

Nature Across Boundaries *Introduction*

November 6, 2017

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NYSDEC Hudson River Estuary Program and Cornell University



Cornell University

Photo: L. Heady

Why
Nature Across
Boundaries?



Photo: L. Heady

Shawangunk Ridge



Photos: L. Heady

Catskill Mountains



Photo: L. Heady

Hudson Highlands



Photo: L. Heady

Albany Pine Bush



Photo: www.albanypinebush.org

Shawangunk Grasslands



Photo: L. Heady

Rensselaer Plateau



Photo: Nate Simms

Bashakill Wetland



Photos: L. Heady

The Great Swamp



HUDSON RIVER ESTUARY

WILDLIFE AND HABITAT CONSERVATION FRAMEWORK



An Approach for Conserving Biodiversity
in the Hudson River Estuary Corridor



New York State Department of Environmental Conservation

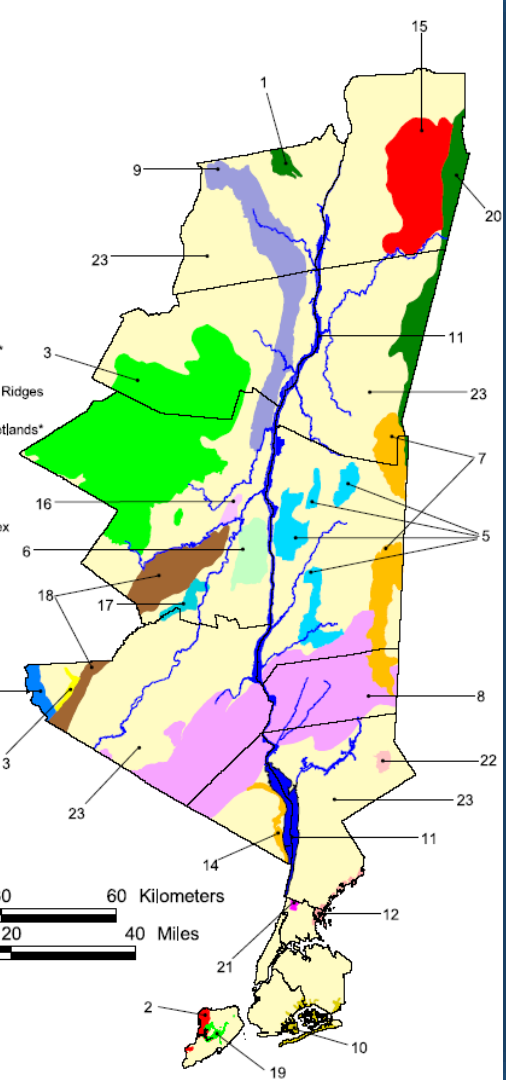
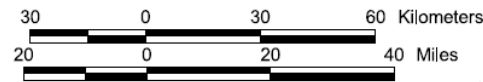
Governor David A. Paterson

