

# Land Use Tools and Strategies for Natural Resource Conservation



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NYSDEC Hudson River Estuary Program

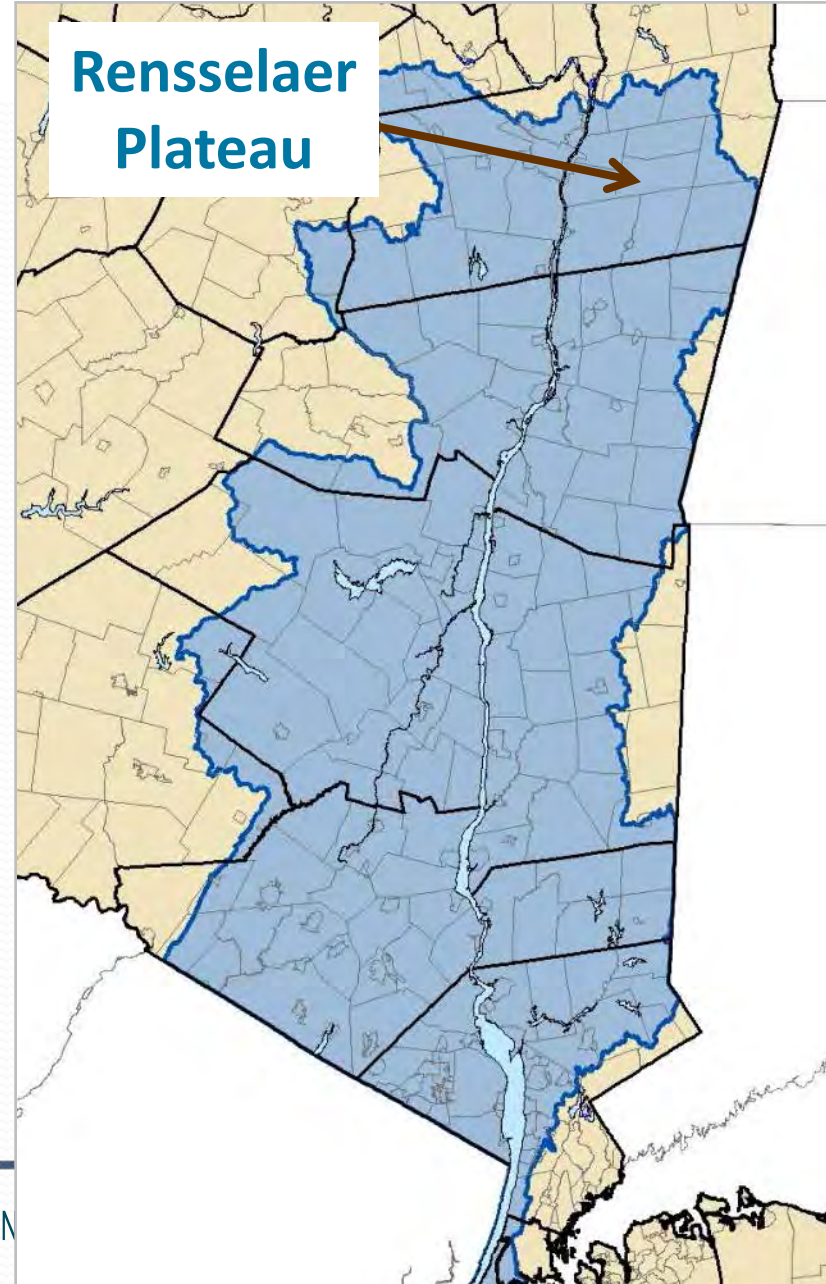
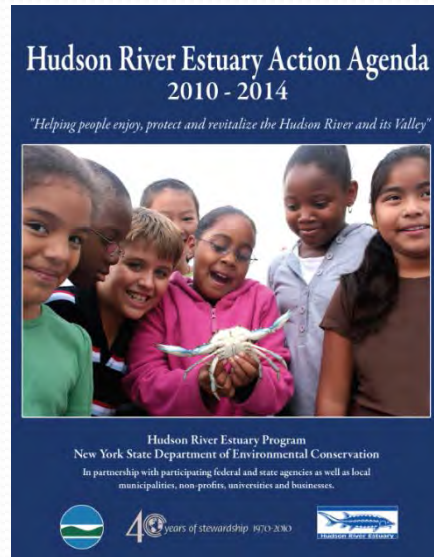
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**



# The Hudson River Estuary Program

## Core Mission:

1. Clean Water
2. Fish & Wildlife Habitats
3. Recreation & Access
4. Climate Change Adaptation
5. Scenery



For Hudson Valley ecosystems,

the individual land-use  
decisions of 250 municipalities  
can lead to death  
by 1,000 cuts.



