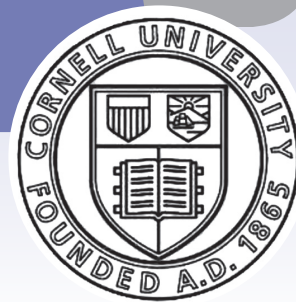


Building Local Capacity for Natural Resource-Based Planning



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A recent evaluation of the Hudson River Estuary Program's outreach and technical assistance program provided insights on municipal capacity needs and barriers to achieving natural resource conservation at the local level. The following article highlights results of the study that may be of particular interest to county leaders. For more details, see Issues 69 and 70 of the Community and Regional Development Institute's Research & Policy Brief Series at <http://cardi.cals.cornell.edu/publications/research-policy-briefs>.

Spanning more than 54,000 square miles, 13.5% of which is water, New York State's landscape is a mosaic of diverse ecological communities. The state's natural heritage includes large, recognizable features such as the Atlantic and Great Lakes coastlines; the Hudson River and Finger Lakes; and expansive forests and high peaks in the Catskill and Adirondack Mountains. At a finer scale, a variety of freshwater and tidal wetlands, streams, floodplains, meadows, woodlands, rocky crests, and other habitats are interspersed across the state. These ecosystems provide essential habitat to tens of thousands of species¹, as well as vital benefits to people, including helping to keep drinking water and air clean, absorbing floodwaters, providing for pollination of crops, and presenting opportunities for outdoor recreation. They improve community resilience, support the state's economy, and contribute to a higher quality of life for its residents.

Habitat loss and fragmentation is the number one threat to these ecosystems¹.

While protection of priority lands and waters continues to be a goal of state agencies, land trusts, and county and municipal governments, a significant amount of New York State's land is in private ownership. For instance, 76% of forest land in the state is privately owned². Decisions about future stewardship or development of private lands are made by individuals as well as local legislatures and planning and zoning boards with land-use authority. With over 1,600 towns, cities, and villages in New York State, the impact of their collective land-use decisions can be great, and the role of local planning can be instrumental in balancing future growth with protection of natural resources across municipal boundaries.

Building Capacity in Hudson Valley Municipalities

In 2001, the NYS Department of Environmental Conservation's Hudson River Estuary Program partnered with Cornell University to address the threat of habitat loss and fragmentation in the estuary watershed. Their Conservation and Land Use Program provides tools, training, funding, and technical assistance to municipal decision makers to build local capacity for adopting land-use practices, plans, and policies that protect natural resources. Local officials from more than half of the 260 municipalities in the estuary watershed have participated in

the program.³

Outcomes of Program Participation

In 2013, Cornell University's Human Dimensions Research Unit conducted a study to determine how program participants applied what they learned to land-use planning, what associated long-term conservation outcomes (municipal procedures, plans, policies) were achieved, and what were the barriers to success.⁴ The survey had a 46% response rate, with participants representing a range of positions and boards, including conservation advisory councils (CACs), open space committees, planning boards, and town/village boards, from a total of 79 watershed municipalities.

As a result of participating in the Conservation and Land Use Program, 90% of the survey respondents reported that they better understood

the principles of conserving biodiversity and factors contributing to its loss and 88% better understood why biodiversity is important. Most respondents said they learned where to go for information on planning for biodiversity (92%), they intended to use the information (91%), and they were better able to inform and influence land-use decisions (80%) as a result of program participation.

In addition, the survey found that the program achieved longer-term land-use outcomes. Participants have used program assistance to inform procedures (76% of respondents; 37% of municipalities),

especially project review, suggesting revisions to project proposals, and conducting site and habitat assessments. Participants contributed to plans (77% of respondents; 57% of municipalities), including habitat maps, comprehensive plans, open space inventories, and natural resource inventories. Participants also used what they learned from the program to contribute to municipal policies (67% of respondents; 28% of municipalities), particularly zoning updates that conserve natural areas and local laws that reduce development impacts on natural areas.

Municipal Capacity and Barriers to Conservation Actions

Two thirds (65%) of respondents indicated the demand for natural resource information to support planning and decision making in their municipalities had increased or greatly increased in the last five years, while 41% stated that the resources available for conservation (like budget, volunteers, or information) had decreased or greatly decreased over the same time period. Respondents identified lack of funding (73%), local politics (64%), inadequate resources to implement and enforce (62%), and lack of support from local leaders (52%) as primary barriers to taking conservation actions. This funding deficit



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is consistent with recent research on local capacity to address open space conservation in the Hudson Valley.⁵

Overall, 42% of respondents felt their municipality did not have adequate procedures, plans, and policies in place to conserve biodiversity. Half of respondents (50%) thought their municipal boards needed more assistance and greater commitment from their leadership to better incorporate biodiversity into land-use and conservation planning. Nearly as many (47%) felt greater coordination between municipal boards and a stronger board mandate would improve procedures, plans, or policies.


The researchers also looked at housing density (rural, exurban, and suburban/urban categories) to understand capacity differences. Interestingly, housing density did not predict significant differences in municipal outcomes, suggesting that even small rural municipalities can make progress toward incorporating natural resources into land-use planning.

Insights for Counties

Municipalities in New York State have great responsibility to address myriad planning needs, particularly in regions facing more intense land-use issues such as residential and commercial development, energy initiatives like large-scale solar installation or natural gas development, or flood mitigation and resiliency. Building capacity through programming such as that offered by the Conservation and Land Use Program can help to mitigate the deficit in funding resources and foster increased understanding and partnerships necessary for successful, locally-driven conservation planning.

Counties can provide leadership in this regard. For example, some county Geographic Information Systems (GIS) programs have developed web-based tools for viewing a county-wide natural

resource inventory (NRI) or provide GIS assistance for municipal NRI projects. Similarly, some county planning departments have created tools to assist communities with natural resource-based planning or offer related trainings. County environmental management councils (EMCs) can provide a forum for peer-to-peer learning by members of municipal CACs. Where possible, county budgets may provide needed financial-capacity building.

Finally, counties are well-situated to encourage intermunicipal cooperation that supports watershed or regional planning, which is more effective for considering large, natural systems that span local boundaries, such as streams, unfragmented forests, and ridgelines. In addition to increased capacity, achieving local conservation actions with meaningful regional outcomes requires leadership and coordination; counties are in a position to provide that vision and support. 

¹ Johnson, E. A. and D. Smith, eds. 2006. *Legacy: Conserving New York State's Biodiversity*. American Museum of Natural History, New York State Biodiversity Research Institute, New York State Department of Environmental Conservation, New York Natural Heritage Program and The Nature Conservancy, Albany, N.Y. 100 p.

² Widmann, R. H. 2015. *Forests of New York, 2014. Resource Update FS-59*. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

³ Strong, K., L. Heady, S. Allred, R. Stedman, and C. Tse. 2015. *Conservation and land use: engaging municipal officials in improving natural resource-based planning*. CaRDI Research & Policy Brief. Issue Number 69.

⁴ Allred, S., R. Stedman, L. Heady, K. Strong, and Tse, C. 2015. *Conservation and land use: linking municipal capacity and biodiversity outcomes*. CaRDI Research & Policy Brief. Issue Number 70.

⁵ Larson, L.R., T.B. Lauber, and D.L. Kay. 2014. *Building local capacity to respond to environmental change: lessons from New York State*. CaRDI Research & Policy Brief. Issue Number 63.

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