Commissioner Pete Grannis



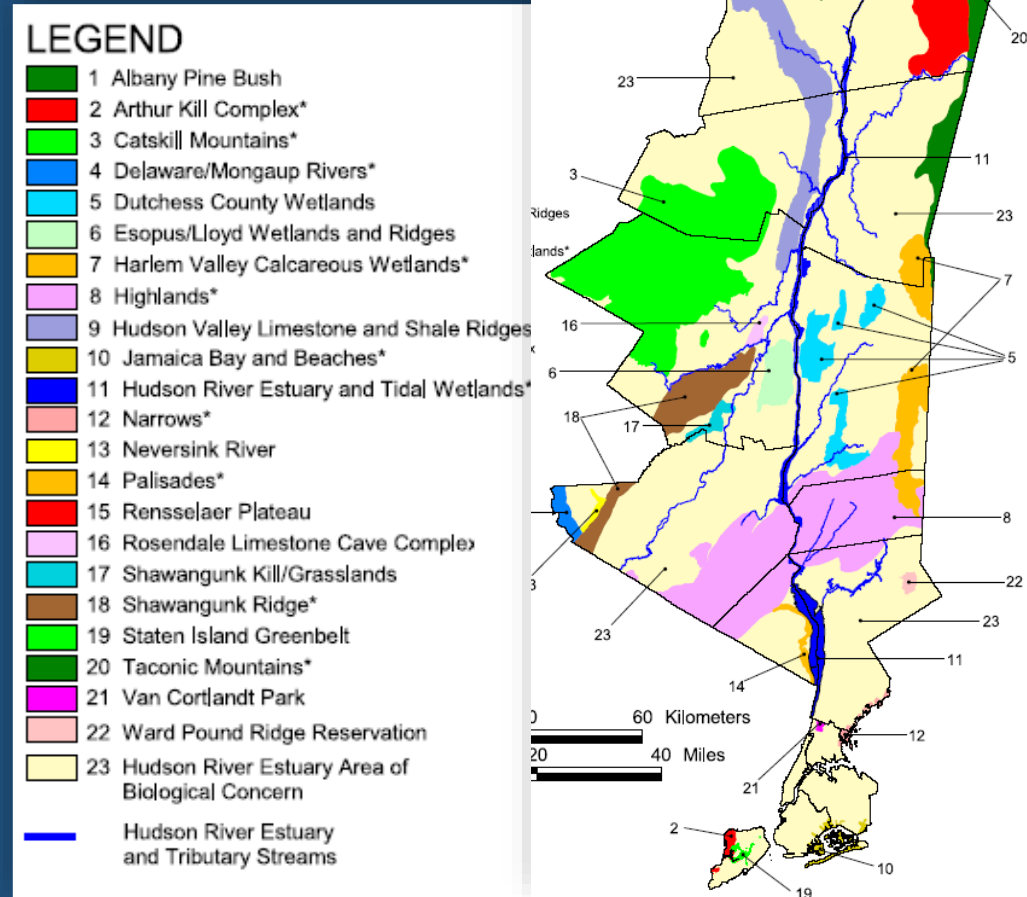
LEGEND

- 1 Albany Pine Bush
- 2 Arthur Kill Complex*
- 3 Catskill Mountains*
- 4 Delaware/Mongaup Rivers*
- 5 Dutchess County Wetlands
- 6 Esopus/Lloyd Wetlands and Ridges
- 7 Harlem Valley Calcareous Wetlands*
- 8 Highlands*
- 9 Hudson Valley Limestone and Shale Ridges
- 10 Jamaica Bay and Beaches*
- 11 Hudson River Estuary and Tidal Wetlands*
- 12 Narrows*
- 13 Neversink River
- 14 Palisades*
- 15 Rensselaer Plateau
- 16 Rosendale Limestone Cave Complex
- 17 Shawangunk Kill/Grasslands
- 18 Shawangunk Ridge*
- 19 Staten Island Greenbelt
- 20 Taconic Mountains*
- 21 Van Cortlandt Park
- 22 Ward Pound Ridge Reservation
- 23 Hudson River Estuary Area of Biological Concern
- Hudson River Estuary and Tributary Streams



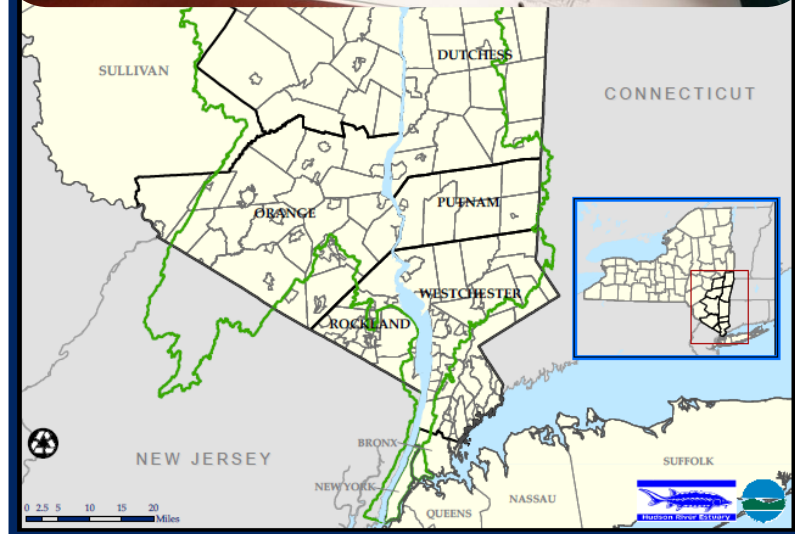
Significant Biodiversity Areas:

- high concentrations of biodiversity
- unusual ecological features
- “...tend to contain uncommon and ancient geologic features, large wetland complexes, unfragmented forests, or sharp changes in elevation.”



The Decision-Making Landscape

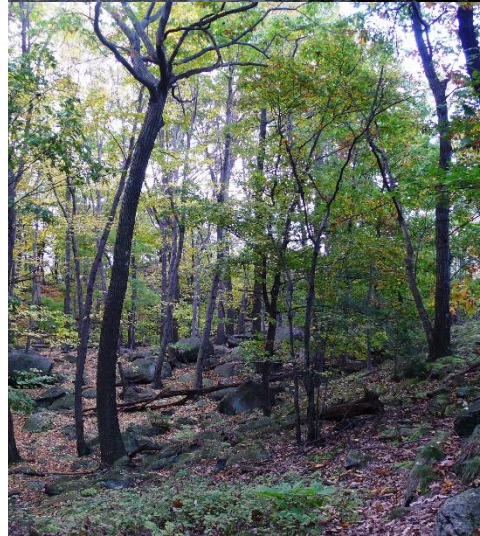
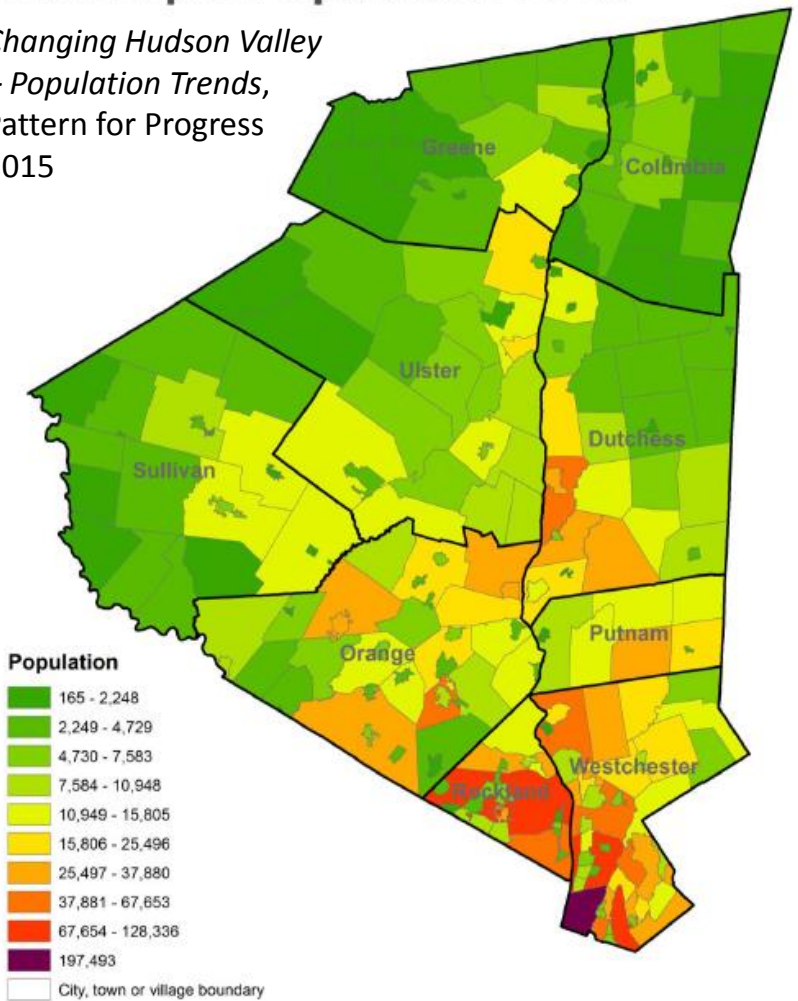
- 260 municipalities
 - elected officials, planning boards, conservation advisory councils