# Local governments have a critical role in managing forests and wetlands



Photo: Karen Strong



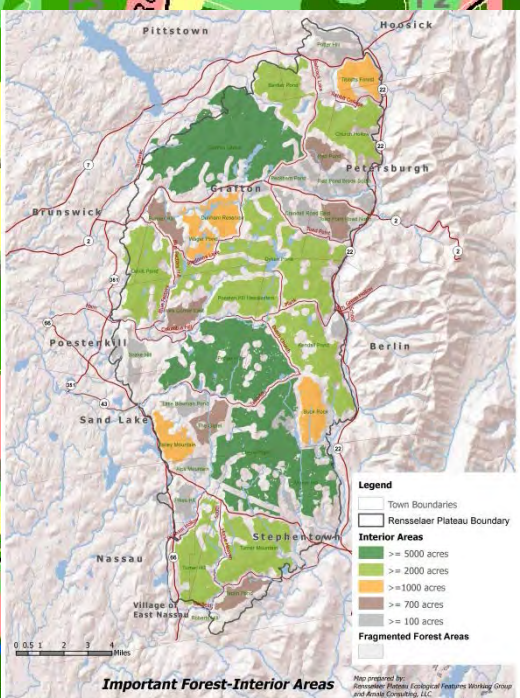
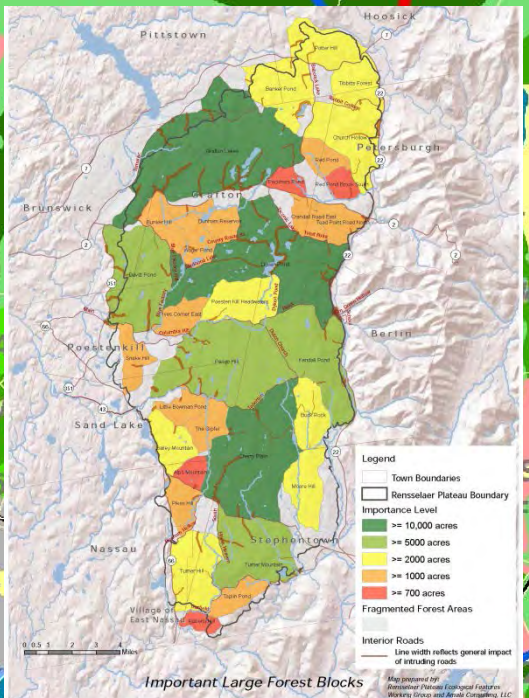
## There are many local tools available to conserve forests and wildlife

Comprehensive/Master Plan  
Open Space Plan  
Watershed Plan  
Regional Conservation Plan  
Natural Resource Inventory  
Critical Environmental Area  
SEQRA  
Zoning  
Conservation Overlay Zone  
Flexible Lot Subdivisions  
Performance Standards  
Performance Zoning

Stormwater Management  
Landscaping Requirements  
Local Wetland and Watercourse  
Law  
Generic Environmental Impact  
Statement  
Site Plan Review  
Conservation Advisory Council  
Habitat Assessment Guidelines  
Public Outreach and Education  
Engage in monitoring efforts  
setting a good example...

# Recommended Planning Approaches

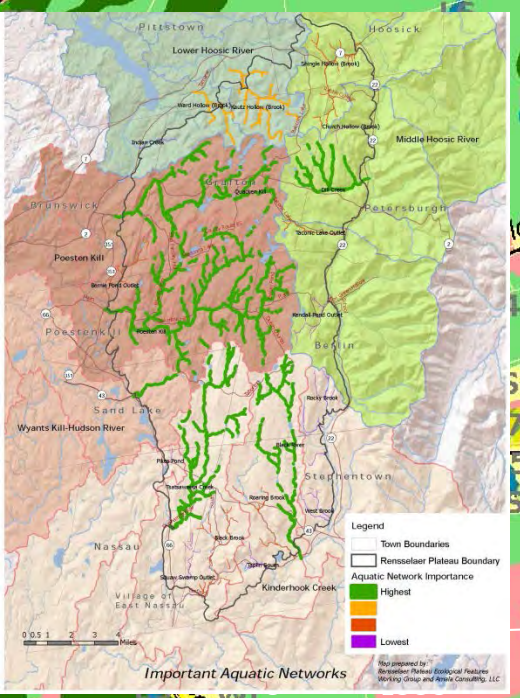
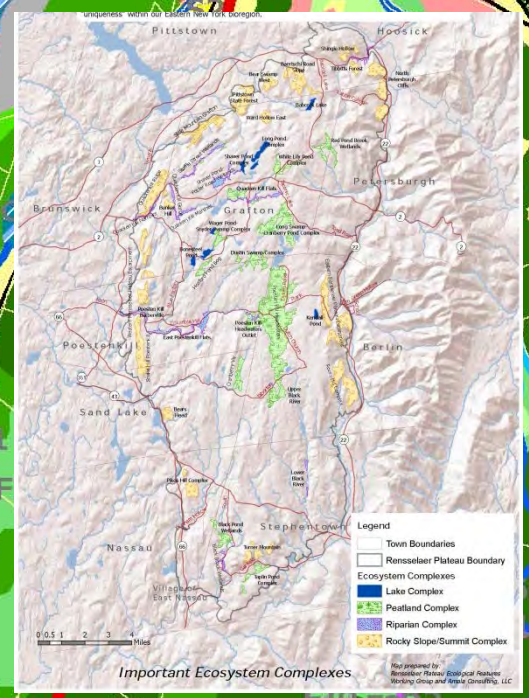
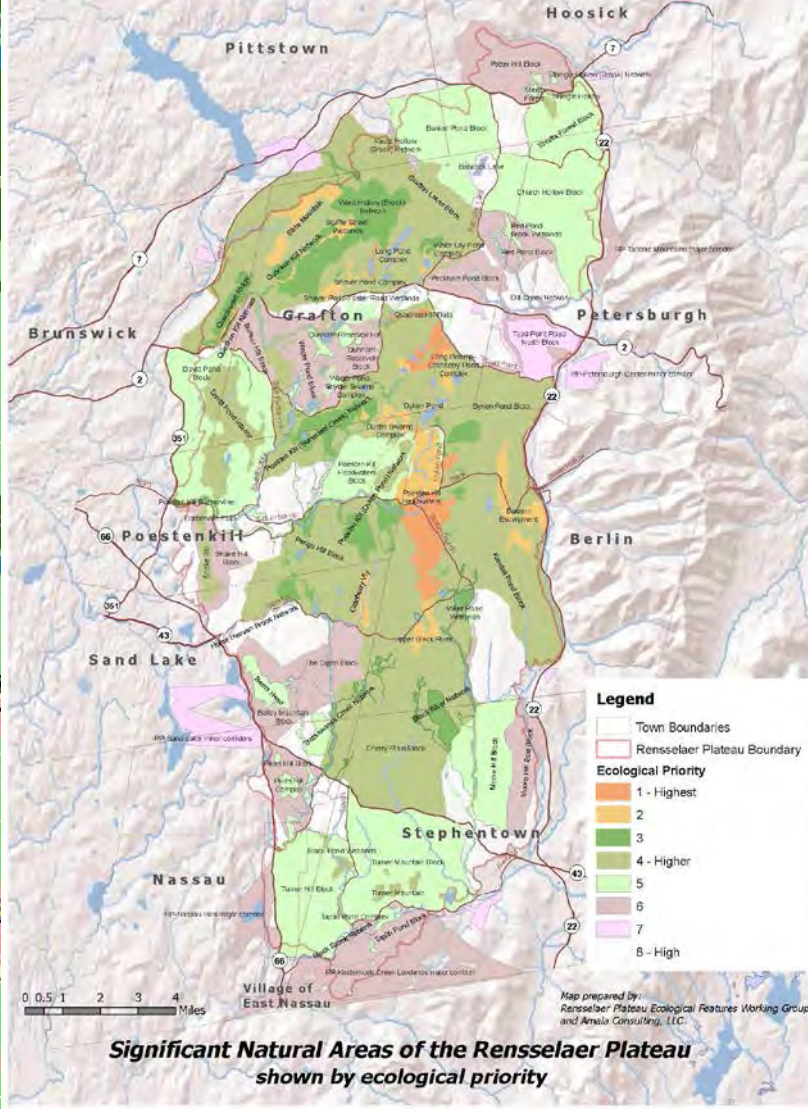
- Gather data, use town or regional plans to guide conservation and land-use decisions
  - Establishes priorities, community buy-in
- Consider habitat conservation *early* in the planning process
  - Creates predictable, less adversarial process
- Take a “big picture” view to prevent habitat fragmentation and maintain ecosystem services
  - Addresses major threats to regional natural resources



