained spotter reported 2.4 inches, with 3.5 inches just to the north in Dutchess County just south of Poughkeepsie.
Photograph	

NCEI SED Episode ID	165058
Description	Winter Weather
Start Date	1/28/2022
End Date	1/29/2022
Episode Narrative	A Nor'easter tracked just east of the benchmark bringing the highest snowfall totals and strongest winds to eastern coastal sections. Blizzard conditions verified across Suffolk County on Long Island, with near blizzard conditions for Southern Queens and Nassau Counties. Islip, NY set a record for its highest calendar day (midnight to midnight) snowfall total with 23.5 inches. The storm total for Islip was 24.7 inches. Winds were a factor even further west into New York City and Southern Westchester were 6 inches or more of snow fell on average. East of New York City widespread amounts of 10 to 20 inches were reported across Long Island. Widespread wind gusts of 40 to 50 mph were reported from New York City on east into Long Island. A few peak wind gusts exceeding 60 mph were reported across Suffolk County.
Event Narratives	A moderate snowfall with strong gusty winds occurred across Putnam. The Brewster NYSM recorded a peak wind gust of 47 mph. Broadcast Media reported 4.0 inches in Putnam Valley, with a general 3 to 5 inches estimated to have fallen across the county.
Photograph	

NCEI SED Episode ID	164813
Description	Winter Weather
Start Date	1/16/2022
End Date	1/17/2022
Episode Narrative	A intense low pressure system tracks just inland from the coast as high pressure retreated resulting in wintry precipitation changing quickly to rain along the coast and in the city. The changeover took longer for northern and northwestern sections where accumulating snow fell.
Event Narratives	From surrounding reports from trained spotters and official NWS Observations along with radar indicated an estimated 3 to 6 inches of snow fell across Putnam County before a brief changeover to freezing rain, then to rain.
Photograph	

NCEI SED Episode ID	164617
Description	Winter Weather
Start Date	1/7/2022
End Date	1/7/2022
Episode Narrative	Coastal low pressure along the polar front developed in response to an upper level disturbance. This result in an moderate snowfall across the interior sections of the Lower Hudson Valley, with heavier snow across more southern and southeastern locations.
Event Narratives	Broadcast Media reported 3.0 inches of snow in Putnam Valley.
Photograph	

NCEI SED Episode ID	156082
Description	Winter Weather
Start Date	2/22/2021
End Date	2/22/2021
Episode Narrative	A strong upper level disturbance and its associated frontal system a brief period of moderate to locally heavy snow. The snow quickly transitioned to plain rain during the late afternoon and early evening as temperatures rose above freezing.
Event Narratives	Broadcast media reported 2.5 inches of snow in Putnam Valley.
Photograph	

NCEI SED Episode ID	156086
Description	Winter Weather
Start Date	2/18/2021

End Date	2/19/2021
Episode Narrative	A long duration wintry weather event occurred on Thursday, February 18, 2021 through Friday, February 19, 2021. A frontal wave of low pressure developed off the Middle Atlantic coast on February 18, 2021. The frontal wave combined with a strong upper level to produce a brief period of moderate to heavy snowfall during the morning and early afternoon on Thursday, February 18, 2021. The snow also mixed with sleet at times during the late morning and early afternoon hours across portions of the New York City metro and Long Island. Snowfall rates of 1 inch per hour occurred with locally 2 inches per hour at times. The precipitation became light and changed to spotty freezing rain and freezing drizzle during the late afternoon through the overnight hours on February 18, 2021. The overall weather pattern did not change to much on Friday, February 19, 2021. Weak waves of low pressure continued to track along the frontal zone off the Middle Atlantic coast, combining with the lingering strong jet stream aloft to produce periods of mainly light snow. The light snow persisted into the early evening hours before tapering off just before midnight on Friday, February 19, 2021.
Event Narratives	Nearby trained spotters in northern Fairfield County Connecticut reported 3 to 5 inches of snow.
Photograph	

NCEI SED Episode ID	155989
Description	Winter Weather
Start Date	2/7/2021
End Date	2/7/2021
Episode Narrative	Low pressure developed off the NC/VA coast during the morning on Sunday, February 7, 2021. The low then tracked northeast away from the Middle Atlantic through the afternoon as it intensified, then well south and east of Long Island in the late afternoon and evening. A band of moderate to heavy snow developed across southern portions of the Lower Hudson Valley during the late morning hours. and the continued moving east across portions of the New York City metro and Long Island through the rest of afternoon. The initial moderate to heavy snow band merged with a second band developing across eastern Long Island in the afternoon. Snowfall rates within the bands were around one to as high as two inches per hour at times. Surrounding this moderate to heavy band was a steady snowfall through much of the day. Snowfall

	accumulation across much of Southern Connecticut ranged from 3 to as high as 9 inches.
Event Narratives	Trained spotters and Broadcast media reported 4 to 5 inches of snow.
Photograph	

NCEI SED Episode ID	155867
Description	Winter Storm
Start Date	2/1/2021
End Date	2/3/2021
Episode Narrative	Low pressure developed over the Ohio Valley and Middle Atlantic on Sunday, January 31, 2021. The low then consolidated along the Middle Atlantic coast early on Monday, February 1, 2021 and intensified as it slowly tracked to the north-northeast. The low meandered slowly north as it moved along the northeast and New England coast later on Monday February 1, 2021 through Wednesday, February 3, 2021. The low brought a major winter storm to Southeast New York, with the most significant impacts occurring on Monday, February 1, 2021. 3 to 6 inches of snow had already accumulated across the New York City metro by the start of the morning commute. Near blizzard conditions then occurred through the rest of the morning into the early afternoon with snowfall rates of 1 to 3 inches per hour. Strong winds combined with these heavy snow rates to produce visibilities one quarter mile or less at times. The heavier bands of snow lifted north across the rest of southeast New York in the afternoon. Some warmer air moved over portions of New York City and Long Island late on Monday, February 1, 2021, which change the snow to sleet and even some light rain early Tuesday, February 2, 2021. Colder air returned however later Tuesday, February 2, 2021, changing all lingering precipitation to light snow. Light snow bands lingered across some of Southeast New York through the early morning hours on February 3, 2021. Snowfall totals ranged from 4 to 10 inches across eastern Long Island, with the rest of southeast New York receiving 12 to 18 inches of snow. Portions of the Lower Hudson Valley observed 20 inches of snow with some locations observing around two feet. Winds gusted 40 to 55 mph at times on Monday, February 1, 2021, which caused power outages. Travel was also severely impacted as many flights were cancelled and travel by train was suspended. New York City issued a Winter Weather Emergency Declaration restricting all non-emergency travel on Monday, February 1, 2021. COVID testing and

	vaccination sites were closed. Impacts were limited on February 2, 2021 and February 3, 2021 as the snow was largely light.
Event Narratives	Amateur radio reported 19.5 inches of snow in Cold Spring. Trained spotters, broadcast media, and COOP Observer reported 13 to 18 inches of snow. The nearby Danbury Connecticut Airport ASOS measured a 38 mph wind gust at 7:14 pm February 1, 2021.
Photograph	

NCEI SED Episode ID	155048
Description	Winter Storm
Start Date	12/16/2020
End Date	12/17/2020
Episode Narrative	Low pressure developed along the Middle Atlantic coast on Wednesday December 16, 2020. The low deepened as it tracked northward towards Long Island, NY through the night on December 16, 2020. Arctic high pressure situated over southeast Canada provided a cold and dry air mass ahead of the low supporting moderate to locally heavy snowfall at the onset. The low pressure ultimately tracked from near Atlantic City, NJ to about 50 miles south of Fire Island, NY before sliding offshore Thursday December 17, 2020. This track led to warmer air aloft moving over the NYC metro and Long Island, changing the snow to a mixture of sleet and rain. Surface temperatures briefly warmed into the upper 30s across central and eastern Long Island early on December 17, 2020, changing the precipitation to plain rain. Once the low began moving away from Long Island, temperatures fell significantly below freezing with snow returning as the event ended. Any snowmelt and standing water refroze on Long Island. Any mixed precipitation was brief in the NYC metro and predominately snow fell across the Lower Hudson Valley. The storm significantly impacted travel during the evening commute on Wednesday December 16, 2020 and the morning commute on Thursday December 17, 2020. Many accidents resulted from the snow and icy conditions. Snowfall rates ranged from 1 to 2 inches per hour Wednesday evening. Total snowfall ranged from around 4 inches across coastal southeast Long Island to as much as 14 inches in Orange County. 6 to 12 inches of snow fell in the NYC metro. Strong wind gusts also occurred with the storm, 35 to 60 mph, with some coastal stations reporting gusts as high as 74 mph on Long Island.
Event Narratives	Trained spotters in Mahopac and Brewster reported 13 and 11.7 inches of snow respectively. Broadcast media, amateur radio,

	CoCoRaHS, and the public reported 9 to 11 inches of snow. The New York Mesonet station in Brewster measured a 36 mph wind gust at 8:55 am on December 17, 2020.
Photograph	

NCEI SED Episode ID	144800
Description	Heavy Snow
Start Date	12/1/2019
End Date	12/3/2019
Episode Narrative	A large area of low pressure across the Middle Atlantic on Sunday December 1, 2019 slowly moved towards the northeast. The low redeveloped just south of Long Island on Monday December 2, 2019 and slowly moved offshore through the morning of Tuesday December 3, 2019.
Event Narratives	Trained spotters and CoCoRaHS observers in Putnam and nearby southern Dutchess County reported 5 to 7 inches of snow.
Photograph	

NCEI SED Episode ID	135657
Description	Heavy Snow
Start Date	3/3/2019
End Date	3/4/2019
Episode Narrative	Low pressure developed across the southeast on Sunday March 3, 2019 and then tracked off the Middle Atlantic coast early on Monday March 4, 2019. The low moved just inside the 40N/70W benchmark and continued out to sea. The low brought a widespread snowfall to southeast New York with the heaviest accumulations occurring across the Lower Hudson Valley. Snow mixed with rain and sleet occurring near the coast, reducing accumulations. Much of the significant snow occurred overnight with improved conditions during the Monday morning commute.
Event Narratives	Fire Department/Rescue, CoCoRaHS, and trained spotters reported 6 to 8 inches of snow.
Photograph	

NCEI SED Episode ID	135751
Description	Winter Weather
Start Date	3/2/2019
End Date	3/2/2019

