Natural Resources Protection in the Hudson Valley: Municipal Conservation Stories

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About the Hudson River Estuary Watershed

The Hudson River begins as a small mountain lake on the side of New York State’s highest peak, Mount Marcy, and ends in New York Harbor, one of the world’s busiest and most populated metropolitan ports. About halfway along its course, it becomes an estuary, a tidal river where salt water from the ocean meets fresh water running off the land. Native tribes called the estuary Mahicantuck, meaning “great waters in constant motion” or “river that flows two ways,” referring to the shifting daily tides – two low tides and two high tides in 24 hours.

Surrounding the estuary is a four-million-acre watershed with forests interspersed with working farms, residential development, small cities, and diverse natural areas (see Map 1). Hundreds of streams connect this vast drainage to the estuary. The varied geology of the watershed underpins a tapestry of habitats, including grasslands, pine barrens, cliffs, mountain ranges, caves, and wetlands, and the estuary supports globally rare freshwater tidal wetlands. This mix of habitats gives the region exceptional importance and supports a high diversity of species of global and national significance.

Conservation and management of the watershed’s remarkable biodiversity is challenging due to its complex decision-making landscape. The watershed is divided into more than 250 towns, cities, and villages and most of the land (almost 90%) is privately owned. While individually they may seem insignificant, the decisions made by landowners and communities can have cumulative impact to lands and waters of local and regional significance. At the municipal level, this decision-making responsibility is most often held by planning and zoning boards, some of which are supported by conservation advisory councils. Due to this municipal land-use authority, in New York State, the focus of conservation plans and policies rarely extends beyond political boundaries to consider the larger landscape or ecosystem. This publication aims to underscore the need to look at conservation plans, policies, and practices across the Hudson River estuary watershed.
About the Hudson River Estuary Conservation and Land Use Program

The Hudson River Estuary Conservation and Land Use Program (CLU Program)¹ was formed in 1997 as a joint initiative of the New York State Department of Environmental Conservation’s (DEC) Hudson River Estuary Program (Estuary Program) and Cornell University’s Department of Natural Resources and the Environment (DNRE) to conserve important ecosystems in the estuary watershed. From the start, the program has included collaboration with scientific partners to increase understanding of ecological resources and conservation priorities in the watershed.

Since 2001, the CLU Program has delivered outreach, technical assistance, and research to raise awareness about estuary watershed biodiversity and conservation approaches, provided access to current, science-based information, and increased the planning capacity of communities and non-profit partners through technical assistance. For the last decade, efforts have focused on engaging municipalities in developing natural resources inventories (NRIs) and using those NRIs as the foundation for setting community conservation and land-use priorities in practices, plans, and policies.

By exchanging ideas and fostering new collaborations, the CLU Program has advanced effective local and regional initiatives that will help sustain the estuary watershed and inspire communities to play an important role in biodiversity conservation. This outreach publication is an outgrowth of the CLU Program’s goals to inform municipal conservation planning in the Hudson River estuary watershed through outreach and applied research.

¹ Originally called the Biodiversity Program
Introduction

This publication explores current decision-making by local government officials regarding ecosystem conservation and presents case studies of municipal conservation planning. The case studies serve as examples and models for practitioners, volunteers, and local governments in the Hudson Valley, and shed light on both successes and challenges of conservation planning in New York State. Municipal officials and volunteers share their perceptions of ecosystem conservation, local conservation priorities and strategies, and experiences with local land-use decision-making while reflecting on the outreach and technical assistance provided to Hudson Valley communities by the Estuary Program.

Municipal governments in New York State play a vital role in creating practices, plans, and policies that protect natural resources at the local level while also contributing to the conservation of regional and landscape-scale priorities\(^2\). The conservation of biodiversity is impacted by the multitude of land-use decisions\(^3\) made by municipal governments at village, city, town, and county levels\(^4\). However, research shows that municipalities often adopt environmental plans only after significant damage has already been done to natural resources\(^5\). Thus, there is a need for proactive, municipal conservation planning that integrates complementary strategies aimed at protecting wildlife, fish, and plant habitats while harmonizing with human needs\(^6\). A comprehensive approach to municipal planning minimizes ecosystem degradation while also incorporating adaptation strategies for environmental change and community needs.

For the research highlighted in this publication, we analyzed local conservation strategies in municipal planning that facilitate stronger ecosystem protection, including protection of wetlands and watercourses, open space, critical environmental areas, and steep slopes. These conservation strategies and tools build community resilience to flooding and drought, control downstream erosion, protect water quality, conserve wildlife habitat, preserve sensitive natural areas and areas of exceptional or unique significance, and include commitments to take action on climate change (see Table 1). Our applied research documents municipal conservation actions and tools across the counties that border the tidal Hudson River estuary corridor and offers a local perspective and voices on the implementation of these actions by local governments.

\(^2\) Allred et al. 2021; Siders et al. 2021
\(^3\) Brody 2003; Haines-Young 2009
\(^4\) Aronson et al. 2017; Wilhelm-Rechmann and Cowling 2013; Allred et al. 2021
\(^5\) Brody 2003
\(^6\) Wamsler et al. 2014
Municipal Conservation Efforts Index

Over the past two years, we collected data on a set of 19 conservation actions (see Table 1) for 256 municipalities in the ten counties that border the tidal Hudson River estuary corridor: Albany, Columbia, Dutchess, Greene, Orange, Putnam, Rensselaer, Rockland, Ulster, and Westchester. We chose this set of practices, plans, and policies based on the authority held by municipalities in New York State and the potential of these actions to contribute to the conservation of natural areas and biodiversity. These conservation actions were used to create the Municipal Conservation Efforts Index (MCEI). For each conservation action from Table 1, we indicated whether it was a) present in a municipality, b) absent, or c) currently in progress but incomplete as of December 2021. Conservation actions that are present in more than half of the 256 municipalities include Steep Slope Protection, the Climate Smart Communities Pledge, and Conservation Subdivision (Figure 1). The least commonly adopted actions include Wetland Setback Protection, Watercourse Setback Protection, and a Natural Resources Inventory Law (Figure 1).

Similar trends were observed among the subset of municipalities featured in this publication (Figure 2). The highest calculated MCEI score in the 256 municipalities was 0.78, the lowest score was 0, and the average score was 0.253 (on a scale from 0 to 1). MCEI values between 0 and 0.2 were considered low, values between 0.21 and 0.4 were coded as medium, and values between 0.41 and 0.78 were coded as high. Map 2 shows the distribution of the MCEI for all towns and cities in the Hudson River estuary corridor. Overall, there were 54 municipalities in the high MCEI index category, 83 in the medium category, and 119 in the low category. For a detailed description of the methodology, please see the Appendix.
<table>
<thead>
<tr>
<th><strong>Natural Resources Inventory</strong></th>
<th>A reference document with maps and descriptions of natural areas, water resources, and cultural features within a given locality.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Resources Inventory Law</strong></td>
<td>A local law or zoning code that requires the use of the NRI.</td>
</tr>
<tr>
<td><strong>Open Space Inventory or Index</strong></td>
<td>An inventory and map of areas within a municipality that are priority for acquisition or conservation due to habitat, agriculture, recreation, scenic, and other community values. Once adopted, the open space inventory is considered an “open space index.”</td>
</tr>
<tr>
<td><strong>Open Space Plan</strong></td>
<td>A community’s strategy for conserving priority lands identified in the open space inventory or index or a similar analysis.</td>
</tr>
<tr>
<td><strong>Community Preservation Plan</strong></td>
<td>Prerequisite for establishing a Community Preservation Fund (CPF); similar to an open space plan but has specific requirements, such as listing priority parcels and considering land-use alternatives.</td>
</tr>
<tr>
<td><strong>Open Space Fund</strong></td>
<td>A funding source (e.g., CPF, bond, tax, etc.) dedicated to implementation of the open space plan or community preservation plan through the purchase of land or development rights or use as a match for state and federal grants.</td>
</tr>
<tr>
<td><strong>Steep Slope Protection</strong></td>
<td>A local law or overlay zone that restricts certain activities on slopes or ridgelines over a certain grade.</td>
</tr>
<tr>
<td><strong>Critical Environmental Area</strong></td>
<td>Designation under authority of the New York State Environmental Quality Review Act (SEQRA) of a specific geographic area with exceptional or unique characteristics by a local or state agency.</td>
</tr>
<tr>
<td><strong>Conservation Zoning or District</strong></td>
<td>Base zoning with a conservation purpose.</td>
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<tr>
<td><strong>Conservation Overlay Zone</strong></td>
<td>Zoning overlay adds a new set of standards and incentives to existing zoning to achieve protection goals for natural resources.</td>
</tr>
<tr>
<td><strong>Conservation Subdivision</strong></td>
<td>A strategy to conserve open space by reformulating conventional subdivision design and allowing for smaller lots to concentrate development away from sensitive natural areas.</td>
</tr>
<tr>
<td><strong>Conservation Advisory Council or Board</strong></td>
<td>A volunteer advisory group that a local legislature may create to advise in the conservation of its natural resources; often charged with creation of an inventory and map of open areas. Also known as an Environmental Commission.</td>
</tr>
<tr>
<td><strong>Climate Smart Communities Pledge</strong></td>
<td>An expression of commitment to take action on climate change by taking a pledge and registering with New York State as a Climate Smart Communities.</td>
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<tr>
<td><strong>Climate Smart Communities Certification</strong></td>
<td>The Climate Smart Communities certification program recognizes communities for their accomplishments through a rating system that awards three levels of recognition: bronze, silver, and gold.</td>
</tr>
<tr>
<td><strong>Wetland Buffer Protection</strong></td>
<td>An ordinance or zoning code that sets buffer sizes greater than 100 feet for wetlands protected by New York State or protects any buffer for wetlands not protected by the state.</td>
</tr>
<tr>
<td><strong>Wetland Setback Protection</strong></td>
<td>An ordinance or zoning code that requires a wetland setback of any size.</td>
</tr>
<tr>
<td><strong>Wetland Protection</strong></td>
<td>An ordinance or zoning code that protects wetlands smaller than or equal to 12.4 acres (the threshold for protection by New York State as of 2024).</td>
</tr>
<tr>
<td><strong>Watercourse Buffer Protection</strong></td>
<td>An ordinance or zoning code that sets watercourse buffer sizes (for perennial, intermittent, and/or ephemeral streams).</td>
</tr>
<tr>
<td><strong>Watercourse Setback Protection</strong></td>
<td>An ordinance or zoning code that requires a watercourse setback of any size.</td>
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</tbody>
</table>
Municipal Conservation Planning Case Studies

In the winter of 2023–2024, we conducted semi-structured interviews with officials and volunteers (e.g., town supervisors, conservation advisory council members) from towns that received high and medium values of the MCEI, demonstrated unique experiences of successful implementation of specific conservation policies, and were available to talk to our team. These interviews pursued several goals:

- analyze municipal officials’ perceptions of ecosystem conservation actions,
- investigate municipal priorities in conservation,
- investigate municipal experiences with local land-use decision-making,
- indicate the gaps and challenges in approaches as well as provide successful examples from municipalities with high capacity in conservation planning and policy,
- investigate the level of community engagement in conservation and land-use planning and best practices to increase community participation,
- analyze whether municipalities develop mechanisms of policy enforcement/implementation,
- help to refine approaches to municipal assistance by the Estuary Program and other practitioners.