Municipal Population 2013

Changing Hudson Valley
– Population Trends,
Pattern for Progress
2015





The Decision-Making Landscape

- 260 municipalities
 - elected officials, planning boards, conservation advisory councils
- 80% private ownership

Why does it matter?

- Fragmentation is a significant threat to biodiversity in Hudson Valley.





Department of
Environmental
Conservation

NEW YORK STATE WILDLIFE ACTION PLAN

September 2015

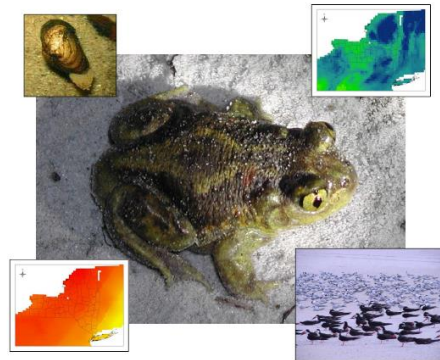


www.dec.ny.gov

Maintaining or restoring connectivity is important for *Species of Greatest Conservation Need* in:

- forests
- streams and rivers
- wetlands
- unique habitats

“aquatic and terrestrial habitat connectivity must be maintained and restored”



Vulnerability of At-risk Species to Climate Change in New York

Matthew D. Schlesiinger, Jeffrey D. Corser, Kelly A. Perkins, and Erin L. White

New York Natural Heritage Program

A Partnership between The Nature Conservancy and the NYS Department of Environmental Conservation
623 Broadway, 5th Floor Albany, NY 12243-4757 (518) 402-8925 Fax (518) 402-8925 www.nynhp.org



Why does it matter?

- Fragmentation is a significant threat to biodiversity in Hudson Valley.
- Poorly planned development is a major factor.



“... [A] a new paradigm is needed – one that advances the proposition that instead of developing land with the naïve expectation that ecosystems will magically rearrange themselves around a new development (i.e., the old thinking), a community should first understand its ecosystems and then place development where it will minimize ecological impact. By doing so, we will bring biodiversity conservation fully into the smart-growth equation, creating quality communities that sustain both humans and the ecosystems on which all life ultimately depends.”

Daly and Klemens, “Nature in Fragments”



“To truly improve quality of life, the planning codes must define open space with the same degree of precision and concern that they now apply to the design of parking lots.”

Duany et al., “Suburban Nation”



Why does it matter?

- Fragmentation is a significant threat to biodiversity in Hudson Valley.
- Poorly planned development is major factor.
- Connectivity contributes to climate change adaptation and resiliency.






- conservation science
- land protection
- land-use planning
- local engagement
- transportation mitigation
- policy advocacy

The poster features a photograph of a river flowing through a wooded area. In the top right corner, there is a small logo for "MOHONK CONSULTATIONS" which includes a silhouette of a mountain house. The main title "Nature Across Boundaries: Keeping Lands and Waters Connected" is displayed in white text on a green and brown background. Below the title, the text "A Mohonk Consultations Conference" is written in a serif font, followed by the date "November 6, 2017" and the location "Mohonk Mountain House Conference Center". A section titled "Thank you to our generous sponsors:" lists several organizations with their logos: the New York State Department of Environmental Conservation (Hudson River Estuary Program), M&T Bank, the Hudson River Estuary Program, and Scenic Hudson (land = parks = advocacy). At the bottom, a green banner contains the slogan "Let's talk it over at Mohonk" - A tradition of connecting people through dialogue. Below the banner, the contact information for Mohonk Consultations, Inc. is provided: 1000 Mountain Rest Road, New Paltz, NY 12561, and the email address mohonkconsultations@hvi.net, 845-256-2726.