Episode Narrative	A wave of low pressure brought light accumulating snow to southeast New York early on the morning of Saturday March 2, 2019. The low pressure quickly moved away from the coast after day break bringing an end to the accumulating snow.
Event Narratives	A COOP observer in Carmel reported 2 inches of snow.
Photograph	

NCEI SED Episode ID	132934
Description	Winter Storm
Start Date	1/19/2019
End Date	1/20/2019
Episode Narrative	Deepening low pressure tracking from the southeast United States on Saturday January 19, 2019 to the northeast on Sunday January 20, 2019. An arctic air mass was located across New England as the storm system approached the region. A warm front associated with the low moved north along the coast early on the morning of January 20 changing moderate to locally heavy snow to sleet and then liquid precipitation. The warmer air battled the arctic air advecting into the Lower Hudson Valley from the north. However, temperatures remained below freezing through much of the winter storm across the Lower Hudson Valley creating a significant ice accretion on top of snow accumulation. Trees and power lines were brought down due to the ice along with power outages across many towns.
Event Narratives	CoCoRaHS and the broadcast media reported 4 to 5 inches of snow. At nearby Newburgh, NY 0.4 inches of ice accretion was reported by a trained spotter and the nearby Danbury, CT Airport ASOS reported 0.37 inches of ice accretion. The combination of snow and ice created hazardous travel conditions along with downed tree limbs and power lines.
Photograph	

NCEI SED Episode ID	132666
Description	Winter Storm
Start Date	11/15/2018
End Date	11/16/2018
Episode Narrative	A wave of low pressure developed along the Middle Atlantic coast during Thursday November 15, 2018. The low was associated with a closed upper level trough across the Midwest. As the trough translated eastward into Friday November 16, 2018, the low pressure moved up the northeast coast. The antecedent air mass

	ahead of the low was cold and dry for the middle of November with temperatures during the morning and afternoon of November in the upper 20s and low 30s. The moisture associated with the trough and low pressure was able to produce moderate to heavy bands of snow as the precipitation began across the entire Tri-State area due to the cold air in place. Once the low drew warmer air from the south, the precipitation gradually changed to a wintry mix and then plain rain, especially for the New York City metro and Long Island. The moderate to heavy wet snowfall significantly impacted the evening rush hour with 1-2 inch per hour snowfall rates. Hundreds of trees, tree limbs, and branches were brought down by the weight of the snow, including over 100 trees alone in the New York City metro. Numerous accidents were reported along with a 20 car accident on the George Washing Bridge. Many motorists were stranded on roads across the city until the early morning hours the next day. The Long Island Railroad had delays and cancellations and there were over 1,000 flights cancelled at the New York City metro airports (Kennedy, La Guardia, and Newark).
Event Narratives	Trained spotters, Social Media, Broadcast Media, and the public reported 7 to 9 inches of snow.
Photograph	

NCEI SED Episode ID	125209
Description	Winter Weather
Start Date	4/2/2018
End Date	4/2/2018
Episode Narrative	Waves of low pressure moved along a stalled frontal boundary across the Middle Atlantic. Moderate to heavy snow fell during the morning commute across southeast New York. Snowfall rates reached 1 inch per hour at times. Daily record snowfall amounts were set at Central Park (5.0 inches), LaGuardia (5.5 inches), Kennedy (3.7 inches), and Islip (4.6 inches) for April 2nd.
Event Narratives	Trained spotters, broadcast media, and the public reported 5 to 6 inches of snowfall.
Photograph	

NCEI SED Episode ID	124192
Description	Winter Weather
Start Date	3/21/2018
End Date	3/22/2018

Episode Narrative	A large and slow moving low pressure developed along the Middle Atlantic coast on Wednesday, March 21st and moved slowly north and east along the coast through Thursday, March 22nd. Moderate to heavy snow bands moved across Long Island and New York City with lighter snow across the Lower Hudson Valley. The heaviest snow occurred in New York City and Long Island Wednesday night into early Thursday morning. The highest snowfall rates occurred on Long Island with generally 2 to 4 inches per hour at times. The NWS official observation at the Islip Airport indicated a snowfall rate of 5 inches per hour between 9pm and 10pm on March 21st with around 9 inches of snow falling from 8pm to 10pm. Within these heavier bands, near-blizzard conditions occurred with visibilities one quarter mile or less and winds gusting 30 to 35 mph.
Event Narratives	A COOP observer and trained spotters reported 3 to 5 inches of snow.
Photograph	

NCEI SED Episode ID	124182
Description	Winter Weather
Start Date	3/12/2018
End Date	3/13/2018
Episode Narrative	A strong area of low pressure tracked well offshore of the eastern seaboard, but tracked close enough to eastern Long Island to bring heavy snow bands during the morning and early afternoon on Tuesday, March 13, 2018. Snowfall rates were 1 to 2 inches per hour at times in the morning across eastern Long Island. A deep upper level trough over the northeast also aided in bringing lighter snow over the Lower Hudson Valley and portions of New York City, despite the low pressure tracking several hundred miles off the coast.
Event Narratives	A CoCoRaHS observer and a COOP Observer reported 4 to 5 inches of snow. An isolated 6.8 inch of snow report occurred 3 miles south of Fishkill by a CoCoRaHS observer.
Photograph	

NCEI SED Episode ID	124011
Description	Winter Storm
Start Date	3/7/2018
End Date	3/8/2018
Episode Narrative	A strong low pressure system developed along the Middle Atlantic coast during the morning of Wednesday, March 7, 2018. The low

	tracked along the coast through the early morning hours on Thursday, March 8, 2018. The storm brought heavy wet snow, strong gusty winds, and even some thundersnow to southeast New York. Snowfall rates ranged from 1 to 3 inches per hour at times in the heaviest snow bands.
Event Narratives	CoCoRaHS observers, trained spotters, COOP Observers, and broadcast media reported 15 to 20 inches of snowfall. Gusty winds combined with the heavy wet snow to bring down tree limbs and some power lines.
Photograph	

NCEI SED Episode ID	124006
Description	Winter Weather
Start Date	3/1/2018
End Date	3/2/2018
Deaths	1
Episode Narrative	A rapidly intensifying low pressure developed along the Middle Atlantic during the early morning hours on March 2, 2018. The low moved slowly off the coast and became nearly stationary near the [...] benchmark. The storm brought winter storm conditions to portions of the Lower Hudson Valley, especially in the higher elevations.
Event Narratives	The county saw generally to 3 to 5 inches of snow, but there were isolated higher amounts at elevated locations. A CoCoRaHS observer reported 10.3 inches of snow three miles north of Fahnestock State Park. The public reported 7.6 inches of snow in Mahopac. The broadcast media reported one fatality due to the strong winds. An 11 year old boy was killed when a tree was knocked down onto a house at 1215 pm in Putnam Valley.
Photograph	

NCEI SED Episode ID	123548
Description	Heavy Snow
Start Date	2/17/2018
End Date	2/18/2018
Episode Narrative	A low pressure developed along a frontal boundary along the southeast coast on the evening of Saturday, February 17, 2018. This low gradually became better organized as it moved up the coast towards the [...] benchmark early Sunday, February 18, 2018. This system brought heavy snow to portions of the Lower Hudson Valley

	and light to moderate snow across the New York City Metropolitan and western Long Island.
Event Narratives	A COOP Observer and trained spotters reported 6 to 7 inches of snowfall.
Photograph	

NCEI SED Episode ID	122899
Description	Winter Storm
Start Date	1/4/2018
End Date	1/4/2018
Episode Narrative	The development of the blizzard/winter storm began along the southeast coast on Wednesday January 3, 2018. An amplifying upper level trough spawned the development of low pressure off the coast of Florida. The low pressure rapidly intensified on Wednesday night through Thursday January 4, 2018 as it moved north-northeast along the coast. The low passed just east of the [...] benchmark Thursday afternoon. The central pressure when the storm developed was around 1004 millibars at 1 pm Wednesday. 24 hours later, the central pressure fell to around 950 mb, approximately a 54 millibar drop. The rapid intensification of the storm led to heavy snow, strong winds, and blizzard conditions over Long Island, and in Queens in New York City and the Lower Hudson Valley. Near-blizzard conditions occurred across Manhattan, the Bronx, and Brooklyn. Thundersnow was also observed across eastern Long Island. ||Thousands of flights were cancelled on January 4, 2018 and nearly 900 were cancelled the day after the blizzard. System-wide delays and cancellations occurred on the Long Island Railroad and Metro North Railroad. There were also numerous accidents on across southeast New York. Thousands of homes and businesses also lost power.
Event Narratives	A COOP Observer reported 10 inches of snow in Carmel. Elsewhere across the county, trained spotters and the broadcast media reported 6 to 8 inches of snow. Winds gusts to 40 MPH at nearby Danbury Airport at 3:21 PM.
Photograph	

NCEI SED Episode ID	114609
Description	Winter Storm, Blizzard
Start Date	3/14/2017
End Date	3/14/2017

Episode Narrative	Rapidly deepening low pressure tracked up the eastern seaboard on Tuesday March, 14 bringing blizzard conditions to portions of the Lower Hudson Valley. Heavy snow and sleet along with strong winds occurred across the New York City Metro. ||The storm cancelled numerous flights at JFK and LGA with some mass transit services suspended. ||A pair of 2 story homes under construction on Beach 7th street in Far Rockaway collapsed and numerous trees and wires were downed due to the strong winds.||Approximately 17,000 power outages resulted from the strong winds and heavy snow.
Event Narratives	Trained spotters and a COOP observer reported 14 to 21 inches of snowfall. Some sleet also mixed in with the heavy snow.; Nearby Poughkeepsie Airport ASOS showed blizzard conditions, with visibility less than one quarter mile in heavy snow and frequent wind gusts over 35 mph during the afternoon on March 14th.
Photograph	

NCEI SED Episode ID	113563
Description	Winter Storm
Start Date	2/9/2017
End Date	2/9/2017
Episode Narrative	Low pressure developed along a cold front over the Middle Atlantic early Thursday, February 9th. The low rapidly intensified as it moved off the Delmarva coast in the morning and then to the south and east of Long Island late morning into the afternoon. The low brought blizzard conditions to Long Island and portions of the Lower Hudson Valley. Heavy snow and strong winds also occurred over the New York City Metro. ||The blizzard brought delays and cancellations to the regions transportation systems as well as numerous accidents on roadways. The Long Island Railroad had system wide delays and at least 20 trains were cancelled. Several hundred rescues were performed by police and fire departments on Long Island. ||The storm also cancelled approximately 2,000 flights at Kennedy and La Guardia Airports.
Event Narratives	Trained spotters and the public reported 11 to 13 inches of snowfall.
Photograph	