In this publication, we present case studies from seven towns in the Hudson River estuary corridor that discuss local capacity for completing conservation actions and ways to overcome obstacles, provide examples of successful conservation initiatives and policies, and, perhaps most importantly, share love and appreciation of their communities.
Conservation Action Status

**Figure 1. Conservation Actions Status for Municipalities in the Hudson River Estuary Corridor**

![Bar chart showing conservation actions status for municipalities.]

**Figure 2. Conservation Actions Status for Interviewed Towns**

![Bar chart showing conservation actions status for interviewed towns.]

- Steep Slope Protection
- Climate Smart Communities Pledge
- Conservation Subdivision
- Conservation Zoning or District
- Conservation Advisory Council or Board
- Natural Resources Inventory
- Conservation Overlay Zone
- Wetland Protection
- Watercourse Buffer Protection
- Wetland Buffer Protection
- Climate Smart Communities Certification
- Critical Environmental Area
- Open Space Plan
- Open Space Inventory
- Open Space Fund
- Community Preservation Plan
- Natural Resources Inventory Law
- Wetland Setback Protection
- Watercourse Setback Protection

% 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
The Town of Bedford is a mix of suburban neighborhoods, large estates, and small forests situated in the Croton River watershed. Development has impacted habitat quality but natural areas with less fragmentation in the protected Butler Preserve and Westmoreland Sanctuary and along the eastern side of the town support wildlife. Important Bird Areas have been designated for these areas. The Cross River Reservoir and Byram Lake are two large water bodies in the town that provide drinking water.
Town of Bedford was the first community in Westchester County to adopt an aquifer protection ordinance in 1986.
Freshwater Wetlands Protection Law regulates activities that might affect wetlands of any size with 100-foot buffers.

Exterior Illumination and Glare Ordinance

The multi-pronged intent of the town’s Exterior Illumination and Glare Ordinance is to mitigate against environmental pollution stemming from exterior lights, provide usage guidance to residents and permitting boards, reduce emissions, and ensure safety considerations and requirements. While not directly related to conservation planning, light pollution can create visual barriers that fragment habitat, disorient migrating birds, and pose significant harm to insect populations.

When talking about the active role and impact that the CB has played in developing this ordinance, Simon shared that the board took the lead in identifying and assessing sources of glare.

“We took an airplane up and surveyed Bedford from the air at night. The areas of darkness were the residential areas, as we suspected. Brighter areas were two state prisons in Bedford, which we found very interesting. But because the state prison’s lights are pointed down, the glare is bounced back into the air from the ground as more of just a glow. They were not as bright as the worst offenders—parking lots. We also get a lot of glare from the commercial district.” (Simon Skolnik, member of the Conservation Board)

The ordinance requires downward-pointing lights and is enforced by the Code Enforcement Officer when violations are reported.
Wildlife Corridor Overlay District

The town is in the early stages of developing a Wildlife Corridor Overlay District, designed to protect wildlife habitat and connectivity through zoning. The town engaged Mianus River Gorge biologists to identify and map areas used by wildlife as movement pathways in the town. The CB led the Estuary Grant-funded project and assisted with volunteer engagement to assess road crossings in potential wildlife corridors. The next phase will involve legal and planning consultants and stakeholder input to draft an overlay ordinance that will require design features for new development in the district. The town aims to balance the ordinance’s objectives to maintain wildlife and aquatic habitat connectivity with the needs of those living and working in the overlay district.

“The goal is to prevent over-development on large parcels while avoiding unnecessary restrictions for small landowners, so we continue to reflect and evolve our thinking with respect to striking the right balance. The process can be time-consuming, but when done thoughtfully, can check a lot of boxes.”
(Gentian Falstrom, chair of the Conservation Board)

Both Gentian and Simon felt optimistic about this ordinance and hoped it would also create an opportunity for protection of Bedford’s forests.

Steep Slopes and Aquifer Protection

The Town of Bedford has found that requiring a permit can be an effective tool to successfully implement an ordinance. It can help by providing residents with transparent guardrails for a regulated activity. Bedford requires obtaining a steep slope permit for conducting activities on any ground area with a minimum slope of 25% or greater, with a minimum area of 100 square feet and a minimum horizontal distance of 10 feet.

Bedford was the first community in Westchester County to adopt an aquifer protection ordinance in 1986.

“In Bedford, a permit is required if there will be an impact on steep slopes, including a public discussion of the impact. We also require a permit in the aquifer protection zone, which has proven to be a successful planning tool when considering potential development projects. It helped us pass on a potential dry-cleaning establishment, based upon the potential for groundwater discharges of toxic chemicals.”
(Simon Skolnik)

Community Engagement In Conservation Planning

Gentian and Simon both described Bedford as a community that cares about the environment, with many opportunities for residents to be involved in stewardship and volunteer activities, such as pollinator habitat plantings, amphibian crossings during migration, and the Leave Leaves Alone program to reduce leaf-blowing. The CB provides environmental and conservation-related feedback to the Town Board, the Planning Board, Zoning Board of Appeals, the Wetlands Commission and town departments. Their meetings are open to the public, and residents may participate as well. However, concern about environmental issues doesn’t always translate into strong participation in municipal meetings or planning efforts, and the CB is making an effort to engage more residents.

“We have big plans this year to share more information about the wildlife corridor project, educate the public, and solicit community feedback. We provide an annual report and periodic updates to the Town Board at public meetings to keep everyone informed. The Town’s comprehensive plan update is underway, and we plan to provide input and encourage residents to share their conservation ideas and priorities. It will help ensure that our natural resources are well considered and planned for.”
(Gentian Falstrom)

Intermunicipal Collaboration

The Town of Bedford has experience collaborating with other municipalities. For example, it worked together with the Town of Somers to participate in Hudsonia’s ten-month biodiversity assessment training, which resulted in detailed maps of habitats for both communities.

Simon described a collaboration with the Town of Pound Ridge on the removal of hardy kiwi, an invasive vine similar to oriental bittersweet. About seven years ago, five patches of hardy kiwi were identified in New York State, two of them in Long Island and three of them in Westchester County - one in Bedford and one in Pound Ridge.

“The Pound Ridge chair came to Bedford to meet us and tell us about hardy kiwi, and we got determined to eliminate it from our town. The control project was funded by the DEC through the Lower Hudson Partnership for Regional Invasive Species Management (PRISM).”
(Simon Skolnik)

This project resulted in conducting control activities to eradicate hardy kiwi infestations on several properties in Bedford where permission was obtained from the landowners.
Challenges Faced by the Town

Gentian and Simon talked about the challenges related to the enforcement of ordinance requirements. For example, the Town of Bedford prohibits the use of gas-powered leaf blowers year-round with the exception of specified clean-up seasons, under the town's noise ordinance. When adopted, these restrictions created a problem for some small business owners because they required new equipment and landscaping practices. To address this issue, Bedford ran a “buy back” program during the first year of this ordinance, in which the town used grant money to buy back gas leaf blowers.

Gentian said that pushback for conservation laws can continue even after implementation:

“During the last election, there were placards around town, not just with the candidates’ names, but specifically about the leaf blower ban, which passed several years ago and has been phased in over several years. There is a sentiment that the government is overreaching with conservation regulations, despite the benefits for all.” (Gentian Falstrom)

Next Steps

In addition to ongoing communications and public outreach plans, the CB is working to support the Open Space Committee in its establishment of a Community Preservation Fund (CPF). They will also have extensive and continuing work to introduce the wildlife corridor ordinance—which, once adopted, will require implementation support.

Simon Skolnik looks at a box turtle found while conducting field work in the Biodiversity Assessment Training. Photo: L. Heady

Land protected by the Westchester Land Trust

Photo: G. Falstrom
Advice to Other Municipalities and Strategies for Success

Gentian and Simon recommended reviewing the five strategies that the Town of Bedford employs to address competing priorities of environmental protection versus development:

- Establish strategic board committees with subject-matter experts who work to advance this work, providing updates and advice to the board, addressing implementation gaps, and ensuring community engagement;
- Utilize legislative power for the adoption of ordinances and/or policies that consider, protect, and revitalize the natural environment;
- Require permits in support of ordinances to ensure successful implementation;
- Cultivate and collaborate with key strategic partners and environmental stakeholders;
- Provide continual communications and education to ensure community engagement and support.

Gentian and Simon also suggested utilizing the tools and assistance offered by the Estuary Program and ensuring ongoing and strong relationships with the Town Board. They also advised ensuring a core group of community members on the CB are passionate about the environment.

Simon thinks it is helpful for CAC and CB members to understand how municipalities work, attend other land-use board meetings—in your own town and other towns—to learn from other experiences, and to leverage opportunities for collaboration.

“I went to my neighboring town of Yorktown and learned that their CB members attend all the other regulatory board meetings. I recommend doing that. We have the Town Board, the Planning Board, Zoning Board of Appeals, and the Wetlands Commission - those groups are at the front lines, making decisions. Attending their meetings lets us learn about their projects from day one. Another piece of advice: do not ever come into a project at the last minute with recommendations. You have to get involved from the beginning, and the way to do that is to know what is going on in your town by attending other board meetings. The success of our CB is based on creating a trust between the town regulatory boards and commissions and providing them with the help they need in reviewing applications that come before Bedford.” (Simon Skolnik)
The east side of the Town of Beekman lies within a north-south forested corridor that includes the Highlands significant biodiversity area (SBA) - a location recognized by the Estuary Program for having a high concentration of biological diversity or value for regional biodiversity in the estuary watershed. The Highlands SBA is notable for its large, unfragmented forests, ridges, and wetland complexes. Diverse wetland types have been mapped in Beekman, including swamp and many vernal pools, along with upland and wet meadow habitats. Most of the streams in Beekman drain into the Hudson River estuary through the Fishkill Creek and Croton River.
Case Studies | Town of Beekman
Examples of Successful Conservation Policies and Actions

Conservation Advisory Council

The Town of Beekman CAC serves in an advisory capacity to the various town boards regarding matters of the environment and the town’s natural resources. Clifford said the CAC in Beekman has an excellent rapport with the town supervisor and the town board, and has been able to support, and lead town initiatives.

Clifford said all members of the CAC are environmentally sensitive and know the Town of Beekman well. The CAC includes nine people, and over the years has had members with different educational backgrounds, occupations, and affiliations in conservation-related organizations.