Nature Across Boundaries:
Keeping Lands and Waters Connected

A Mohonk Consultations Conference
November 6, 2017
Mohonk Mountain House Conference Center

Thank you to our generous sponsors:

"Let's talk it over at Mohonk" - A tradition of connecting people through dialogue.

Mohonk Consultations, Inc.
1000 Mountain Rest Road, New Paltz, NY 12561
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Photo: A. Meyer



Photo: L. Heady

Aquatic Connectivity



Revegetating Stream Corridors

Photo: NYSDEC



Education through Citizen Science

Photos: L. Heady, C. Bowser

Creating a Natural Resources Inventory

A Guide for Communities in the Hudson River Estuary Watershed



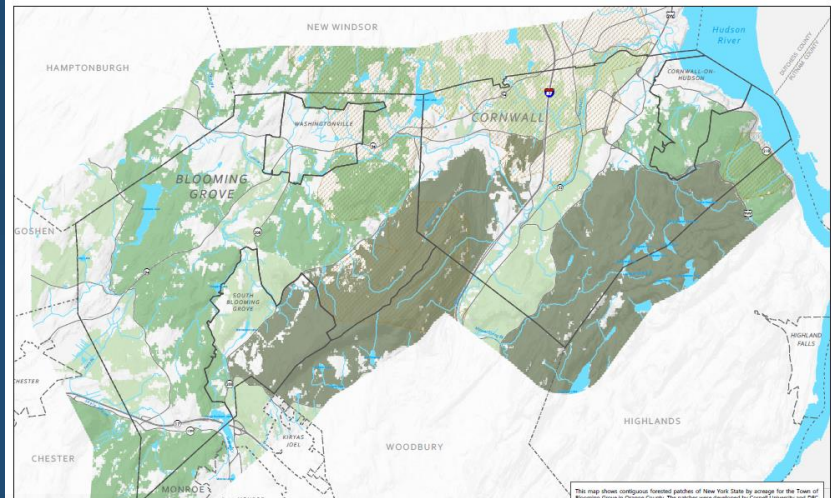
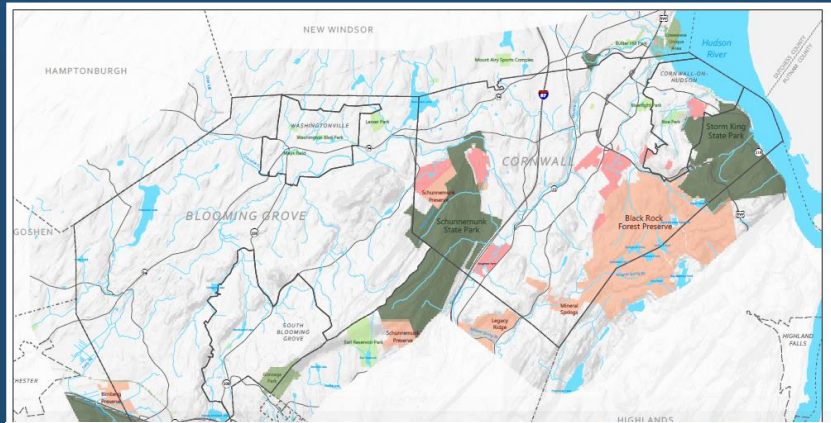
“... a community should first understand its ecosystems and then place development where it will minimize ecological impact.”

*Daly and Klemens,
“Nature in Fragments”*



Natural Resource-Based Planning

Photo: L. Heady



This map shows contiguous forested parcels of New York State by village for the Town of Blooming Grove in Orange County. The parcels were developed by Cornell University and DEC using forest cover data from the Current Change Analysis Program. Site classes are based on ecological importance. Major Forest Blocks and Linkages were developed by The Nature Conservancy and The New York Natural Heritage Program. Significant forest communities were mapped by The New York Natural Heritage Program.