**Ecological Communities Within Plateau Boundary (Code, Name, Acreage within Town Boundary)**

- B1 Cliff Community (7.59)
- R2 Pitch Pine/Oak/Heath Rocky Summit (0.16)

The entire Rensselaer Plateau is ecologically significant. This map shows which areas are most significant based on an analysis of six ecological features: large forests, forest-interior habitat, significant natural communities, important ecosystem complexes, important aquatic networks, and rare plant habitat. Dr. Hunt weighed 17 factors to measure each site's ecological priority, including the rarity, size, quality, and distribution of the six ecological features, and connections to other forested areas. From this, areas were further prioritized by selecting those areas that included the most important sites for each feature in the least amount of area. Natural areas with the highest resulting ecological priority on the Plateau are shown in orange. A list of these highest ecological priority areas, and a description of each is included in the full Ecological Report. Areas that rank lowest on the Plateau are still important ecologically, but they do not have as many important features as other areas.



W12 Inland Non-Calcareous Lakeshore (1.66)

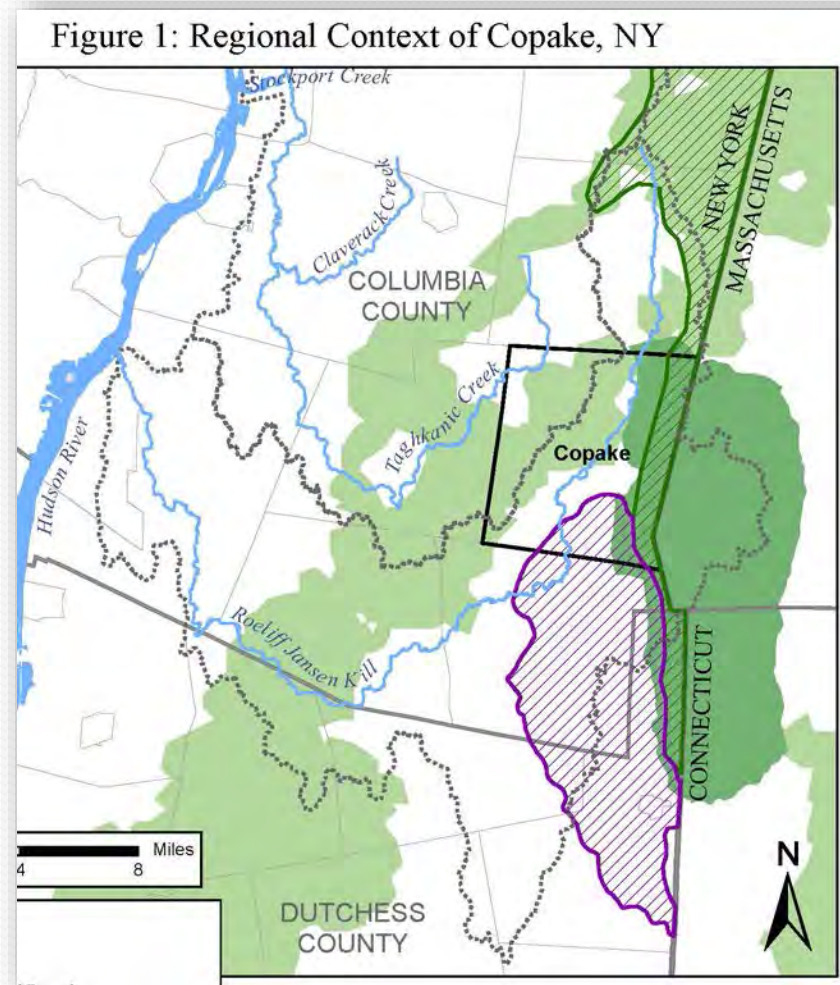
W14 Inland Non-Calcareous Lakeshore (5.91)

W16 Reedgrass Marsh (5.67)