“I have a logger on my board. He knows the Town of Beekman like the back of his hand, and he is a real environmentalist. He cuts trees for a living, but he does it sensibly. He is a very vital part of my committee. I have a high school biology teacher. One of my members happens to own a pharmacy business. He is also the chairman of the Town Planning Board. This is unique, and it has worked out just fine.” (Clifford Schwark, chair of the Conservation Advisory Council)

The CAC developed three major laws that proved to be successful in the Town of Beekman: the Timber Law; the Wetland, Waterbody and Watercourse Protection Law; and the Steep Slope Protection Law. These laws were constructed to work together and complement each other. For example, the Timber Law refers to the protection of wetlands, streams and soils: “The Town also recognizes that, if timber harvesting is not conducted properly, this activity can result in significant and direct environmental damage to water quality, soils, adjacent lands, public roads, land and infrastructure, and future forest quality...All local wetland, water body, watercourse and stormwater protection regulations shall apply.”

“Today, everybody lives next to each other. I cannot do something on my property if it can affect my neighbor’s property. A few years ago, people in Beekman were building houses on wetlands and polluting streams. Now, they cannot do it here.” (Clifford Schwark)

Clifford mentioned that he attends every planning board meeting, because this is where new developments and new projects are being discussed and actions are taking place. As the chair of the CAC, and with the input of the CAC members, Clifford advises the planning board about projects that are related to the environment, and he uses this opportunity to make sure no harm is done to the town’s wetlands, streams, ponds, and vernal pools.

Community Engagement In Conservation Planning

Clifford said that public attendance at town board meetings and planning board meetings has been very poor. However, all board meetings are recorded and available for the public on the town’s website. Very few people attend CAC meetings, as well. A boost in attendance happens when there are issues or projects that affect a lot of people.

“For instance, when I was working on the wetland and waterbody protection, there was a tremendous public outcry. Residents were not in favor of the law, saying, ‘We don't want you to tell us what to do with our property.’ It was challenging to get through that, and it took almost six years to convince the town board and the public to approve these laws.” (Clifford Schwark)

Clifford provided another example of increased engagement spurred by opposition:
“Cell tower installation caused a big uproar. A lot of people came to comment that they didn’t like the look of the towers and they were concerned about radiation. The radiation issue has been disproven. But it brought out the public because there was a negative response. You get very few people coming in and saying, ‘We like that. We want you to do that.’” (Clifford Schwark)

Intermunicipal collaboration

The CAC regularly participates in the Dutchess County Annual CAC & Environmental Management Council (EMC) Roundtable discussions hosted by Cornell Cooperative Extension of Dutchess County. These roundtables provide a platform for municipalities to exchange ideas and experiences and find opportunities for collaboration.

Challenges Faced by the Town

Clifford shared that the CAC has been trying to get the Town of Beekman to participate in the NYS Climate Smart Communities (CSC) program but has not succeeded yet. According to Clifford, municipalities that participate in this program get a better chance of receiving grants, so it is vital for Beekman to get certified.

Clifford also talked about how public perceptions can sometimes create obstacles in conservation law enforcement, as it happened with the Wetland, Water body and Watercourse Protection Law discussed above.

Next Steps

The CAC is currently working to start an open space plan. The project will include developing maps and determining where open space should be protected in the Town of Beekman. In the meantime, the town is benefiting from land conservation efforts by a national non-profit.

“The big environmental organization Trust for Public Land buys up open space that needs protection from inappropriate development, for example, because there are steep slopes, or it is a very environmentally sensitive area. They buy these properties and then hold them until they can get organizations like the DEC to purchase them.” (Clifford Schwark)

The CAC and the Planning Board held numerous meetings with the Trust for Public Land (TPL) to help identify about 500 acres of open space, which TPL purchased and now owns in the Town of Beekman. The town also assisted with obtaining the necessary approvals on some of the properties.

“These 500 acres of open space land in the southern Town of Beekman is just ideal for trails, hunting, fishing, hiking, camping—500 acres that will never be developed. There are wetlands there, steep slopes, and forests. That’s the kind of land we are trying to keep.” (Clifford Schwark)

Advice to Other Municipalities and Strategies for Success

Clifford stressed that creating local laws requires a lot of research and input from the public and emphasized the value of relationships and persistence in conservation work.

“Most environmental decisions require a compromise. If you are not willing to make reasonable compromises, you will never get anything approved. It is also important to maintain good rapport with the Town Supervisor and the Town Board. And I say, what it takes in the world of environmental conservation, is persistence.” (Clifford Schwark)
Town of Milan

County: Dutchess
Nearest city: Kingston
Population: 2,245 (2020)
Town Supervisor: Alfred Lo Brutto

Municipal Conservation Efforts Index value: Medium

Conservation tools in place:
- Natural Resources Inventory
- Conservation Zoning or District
- Conservation Subdivision
- Steep Slope Protection

Natural Resources and Biodiversity

Milan is a town of forested hills and meadows that lies in the watersheds of seven streams that all drain to the Hudson River estuary. Significant headwaters for five of those streams are located in the town. Areas of underlying alkaline bedrock are associated with unusual habitats like calcareous ledges and circumneutral bog lakes. A portion of the town is located within the Dutchess County Wetlands SBA, designated by the Estuary Program for its importance to a variety of reptile, amphibian, and bird species of conservation concern.
Debra attributed the success of the town’s NRI to its committee members bringing a variety of viewpoints to the table and contributing their unique knowledge about the history of Milan, along with beautiful photos of its natural areas. Interviews with residents and historic perspectives were a valuable addition.

“We interviewed some of the long-time residents to get the historic background of the town. Those interviews were really interesting and added a human element to the very scientific document. We had various quotes from people who lived here a long time ago, and from current citizens, along with their reflections on how the town has changed, what it was like when it was mostly deforested versus what it is now.” (Debra Blalock, member of the Town Board and the chair of the Natural Resources Inventory Advisory Committee)

Steep Slope Protection Law and Logging Law

As observed in many communities, concern over land-use impacts can bring attention to the need for conservation regulation. While proactive planning and policy is ideal, these more acute situations present an opportunity to educate, galvanize support, and take action.

“A lot of conservation actions in Milan have been reactive measures more than proactive. For example, because some logging was done indiscriminately and without any guidelines, we crafted the Logging Law. It prescribes the approach for cutting and removal of trees, protection of the environment and roadways during the process of logging, and remediation measures for the logged area.” (Debra Blalock)
Indiscriminate logging can create decades-long impacts to communities by causing habitat loss, exposing the topsoil causing erosion, and impacting waterways. Debra said people of Milan recognize its negative impacts on the environment. The Logging Law was passed several years ago and has not been challenged by the community.

### Community Engagement In Conservation Planning

The Town of Milan has the smallest population out of any town in Dutchess County. Sheila said that the town is very rural, and it poses a problem of communicating with the residents and getting everybody on the same page.

“Here, we live in our own little world, very separate from just about everybody else. People don’t live close to each other, so they are not really involved with their neighbors. There are people who don’t even have email addresses.” (Sheila Buff)

Both Debra and Sheila stressed the importance of educating residents about local environmental issues but without an extensive email list, there can be challenges with getting the word out.

“We could print up educational information about how people in this town can be a part of the conservation movement, how they can affect what’s going on in their neighborhood. We would need a compelling brochure to send to households, because people don’t necessarily come to meetings. It is hard to communicate with the citizens of this town except through the mail.” (Debra Blalock)

They noted that residents tend to get involved in public meetings and conservation efforts when confronted with a serious issue. For example, when a gravel mine was proposed in Milan, residents came out to express their concerns about the traffic, noise, and dust from a mine operation. The town’s comprehensive plan was amended to reflect the opposition to mining operations and included language calling for the elimination of mining.

Sheila described how participation in the Estuary Program’s Amphibian Migrations and Road Crossing Project helped to increase conservation awareness among the public about wetlands, vernal pools, and forests by providing a hands-on activity and connecting residents to nature. According to Sheila, more than 80 town residents took part in this project and people really enjoyed it.

Debra pointed out that Milan’s residents with young children are more inclined to take action on climate change, because their kids help them recognize the seriousness of the issue more.

“Kids are leading the way, saying, ‘We want a safer world. We don’t want to be in trouble going forward. How about we do something now?’ And I hear from other town board members too, that their kids really want something to happen. I think that’s a big driving force that if we can get the youth on board, we can make things happen.” (Debra Blalock)

### Intermunicipal Collaboration

Milan includes parts of the Wappinger Creek and Saw Kill watersheds. Debra is currently a delegate to the WIC and Sheila served as the town representative to the WIC for almost five years. The WIC is an intermunicipal organization that aims to cooperatively address common issues that affect the quality of Wappinger Creek and its watershed. The town is also involved with the Saw Kill Watershed Community, which provides additional opportunities for intermunicipal collaboration around water resources.

### Challenges Faced by the Town

Finding people to fill committee positions is challenging in Milan—so much so, that the town lacks a CAC, a gap that members of the Town Board attempt to fill themselves. Sheila added that Milan has many weekenders as well as full-time residents, further limiting the availability of volunteers.

On a positive note, there is greater acceptance of the need to address environmental issues than in years past, and residents may be more supportive having the data provided by the NRI.

“I think that some of the older residents were opposed to changes reflexively, they couldn’t justify their opposition in any scientific way. But I think it has changed at the administrative level, the town board level, and the zoning board level. I think people are starting to understand that environmental issues are just too important to ignore. Legislation is a slow process, but I feel very optimistic, especially now that we have the NRI.” (Sheila Buff)

### Next Steps

Debra mentioned that going forward, conservation efforts in Milan should focus on wetland and stream buffers. Past development occurred where construction was relatively convenient; much of the remaining land in town has wetlands, steep slopes, and other environmentally sensitive features. The town is also interested in pursuing legislation on conservation subdivision in the future.

An AM&RC volunteer assists a spotted salamander in Milan. Photo: B. Beam
Advice to Other Municipalities and Strategies for Success

Sheila said that there used to be a Watershed Awareness Month in Dutchess County, which provided the opportunity to communicate to people the importance of the small things like fixing a septic, preventing it from leaking into a stream, using fewer lawn chemicals, not mowing down the slope—some basic stream management measures that an individual landowner can do.

“Educating people about the environment is very important. When people are more educated and understand what is going on, for example, when they understand the role of wetlands and flood prevention, I think that really helps them. The NRI is a good tool for education. We put our NRI on the town’s website, so people can access it at any time.” (Sheila Buff)

Debra recommended picking up on some of the less contentious conservation measures first, and then moving on to the more significant ones. She agreed that raising awareness is very important.