NCEI SED Episode ID	112447
Description	Winter Weather
Start Date	12/17/2016
End Date	12/17/2016

Episode Narrative	A warm front moving north along the Middle Atlantic coast initiated the development of a wave of low pressure south of Long Island on the morning of December 17. This system brought locally heavy snow and some ice to portions of the lower Hudson Valley of southeast NY.
Event Narratives	A cooperative observer in Carmel reported snowfall of 3.5 inches. A trained spotter in Mahopac reported snowfall of 5.1 inches.
Photograph	

NCEI SED Episode ID	103820
Description	Winter Storm
Start Date	1/23/2016
End Date	1/24/2016
Episode Narrative	Low pressure moving across the deep South on Thursday January 21st and Friday January 22nd intensified and moved off the Mid Atlantic coast on Saturday January 23rd, bringing heavy snow and strong winds to southeast New York, and blizzard conditions to Long Island, New York City, and nearby southern Westchester County.||NY Gov. Cuomo declared a state of emergency early Saturday January 23rd. Metro North and Long Island Railroad service halted at 4 PM Saturday.||In New York City, the blizzard contributed to more than 400 car crashes, and streets were closed to all but emergency vehicles from mid-afternoon Saturday January 23nd until 7 AM Sunday January 24th. Much of the city's mass transit was shut down, along with bridges and tunnels across the city and to/from New Jersey. The Port Authority Bus Terminal, the busy Midtown NYC transportation hub, closed its doors at 4 PM Saturday. Broadway shows announced all Saturday performances were canceled.||Travel in and out of New York City airports lagged through Monday January 25th as airlines pre-emptively cut hundreds of flights. All arrivals and departures were eventually canceled due to severe winter weather conditions at LaGuardia airport, with Kennedy at a virtual standstill as well. More than 1,000 flights out of New York City-area airports were cancelled, including 90% of flights from LaGuardia.
Event Narratives	Trained spotters and an NWS cooperative weather observer in Carmel reported snowfall ranging from 8 to 14 inches.
Photograph	

Flooding - National Centers for Environmental Information Storm Events Database

NCEI SED Episode ID	205599
Description	Flash Flood
Start Date	7/14/2025
End Date	7/14/2025
Episode Narrative	A weak front approached from the west along with PW of 2 inches resulting in heavy rainfall across the area. 4 to 6.5 inches of rainfall totals were reported with rainfall rates between 1 to 2 inches.
Event Narratives	PUTNAM LAKE: Basement flooding on Gates Drive near Haviland Drive. Fire Department responding.
Photograph	

NCEI SED Episode ID	193107
Description	Flash Flood
Start Date	6/30/2024
End Date	6/30/2024
Episode Narrative	A slow moving cold front allowed for widespread thunderstorm development on June 30th. MUCAPE values of 2000-3000 J/kg with PWATs near 2 allowed for thunderstorms to produce heavy rainfall with rainfall rates of 1-2 inches per hour. These thunderstorms moved through the Lower Hudson Valley and Connecticut resulting in 1 to 2 inches of rain, most of which fell over a one to two hour period. This resulted in localized flash flooding.
Event Narratives	SODOM: Police reports occupied vehicle stuck in flood water.
Photograph	

NCEI SED Episode ID	187410
Description	Flash Flood
Start Date	12/18/2023
End Date	12/18/2023
Episode Narrative	A warm front ahead of a developing coastal low pressure system positions itself over the area late on December 17th and into December 18th. As the low pressure intensified and approached, significant amounts of moisture focused along the warm front ahead of the coastal low resulting in widespread areas of heavy rainfall that occurred over a 12-18 hour period. PWATs were 1.5-1.7 inches which were near record values. A widespread 2-5 inches of rain fell over the area. This resulted in many areas of flash flooding as well as significant rises in rivers.

Event Narratives	NELSONVILLE: Flooding on NY 9D both directions near Fair Street. All lanes closed. HAVILAND HOLLOW: Route 22 closed due to flooding between Route 164 and Haviland Hollow Road.
Photograph	

NCEI SED Episode ID	183593
Description	Flash Flood
Start Date	7/9/2023
End Date	7/10/2023
Episode Narrative	A stalled frontal boundary remained over the area which produced multiple rounds of torrential rainfall form heavy thunderstorms from July 9th through July 10th. CAPE values of 2500 to 3500 J/kg and PWAT values of near 1.8 allowed heavy thunderstorm development to produce rainfall rates of 2-3 inches per hour at times. There were parts of the area that receive anywhere from 3-5 inches of rain in a several hour period with some spots seeing upwards of 8 inches. This allowed for the issuance of a localized Flash Flood Emergency for portion of the Lower Hudson Valley.
Event Narratives	MAHOPAC MINES: Carmel: Video of water rushing down Wixon Pond Road and East Lake Blvd in Carmel, NY. LAKE CARMEL: Fair Street closed due to high water in Lake Carmel. MAHOPAC FALLS: DOT reports flooding on NY 6N both directions at Potter Road. All lanes blocked. TOMPKINS CORNERS: All lanes flooded on Taconic State Parkway near Tompkins Corners. PATTERSON: Flooding and road closure on NY 292 both directions between start route NY 292 NY 311 Patterson and End Route NY 55 Pawling. All lanes of 2 blocked.
Photograph	

NCEI SED Episode ID	129478
Description	Flash Flood
Start Date	7/28/2018
End Date	7/28/2018
Episode Narrative	A cold front stalled across the region during the afternoon, resulting in widely scattered showers and thunderstorms, primarily across the Lower Hudson Valley. With plenty of moisture available in the atmosphere, these storms resulted in isolated flash flooding across parts of northeastern Putnam County. A cooperative observer in Carmel, NY measured 1.39 inches of rain from this event.

Event Narratives	LAKE CARMEL: Ludingtonville Road was closed along I-84 in Lake Carmel due to flooding. PATTERSON: Route 311 was closed in Patterson due to flooding.
Photograph	

Extreme Heat - National Centers for Environmental Information Storm Events Database

NCEI SED Episode ID	659285
Description	Excessive Heat
Start Date	8/12/2016
End Date	8/13/2016
Episode Narrative	High pressure over the western Atlantic Ocean ushered in hot and humid air northward across the area.
Event Narratives	The combination of hot temperatures in the 90s, and high humidity resulted in a heat index up to 110 degrees at Montgomery Airport. In addition, a heat index of 109 was observed at nearby Poughkeepsie.

Drought – National Drought Mitigation Center U.S. Drought Monitor

Drought data comes from the U.S. Drought Monitor, made available from NOAA's National Integrated Drought Information System.[xxiv] The Drought Monitor is a dataset released weekly by authors who "bring together the physical climate, weather and hydrology data and reconcile that with local expert feedback, impact reports and conditions observations."[xxv]

Start Date	9/2/2025
End Date	12/31/2025 (ongoing)
Severity	Moderate drought (D1) nearly all of county in October, abnormally dry November and in ~half of county through December.
Narrative	According to CBS News, the drought was caused by low precipitation, with deficits ranging from –7 to –12 inches across Connecticut and New York. A burn ban was declared in New York State.[xxvi] Except for Westchester County and New York City, the entire state was in a drought watch or warning.[xxvii]

Start Date	9/24/2024
End Date	5/20/2025
Severity	Severe drought (D2) in nearly all of county mid-November through March; moderate drought for much of rest of time, abnormally dry in October 2024 and May 2025
Narrative	From mid-November 2024 – early March 2025, 90-100% of Putnam County experienced severe drought, with Abnormally Dry and

	Moderate Drought conditions extending several weeks earlier and later.[xxviii] The drought was caused by historically low precipitation.[xxix] In mid-December, Putnam County streamflow was marked as Much below normal (less than 10th percentile), and groundwater was measured at a record low.[xxx] A statewide Drought Watch was declared, and a Drought Warning was issued from mid-November to mid-December for 15 New York counties, including Putnam County.[xxxi]

Start Date	6/13/2023
End Date	7/4/2023
Severity	Abnormally dry conditions, moderate drought in 2% of county for two weeks

Start Date	4/11/2023
End Date	5/2/2023
Severity	Abnormally dry conditions, moderate drought in 11% of county

Start Date	7/12/2022
End Date	1/24/2023
Severity	Severe drought in all or most of county from August - early November; moderate drought Nov-Dec, abnormally dry July and January
Narrative	From August – early November 2022, a majority of Putnam County experienced a severe drought, with 100% of the County experiencing severe drought from mid-August to early October.[xxxii] The drought was caused by low precipitation, with areas from New Jersey to Rhode Island and Massachusetts experiencing the driest or near-driest July on record.[xxxiii] [xxxiv] Moderate Drought conditions lasted until late December 2022, and Abnormally Dry conditions existed from July and until January 2023.[xxxv]

Start Date	3/22/2022
End Date	4/5/2022
Severity	Abnormally dry conditions in part or all of county

Start Date	4/13/2021
End Date	5/25/2021
Severity	Abnormally dry conditions in part or all of county

Start Date	9/22/2020

End Date	10/27/2020
Severity	Abnormally dry conditions

Start Date	6/23/2020
End Date	8/4/2020
Severity	Abnormally dry conditions

Start Date	3/17/2020
End Date	3/24/2020
Severity	Abnormally dry conditions

Start Date	9/17/2019
End Date	11/5/2019
Severity	Abnormally dry conditions

Start Date	12/5/2017
End Date	2/6/2018
Severity	Abnormally dry conditions

Start Date	9/26/2017
End Date	10/24/2017
Severity	Abnormally dry conditions in portions of County; all of County for week of October 24

Start Date	4/19/2016
End Date	5/2/2017
Severity	Severe drought October 2016-March 2017; Extreme drought mid-November-January for portions of County; drought and abnormally dry conditions for whole period
Narrative	From Fall 2016 – Winter 2017, a severe (D2) drought encompassed 100% of Putnam County, with 12% of the County experiencing an extreme (D3) drought from late November to late January. 30% of the county experienced extreme drought the week of November 15.[xxxvi] According to the Cornell Chronicle, the drought was caused by warmth and a lack of snow in winter 2015-2016, followed by low rainfall and high temperatures throughout the growing season.[xxxvii] New York's Department of Environmental Conservation issued a drought watch, and the U.S. Department of Agriculture's Farm Service Agency declared many New York counties natural disaster areas. One survey of New York farmers found that over two-thirds of

	unirrigated field crops and pasturage suffered losses between 30 and 90 percent, with irrigated farms still experiencing up to one third of losses. Eastern New York farmers experienced average losses of 22 percent.[xxxviii] These conditions had not occurred with such severity since the 1960s,[xxxix] and abnormally dry conditions extended for months before and after the most severe period.[xl]