# Estuary Program *Habitat Summaries* can help fill the gaps at the townwide scale

## Maps, Narrative, and Tables:

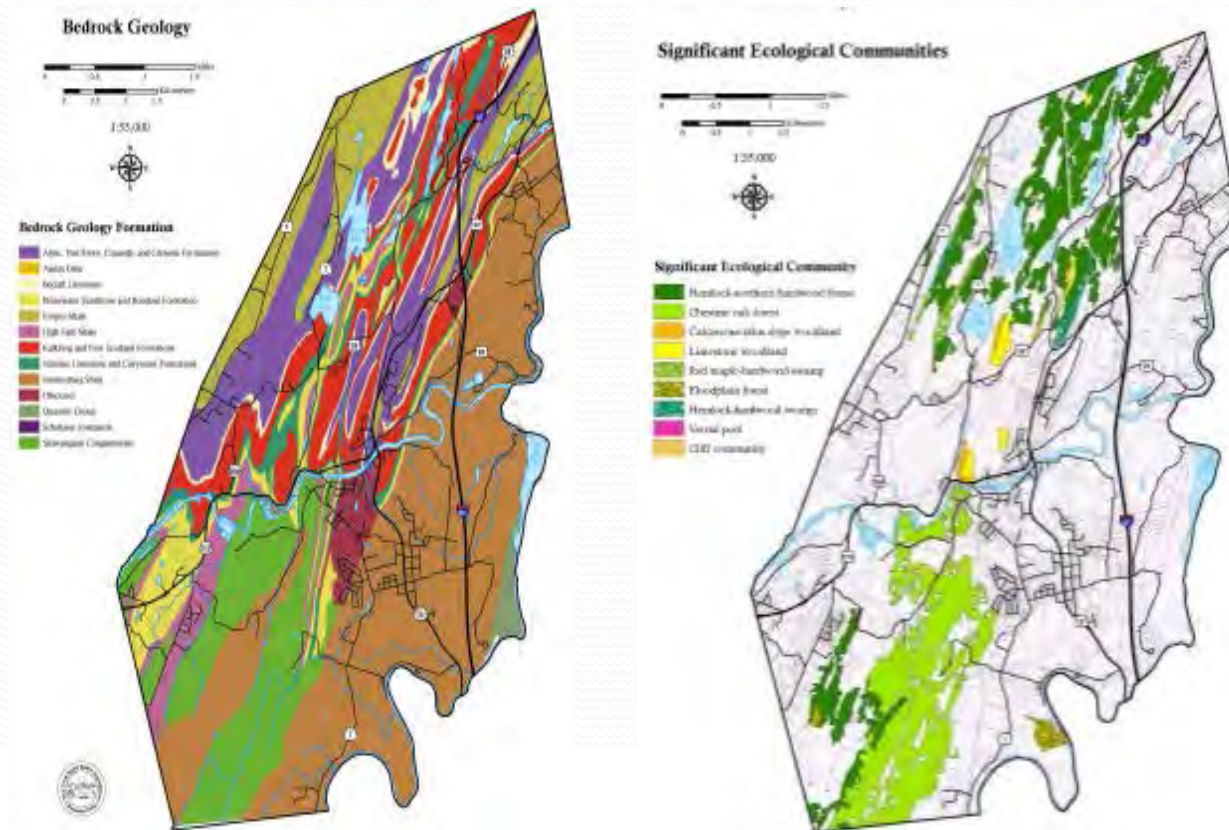
- Regional Context
- Important Areas for Biodiversity
- Coastal and Shoreline Habitat
- Streams and Watersheds
- Wetlands
- Large Forests (200+ acres)
- Grasslands and Shrublands
- Rare plants, animals, ecosystems
- Local data available from partners





# Build on the ecological maps to create a Natural Resources Inventory (NRI):

a summary of local physical and biological characteristics



# Recognize Important Natural Resources in your Comprehensive Plan

Provide specific policy statements regarding natural resources:



Photo by K. Strong

*“Our town recognizes that wetlands and forests are vital to clean and abundant water”*

A sample goal might be:

*“To protect forest land for multiple-use forestry, including timber production, watershed management, fish and wildlife habitat, and recreation.”*

The Comprehensive Plan establishes a community’s vision for the future and is the basis for zoning and land use decisions

Town of Pleasant Valley

**2013**

## **OPEN SPACE AND FARMLAND PLAN**



**SUBMITTED TO**  
Town of Pleasant Valley  
1554 Main Street  
Pleasant Valley, New York 12569

**SUBMITTED BY**  
Town of Pleasant Valley Open Space Committee  
with assistance from:  
AKRF, Inc. and  
Taconic Site Design and Landscape Architecture

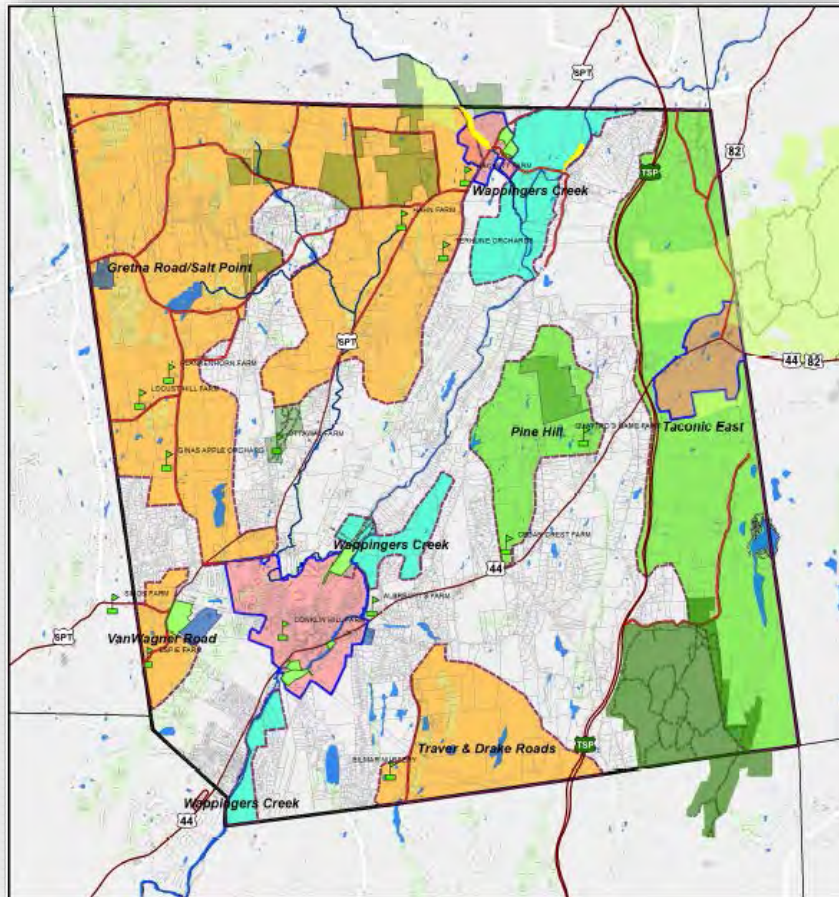
## **Identify conservation priorities in an Open Space Plan**