“If everybody gets on the same page, even with the small measures, we can affect this area, or property, or the results of climate change.” (Debra Blalock)

Debra and Sheila suggested that municipalities who want to complete an NRI need to bring in consultants who have experience in the area. An NRI is not a do-it-yourself project. It is also important to have a committed group of volunteers, people who will attend the meetings and participate.

“You can engage people a little more by asking them to contribute pictures. Also, make sure your town board is supportive. We gave a presentation to the town board about the report, and they were really appreciative. Also, it is good to have a certain diversity of thought and knowledge on the NRI advisory committee, so that you do not just have members who agree on everything. And finally, keep your eye out for grant money. I think some towns are forgoing opportunities just because they are not aware or interested.” (Sheila Buff)

Raccoons thrive in human-altered landscapes due to their adaptability and ability to exploit anthropogenic food sources. Their predation on eggs and nestlings contributes to the challenges faced by ground-nesting bird populations. Photo: P. Zemke
Natural Resources and Biodiversity

The Town of Nassau has large expanses of forests, and the northeast corner of the town is part of the Rensselaer Plateau, identified by the Estuary Program as a SBA due to its unfragmented, matrix forest. The uplands of the plateau have conditions that support Adirondack-like coniferous forest and wetlands, and the forest habitats are especially important for birds. Most of the town is included in the watershed of the Lower and Upper Kinderhook, and the Town has eight water bodies, including several streams flowing through the town that support trout.
Part of the Town of Nassau is located on the Rensselaer Plateau, which is one of the largest and most ecologically intact native habitats in New York State, covering approximately 105,000 acres. The value of the plateau’s contiguous high elevation northern forests is one of the reasons it was recognized as a significant biodiversity area in the *Hudson River Estuary Wildlife and Habitat Conservation Framework (2006)*.
Interviewees

David Fleming, Town Supervisor
David has recently taken his oath for the 10th time in the office, serving two years as deputy supervisor and the remainder as supervisor. He was first elected in 2007. David is also a management and legislative representative for an Albany law firm.

Barbara Nuffer, member of the Natural Resources Committee
Barbara has an advanced degree in biology and worked at the DEC for 32 years. Alongside her husband, Fred, she formed the Natural Resources Committee for Nassau to address environmental evaluation needs. Barbara also serves on the town zoning board.

Assistance received from the Hudson River Estuary Conservation and Land Use Program

- Habitat Summary
- Hudsonia’s Biodiversity Assessment Training, funded by the Estuary Program

Examples of Successful Conservation Policies and Actions

Natural Resources Inventory
An important first step in the Town of Nassau’s conservation planning efforts was completion of an NRI to inform land-use decisions and policies. David emphasized that the NRI served as a foundational document significantly influencing Nassau’s planning and zoning. It underscores the critical role of natural assets, not only in present day town decisions but also in fostering sustainable development for future generations, highlighting the dual importance of conservation and economic development efforts.

“We knew that we would never be a town like Greenbush just outside of Albany, where there will be significant commercial development. One of the benefits of Nassau is that we are a rural community that has valuable natural resources. So, we wanted to protect those. A lot of technical documents that were drafted at the town’s request by an amazing group of residents have been foundational, and they have enabled the community to go from a place where you could do whatever you wanted, to one of the most progressive land-use ordinances in the Capital Region, and all based on science and on our NRI.” (David Fleming, Town Supervisor)

Rightsizing and Replacement of Culverts
Culverts are structures designed to allow water to flow underneath roads, trails, railways, or other paths. In many municipalities, old culverts need to be upgraded to accommodate increased water flow from runoff from impervious surfaces in the surrounding landscape and rainfall from intense storms. Resizing and replacing culverts can also restore stream habitat connectivity, allowing for movement by aquatic species such as fish, wood turtles, and stream salamanders. Nassau worked with Trout Unlimited and received funding and assistance from the Estuary Program’s watershed team to inventory and upsize culverts and water crossings to increase resilience during heavy precipitation events and improve stream habitat. David said that the town is already taking action based on the initial analysis:

“We had the storms of 2021 that hit in July. Nassau fared so much better than similarly situated communities and I attribute a lot of that to our proactive rightsizing of culverts. We still have several perched culverts that don’t even touch the water. So, they are not particularly helpful to amphibians and other parts of our ecosystem. And just the replacement of a couple of those culverts is half a million dollars. These challenges make this work one of the town’s priorities and we are now in the process of replacing two culverts.” (David Fleming)

Community Engagement In Conservation Planning
The Town of Nassau has faced a legacy of environmental issues, including hard rock mining, an industrial gas compressor station, and a gas pipeline that fragmented local forests. The town has also been dealing with problems from the Dewey Loeffel Landfill since the 1950s, including migration of hazardous substances from the landfill to underlying aquifers and downstream surface

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water bodies, which resulted in contamination of surface water, groundwater, and several species of fish. David said that these threats brought together community members who are willing to get involved and the town created broad-based coalitions of not just community groups and activists but also elected officials at every level of government, across political party lines.

“In many communities that face environmental issues, you see a lot of polarization on issues, where it is ‘them’ against ‘us.’ If you look at the challenges that Nassau has faced in the last 18 years, it has not been a political issue. It has been both parties on both sides understanding that there is commonality and that there are impacts on the whole community, and not just now but in the future.” (David Fleming)

Barbara highlighted that small positive changes can also foster community engagement with the environment and encourage participation in conservation efforts. One example is providing access to natural areas in the town, which allows people to appreciate and enjoy open spaces, thereby nurturing a sense of connection and stewardship. With adequate planning, public access and conservation of sensitive habitats can both be achieved.

“We have the Mud Pond Preserve in our community, which has one of only five acidic bog lakes in the whole state. We apply parameters to design trails to be away from the sensitive water bodies to protect them but also provide access on 100 acres that people didn’t have access to before.” (Barbara Nuffer, member of the Natural Resources Committee)

David and Barbara noted that the town often uses the expertise of community members. The first community walking trail system - Mud Pond Preserve - was established with the help of volunteers as well as grant funding. Mud Pond Preserve is an example of an open space that provides economic benefits to the town. Despite initial complaints from some individuals who believed taxpayer money was being misspent, the opening of the park proved to be a success. Visitors began frequenting the nearby shops to ask for directions and get water, snacks, or buy gas, demonstrating the positive impact of the walking areas on both the community and local businesses.

“Suddenly, people realized that there is an economic development factor and that there were certainly financial benefits for the residents. So, I think we have been successful in trying to help people understand that there is a benefit for everyone in preserving space and conservation.” (David Fleming)

David added that social media and the internet have also been effective mechanisms for educating and engaging residents. Nassau maintains a town Instagram account and utilizes its website to make recordings of board meetings available to the public.

Intermunicipal collaboration

Nassau has been actively engaged in intermunicipal conservation efforts through the Rensselaer Plateau Alliance (RPA), a nonprofit that works with the community to conserve the plateau’s undeveloped and unfragmented forests and other ecologically important areas. Through regular quarterly meetings with municipal officials, the RPA serves as a platform for collaboration and exchange of ideas. For example, inspired by Nassau’s initiatives, like creation of Mud Pond Preserve, towns like Sand Lake have followed suit by establishing their first public parks and considering other ways in which they can utilize their rail corridors and other natural areas for community benefit.

“We share a lot of information during those [RPA] meetings about what folks are doing, and we try to push forward some of our colleagues that are more conservative. I am the token tree hugger of the group, I think.” (David Fleming)

Challenges Faced by the Town

In recent years, Nassau faced the emerging challenge for local decision-makers associated with siting renewable energy projects with adequate provisions to protect habitat and environmental quality. While drafting zoning laws and regulations to govern solar development, the town received significant resistance from the community over the inclusion of steep slope protection.

“There was a proposal to put a large solar farm in our community, which would involve complete removal of the [tree] canopy for 35 acres in a high elevation area for the solar panels. It would have led to significant runoff directly into two trout streams in the town with very limited steep slope protections for runoff. Our concerns there were about wetland and waterway protection.” (David Fleming)

David explained that the proposed changes in zoning law and solar development regulations prioritize the use of already cleared lands and lower elevation sites where there is less runoff.
“We heard from a lot of people that we were communists trying to steal people’s property rights. My farm is on a very steep area on the edge of the plateau, and I have seen throughout my life the damage that can be done by deforestation. I had a neighbor who clearcut five acres of land probably 20 years ago - what it did to the tributaries of the Tsatsawassa from sediment and destroying habitat was just unbelievable. When you think about a 35-acre change like that, that is incomprehensible in a community that values water resources.” (David Fleming)

**Next Steps**

The Town of Nassau is currently working on the development of an innovative local law that would provide tax exemptions to landowners in order to conserve the town’s grasslands, which provide habitat to many bird species. The town is planning to hold public hearings in 2024 and is considering offering the tax exemption for properties as small as two acres.¹

**Advice to Other Municipalities and Strategies for Success**

Nassau has had a natural resources committee—its version of a CAC—since February 2006. Barbara pointed out that having an environmental commission in a municipality is very important, and it can be a valuable resource, especially if there are scientists among the members.

“A municipality would need an environmental commission or board in order to take conservation actions, for example, to conduct an NRI, to help create a zoning district or overlay, and to set priorities.” (Barbara Nuffer)

David recommended including a broad range of the community on committees whenever possible. This approach enhances legitimacy and ensures a balance between people who are more environmentally conscious and those advocating for economic interests.

“Also, as a politician, I believe that small actions are as important as bigger actions later on because I want to bring this community to the point where we cannot go backwards and can only go forward. I think we have done a pretty good job working together to lay a significant foundation for the future.” (David Fleming)
Case Studies

Town of Nassau
Town of New Paltz

**County:** Ulster

**Nearest city:** Poughkeepsie

**Population:** 14,407 (2020)

**Town Supervisor:** Neil Bettez

**Municipal Conservation Efforts Index value:** High

**Conservation tools in place:**
- Natural Resources Inventory
- Open Space Inventory
- Open Space Plan
- Community Preservation Plan
- Open Space Fund
- Critical Environmental Area
- Conservation Zoning or District
- Wetland Buffer Protection
- Wetland Protection
- Watercourse Buffer Protection
- Steep Slope Protection
- Conservation Subdivision
- Conservation Advisory Council or Board
- Climate Smart Communities Pledge
- Climate Smart Communities Certification

**Natural Resources and Biodiversity**

The Town of New Paltz is situated between two SBAs recognized by the Estuary Program: the Shawangunk Ridge along its western border and the Esopus-Lloyd Wetlands and Ridges along its eastern edge, which are part of the Swarte Kill watershed. Along with these prominent natural features is the Wallkill River, a major tributary of the Hudson River estuary that flows north through the center of town.
New Paltz was the first town in Ulster County to create a Community Preservation Fund (CPF) after municipalities in the county were given authority in 2019. Two other Ulster County towns followed its example and implemented CPFs.
Interviewees

Neil Bettez, Town Supervisor
Neil has been New Paltz’s supervisor since being elected in 2015. He has a PhD in Ecology from Cornell University. Prior to becoming town supervisor, Neil was a volunteer on different town boards.