Start Date	8/11/2015
End Date	2/23/2016
Severity	Moderate drought conditions May 19-June 15 and September-December; abnormally dry conditions otherwise

Wildfire – Compiled via Desktop Research

Start Date	4/18/2025
End Date	4/18/2025
Municipality	Putnam Valley
Extent (Acres)	21[xli]
Location	Peekskill Hollow Rd
Narrative Impact	Brush fire; At least 10 neighboring agencies called; road closed; statewide burn ban was in effect.[xlii] [xliii]

Start Date	1/3/2025
End Date	1/5/2025
Municipality	Patterson
Extent (Acres)	1[xliv]
Location	Area behind Peterson's Patterson Greenhouses
Narrative Impact	Caused by items in a burn pile that should not have been there; burned 1 acre of swampy land; included 5 DEC rangers.[xlv]

Start Date	11/9/2024
End Date	11/9/2024
Municipality	Putnam Valley
Extent (Acres)	8[xlvi]
Location	North end of Indian Lake; Chapman Rd
Narrative Impact	Brush fire; 40-50 firefighters called from across County and nearby towns.[xlvii] [xlviii]

Start Date	10/22/2024
End Date	10/28/2024
Municipality	Kent

Extent (Acres)	33[xlix]
Location	899 Golf Ridge Rd
Narrative Impact	Brush fire; Burn ban issued across Putnam County following fire; fire departments were called from across the county and nearby towns.[10]

Start Date	3/9/2020
End Date	3/10/2020
Municipality	Cold Spring
Extent (Acres)	277[11]
Damages	$116,000[12]
Location	Breakneck Ridge, Hudson Highlands State Park
Narrative Impact	From MitigateNY: "A fire on Breakneck Ridge began early afternoon on Monday, March 9th, 2020, near the town of Cold Spring, NY. By the morning of March 10th, 150 acres of land had burned. Several agencies responded to help fight the fire, including fire departments from Dutchess Junction, North Highlands, Garrison, Putnam Station, Rombout, Cold Spring and Continental Village. Additionally, Cold Spring police and rangers from State Parks and the Department of Environmental Conservation (DEC) aided in putting out the fire. The fire was contained by Tuesday afternoon, March 10th. Eleven cars parked at the Breakneck parking lot were burned with no injuries reported. On March 18th, the state Department of Conservation said the fire had burned 277 acres. It ultimately caused $116k in damages (REF507)."[13] From Putnam County's 2021 HMP: "In March 2020, Putnam County and Dutchess County fire companies in addition to New York State Park Rangers responded to a major brushfire that broke out between Cold Spring and Beacon. The brush fire started from a maintenance vehicle on the Metro-North Railroad line, damaged several park vehicles at a hiking trailhead, then jumped Route 9D and burned approximately 300 acres in Hudson Highlands State Park (Welber 2020, Sucato n.d.). No structures were reported damaged."[14]

[10] Jeff Edwards, "Putnam County Implements Temporary Burn Ban, Kent Fire Extinguished," Patch, last modified October 30, 2024, https://patch.com/new-york/southeast/putnam-county-implements-temporary-burn-ban-kent-fire-extinguished.
[11] "Wildfire," New York State MitigateNY, https://mitigateny.org/assess_risk/natural_hazards/wildfire.
[12] "Wildfire," New York State MitigateNY, https://mitigateny.org/assess_risk/natural_hazards/wildfire.
[13] "Wildfire," New York State MitigateNY, https://mitigateny.org/assess_risk/natural_hazards/wildfire.
[14] Tetra Tech, "Section 5.4.10: Wildfire," in *Putnam County Hazard Mitigation Plan* (Putnam County, 2021), 7-8, https://www.putnamcountyny.gov/images/Departments/Emergency_Services/mitigation/2021/Section-5.4.10-Wildfire-121520dfs.pdf.

Photograph



Source: Sucato n.d.

[15]

[i] "AVAIL - Fusion Events V2," Albany Visualization and Informatics Lab (AVAIL), last modified October 30, 2025, https://mitigateny.org/cenrep/source/870, included in "Hurricane," New York State MitigateNY, https://mitigateny.org/assess_risk/natural_hazards/hurricane.

[ii] "July 9-10, 2023 Devastating Flooding Across Southeastern NY," National Weather Service New York, NY, https://storymaps.arcgis.com/stories/821dddf2db7847ecad6b2424f206focd.

[iii] "July 9-10, 2023 Devastating Flooding Across Southeastern NY," National Weather Service New York, NY, https://storymaps.arcgis.com/stories/821dddf2db7847ecad6b2424f206focd.

[iv] "Preliminary Local Storm Report... Summary," National Weather Service Text Product: LSROKX, July 11, 2023, https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=LSROKX&e=202307110027, included in Iowa Environmental Mesonet, Iowa State University.

[v] "Rainfall Reports from Flood Event July 9 - July 10," National Weather Service Text Product: PNSOKX, National Weather Service, July 10, 2023, https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=PNSOKX&e=202307102332, included in Iowa Environmental Mesonet, Iowa State University.

[vi] Lanning Taliaferro, "HV Flood Timeline July 9: People Trapped, Cars Flood, Roads Collapse," Patch, last modified July 15, 2023, https://patch.com/new-york/southeast/hudson-valley-flooded-timeline-sundays-severe-weather.

[vii] "AVAIL - Fusion Events V2," Albany Visualization and Informatics Lab (AVAIL), last modified October 30, 2025, https://mitigateny.org/cenrep/source/870, included in "Hurricane," New York State MitigateNY, https://mitigateny.org/assess_risk/natural_hazards/hurricane.

[viii] "Ida 2021," National Oceanic and Atmospheric Administration (NOAA), Historical Hurricane Tracks, https://coast.noaa.gov/hurricanes/#map=3.29/34.17/-76.65&search=eyJzZWFyY2hTdHJpbmciOiJQdXRuYWogQ291bnR5LCBOZXcgWW9yaywgVVNBIiwic2VhcmNoVHlwZSI6ImdlbzNvZGVkIiwib3NtSUQiOiIxODM4MDIyIiwiY2F0ZWdvcmllcyI6WyJINSIsIkgoIiwiSDMiLCJIMiIsIkgxIiwiVFMiLCJURCIsIkVUIlosInllYXJzIjpbXSwibW9udGhzIjpbXSwiZW5zbyI6W10sInByZXNzdXJlIjp7InJhbmdlIjpbMCwxMDMwXSwiaW5jbHVkZVVua25vd25QcmVzc3VyZSI6dHJ1ZXosInNlbGVjdGVkU3Rvcm1JRCI6IjIwMjEyMzlOMTcyODEiLCJidWZmZXIiOjYwLCJidWZmZXJVbmloIjpbIk5hdXRpY2FsIE1pbGVzIlosInNvcnRTZWxlY3Rpb24iOnsidmFsdWUiOiJ5ZWFyc19uZXdlc3QiLCJsYWJlbCI6IlllYXIgKE5ld2VzdCkifSwiYXBwbHlUboFPSSI6dHJ1ZSwiaXNTdG9ybUxhYmVsc1Zpc2libGUiOnRydWV9.

[ix] Governor Kathy Hochul, "Governor Hochul Announces Four Additional Counties Impacted by Ida Now Eligible for Assistance as Part of Federal Major Disaster Declaration," New York State, September 24, 2021,

[15] Tetra Tech, "Section 5.4.10: Wildfire," in *Putnam County Hazard Mitigation Plan* (Putnam County, 2021), 8, https://www.putnamcountyny.gov/images/Departments/Emergency_Services/mitigation/2021/Section-5.4.10-Wildfire-121520dfs.pdf.

https://www.governor.ny.gov/news/governor-hochul-announces-four-additional-counties-impacted-ida-now-eligible-assistance-part.

[x] Town of Kent, New York, *Town Board Meeting September 17, 2024* (Town of Kent, 2024) https://www.townofkentny.gov/sites/g/files/vyhlif4576/f/news/veteran_memorial_bridge_lake_carmel_sept_2024.pdf.
[xi] Governor Kathy Hochul, "Governor Hochul Announces Four Additional Counties Impacted by Ida Now Eligible for Assistance as Part of Federal Major Disaster Declaration," New York State, September 24, 2021, https://www.governor.ny.gov/news/governor-hochul-announces-four-additional-counties-impacted-ida-now-eligible-assistance-part.

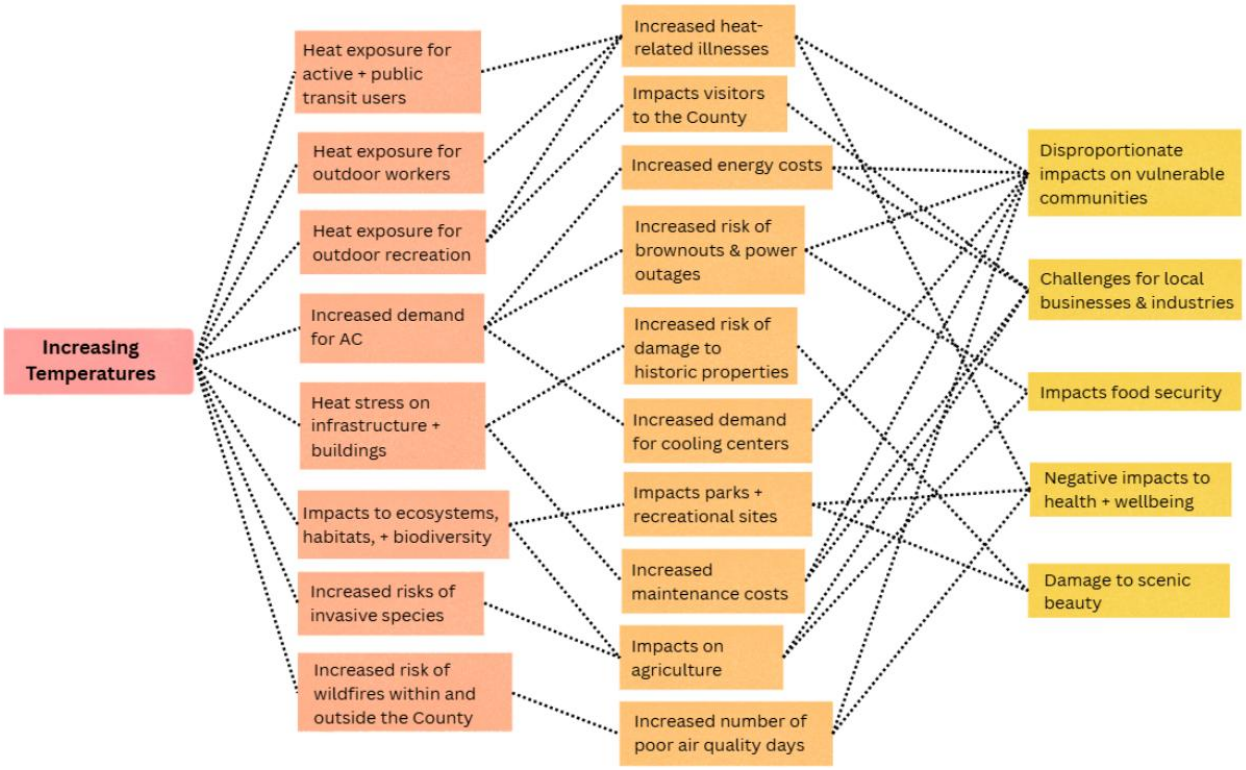
[xii] "Governor Hochul Commits Up to $2 Million in Emergency Funding for Eligible Homeowners Impacted by Flooding From Hurricane Ida," New York State Homes and Community Renewal, November 15, 2021, https://hcr.ny.gov/news/governor-hochul-commits-2-million-emergency-funding-eligible-homeowners-impacted-flooding.

