

## *Conserve resilient lands, waterways, and priority habitat*

### Strategies

Land conservation protects the valuable ecosystem services in our region in perpetuity, and is one tool that ensures resilient lands are able to remain intact and in natural cover. Protected lands contribute to improved water and air quality, provide habitat for native plants and wildlife, and provide open space and recreational opportunities for the public. Conserved lands are some of the most important areas in our County that directly contribute to preserving and enhancing the quality of life for Erie County residents.

Resilient lands are a critical focus for land conservation. Resilient land, as defined by The Nature Conservancy, is, “an area of land where high microclimatic diversity and low levels of human modification provide species with connected, diverse climatic conditions they will need to persist and adapt to changing regional climates.” Resilience is also impacted by local connectedness, which refers to the ability for species to move across a landscape without barriers; and biodiversity, which takes into account rare species, exemplary natural communities, or geological environments within a given elevation zone that are underrepresented in currently protected areas. By protecting resilient lands and areas of high biodiversity, and ensuring those lands are connected, species are better able to respond to changes in climatic conditions.<sup>1</sup>

Land conservation provides habitat for native plants and wildlife. With optimal connectivity and habitat, plants and animals are able to shift their distributions as climate and habitats change. One local example of this is the Fisher. Populations of the Fisher (*Martes pennanti*) had reached dangerously low levels, likely due to a combination of over-trapping and habitat loss caused by deforestation. However, the species appears to be making a comeback. Evidence over the last decade shows fishers significantly expanding their range in the northeast due to several factors, such as reforestation and land conservation. In Western New York, Fishers have steadily spread northward from source populations in Pennsylvania and southern NY counties. Fishers have now been observed as far as the northern tip of Erie County. As conservation efforts continue and New York continues to reforest and reconnect habitat, the future for the Fisher and other species is promising.

Land conservation provides valuable ecosystem services and avoided costs for the County. Ecosystem services are ways that people benefit from their surrounding environment. Common ecosystem services include benefits that support daily life such as air filtration/carbon sequestration, water filtration/flood regulation, soil formation and pollination. The most well known example of avoided costs in the eastern United States is the protection of the Catskill and Delaware Watersheds in place of NYC having to spend \$8-10 billion to build a water filtration plant

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<sup>1</sup> Terrestrial Resilience Core Concepts, <http://maps.tnc.org/resilientland/coreConcepts.html>

and an annual cost of \$100 million to operate.<sup>2</sup> Avoided costs also include potential future costs if intact natural systems are lost. In an EPA paper on protecting healthy watersheds, they show a correlation between percentage of forest cover and predicted water treatment costs.<sup>3</sup>

Land conservation provides the opportunity for outdoor recreation resulting in overall health benefits and better stewards of natural spaces. In 2020 and again in 2021, NYS Parks saw record attendance with a record in overnight visitation at campgrounds, campsites, cabins and cottages booked for more than 787,000 nights and Niagara Falls State Park was the most visited park in the state with over 9 millions visitors!<sup>4</sup> Exposure to nature has many physiologic benefits including lowering cortisol levels and blood pressure, thus lowering stress and anxiety<sup>5</sup> and living near green space reduces mortality even when adjusted for socio-demographic factors.<sup>6</sup> When people have access to local green space, having access to it can foster a sense of community, ownership, and thus stewardship, in addition to health benefits. These experiences often result in a stronger relationship to nature, perpetuating continued stewardship.

### Action Items

1. Map the most climate resilient<sup>7</sup> lands in Erie County, and prioritize them for protection.
  - a. Identify priority land for protection.
  - b. Identify priority waterways, riparian corridors, coastal zones, wetlands, and floodplains for protection.
  - c. Identify connections/corridors between habitats.
  - d. Identify priority habitats for species of greatest need.
2. Create a Conservation Plan for Erie County, that outlines:
  - a. The priorities of the County for protection and includes the data identified above in Action 1.
  - b. Ensures equitable access for people to open space, access for wildlife, and connectivity between protected parcels.
  - c. Potential partnerships with towns and villages, non-profits, and other appropriate entities in Erie County to execute the Conservation Plan.

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<sup>2</sup> How and why Farmers in the Catskills protect New York City's Drinking Water, <http://blogs.edf.org/markets/2017/11/07/how-and-why-farmers-in-the-catskills-protect-new-york-citys-drinking-water/>

<sup>3</sup> The Economic Benefits of Protecting Healthy Watersheds, [https://www.epa.gov/sites/production/files/2015-10/documents/economic\\_benefits\\_factsheet3.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/economic_benefits_factsheet3.pdf)

<sup>4</sup> Gov. Hochul announces record attendance in 2021 for NYS Parks, <https://www.wgrz.com/article/news/local/new-york-state-parks-see-record-attendance-in-2021-niagara-falls-state-park/71-ecf05b61-d4a6-4a0c-be83-7a2030ab3b75>

<sup>5</sup> <https://www.pnas.org/doi/10.1073/pnas.1510459112>

<sup>6</sup> <https://pubmed.ncbi.nlm.nih.gov/28863390/>

<sup>7</sup> The Nature Conservancy's Climate Resilient Lands <https://maps.tnc.org/resilientland/>

3. Work with partners and residents to protect priority lands.
  - a. Identify funding sources best suited to each reason for protection.
  - b. Assist partners by strengthening proposals for funding (potentially looking at community benefit payments).
  - c. Support indigenous communities in their conservation efforts, as appropriate and desired by the communities.
  - d. Provide outreach and education for municipalities and individuals in the community