Amanda Gotto, Town Planning Board Member
Amanda has been a member of the Town Planning Board for seven years and the Ulster County Planning Board for four years. Amanda has been in New Paltz for about 12 years, and she was the volunteer project manager of the Climate Smart Communities Task Force for five years.

Examples of Successful Conservation Policies and Actions

Natural Resources Inventory
The Town and Village of New Paltz completed their NRI in June 2021. Amanda described the value of the NRI which was created with grant support and technical assistance from the Estuary Program.

“The NRI is an amazing piece of work; we are very proud of it. Thanks to the Estuary Grant, we were able to get really talented and experienced consultants to work with us. We have a user-friendly online version of the NRI, and we held a training session that is available online on how to use it; for example, how to put in an address or an SBL tax parcel number, zoom in and find what you are looking for. It is meant to answer questions, ‘What’s in New Paltz?’ or ‘What might be near me?’ or ‘What about this piece of property I’m thinking of buying?’” (Amanda Gotto, former member of the Town of New Paltz Planning Board)

Amanda said the NRI is a great tool and hopes that residents use it. Hard copies of the NRI are available at the town’s library in the reference room, the town and village halls, and were also provided to the planning board.

Community Preservation Fund: Real Estate Transfer Tax
A CPF is a dedicated account that provides municipalities with the opportunity to raise money for local land conservation. New Paltz established its CPF after a successful ballot referendum in 2020, making it the first municipality in Ulster County to adopt this conservation financing strategy. New Paltz’s CPF will generate open space funding through a local real estate transfer tax (1.5%), which is a one-time fee on home sales above the median price for Ulster County. This funding approach will allow New Paltz to support farmland, habitat protection, and historic preservation without increasing taxes for residents. Neil talked about the struggles he encountered when trying to pass this law in New Paltz:

“Towns, under state law, cannot create taxes. Cities and counties can; they can put sales tax on, but towns cannot. In order to create a real estate transfer tax, we had to get approval from the New York State Assembly and the Senate. The Town of Red Hook did this maybe 10–12 years ago. The Town of Warwick did it a little before that. When I was first elected, I went to our state senator and said, ‘We would like to do that, too.’ To move forward, we needed to get CPF authorization from the Senate and the Assembly.” (Neil Bettez, Town Supervisor)

Political support is an essential dimension of how municipalities can enact conservation policies, and changes in leadership can provide new opportunities. Neil explained how they worked with new state-elected senators to revisit the real estate transfer tax once they had other conservation policies in place.

Assistance received from the Hudson River Estuary Conservation and Land Use Program
- Habitat Summary
- Hudsonia’s Biodiversity Assessment Training, funded by the Estuary Program
- Northern Wallkill Biodiversity Plan: Balancing Development and Environmental Stewardship in the Hudson River Estuary Watershed developed by Metropolitan Conservation Alliance, funded by the Estuary Program
- DEC Estuary Grant to complete a Natural Resources Inventory
- Technical assistance to draft a Conservation Overlay Zone
“We had a different senator elected. I approached her, and she was able to get authorization passed for all municipalities in Ulster County. After that, we pursued it in New Paltz. There was pushback from the New York State Association of REALTORS (NYSAR), but the referendum passed in New Paltz in part due to the plans we had adopted previously - the Open Space Plan, the Natural Resources Inventory, the farmland protection plan, and the historic preservation plan. We built the Community Preservation Plan (CPP) based on all of those previously accepted plans that everyone supported. The CPF referendum was passed with a 75% approval rating in New Paltz. After that, when other towns tried to pass it, NYSAR didn’t fight it anymore.” (Neil Bettez)

Investing in conservation inventory and planning can serve as a springboard for a community to move forward with a CPF, where authorized, and benefit from the conservation financing generated by a local real estate transfer tax.

“This means the town now has a conservation fund. Every time a house is sold above the median sale price, there is a 1.5% tax on anything above that. This one-time fee goes into a fund that the town can use to purchase easements or buy property—this is how we are trying to preserve the land. But like I said, we were able to do that because we had all of the other plans already in place.” (Neil Bettez)

Wetland and Watercourse Protection Law
The Town of New Paltz’s Wetland and Watercourse Protection Law regulates activities that might affect wetlands as small as 0.1 acres. The law protects 50-foot buffers around wetlands between 0.1 and 1 acre in size, and 100-foot buffers for wetlands larger than 1 acre. The New Paltz law also protects watercourse buffers ranging from 50 to 200 feet. Enacted in 2011, the law proved especially valuable after a Supreme Court decision in May 2023 removed federal protections for inland wetlands lacking a continuous surface connection to bodies of water.

“The day after the Supreme Court decision, we had applicants before our code office saying they wanted to do stuff [construction, development, etc.] that was previously prohibited in order to protect wetlands. It was that fast. People were saying: ‘Well, there’s no more law. We can do what we want to.’ But we had our own [local] law in place, and we were able to say, ‘No, I’m sorry. New York has laws. And actually, the town has laws that are still working.’ And people went away. It was amazing.” (Neil Bettez)

Community Engagement In Conservation Planning
Neil and Amanda described people in New Paltz as being passionate about the environment. One of the attractive features for residents is the easy access to nature and protected lands, such as Mohonk Preserve and Minnewaska State Park Preserve.

“New Paltz is a really interesting place to live because there is a lot of awareness. You can see it in all of our documents. You go back to our comprehensive plan from 1995, and residents were talking about preserving open space, waters, and recreation. And that interest has continued.” (Amanda Gotto)

Amanda described the level of public participation in conservation planning as high. She added that more than a hundred people were involved in the creation of the NRI, writing, providing input and photos, and then reviewing the document.

“We have a very engaged Environmental Conservation Board. We have a Climate Action Coalition of people who are volunteers. They are willing to hold signs or review a document, especially if you encourage them. Our Climate Smart task force has a real core of committed members. People who worked on the CPF—they are folks who had been on the planning boards years before, and they remain interested.” (Amanda Gotto)
One of the challenges with public engagement in conservation planning in New Paltz is that there are multiple communication channels.

“Not everyone listens to the same radio station or watches the same television channel. Things get announced on the town and village community websites, but it’s just really hard to know how to get a message out to everybody.” (Neil Bettez)

Amanda described different strategies the Climate Smart task force used to reach different audiences and increase awareness among residents:

“We had a workshop at the community center that was advertised in the paper, online, and through fliers. We got about 40 people to show up. We had an online survey. Then, we did pop-ups—we would go to the farmers market on Sundays, to the movie night in the park, and other events organized by the recreation department. We would go with our little table and ask people, ‘What do you think about climate change?’ and ‘What do you think New Paltz should be paying attention to?’ It is just hard to figure out ways to engage everybody.” (Amanda Gotto)

Raising public awareness and involving residents in planning and decision-making creates a greater sense of ownership and commitment to local conservation efforts. This engagement can also help in identifying key environmental concerns specific to the residents.

**Intermunicipal Collaboration**

The Town of New Paltz has rich experience collaborating and exchanging knowledge with other municipalities in the Hudson River estuary corridor. During the implementation of the CPP, New Paltz received advice and help from the town supervisors of Warwick and Red Hook who were early adopters and leaders in implementing CPFs. With the Critical Environmental Area (CEA) project, the town learned from the Town of Wawarsing’s experience. The towns of New Paltz and Lloyd collaborated on habitat mapping as participants of Hudsonia’s biodiversity assessment training.

“There were members of both towns’ environmental commissions and other volunteers associated with different boards or committees participating in Hudsonia’s biodiversity assessment training. That is an example of a real, true, intermunicipal effort. It wasn’t leading to a plan or policy, but it was an information gathering kind of process and training.” (Neil Bettez)

New Paltz is also engaged in re-establishing the Wallkill River Watershed Alliance, which was co-founded by former Village of New Paltz Mayor Jason West. The Wallkill River originates in New Jersey, which creates some complexity for watershed planning. New Paltz is also involved with the Hudson Valley Regional Council, which brings together members of CACs and CSCs to share experiences and ideas. Amanda spoke at one of the CSC leadership training programs on the topic of grant writing and responds regularly to requests from other communities for help with their Climate Smart actions.

Neil said that county planning board meetings usually have a representative from every town and village in the county discussing different projects, which provides a great opportunity to learn from each other.

“Usually, the local representative on the county planning board is on your community’s planning board. So, they come back from the county board meetings with information and knowledge to share.” (Neil Bettez)

New Paltz is also involved with the organization called International Council for Local Environmental Initiatives (ICLEI)—Local Governments for Sustainability. ICLEI is an international non-governmental organization that promotes sustainable development.

**Challenges Faced by the Town**

One of the biggest challenges Neil and Amanda mentioned relates to applying for grants:

“Grants, in general, are just tough. The [NYS Grants Gateway] application portal is not really user-friendly; coming up with the match can be difficult. Not only are we a little town and we don’t have a big municipal budget, but we also do not have a huge municipal staff, either. So, we come back all the time to volunteers. But then if you are awarded the grant, you have to administer the grant, file the reports, and take care of other things. We are happy to receive grants because it means we can do things, but if there was another way to do it, especially for smaller communities, I think that would be great.” (Amanda Gotto)

Neil said that it is hard to apply for multiple grants because they often have the same due date:

“Historically, different agencies had different due dates for grants. Now, [in New York State] it is one due date for all grants—end of July, every year. It is a lot harder because you have to pick and choose. You cannot apply for ten grants because you are not going to get ten grants, right? So, we are applying for more localized grants that are just for one town, and that is okay at the state level. But I would like to see applications for some of the federal grants done at the county level. For example, get some sort of an EPA grant for the whole Wallkill watershed and have the county or state write the application. It is hard for New Paltz to write a grant focused on a watershed that is 900 square miles.” (Neil Bettez)
A financial challenge in conservation planning is the need to hire a consultant to help prepare a conservation plan or policy, which can require finding additional funding. New Paltz received a grant from the Hudson River Valley Greenway to create the CPP, but volunteers also helped the committee to draft the CPP and conduct GIS analysis. Neil expressed his gratitude to the people of New Paltz for sharing their expertise and providing assistance to the town.

Next Steps

Currently, the Town of New Paltz is working on implementing conservation overlay zoning to control future development in an area of town with rich ecological resources. Conservation overlay zoning establishes additional rules over existing zoning to protect priority natural or cultural resources. The proposed overlay zoning in New Paltz will require a conservation design process for all subdivisions as well as single-family homes on lots of six acres or more in the overlay area. This policy would help preserve unfragmented forest and wetland habitats, and the approach was a preferred alternative to CEA designation, which is not as explicit about regulated activities.