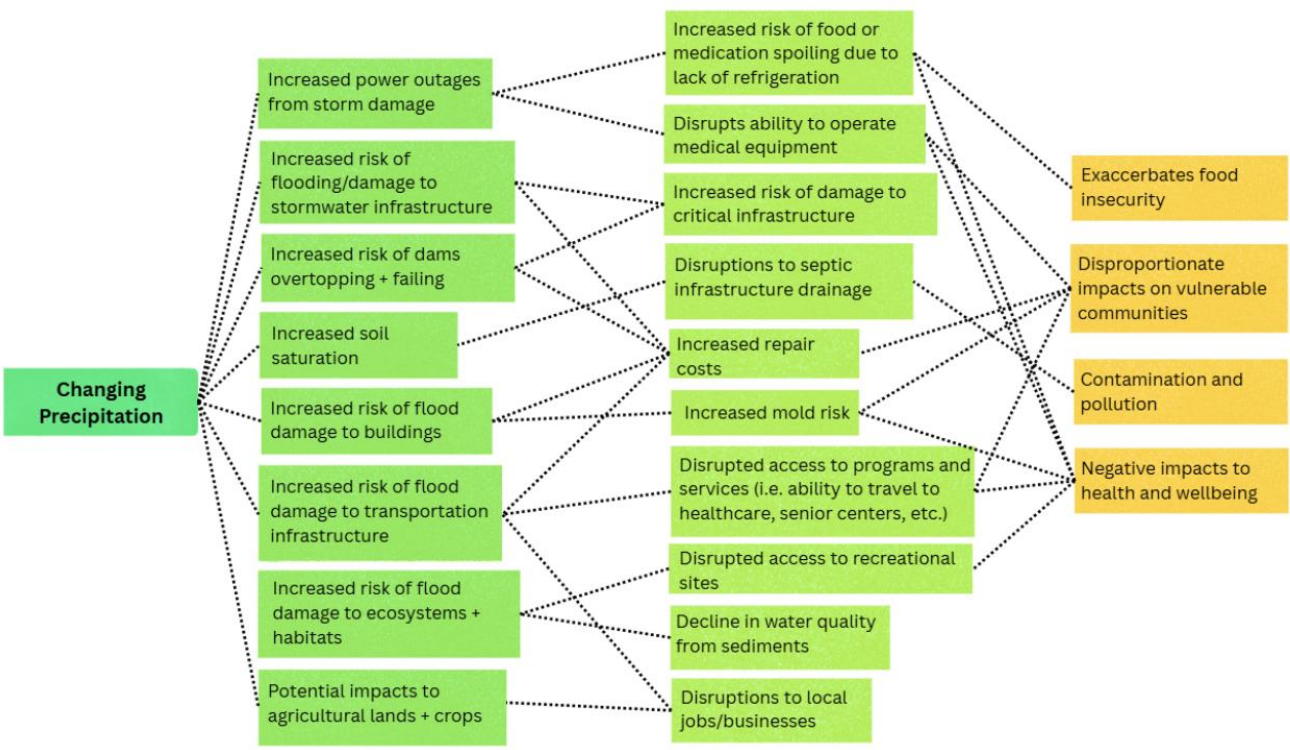
[xiii] Ryan Miller and Diane Pantaleo, "Tropical Storm Henri Doesn't Make Landfall in NY but State of Emergency Still in Effect," LoHud, Rockland/Westchester Journal News, last modified August 22, 2021, https://www.lohud.com/story/weather/hurricanes/2021/08/21/hurricane-henri-nyc-long-island-tracker-category-1-cuomo-state-of-emergency/11845709 8/?gnt-cfr=1&gca-cat=p&gca-uir=true&gca-epti=z116701d00----v116701d--75--b--75--&gca-ft=153&gca-ds=sophi.
[xiv] Richard J Pasch, Robbie Berg, and Andrew B. Hagen, *National Hurricane Center Tropical Cyclone Report: Hurricane Henri*, Report No. AL082021 (National Oceanic and Atmospheric Administration National Weather Service, 2022), https://www.nhc.noaa.gov/data/tcr/AL082021_Henri.pdf.
[xv] Michael Woyton, "Power Restoration Continues Monday in Mid-Hudson Valley," Patch, August 23, 2021, https://patch.com/new-york/midhudsonvalley/power-restoration-continues-monday-mid-hudson-valley.
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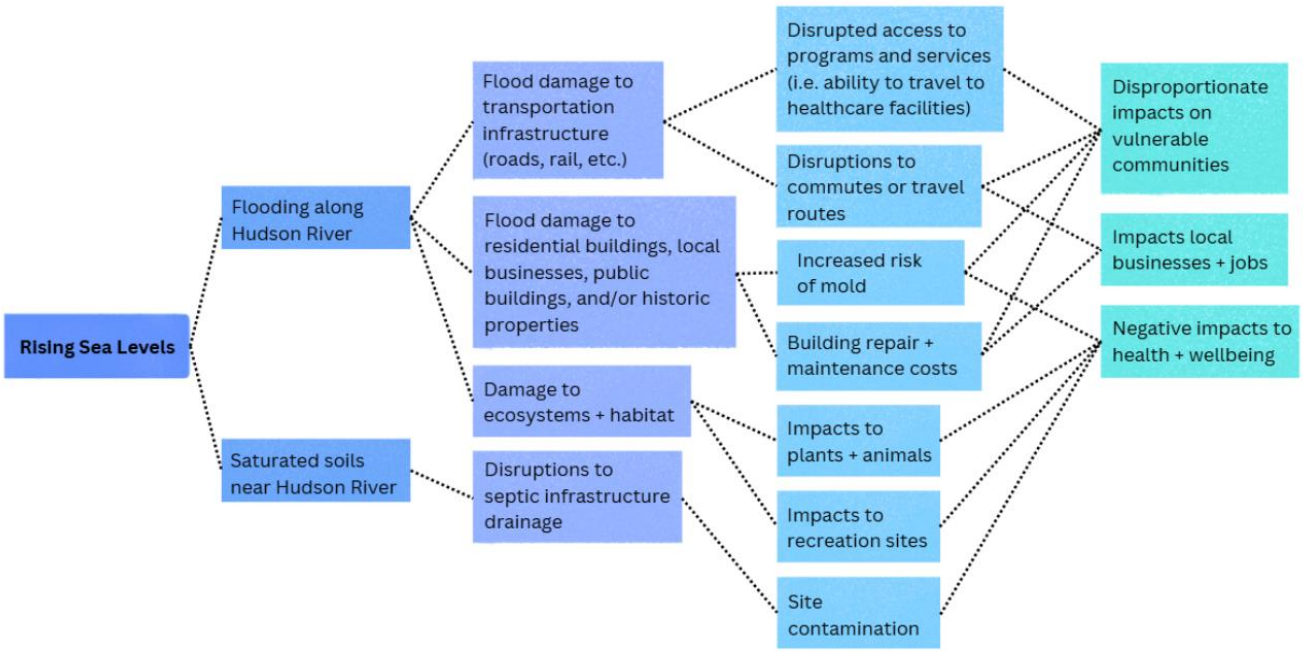
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Appendix L: Climate Impact Chains