- Creates a vision for the future of valuable natural resources and cultural assets.
- Lays out a strategy for achieving goals.

# Example:

## Town of Pleasant Valley Open Space Plan Priority Areas

### Priority Conservation Areas



- Critical habitat areas
- Contiguous Forests
- Wetland complexes
- Water quality protection
- Working farmland
- Scenic resources

# Identify Opportunities for Intermunicipal Cooperation

... because important resources don't stop at your town's boundary

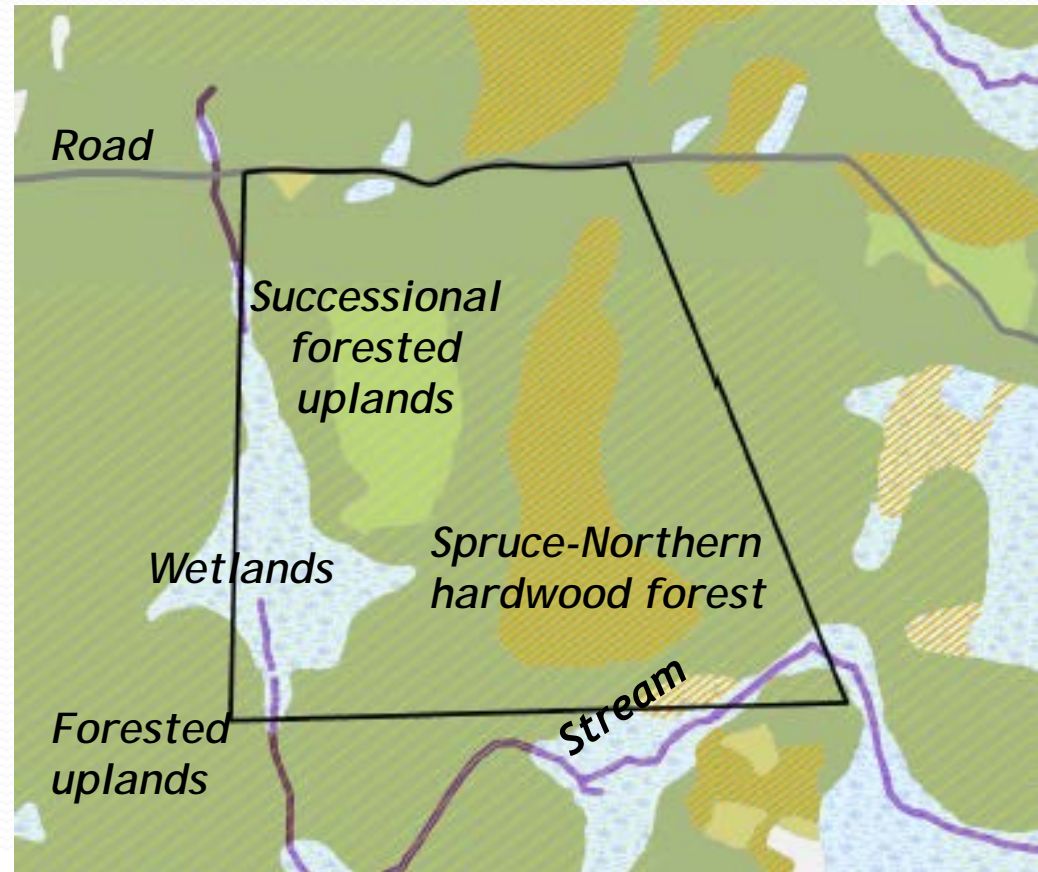
## Benefits:

- More effective solutions to issues through comprehensive approaches and coordination of efforts
- Increased eligibility for many grants
- Examples: watershed management plans, open space plans, Scenic Byway designation...



# Raise questions about ecological resources during project review

- Review the RCP maps
- Site visits
- What resources are present on/near the site, and can potential impacts to them be minimized?



# Use SEQR authority to take a “hard look” at environmental impacts and address local concerns

- 1) identify relevant areas of environmental concern and thoroughly analyze them
- 2) determine if the action may have a significant adverse impact
- 3) support the determination with reasoned elaboration



## Hold a pre-application meeting

prior to preparing or submitting any site plan, subdivision plat, or other formal drawing of a proposed project



*Photo by L. Heady*

Considering habitats early in the planning process creates a more efficient, standardized approach for boards and applicants.



# Adopt environmental review procedures that consider resources early in the process

## Example: Milan Habitat Assessment Guidelines

“Habitat assessments should be completed before sketch plan endorsement or initiation of the SEQR process...

...This approach minimizes project review delays and expenses.”