Advice to Other Municipalities and Strategies for Success

Neil recommended tackling one initiative at a time instead of trying to initiate several conservation actions at once:

“Do things in increments. For example, our conservation overlay zone builds on our existing plans. So, you get momentum going, and then it is easier to keep doing it. Do an NRI or an open space plan first. Start with something that you know people are going to be passionate about, something not controversial. Pick a policy that is going to have some support, and then you can point back to that and say, ‘Well, we did this, and the world didn’t end. So, now we want to do the next thing.’ That also builds some trust with the community.” (Neil Bettez)

Time and money are often big obstacles in conservation planning. Neil said that external help—whether from volunteers or non-profit organizations—is very important for the successful implementation of conservation policies.

“If you have someone who is willing to take the lead and put in effort, like Amanda did with the NRI, that is how the process happens. And you have to make it easy for people to do the right thing; for example, by giving a grant or having consultants. It is also easier if there is already a law that they can copy. Something that the Estuary Program could do is put model laws forward for conservation actions like wetland setbacks, for example. That is one of the things we try to do in New Paltz: when we are working on a conservation law, we try to create something that is easy to replicate by other municipalities.” (Neil Bettez)
Town of Philipstown

County: Putnam
Nearest city: Peekskill
Population: 9,831 (2020)
Town Supervisor: John Van Tassel

Municipal Conservation Efforts Index value: High

Conservation tools in place:
- Natural Resources Inventory
- Open Space Plan
- Open Space Index
- Community Preservation Plan
- Conservation Zoning or District
- Conservation Overlay Zone
- Wetland Buffer Protection
- Wetland Protection
- Watercourse Buffer Protection
- Steep Slope Protection
- Conservation Subdivision
- Conservation Advisory Council or Board
- Climate Smart Communities Pledge
- Climate Smart Communities Certification

Natural Resources and Biodiversity

Philipstown is bordered to the west by the tidal Hudson River estuary, and the entirety of the town is in the Highland’s SBA, a regionally significant landscape recognized by the Estuary Program for its extensive forest and high diversity of species and ecological communities. The Highlands are also valuable for outdoor recreation. Most of the waterways in town drain directly to the estuary via small tributaries, including the Philipse Brook, Indian Brook, and Foundry Brook, while other portions are in sub-watersheds of Fishkill Creek and Peekskill Hollow Creek. The estuary shoreline area of the town is especially biologically rich and includes Constitution Marsh, one of three Important Bird Areas of statewide significance in the town.
More than 40 percent of Philipstown is protected state and federal land.
Conservation Overlay Zone

Conservation overlay zoning is a land-use tool that aims to protect natural and cultural resources valued by the community, such as stream corridors, wildlife habitats, and scenic ridgelines. Whereas standard zoning traditionally focuses on human settlement, overlay zones introduce additional standards and incentives to existing zoning to address conservation needs within a defined area. In Philipstown, these additional regulations of conservation overlay zones have been instrumental in protecting several priority resources, ranging from source water to scenery. The Aquifer Overlay District, for instance, was designed to protect groundwater resources that currently provide drinking water for private wells and, in the future, could be used to provide public water supplies. Similarly, the Cold Spring Watershed Overlay District protects the water supply of the villages of Cold Spring and Nelsonville, and includes the entire watershed of Foundry Brook. Additionally, the town’s Open Space Conservation Overlay District places special protections to parcels of land identified in the open space index that are 30 acres or more in size. Meanwhile, the Floodplain Overlay District controls development within the 100-year floodplain in order to minimize flood damage and protect water resources.

Andy said that Max Garfinkle, the Philipstown Natural Resources Officer/Wetlands Inspector, developed a GIS-based mapping tool that includes the town’s different overlay districts. The mapping tool provides board members, the town engineer, and building inspector with access to view digital maps of regulated areas like steep slopes; drinking water resources; and wetlands, watercourses, and their buffers. Refining the mapping tool and providing training to Philipstown officials is planned.
for the future. Andy described the role of the Natural Resources Officer/Wetlands Inspector as exceedingly important:

“Before this position was created, we had a Wetland Inspector, which was not ideal because wetlands, water courses, water bodies, and their buffers do not exist on their own. They are integrated into the whole environment. So, to have somebody with a good background in wildlife biology and ecology is very important. We also have a part-time engineer, Ron Gainer, who is also very helpful.” (Andy Galler, chair of the Conservation Board)

Open Space Index

Nat and Andy discussed the significance of the open space index as a valuable conservation strategy that benefits the town by setting preservation and acquisition priorities for land-use planning and policy decisions. After adopting the town’s open space index in 2009, Philipstown redesignated its CAC as a CB, conferring additional authority to its members as outlined in NYS GML Section 239-7. The open space index was then amended in 2016 to include an updated map and summaries of the 27 areas identified as conservation priorities.

Community Preservation Plan

The updated open space index proved valuable, as it informed the town’s CPP that was adopted in 2023. A CPP is similar to an open space plan but has specific content and process requirements that are outlined in NYS GML Section 6-s. Philipstown partnered with Hudson Highlands Land Trust to facilitate the process and CPP task force, which included members of the Planning Board, comprehensive plan update committee, and CB, and at-large residents. For communities pursuing conservation financing through a dedicated CPF, a CPP must be adopted first.

Andy and Nat indicated that having open space financing would be very helpful for the town. There are certain parts of the town that were subdivided even before zoning was in place. Many of the resulting lots are tiny and not buildable; with an open space fund, the town could buy some of these lots to maintain as undeveloped land.

To help a town board in assessing its community’s interest in enacting a CPF, feasibility studies are typically conducted, and residents are polled. Philipstown conducted its feasibility study at the height of the COVID pandemic and results suggested that residents were concerned about various competing needs within the community.

“There was some initial talk about the CPF mechanism for raising money, but it got sidelined for a while because of the results of a survey that was done. I think the judgment was made that we are not quite ready for an open space fund.” (Nat Prentice)

While implementation will be more difficult without financing, the CPP can still serve as a roadmap for pursuing the community’s conservation priorities through practice and policy.
Community Engagement In Conservation Planning

Nat and Andy noted the considerable activism and public engagement in natural resource protection within the town. Nat expressed gratitude for the ongoing willingness of people in Philipstown to volunteer to serve on boards and committees, as well as their dedication in contributing their time and expertise to support the municipality.

“Whenever a position comes up on a board, there seem to be several candidates that come up. I think this level of involvement is a tradition that we have in Philipstown, and a couple of real activists started it. We are very fortunate—we have excellent people in the town who are willing to serve on the boards. We can always use more help, but volunteerism for all of the boards has been really good.” (Nat Prentice)

Andy outlined different mechanisms of public outreach used by different boards in Philipstown:

“Our town clerk has done a great job having a resident email list with a very large number of subscribers. So even if you are not involved daily, you can see what the town board meeting agenda is with associated materials, or the CB’s agenda, etc. The emails go out several times a month. And I think our town website is pretty good, too. If you want to find out something about a particular project or a proposal, sometimes it takes a little bit of digging but everything that has been done in the last five years is all there.” (Andy Galler)

Andy finds it beneficial that Philipstown televises various planning board, zoning board, conservation, and town board meetings through the town’s YouTube channel.

Intermunicipal Collaboration

The Town of Philipstown includes the villages of Cold Spring and Nelsonville, and the three local governments work together on stormwater management to control runoff from rainfall. Because stormwater doesn’t adhere to municipal boundaries, it is an environmental issue for all of these communities and an ideal opportunity for intermunicipal collaboration.

“I know we have these issues that cut across village and town lines, and my sense is that our town supervisor gets along well with the two mayors of Cold Spring and Nelsonville, and they discuss opportunities to share resources between the entities.” (Nat Prentice)

Furthermore, climate action also benefits from community collaboration. Philipstown became a Climate Smart Community in 2017, and more recently, the Village of Cold Spring followed suit by taking the pledge and establishing a Climate Smart Task Force. Nearly 50 volunteers are actively engaged in regular meetings of the climate smart groups, partnering to complete energy efficiency and emissions reductions campaigns in both municipalities.

Challenges Faced by the Town

Philipstown faces some challenges related to public engagement. A significant portion of the town’s population are weekenders – people who live in the town solely during the summer months. While some of them show considerable interest in town affairs, others do not.

“Geographically we are a big town, but population-wise we are tiny. I think that people are involved in conservation efforts. We are lucky that we have two local newspapers, which help people to stay connected. But there are also a lot of divisions.” (Andy Galler)

Andy explained that Philipstown is divided into three school districts, further complicating communication among the residents and contributing to a sense of division within the community across a number of issues.

“There is a part of Philipstown known as Continental Village. Sometimes you hear from its residents that their interests are not well represented, that they live somewhat a split life because they are very close to Westchester. They often get mixed in with Westchester because of the school district.” (Nat Prentice)
Nat noted that both 2007 and 2021 versions of the comprehensive plan proposed a possible consolidation of the school districts as a means to foster a more unified communication approach.

**Next Steps**

Addressing the effects of climate change is a priority in Philipstown, particularly as the shoreline community considers the impacts of sea level rise.

“There has been a discussion at the Town Board, the CB, and, I believe, at the Planning Board about what we can do about sea level rise, and how it is going to affect us because we do have 18 miles of shoreline on the Hudson River. While most of it is owned by the railroad, it is still going to affect some houses on the other side of the tracks. This is an issue that we have not dealt with yet, but everybody is starting to think about it.” (Andy Galler)

Situated along the Hudson River, Philipstown is part of an estuary ecosystem, connected to the sea and subject to tidal influences up to the Federal Dam in Troy. Estuary shoreline municipalities like Philipstown are grappling with the challenges posed by sea level rise and the other potential impacts of climate change like storm surge. Scenic Hudson estimates that sea level in the estuary have risen by approximately one foot over the past century, a rate exceeding the global average. 10

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Advice to Other Municipalities and Strategies for Success

Andy recommended that local lawmakers focus on crafting laws and ordinances that actively seek to make improvements, rather than solely imposing restrictions. By emphasizing proactive measures for improvement, these regulations can effectively address issues while also fostering positive outcomes for both the community and the environment.

“If you are going to have a subdivision or build a house, think about how it can be done in a way with less negative impact on the environment and on the community. There are ways to do that. I get phone calls from other people that run CBs or committees here or there, and they are frustrated at times. And what I always tell them is, ‘Our job is not to say ‘no.’ Our job is to help the town or the Planning Board, and to try and make things better.’” (Andy Galler)

In doing so, municipalities can prioritize conservation policies that address pressing environmental concerns while also promoting a resilient future for the community.