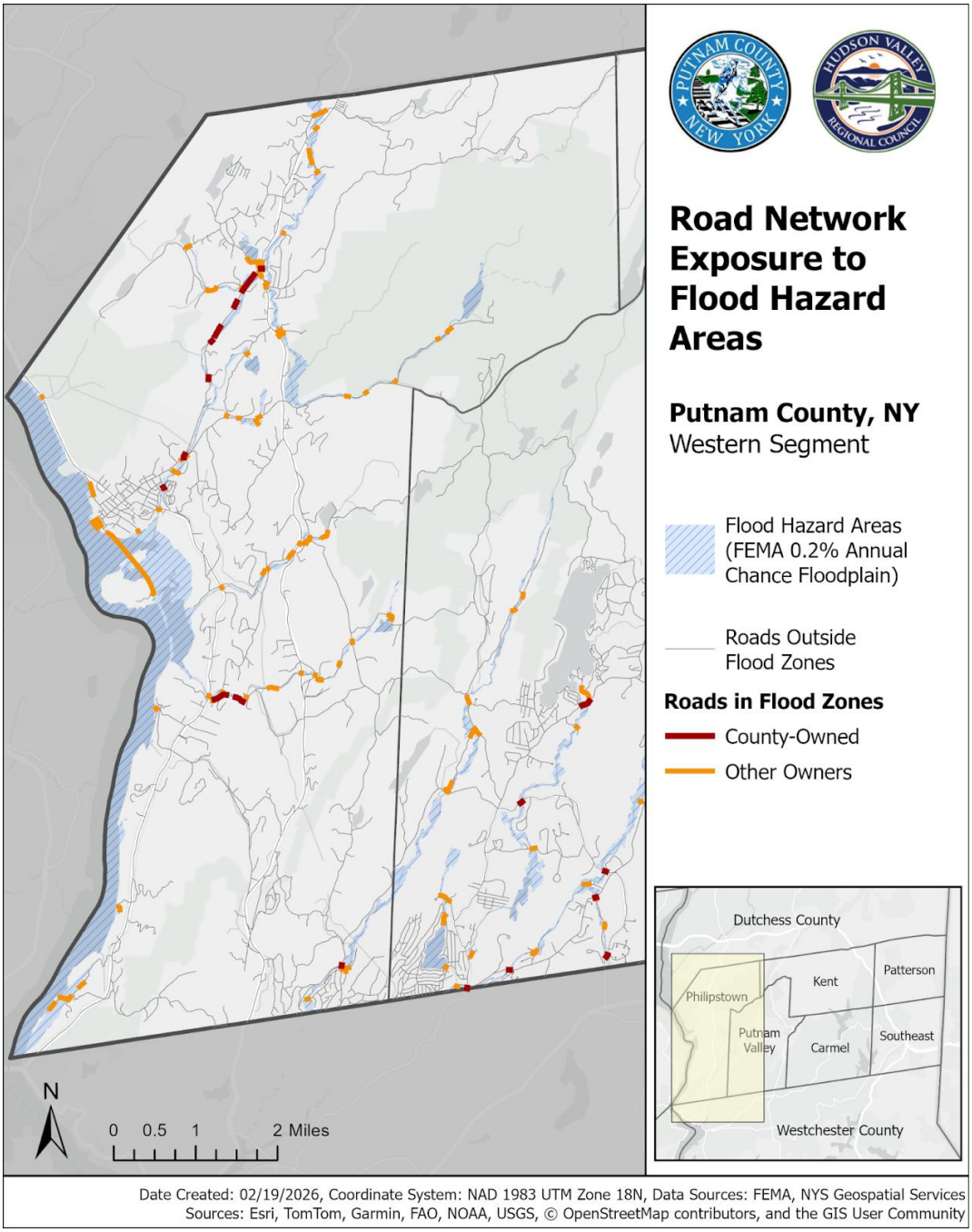



Changing Precipitation
Increased power outages from storm damage
Increased risk of flooding/damage to stormwater infrastructure
Increased risk of dams overtopping + failing
Increased soil saturation
Increased risk of flood damage to buildings
Increased risk of flood damage to transportation infrastructure
Increased risk of flood damage to ecosystems + habitats
Potential impacts to agricultural lands + crops
Increased risk of food or medication spoiling due to lack of refrigeration
Disrupts ability to operate medical equipment
Increased risk of damage to critical infrastructure
Disruptions to septic infrastructure drainage
Increased repair costs
Increased mold risk
Disrupted access to programs and services (i.e. ability to travel to healthcare, senior centers, etc.)
Disrupted access to recreational sites
Decline in water quality from sediments
Disruptions to local jobs/businesses
Exaccerbates food insecurity
Disproportionate impacts on vulnerable communities
Contamination and pollution
Negative impacts to health and wellbeing

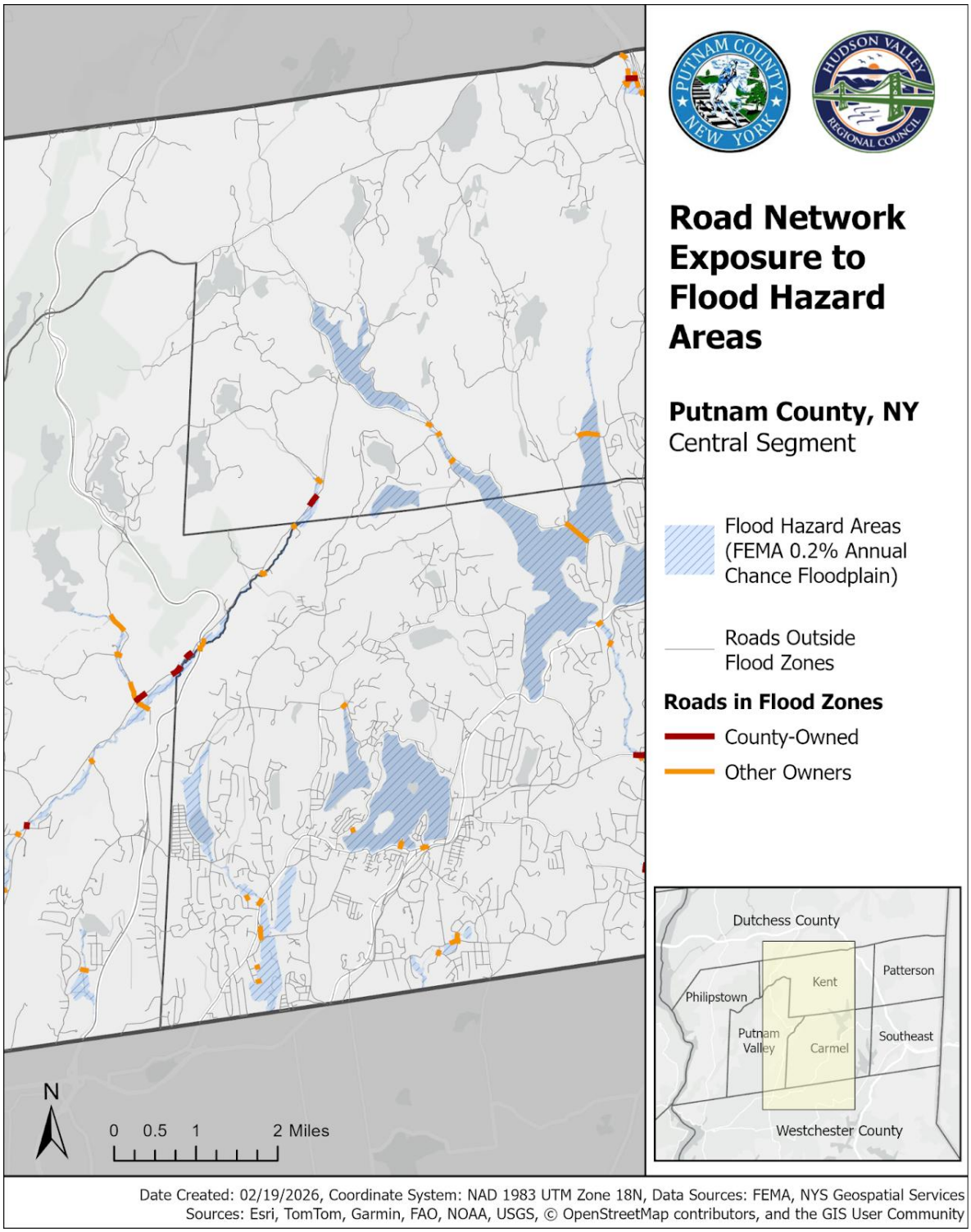

Rising Sea Levels
Flooding along Hudson River
Saturated soils near Hudson River
Flood damage to transportation infrastructure (roads, rail, etc.)
Flood damage to residential buildings, local businesses, public buildings, and/or historic properties
Damage to ecosystems + habitat
Disruptions to septic infrastructure drainage
Disrupted access to programs and services (i.e. ability to travel to healthcare facilities)
Disruptions to commutes or travel routes
Increased risk of mold
Building repair + maintenance costs
Impacts to plants + animals
Impacts to recreation sites
Site contamination
Disproportionate impacts on vulnerable communities
Impacts local businesses + jobs
Negative impacts to health + wellbeing

Appendix M: Travel & Transportation

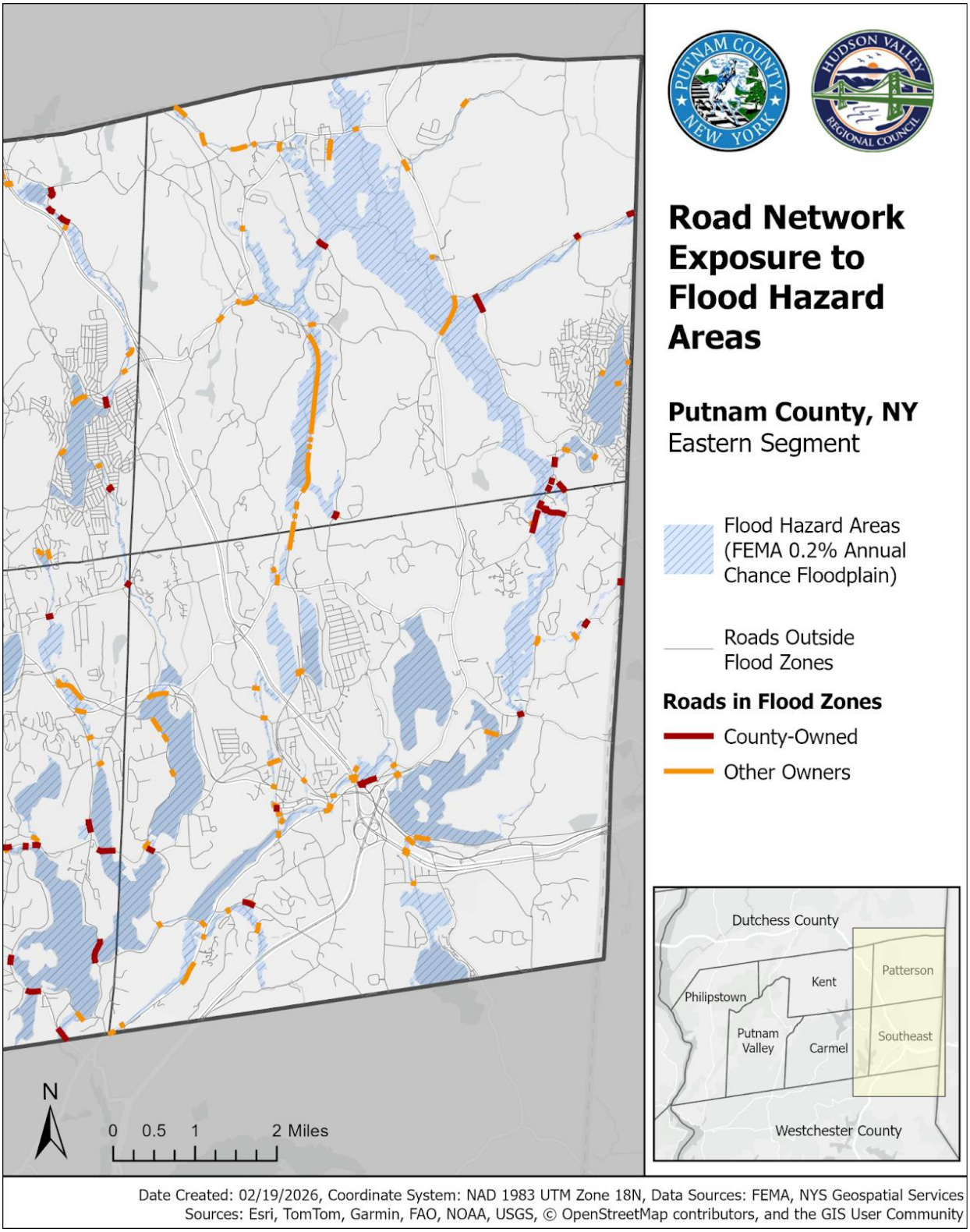
County & Non-County Roads within the 0.2% Annual Chance Floodplain



Map 1: Road network (separated by County ownership) in relation to the FEMA 0.2% Annual Chance Floodplain in Putnam County. Western segment.