**Habitat Assessment Guidelines  
Town of Milan**

Endorsed by the Town of Milan Planning Board  
March, 2005

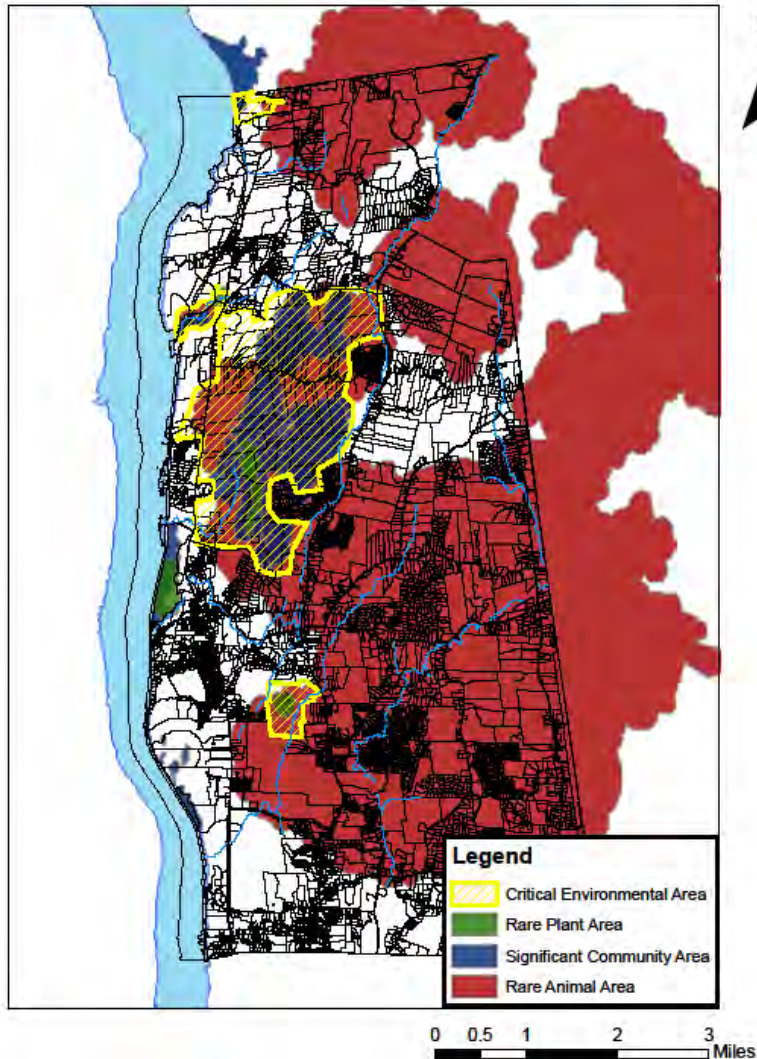
**Prepared for the Town of Milan by:**

Karen Schneller-McDonald, Greenplan Inc.,  
CAC members Sheila Bafl and Frank Margiotta,  
and Planning Board Chair Lauren Kingman.  
Gretchen Stevens of Hudsonia Ltd. provided invaluable guidance.

An electronic retrievable copy (PDF file) of this document may be obtained from  
[www.milan-nv.gov](http://www.milan-nv.gov).

Recommended citation for this document:  
*Town of Milan Planning Board, Habitat Assessment Guidelines (Milan, New York, 2005)*

## Candidate Critical Environmental Areas in the Town of Hyde Park



# Designate Critical Environmental Areas

A specific geographic area designated by a state or local agency as having **exceptional or unique environmental or cultural characteristics.**

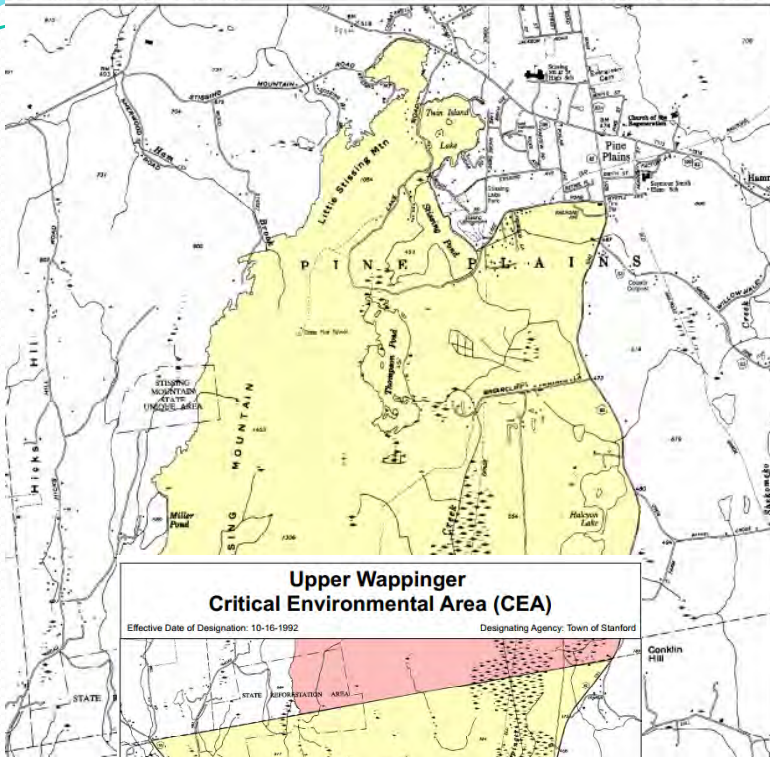
- Brings awareness to local priority resources