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Town of Woodstock

County: Ulster
Nearest city: Kingston
Population: 6,287 (2020)
Town Supervisor: Bill McKenna

Municipal Conservation Efforts Index value: High

Conservation tools in place:
- Natural Resources Inventory
- Critical Environmental Area
- Conservation Zoning or District
- Wetland Buffer Protection
- Wetland Protection
- Watercourse Buffer Protection
- Steep Slope Protection
- Conservation Subdivision
- Conservation Advisory Council or Board
- Climate Smart Communities Pledge
- Climate Smart Communities Certification

Natural Resources and Biodiversity

Most of Woodstock is forested, and the town’s landscape ranges from high-elevation Catskill peaks like Overlook Mountain to streams that form valleys through the town, including Warner Creek, the Beaver Kill, the Little Beaver Kill, and the Saw Kill. The town’s large forests, meadows, ledges and talus, wetland complexes, and stream corridors support wildlife species that thrive in unfragmented, connected habitats.
Case Studies
Town of Woodstock
Woodstock adopted “Zena Woods” as a CEA, to preserve the diverse habitats of the area which include forests, shrublands, meadows, forested swamps, vernal pools, ponds, marshes, small streams, and a segment of the Saw Kill, which is a 14.3-mile-long tributary of the Hudson River. Alex shared that the CEA was an unpopular initiative at first, but it passed eventually: “What got us to the finish line was a lot of public outreach, and a lot of communicating to people about what the CEA was, and how it would affect each person. Interestingly, now that there is a large development proposed in that same area, all of a sudden everyone is really excited that the CEA exists there. It is having a little bit of a resurgence in popularity after people were initially very upset about it.” (Alex Bolotow, former chair of Environmental Commission)

The designation of CEAs is an example of a proactive planning step that may not be fully understood or appreciated for their conservation value until implemented. When policies like CEAs are grounded in science and shaped by public input, and correctly implemented, they can help a community ensure that development occurs in appropriate places and that conservation priorities are protected.

Examples of Successful Conservation Policies and Actions

**Wetland and Watercourse Protection**

The Town of Woodstock’s Wetland and Watercourse Protection Standards represent an effective model for local wetland and stream protection. These standards were implemented in 2009 and they regulate activities that might affect wetlands of any size, with 100-foot buffers for wetlands larger than 0.1 acre and 50-foot buffers for smaller wetlands. Regulations are also established for any natural, artificial, permanent, seasonal, or intermittent waterway, with protected buffers ranging from 30 to 100 feet. A wetland and watercourse inspector has the responsibility of enforcement and processing permits.

**Natural Resources Inventory and Critical Environmental Area**

Ken and Alex discussed the NRI and the CEA as successful conservation actions taken in Woodstock. The NRI in particular resulted in a collection of maps used to inform planning and decision-making.

“The land-use attorney for the town said that Woodstock is very fortunate to have the wetlands and watercourse laws and NRI maps. Melissa Gray, who is the administrative assistant for the Planning Office in the Town of Woodstock, said she uses our maps every day to answer people’s questions about where things can be built. These maps were one of the major motivations to do the CEA.” (Ken Panza, former Town Board Member)

CEAs are a designation that can be made by a municipality under SEQRA to recognize a specific geographic area with exceptional or unique characteristics. In 2022, the Town of Woodstock adopted “Zena Woods” as a CEA, to preserve the diverse habitats of the area which include forests, shrublands, meadows, forested swamps, vernal pools, ponds, marshes, small streams, and a segment of the Saw Kill, which is a 14.3-mile-long tributary of the Hudson River. Alex shared that the CEA was an unpopular initiative at first, but it passed eventually:

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**Community Engagement In Conservation Planning**

Historically, the Town of Woodstock attracted many communities of artists due to the scenic beauty of the area. Ken said that keeping visual aspects of the town intact is important.
to Woodstock residents, they are “part of the town’s DNA.” Alex also mentioned that many residents are very connected to their land and know its history over the past 20, 50, or more years, but may have different perspectives on what the future could bring or the need to plan for change and future threats.

“It is wonderful to hear what residents have observed on their property and how they understand things to be. But often, that understanding does not translate the more radical changes that we see now, or that will be coming. For some people, it is harder to accept that those radical changes will need to be addressed. I moved here from New York City, where you are not connected to nature in that same way. People here know the migration and planting patterns, and the idea that they might be changing seems very difficult to communicate. I saw that with the CEA, when we heard from people who had tremendous knowledge about what is happening on their land, but not about what might be going on in the future, or how we need to prepare. So, it’s kind of a blessing and a curse in some ways.” (Alex Bolotow)

Since the pandemic, community engagement in public meetings decreased because the usual venues were shut down, and some of the mechanisms of public outreach are no longer working.

“Before the pandemic we had periodic meetings on specific topics, and a lot more involvement. The Environmental Commission or local library would sponsor the program. We could announce something at the community center and gather a crowd, 50 or 60 people, to come for a presentation on, for example, electric vehicles.” (Ken Panza)

Alex explained that communicating with the public has been a challenge that requires trying a variety of outreach methods. In addition, many new residents moved to Woodstock in the past three years, and the Environmental Commission does not have contact information for all of them.

“There used to be a local newspaper (Woodstock Times) where you could publish things, and people would read it. We tried collecting email addresses at events. When we proposed the CEA, Ken got all the physical addresses of every parcel in the area, and we hand-delivered letters, because the town didn’t want to pay for postage. So, we made phone calls and sent emails. But it is difficult to let everyone know that something is going on and they should pay attention.” (Alex Bolotow)

Another issue with public engagement includes unequal community representation in conservation decision-making or participation in the process, which can result in outcomes or policies that do not reflect the full spectrum of residents.

“A lot of the people who are not represented in the discourse of the town are newer people. It is not necessarily traditionally underserved groups. It is younger people who are not on social media like Facebook or Nextdoor, or people who moved here more recently. There are also people who are probably not being served well or enough for financial reasons or due to limited access. Then, there are people who moved here from New York City - they are probably high-income residents who have access to a lot of things, but they are not coming to town board meetings and not joining committees. They are not volunteering. So, you do often hear one very homogenous kind of opinion here.” (Alex Bolotow)

### Intermunicipal Collaboration

The Town of Woodstock worked with the towns of Kingston and Ulster on a management plan for the Sawkill Creek, which runs through the three towns. Woodstock took the lead and applied for a grant from the Estuary Program in 2002 to fund a Sawkill Watershed Stewardship and Education project that included a stream corridor assessment and preliminary management plan. Ken observed that coordinating with multiple towns is challenging due to varying levels of capacity and interest. When the results of the watershed study were complete, it was clear each town was focused on its own problem areas and did not consider an overall management plan for the Sawkill a priority. For example, Woodstock, with the longest stretch of the Sawkill, was concerned with log jams and periodic road flooding, while the other towns had concerns about residential flooding and high turbidity after storms. Intermunicipal cooperation on watershed protection can sometimes be difficult for municipalities due to the need for officials to be responsive to the local needs of residents, despite streams and their management extending beyond town boundaries.

In a recent experience that highlighted differences in local conservation policies in Woodstock and neighboring Saugerties, Alex noted that it would be good to see more intermunicipal collaboration.

“Two years ago, there was a big development planned in Saugerties right on our town border, where wetlands spanned the municipal boundary. The Town of Woodstock and its neighbors were very concerned because the project sponsor planned to fill a lot of wetlands on the Saugerties side. It has become a complicated issue because the landscape doesn’t stop at the town line, and we have much stricter wetland laws in Woodstock. Eventually, the development didn’t happen, so it was a success, but it would have been so much better to have that experience of working together within adjacent areas because we do share so many overlapping ecosystems.” (Alex Bolotow)

### Challenges Faced by the Town

One of the challenges that the Environmental Commission faces is convincing the public to pursue recommended conservation policies, especially when they address longer-term or less
tangible outcomes. Similarly, town government, can be reluctant to change:

“If we propose to expand the watercourse law, we often hear from the town government, ‘It has worked until now.’ So, they are looking backwards to see when something has failed, and we are trying to look forward to anticipating the needs that we will have down the line. I think that makes future planning a bit more difficult because we are planning on the past.” (Ken Panza)

Ken stated that the town board has had trouble convincing people that flooding is a problem in Woodstock:

“We have all these flood maps; people just don’t believe them. We had a meeting with the Department of Transportation about redoing the part of Route 212 that runs through Woodstock. They provided flood maps of the center of the town showing half of the town in the flood zone. And people didn’t believe it could happen. They said, ‘I’ve lived here for 50 years, and I’ve never seen a flood in this area.’ We tried to include flood mitigation in our comprehensive plan but failed, because for the town government and the people who worked on the comprehensive plan, flooding was not a problem. So, we are working with the New York City Department of Environmental Protection trying to figure out how to get the people of Woodstock aware of flood risk.” (Ken Panza)

Alex thinks that lack of an orientation process for new municipal volunteers is an obstacle to accessing the information they need to use in their town committee or board roles:

“When I joined the Environmental Commission, no one sat down to explain anything or show what the town code looks like, or where to find things, and what I was supposed to be doing. I think, generally, across the board, we have a lot of committees and boards that people join, but no one explains to them how to find that information.” (Alex Bolotow)

Alex added that a lot of people who are involved with different boards are not trained in what they are empowered to do in their positions. Alex said the best advice she received when joining the Environmental Commission was reading the town code to understand the policies that Woodstock had in place.

“I think one of the difficulties generally is not necessarily passing the law; it is the implementation of them, partly because there is pushback, but I think partly because there is just a lack of knowledge about what we already have done in Woodstock.” (Alex Bolotow)

Municipalities may want to consider periodic refresher training for current board and committee members and compulsory orientation for all newly appointed officials to ensure a clear understanding of the scope of their positions and to review existing plans and policies and the municipal code for their own communities. While it has been mandatory since 2007 for members of local planning boards, zoning boards of appeals, and county planning boards to receive a minimum of four hours of training each year, the requirement may be met through educational programs on topics unrelated to decision-makers’ own municipal plans and policies.

**Next Steps**

The Town of Woodstock currently has a new zoning law under consideration that includes conservation overlay zones that would require new development to set aside 50% of the property as a conservation area. The proposed law is still under debate.
Advice to Other Municipalities and Strategies for Success

Ken and Alex discussed how the technical assistance, outreach, and training received from the CLU Program were valuable tools for conservation planning. They also described how they learned from the experience of what other municipalities had done in conservation planning.

“It was helpful to learn about the experiences of other communities, how the process had worked there, what some of the obstacles were, and what to expect. Don’t reinvent the wheel. If other towns have already done something very similar, ask them. You don’t need to start it from scratch if someone else already knows the way. Sharing that kind of experience and knowledge through networking is a great way. When we did a CEA, we talked to as many people as possible, learned what they knew and listened to their concerns. Getting as much input as possible helps to serve the community positively.” (Alex Bolotow)

They found that a successful strategy for convincing people of the importance of local conservation is having a third-party expert come in and have conversations with the town government and the community. Alex said that it can help remove any political or personal biases.