Map 2: Road network (separated by County ownership) in relation to the FEMA 0.2% Annual Chance Floodplain in Putnam County. Central segment.



Map 3: Road network (separated by County ownership) in relation to the FEMA 0.2% Annual Chance Floodplain in Putnam County. Eastern segment.

County-Owned Roads within Floodplain

Street	Town	Neighborhood	Waterbody (Origin of flood zone)	Start	End
Croton Falls Road	Carmel	Kent Cliffs	West Branch Croton River	073° 40' 17.44" W 41° 21' 20.18" N	073° 40' 12.58" W 41° 21' 15.25" N
Croton Falls Road	Carmel	Kent Cliffs	Croton Falls Reservoir	073° 40' 43.08" W 41° 21' 45.54" N	073° 40' 35.17" W 41° 21' 45.42" N
Drewville Road	Carmel	Carmel Hamlet	Croton Falls Reservoir	073° 39' 40.95" W 41° 23' 14.56" N	073° 39' 30.18" W 41° 23' 14.46" N
Drewville Road	Carmel	Carmel Hamlet	West Branch Croton River	073° 41' 4.31" W 41° 23' 17.64" N	073° 40' 57.91" W 41° 23' 17.63" N
Drewville Road	Carmel	Carmel Hamlet/Kent Cliffs	Stream between Croton Falls Reservoir and Lake Gilead	073° 40' 35.58" W 41° 23' 18.77" N	073° 40' 33.7" W 41° 23' 18.64" N
Fair Street	Carmel	Carmel Hamlet	Michael Brook	073° 40' 21.11" W 41° 25' 44.15" N	073° 40' 19.86" W 41° 25' 44.35" N
Fair Street	Carmel	Carmel Hamlet	Middle Branch Croton River	073° 39' 13.71" W 41° 26' 3.86" N	073° 39' 13.37" W 41° 26' 4.23" N
Stoneleigh Avenue	Carmel	Carmel Hamlet	Michael Brook	073° 39' 48.7" W 41° 23' 27.97" N	073° 39' 50.08" W 41° 23' 32.79" N
Stoneleigh Avenue	Carmel	Kent Cliffs	Croton Falls Reservoir	073° 39' 46.68" W 41° 22' 4.71" N	073° 39' 42.05" W 41° 22' 16.37" N
West Shore Drive	Carmel	Kent Cliffs	Croton Falls Reservoir	073° 40' 58.17" W 41° 22' 4.35" N	073° 40' 57.56" W 41° 22' 7.07" N
West Shore Drive	Carmel	Kent Cliffs	Croton Falls Reservoir	073° 40' 43.85" W 41° 23' 17.55" N	073° 40' 43.74" W 41° 23' 18.31" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond Stream	073° 40' 0.64" W 41° 29' 55.83" N	073° 40' 0.91" W 41° 29' 55.91" N

Ludingtonville Road	Kent	Whaley Lake	Stump Pond Stream	073° 40' 2.54" W 41° 29' 56.48" N	073° 40' 3.52" W 41° 29' 56.91" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond Stream	073° 40' 4.61" W 41° 29' 57.55" N	073° 40' 5.09" W 41° 29' 57.9" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond Stream	073° 40' 13.3" W 41° 30' 2.58" N	073° 40' 15.21" W 41° 30' 3.67" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond	073° 40' 13.43" W 41° 30' 12.66" N	073° 40' 13.27" W 41° 30' 12.77" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond	073° 40' 13.1" W 41° 30' 12.89" N	073° 40' 13.04" W 41° 30' 12.93" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond	073° 40' 12.83" W 41° 30' 13.19" N	073° 40' 12.8" W 41° 30' 13.24" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond	073° 40' 12.77" W 41° 30' 13.34" N	073° 40' 12.73" W 41° 30' 13.5" N
Ludingtonville Road	Kent	Whaley Lake	Stream between Stump and Browns Ponds	073° 40' 13.47" W 41° 30' 15.58" N	073° 40' 13.59" W 41° 30' 16.04" N
Ludingtonville Road	Kent	Whaley Lake	Stump Pond Stream	073° 40' 57.01" W 41° 30' 29.33" N	073° 41' 2.23" W 41° 30' 29.32" N
Peekskill Hollow Road	Kent	Kent Cliffs	Peekskill Hollow Creek	073° 45' 36.77" W 41° 26' 1.21" N	073° 45' 32.88" W 41° 26' 5.02" N
Terry Hill Road	Kent	Lake Carmel	Lake Carmel/Stump Pond Stream	073° 39' 29.31" W 41° 27' 58.44" N	073° 39' 29.51" W 41° 27' 59.06" N
Terry Hill Road	Kent	Lake Carmel	Lake Carmel/Stump Pond Stream	073° 39' 29.83" W 41° 28' 0.36" N	073° 39' 29.85" W 41° 28' 0.47" N
Terry Hill Road	Kent	Lake Carmel	Lake Carmel/Stump Pond Stream	073° 39' 30.06" W 41° 28' 1.36" N	073° 39' 30.18" W 41° 28' 1.88" N
Towners Road	Kent	Lake Carmel	Middle Branch Croton River	073° 39' 27.81" W 41° 27' 4.87" N	073° 39' 27.04" W 41° 27' 5.38" N
Cornwall Hill Road	Patterson		Muddy Brook	073° 36' 22.14" W 41° 29' 37.66" N	073° 36' 22.19" W 41° 29' 37.69" N

Cornwall Hill Road	Patterson		Muddy Brook	073° 36' 22.42" W 41° 29' 37.8" N	073° 36' 25.71" W 41° 29' 39.45" N
Cornwall Hill Road	Patterson		Muddy Brook	073° 36' 25.95" W 41° 29' 39.59" N	073° 36' 26.59" W 41° 29' 40.1" N
Doansburg Road	Patterson	Sears Corners	East Branch Croton River	073° 33' 15.96" W 41° 27' 0.5" N	073° 33' 15.61" W 41° 27' 0.99" N
Doansburg Road	Patterson	Sears Corners	East Branch Croton River	073° 33' 13.17" W 41° 27' 5.18" N	073° 33' 12.98" W 41° 27' 5.65" N
Doansburg Road	Patterson	Sears Corners	Stream between East Branch Croton River and Lost Lake	073° 33' 10.51" W 41° 27' 16.11" N	073° 33' 10.07" W 41° 27' 18.48" N
Doansburg Road	Patterson	Sears Corners	Stream between East Branch Croton River and Lost Lake	073° 33' 10.02" W 41° 27' 18.72" N	073° 33' 9.98" W 41° 27' 18.93" N
East Branch Road	Patterson	Putnam Lake	Haviland Hollow Brook	073° 34' 9.48" W 41° 28' 55.44" N	073° 34' 14.61" W 41° 29' 3.54" N
Farm To Market Road	Patterson	Sears Corners	Southeast of Ice Pond	073° 36' 17.28" W 41° 26' 45.22" N	073° 36' 16.36" W 41° 26' 46.61" N
Gage Road	Patterson	Sears Corners	East Branch Croton River	073° 33' 2.76" W 41° 26' 59.9" N	073° 33' 5.91" W 41° 27' 2.82" N
Gage Road	Patterson	Sears Corners	East Branch Croton River	073° 33' 6.12" W 41° 27' 3.02" N	073° 33' 6.22" W 41° 27' 3.11" N
Haviland Hollow Road	Patterson		Haviland Hollow Brook	073° 32' 48.03" W 41° 29' 41.18" N	073° 32' 47.91" W 41° 29' 41.24" N
Haviland Hollow Road	Patterson		Quaker Brook	073° 32' 3.11" W 41° 29' 54.79" N	073° 32' 2.26" W 41° 29' 55.04" N
Haviland Hollow Road	Patterson		Quaker Brook	073° 32' 2.15" W 41° 29' 55.07" N	073° 32' 1.68" W 41° 29' 55.17" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 56' 23.97" W 41° 25' 40.4" N	073° 56' 23.26" W 41° 25' 42.1" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 56' 2.22" W 41° 26' 30.06" N	073° 56' 2.16" W 41° 26' 31.52" N

Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 59.54" W 41° 26' 54.17" N	073° 55' 58.97" W 41° 26' 54.56" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 55.98" W 41° 26' 58.03" N	073° 55' 51.98" W 41° 27' 3.26" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 39.44" W 41° 27' 16.51" N	073° 55' 37.68" W 41° 27' 19.28" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 32.37" W 41° 27' 26.47" N	073° 55' 31.87" W 41° 27' 27.02" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 31.62" W 41° 27' 27.31" N	073° 55' 31.49" W 41° 27' 27.45" N
Fishkill Road	Philipstown	Nelsonville	Foundry Brook	073° 55' 31.33" W 41° 27' 27.62" N	073° 55' 22.7" W 41° 27' 36.23" N
Fishkill Road	Philipstown	Nelsonville	Barrett Pond and Clove Creek	073° 55' 16.66" W 41° 27' 40.31" N	073° 55' 15.82" W 41° 27' 40.34" N
Peekskill Road	Philipstown	Nelsonville	Foundry Brook	073° 56' 41.55" W 41° 25' 21.47" N	073° 56' 41.39" W 41° 25' 21.24" N
Snake Hill Road	Philipstown	Manitou	Philips Brook	073° 55' 36.62" W 41° 23' 4.23" N	073° 55' 36.93" W 41° 23' 4.33" N
Snake Hill Road	Philipstown	Manitou	Philips Brook	073° 55' 59.14" W 41° 23' 6.22" N	073° 56' 0.42" W 41° 23' 5.94" N
Snake Hill Road	Philipstown	Manitou	Philips Brook	073° 55' 40.28" W 41° 23' 6.32" N	073° 55' 42.54" W 41° 23' 6.96" N
Snake Hill Road	Philipstown	Manitou	Philips Brook	073° 55' 50.66" W 41° 23' 8.72" N	073° 55' 50.7" W 41° 23' 8.73" N
Snake Hill Road	Philipstown	Manitou	Philips Brook	073° 55' 50.75" W 41° 23' 8.74" N	073° 55' 55.97" W 41° 23' 7.49" N
Sprout Brook Road	Philipstown	Manitou	Canopus Creek	073° 54' 15.9" W 41° 20' 14.85" N	073° 54' 15.8" W 41° 20' 15.32" N
Church Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Brook	073° 50' 31.39" W 41° 21' 12.82" N	073° 50' 32.08" W 41° 21' 13.03" N