Intermunicipal NRI

Photo: L. Heady

<p>Forest Patches (Acres)</p> <ul style="list-style-type: none"> Stepping Stone Forest (200 - 399) Locally Significant Forest (2000 - 3999) Regionally Significant Forest (>4000) Regional Forest Linkage Zone 	<p>WATERBODIES</p> <ul style="list-style-type: none"> Streams Major roads 	<p>Scale 1:25,000 1 inch = 0.4 miles</p>	<p>NORTH</p>	
<p>Orange County Department of Planning and Economic Development Planning and Economic Development 100 State Street, 3rd Floor Poughkeepsie, NY 12560 Phone: 845.486.2000 Fax: 845.486.2001 Email: info@orange-county.net</p>				



Intermunicipal Open Space Planning

Photos: L. Heady



Ag Across

- Study of Personal History in TN
- Use of cases - heavy presence of summer Ag sales
- Dairy milk v. Dispersed operations
- I.D. what Commonality needs to succeed
- Resiliency to changing conditions & markets

Intermunicipal Open Space Planning

Photos: L. Heady

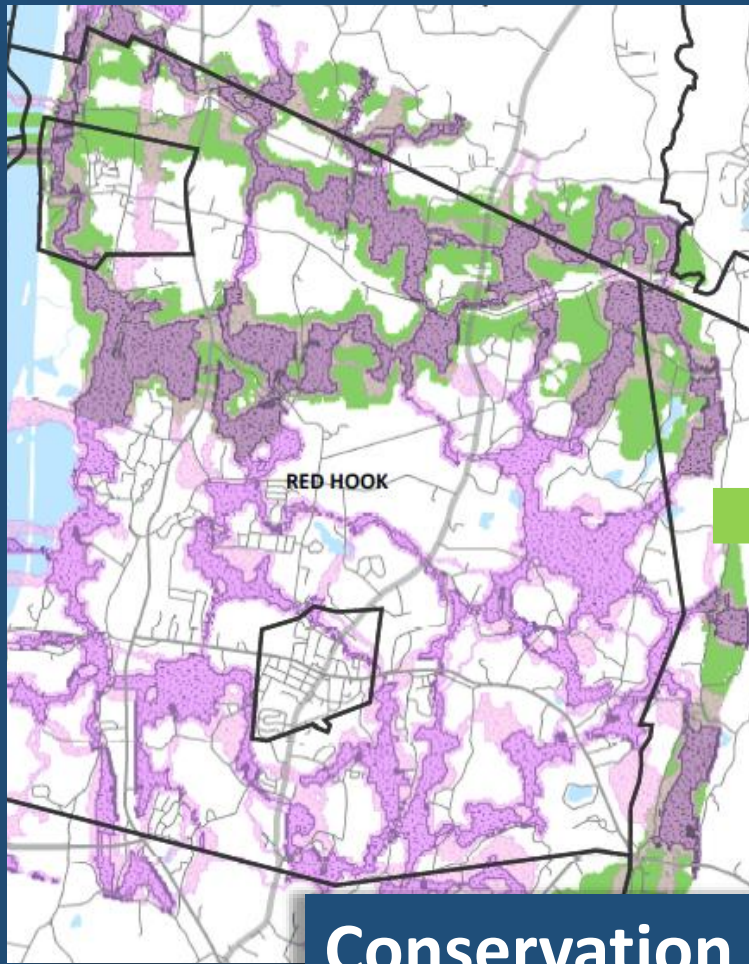


Table 2.6 Biodiversity



Points accrued for parcels identified as significant for biodiversity attributes

These parcels include those that have been identified as significant in "Integrity-based Forest Connectivity Modelling at Regional and Local Scales in the Hudson River Estuary Watershed" because they provide landscape connections within a watershed's high-integrity forests, streams, and wetlands that create pathways for species to move, as outlined below. These attributes result in a total of 1,108 parcels containing 20,344.2 acres of land.