“People were much more likely to understand and agree and be interested when someone from the Estuary Program was delivering the presentation rather than me. I think that more broad collaboration would be really helpful in terms of communicating some of these things and the needs. It was good to have someone come in and give us professional answers, so we could reassure people and explain to them what was happening.” (Alex Bolotow)

Ken stressed the important role of the Environmental Commission for the town, because it can assist the Planning Board members in addressing questions from the public, for example, those related to the environmental evaluation of a project.

While public outreach is challenging in Woodstock, Ken and Alex found that the outreach for the CEA was incredibly effective because it was transparent and comprehensive. They also noted the importance of building trust.

“A previous law, the wetland protection law, had no public outreach. And now, no one knows what it is, no one can talk about it. The work that Alex did with the CEA—those additional sessions and public meetings and communication—really made it effective.” (Ken Panza)

“We asked people, ‘What can we tell you? What can we answer for you?’ We answered every single question publicly so that no one felt like anything was being hidden. Having a lot of transparency was key. This is another piece of advice—make your process really transparent and make it easy for people to be involved and see what you’re doing all the way through.” (Alex Bolotow)
This publication delved into the decision-making processes of local government officials and volunteers regarding municipal conservation planning. It provides valuable examples for other municipalities, conservation practitioners, and anyone else interested in these types of locally-driven approaches to biodiversity conservation. The case studies offer insights into both successful initiatives and challenges encountered in conservation planning in the Hudson River estuary corridor while also reflecting on the outreach and technical support provided by the Estuary Program.

The MCEI indicated a range of conservation efforts in the 256 municipalities in the Hudson River estuary corridor, with most (97%) having implemented at least one action. Of the 19 conservation actions we tracked, the most undertaken by a municipality was 15 and the least was 0. The candid interviews provided by local leaders and volunteers helped to illuminate why conservation planning is valuable, why some outcomes are harder to achieve or implement than others, and how community engagement is essential to success.

Conservation Planning Recommendations

Collectively, our interviewees have many decades of experience in local conservation and land-use planning and were able to share thoughtful insights and many useful recommendations to advance local conservation actions. Some of these recommendations include:

- Implement conservation actions gradually, starting with initiatives that garner public interest and have community-wide benefits, and serve a foundational role for future planning, such as an NRI or an open space plan, and then advance to other plans and policies based on these completed documents. Creating a Natural Resources Inventory: A Guide for Communities in the Hudson River Estuary Watershed (Haeckel and Heady, 2014) is a great resource to learn a step-by-step process of creating an NRI.

- Take advantage of technical assistance opportunities and apply for grants to support local goals. Leverage assistance from organizations like the Estuary Program, including attending webinars and training sessions.

- Learn from other municipalities by attending their board meetings, asking pertinent questions, and adapting their efforts when appropriate. Do thorough research and avoid reinventing the wheel.

- Educate community members about local environmental issues, build trust, and be transparent when sharing proposed initiatives and policies.

- Learn what’s going on in your municipality by attending the meetings of other commission and boards. Cultivate a strong relationship with your municipality’s elected officials.

- Use a variety of public outreach methods to raise awareness and engage different population groups, including social media, municipal websites, email, physical mail, newspapers, radio stations, television channels, YouTube, and tabling at local events.

- Invite diverse perspectives on committees and boards by including representatives from different population and interest groups and strive to get as much of a cross-section of the community as possible.

Challenges in Local Planning and Policy

Many municipalities we profiled in this report shared their challenges with the process of public engagement and education to advance conservation initiatives. Major contributing factors are the shift in how people receive information and the inability to communicate with all residents comprehensively and affordably. Local media outlets are closing; broad mailing efforts come with costs; and resident email lists are often incomplete. Public meetings were once a standard way to share information; however, attendance has declined since the onset of the COVID-19 pandemic and the shift to virtual meetings. Additionally, towns such as Bedford, Milan, and Philipstown have many part-time residents who have minimal involvement in town affairs, making it challenging to engage them in board meetings and decision-making processes. Conversely, long-term residents have a strong connection to their land coupled with a rich knowledge about the area. However, in some communities, this attachment may make them hesitant to embrace change, particularly if a proposed conservation law involves drastic changes to the established way of doing things or addresses an emerging threat that is unfamiliar or not accepted as legitimate. Public perceptions on flooding and energy siting were discussed as examples and point to the importance of community education and outreach, despite the challenges.

The costs associated with conservation planning were an additional concern for many municipalities. Some actions can be expensive, for example, if they require hiring a consultant. While federal and state grants as well as funding from non-profit organizations provide financial support to municipalities, navigating the application process can be challenging and often requires third-party assistance. Once awarded, grants require administration that can necessitate municipal staff time.
Conclusion

Many municipalities in the Hudson River estuary corridor are successfully engaging in conservation planning and taking proactive action to address natural resource priorities and concerns. Despite the challenges they encounter, these communities are adopting conservation strategies, leveraging available grants, fostering collaboration with other municipalities, and employing a diversity of outreach methods to lay the groundwork for effective and sustainable conservation efforts in the region.

The Estuary Program is a great source of up-to-date science-based information and technical assistance, as well as grants and funding opportunities. For more than two decades, the Estuary Grants Program implements priorities outlined in the Hudson River Estuary Action Agenda 2021-2025. As of 2024, the Estuary Program has awarded 643 grants totaling $28 million. Funding for the DEC’s Estuary Grants program is provided by the State’s Environmental Protection Fund, a critical resource for environmental programs such as land acquisition, farmland protection, invasive species prevention and eradication, recreation access, water quality improvement, and environmental justice projects.

Appendix: Municipal Conservation Efforts Index Methodology

- We integrated a set of 19 conservation actions to develop a comprehensive Municipal Conservation Efforts Index (MCEI) that measures municipal conservation practices, plans, and policies. The MCEI represents a comprehensive evaluation approach to using local practices, plans, and policies by municipal governments to support conservation, and builds on a smaller-scaled data-collection effort completed by the CLU Program in 2009.

- We used online resources (such as eCode360@Library, municipal web pages, and online databases) and direct outreach to municipal officials via phone and/or email to collect the data and determine what conservation action from the list (Table 1) were present in a municipality or in progress but incomplete as of December 2021 (Figures 1 and 2).

- We calculated the MCEI for each municipality in the Hudson River estuary corridor as the sum of weighted conservation actions on the municipal level. All conservation actions are important, but some carry more weight than others in the index because they require more effort to be enacted and/or have a higher potential to protect natural resources and biodiversity. We determined weights for each conservation action using a Pairwise Comparison Matrix method based on two criteria: a) the difficulty of enactment of the tool and b) the action’s conservation impact if it is implemented as prescribed. We used the local expertise and knowledge of the Estuary Program staff to assign weights to conservation actions using these criteria.

- As a result, each of the 256 municipalities in the Hudson River estuary corridor received an index score on a scale from 0 to 1. The highest calculated score was 0.78, the lowest score was 0, and the average score was 0.253. We applied the Natural Breaks classification method to determine the upper and lower limits of the class values by distributing values among three classes based on natural groupings inherent in the data. As a result, index values between 0 and 0.2 were considered low, values between 0.21 and 0.4 were coded as medium, and values between 0.41 and 0.78 were coded as high (See Map 2).

- The MCEI includes actions completed as of December 2021; however, the interviews may include initiatives undertaken since then and may also go beyond the actions included in MCEI.
About the Authors

Daria Ponstingel is a postdoctoral research associate at the Department of Natural Resources and the Environment at Cornell University. Daria earned her Ph.D. in Geography from Texas State University at San Marcos. Her research investigates human aspects of environmental well-being, including how decision-making, governance and policy affect the outcomes of socio-ecological systems, and how these impacts can be managed and regulated. Her research interests also include social vulnerability to environmental disasters, and land-cover and land-use change analysis. Daria uses GIS and remote sensing techniques to analyze ecological change and evaluate ecosystem services, such as carbon sequestration. In her work, Daria also applies the diverse economies and Ostrom’s frameworks to understand human behavior in natural resource management.

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Laura Heady leads the Conservation and Land Use Team at the NYSDEC Hudson River Estuary Program through a partnership with Cornell University. She has more than 20 years of experience working to advance biodiversity conservation in the Hudson estuary watershed, including creating and implementing innovative programs to help communities with conservation planning; developing new partnerships; and contributing to New York State policy and planning initiatives. Laura also has interests in science communication and habitat connectivity and is the founding manager of the volunteer Amphibian Migrations & Road Crossings Project. She earned her Master of Science degree in biology with an emphasis in ecology from Idaho State University and Bachelor of Science from Rutgers University.

Acknowledgments

This outreach publication was prepared for the NYS Water Resources Institute at Cornell University and the NYS Department of Environmental Conservation Hudson River Estuary Program, with support from the NYS Environmental Protection Fund.

This project would not be possible without the generosity of municipal officials and volunteers who offered their time and candidly shared their experiences. Their commitment to conservation and their communities is inspiring and we’re grateful we could include some of their stories in this publication.

We would like to thank Ingrid Haeckel, Hudson River Estuary Program Manager, and Christine Vanderlan, Conservation and Land Use Specialist for their expertise and assistance with municipal conservation actions data collection and interpretation.

We express our gratitude to the student researchers from Cornell University who contributed to the data collection for the Municipal Conservation Efforts Index, as well as to the descriptive statistical and qualitative analyses. These students include Caroline Deck, Sara Allen, Devin Perlo, Alfredo Con Jr., and Karen Perez.

We are grateful to Dr. A.R. Siders (Assistant Professor at the University of Delaware’s Biden School of Public Policy and Administration) and Stevie Adams (Freshwater Specialist with The Nature Conservancy), who provided valuable guidance on the study design and data collection procedures. Thank you also to Dr. George Franz for his helpful peer review of this publication.
References


Useful Resources

Documents


Websites

Department of Environmental Conservation of New York State: https://dec.ny.gov/

Hudson River Estuary Program: https://dec.ny.gov/nature/waterbodies/oceans-estuaries/hudson-river-estuary-program


Climate Smart Communities Program: https://climatesmart.ny.gov/

Community Preservation Funds: https://defendthevalley.org/campaign/community-preservation-fund/

Town Websites:

Town of Bedford: https://bedfordny.gov/

Town of Beekman: https://www.townofbeekman.com/

Town of Milan: https://milan-ny.gov/

Town of Nassau: https://townnassau.digitaltowpath.org:10091/content

Town of New Paltz: https://www.townofnewpaltz.org/

Town of Philipstown: https://philipstown.com/

Town of Woodstock: https://townwoodstock.digitaltowpath.org:10111/content

Hudson Highlands Land Trust engaged the towns of Philipstown and Putnam Valley when developing the Estuary Grant-funded *Green Corridors Plan for the Eastern Highlands of New York.*

Photo: N. Wooten