Church Road	Putnam Valley	Oscawana Lake	Oscawana Brook	073° 51' 41.54" W 41° 21' 58.01" N	073° 51' 42.85" W 41° 21' 57.27" N
Mill Street	Putnam Valley	Oscawana Lake	Shrub Oak Brook	073° 50' 32.0" W 41° 20' 18.53" N	073° 50' 31.16" W 41° 20' 19.56" N
Oscawana Lake Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 52' 30.07" W 41° 19' 59.31" N	073° 52' 29.95" W 41° 19' 59.81" N
Oscawana Lake Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 50' 49.44" W 41° 22' 59.03" N	073° 50' 49.03" W 41° 22' 59.15" N
Oscawana Lake Road	Putnam Valley	Oscawana Lake	Oscawana Brook	073° 50' 48.1" W 41° 22' 59.38" N	073° 50' 46.63" W 41° 22' 59.73" N
Oscawana Lake Road	Putnam Valley	Oscawana Lake	Oscawana Brook	073° 50' 45.42" W 41° 23' 0.2" N	073° 50' 43.66" W 41° 23' 1.54" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 51' 54.61" W 41° 20' 10.92" N	073° 51' 53.55" W 41° 20' 10.89" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Shrub Oak Brook	073° 50' 40.73" W 41° 20' 56.34" N	073° 50' 40.04" W 41° 20' 56.48" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 49' 41.51" W 41° 22' 37.92" N	073° 49' 41.42" W 41° 22' 38.47" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Wiccopee Brook	073° 48' 6.28" W 41° 23' 57.56" N	073° 48' 0.77" W 41° 24' 0.68" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 47' 34.6" W 41° 24' 14.29" N	073° 47' 30.55" W 41° 24' 17.12" N
Peekskill Hollow Road	Putnam Valley	Oscawana Lake	Peekskill Hollow Creek	073° 47' 23.18" W 41° 24' 25.0" N	073° 47' 21.28" W 41° 24' 26.22" N
Deans Corner Road	Southeast	Sears Corners	Holly Stream	073° 37' 38.36" W 41° 22' 40.24" N	073° 37' 32.89" W 41° 22' 38.52" N
Doansburg Road	Southeast	Sears Corners	East Branch Croton River	073° 33' 29.9" W 41° 26' 34.29" N	073° 33' 25.78" W 41° 26' 45.24" N
Doansburg Road	Southeast	Sears Corners	East Branch Croton River	073° 33' 23.49" W 41° 26' 49.69" N	073° 33' 22.54" W 41° 26' 51.19" N

Drewville Road	Southeast	Sears Corners	Middle Branch Croton River	073° 38' 58.73" W 41° 23' 14.84" N	073° 38' 56.99" W 41° 23' 14.17" N
Milltown Road	Southeast	Sears Corners	East Branch Croton River	073° 33' 43.04" W 41° 24' 37.15" N	073° 33' 42.39" W 41° 24' 37.29" N
Milltown Road	Southeast	Sears Corners	Salmons Daily Brook	073° 32' 46.78" W 41° 25' 33.49" N	073° 32' 45.45" W 41° 25' 35.08" N
Milltown Road	Southeast	Sears Corners	Salmons Daily Brook	073° 32' 16.36" W 41° 26' 0.03" N	073° 32' 16.26" W 41° 26' 0.83" N
Old Doansburg Lane *Includes cul-de-sac	Southeast	Sears Corners	East Branch Croton River	073° 33' 4.15" W 41° 26' 44.4" N	073° 33' 17.73" W 41° 26' 47.16" N
Railroad Avenue	Southeast	Brewster	Tonetta Brook	073° 37' 10.6" W 41° 23' 39.44" N	073° 37' 10.55" W 41° 23' 40.06" N
Sodom Road	Southeast	Sears Corners	East Branch Croton River	073° 35' 57.35" W 41° 23' 53.8" N	073° 35' 56.93" W 41° 23' 55.03" N
Sodom Road	Southeast	Sears Corners	East Branch Croton River	073° 35' 59.26" W 41° 23' 54.42" N	073° 35' 56.93" W 41° 23' 55.03" N
Sodom Road	Southeast	Sears Corners	East Branch Croton River	073° 35' 56.93" W 41° 23' 55.03" N	073° 35' 47.96" W 41° 23' 57.44" N

Table A: Roads owned by Putnam County intersecting the FEMA 0.2% floodplain. Roads are listed alphabetically by town and then road name. Neighborhood names and the name of the closest waterbody are given. Geographic coordinates of the start and end of each road segment at risk of flooding are given at road centerline

Appendix N: Maladaptation Analysis

The following matrix includes an analysis of the CCARP's strategies for potential maladaptations, or unintended, negative outcomes. The analysis is color-coded such that a darker color indicates more significant maladaptive potential. This matrix is an initial assessment and aims to support proactive planning to reduce risks and promote positive outcomes into the future. All strategies may be vulnerable to lack of funding, which is maladaptive.

Infrastructure Adaptation Strategies						
	Does the below listed strategy have the potential to…					
Strategy	**Increase emissions or exacerbate climate impacts?**	**Redirect vulnerabilities to other communities or future generations?**	**Negatively affect vulnerable communities?**	**Create path dependency?**	**Degrade ecosystems, biodiversity, or ecosystem services?**	**Become ineffective due to uncertainties about the future?**
1. Secure & Incentivize Backup Power at Critical Facilities						
2. Expand Evacuation Planning	Will any new transportation infrastructure or options lead to increases in emissions?		How will evacuation routes ensure accessibility for vulnerable communities?			Will the travel routes be accessible in the future, given uncertainties about future climate conditions?
3. Increase Cooling Center Program Awareness and Accessibility						
4. Expand Storm & Emergency Shelters for Animals			Will there be any new accessibility challenges at storm shelters for people with pet allergies?			
5. Assess & Right-Size		Could investments in one location impact		For projects with large upfront costs, how	How will surrounding ecosystems be	How can investments contend with

Stormwater Infrastructure		stormwater management downstream?		feasible will it be to adjust in the future?	affected by stormwater infrastructure?	uncertainties about climate projections into the future?
6: Assess & Mitigate Dam-Related Risks		Will any new communities face changing flood risks due to dam removals?		Once expenditures on dam improvements or removals are implemented, how feasible is it to reverse course?	How will dam removals impact surrounding ecosystems and water levels?	How much will flood risks increase in the future?
7. Expand Septic Outreach, Education, & Programs						
8. Assess & Protect Building Stock			How can municipalities ensure equitable outcomes while identifying places to relocate buildings outside of the floodplain?			Could uncertainties about future climate trends impact building upgrades/repairs?
9. Expand Public Transportation				Could investments in public transportation infrastructure/assets impact long-term sustainability? (i.e. investing in EV v. traditional vehicles).		Could routes identified as safe now become vulnerable due to uncertainties about future climate conditions?

Social Adaptation Strategies						
	Does the below listed strategy have the potential to…					
Strategy	**Increase emissions or exacerbate climate impacts?**	**Redirect vulnerabilities to other communities or future generations?**	**Affect vulnerable communities?**	**Create path dependency?**	**Degrade ecosystems, biodiversity, or ecosystem services?**	**Become ineffective due to uncertainties about the future?**
10. Expand Outreach & Programs for			How will updates to print materials be communicated to			How will print materials contend with changing climate

Vulnerable Communities			community members, particularly residents without internet access?			conditions into the future?
11. Further Food System Resilience						
12. Coordinate with Healthcare Facilities						How will uncertainties about future climate trends impact emergency preparedness?
13. Collaborate with schools, daycares, preschools, and summer camps on resiliency and emergency preparedness planning.						
14. Coordinate with Local Employers & Businesses				How will current initiatives related to economic resiliency affect long-term sustainability? Will the industries invested in today continue to support Putnam in the future?	How will economic initiatives affect ecosystem and environmental resources?	

Environmental						
	Does the below listed strategy have the potential to…					
Strategy	**Increase emissions or exacerbate climate impacts?**	**Redirect vulnerabilities to other communities or future generations?**	**Affect vulnerable communities?**	**Create path dependency?**	**Degrade ecosystems, biodiversity, or ecosystem services?**	**Become ineffective due to uncertainties about the future?**

15. Reduce Risks from Wildfires & Smoke Exposure					How will forest management practices impact existing ecosystems and ecosystem services?	Will current fire resiliency planning efforts be updated in the future based on changing risk patterns?
16. Increase Ecosystem Management & Data Collection for Climate Resilience				Will the full suite of infrastructural options be considered (nature-based solutions and gray infrastructure solutions?)		
17. Enhance Agricultural Resilience						How will agricultural challenges and opportunities change in the future due to climate trends?
18. Protect County Archives & Historical Records from Flood Risk						Will the option identified for County Historical Records and Archives remain safe under a range of possible future conditions?

Cross Cutting						
	Does the below listed strategy have the potential to…					
Strategy	**Increase emissions or exacerbate climate impacts?**	**Redirect vulnerabilities to other communities or future generations?**	**Affect vulnerable communities?**	**Create path dependency?**	**Degrade ecosystems, biodiversity, or ecosystem services?**	**Become ineffective due to uncertainties about the future?**
19. Increase Storm & Emergency Preparedness Education						

20. Expand Data & Data Collection						Will data and mapping projects continue to reflect risks and vulnerabilities due to changes in climate trends over time?
21. Align Internal Processes & Plans						
22. Increase Volunteer Capacity						How can programs maintain long-term success if volunteer interest/capacity changes over time?
23. Increase Staff Capacity for Adaptation & Resilience Planning						
24. Expand Partnerships for Climate Resilience				Will resource sharing options or agreements remain consistent over time?		
25. Expand Timely Outreach & Education Capacity						

Table inspired by and adapted from the CCARP Template's Sample Maladaptation Analysis Matrix (p. 52)