Community Preservation

Plan UPDATE

Town of Red Hook
Villages of Red Hook & Tivoli

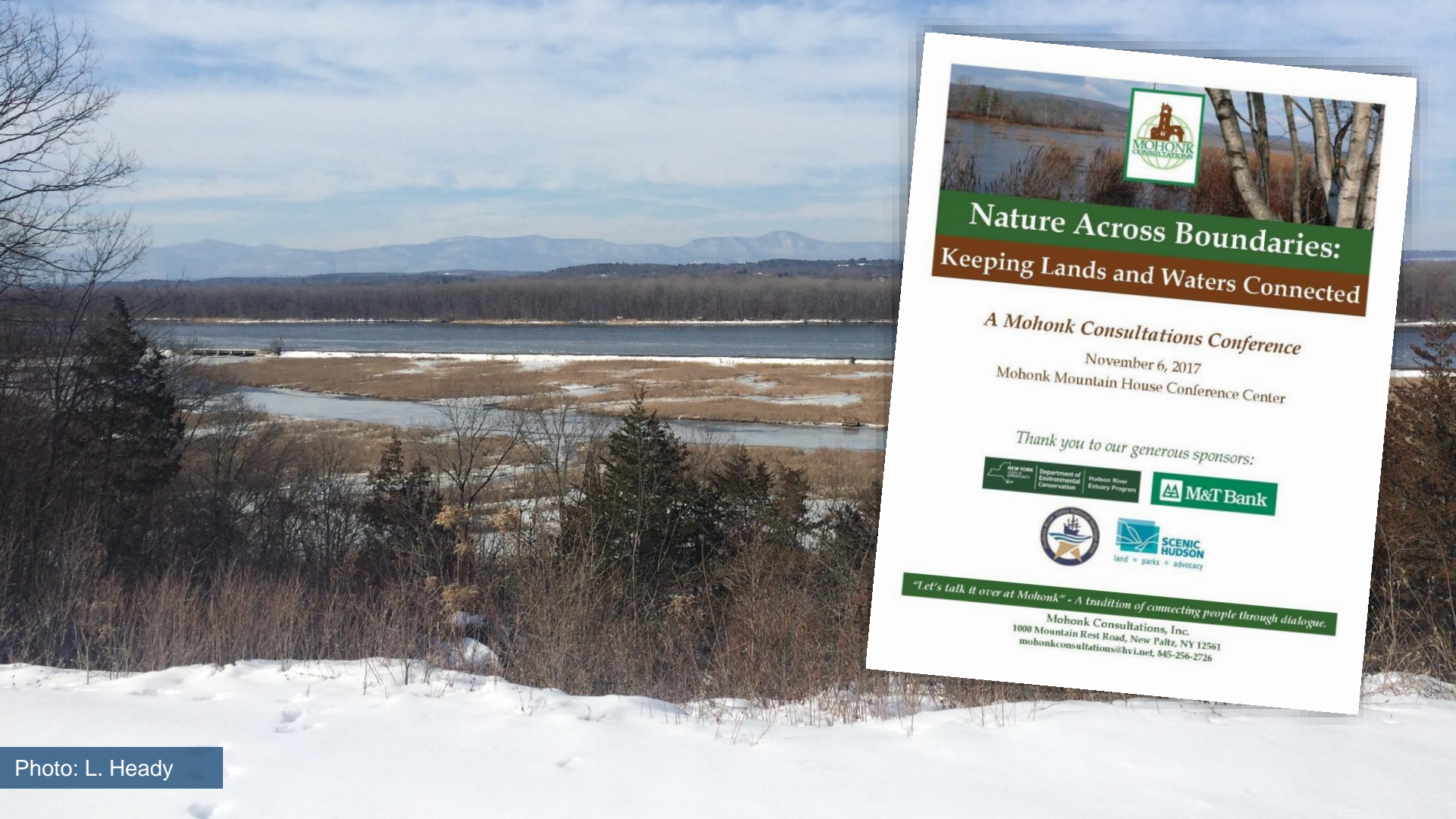
Red Hook Town Board | Red Hook, NY
Adopted June 9, 2016

Parcel Points Assigned Based Upon the Following Attributes:

1. Properties with Large Forest Patches (>200 acres)
2. Properties with Areas of Known Importance for Rare Animals
3. Properties with High Priority Habitat Integrity Linkages
4. Properties with Low Priority Habitat Integrity Linkages

For a complete breakdown of each parcel, including all additional information used in the ranking, see the updated Appendix A to the 2016 CPP Update.

Conservation Financing for Connectivity



Nature Across Boundaries: Keeping Lands and Waters Connected

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For more information:

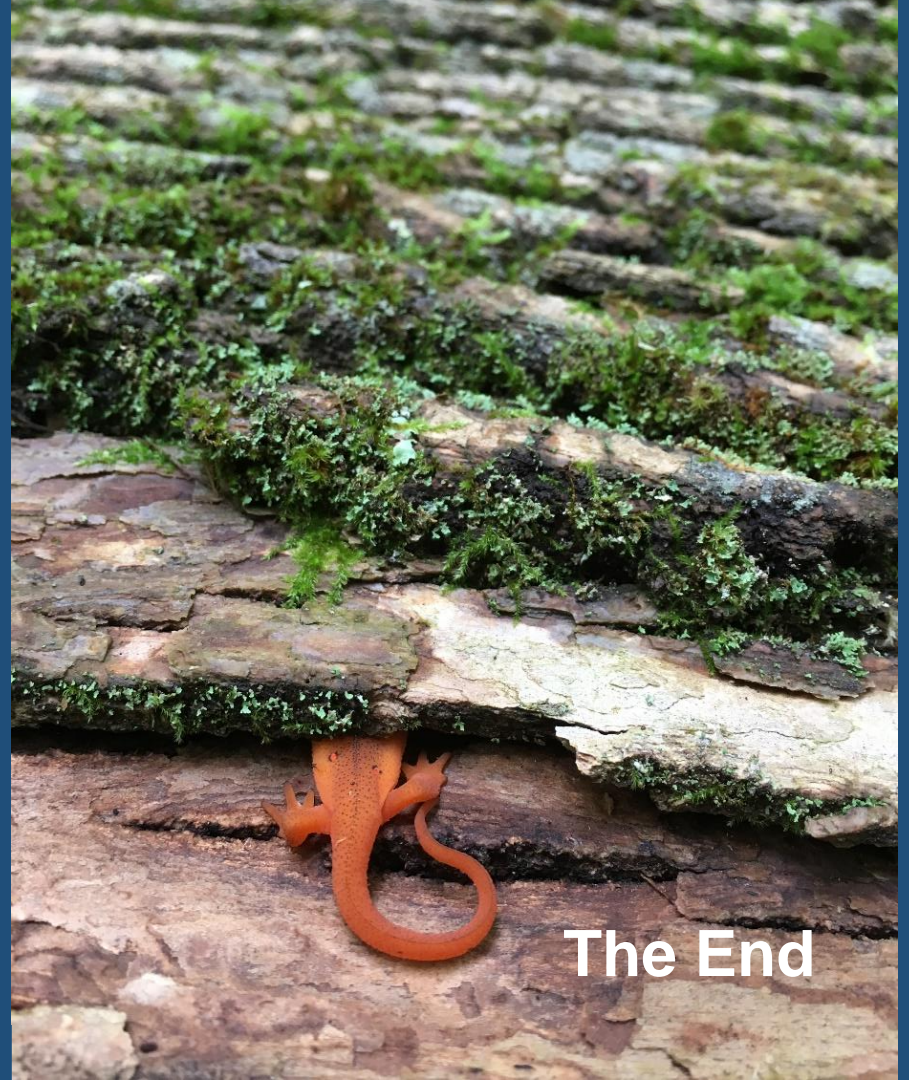
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845-256-3061



The End