Town of Hyde Park CEAs

## Stissing Mountain Critical Environmental Area(CEA)

Effective Date of Designation: 2-2-2005

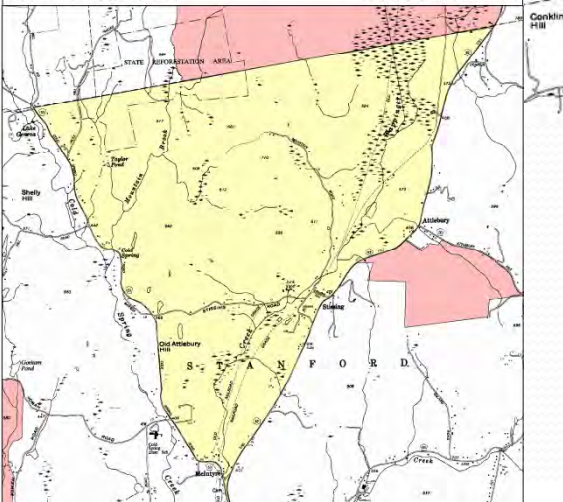
Designating Agency: Dutchess County



## Upper Wappinger Critical Environmental Area (CEA)

Effective Date of Designation: 10-16-1992

Designating Agency: Town of Stanford



# Example: Stissing Mountain CEAs

- Mountain area – steep slopes
- Large forest ecosystem
- Exceptional wildlife habitat



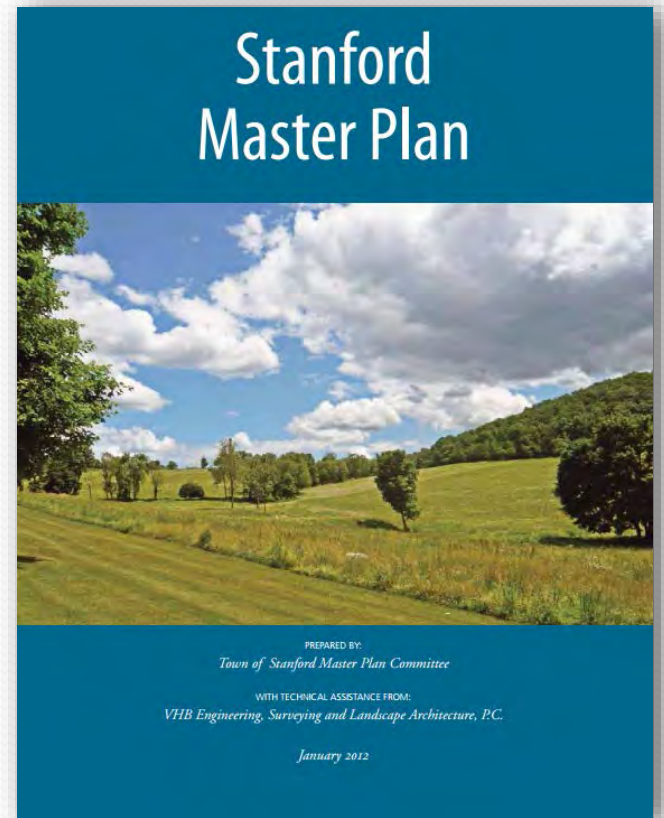
*Photo: Nature Conservancy*

View from Stissing Mountain fire tower

# Local SEQR authority can bring attention to local conservation priorities

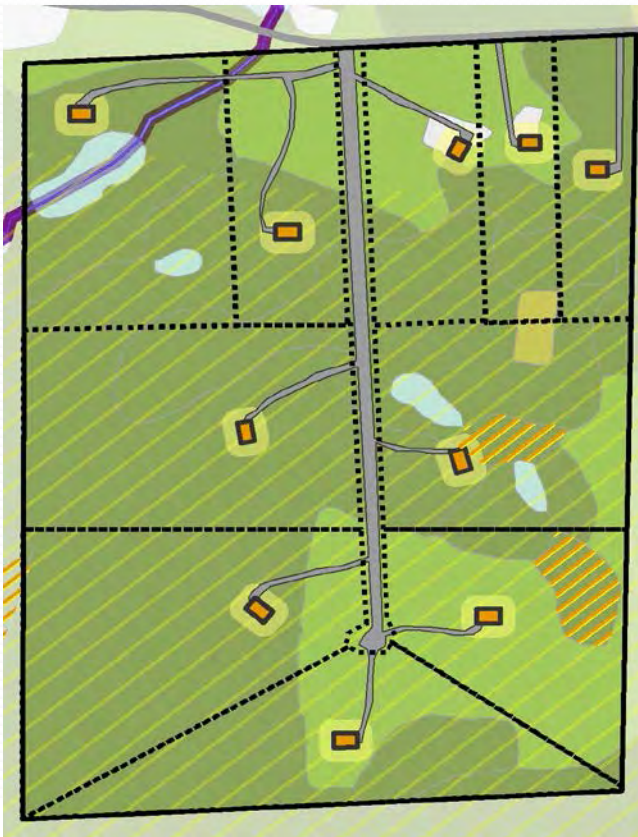
Recognizing that state-defined Type 1 actions rarely apply towards protecting rural character and natural resources, the **Town of Stanford** proposed a list of local Type 1 actions, including:

- Actions within CEAs
- Actions within wetland or stream buffer zones

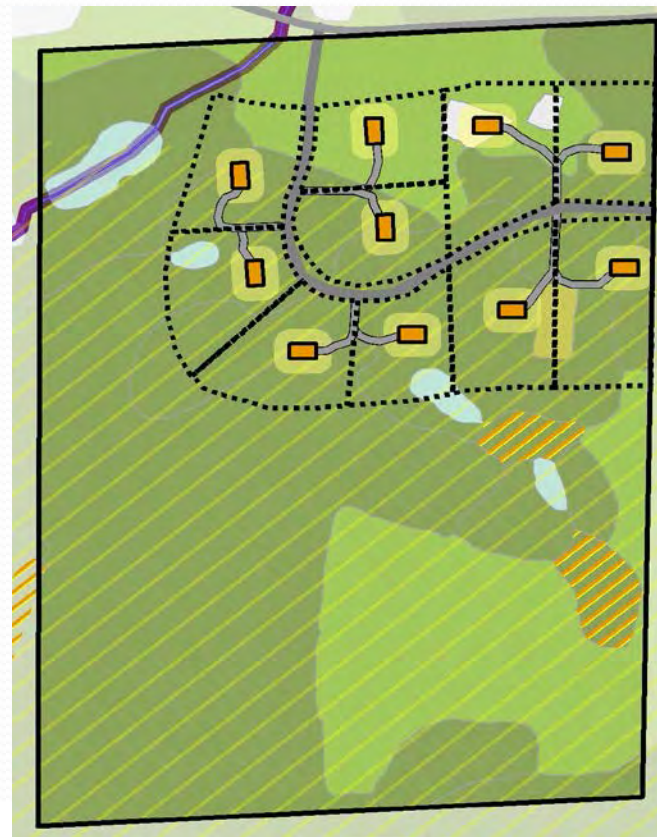


# Allow flexible lot sizes in Subdivision Regulations

-- and use resource analysis to help determine which areas to build on and which to conserve



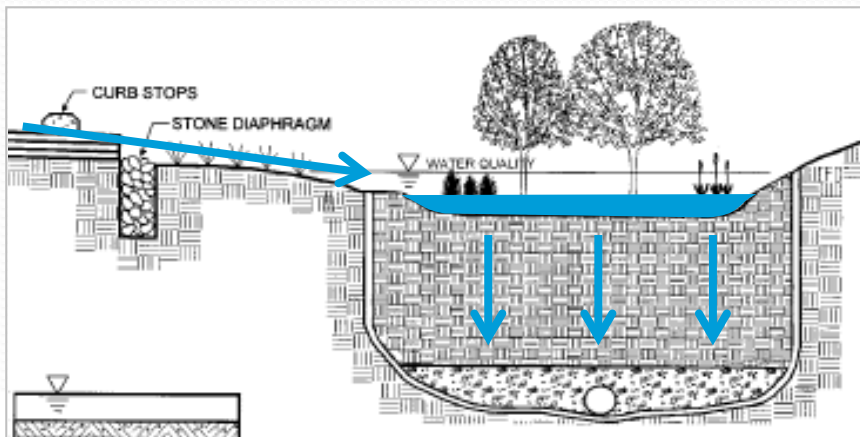
*Conventional*



*Flexible alternative*

# Use stormwater management practices to reduce pressure on wetlands and streams

- Direct stormwater runoff from paved areas or fertilized turf through oil-water separators and into detention basins or “rain gardens” instead of directly into ditches, streams, ponds, or wetlands.
- Conserve natural areas on site



NYS Stormwater Management Design Manual



Bioretention area, Vassar College

# Use zoning to conserve natural areas

Zoning controls the type and intensity of land use within defined areas

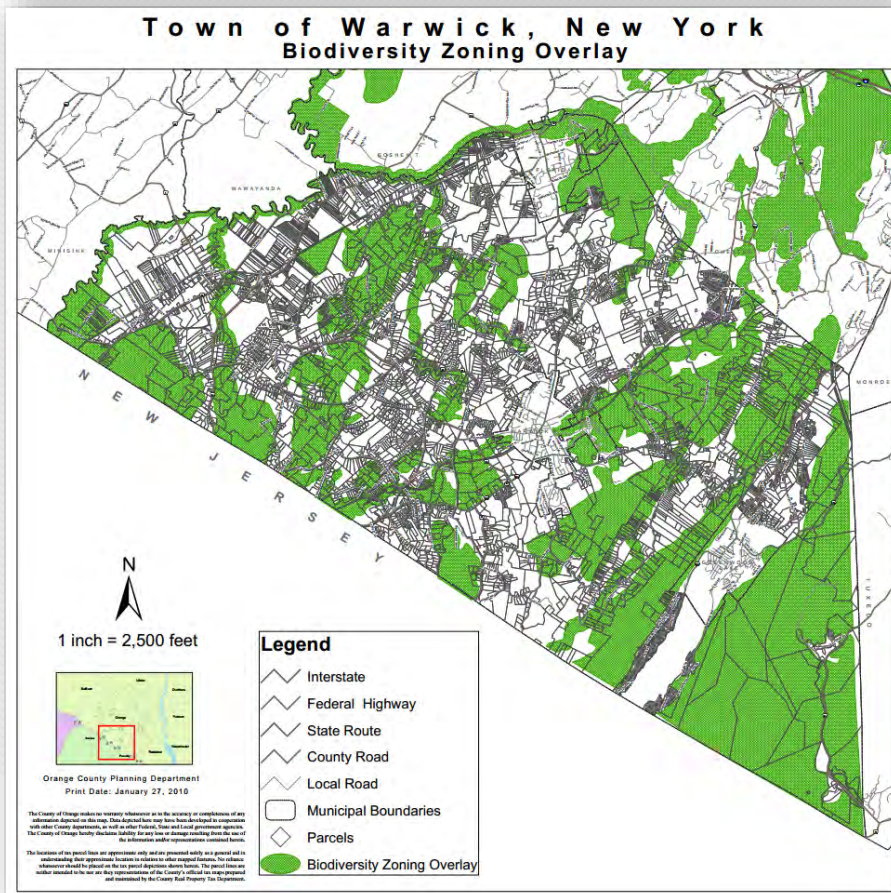


## Examples:

- Identify forestry as a use for appropriate districts
- Establish a forestry district (10-20 ac density)
- Remove sensitive areas from density calculations
- Require wetland and stream setbacks

# Overlay Zoning

Adds new standards to density and uses allowed in the underlying zoning



- Encourage development away from natural areas
  - Steep slopes
  - Woodlands
  - Aquifers
  - Wetlands
  - Stream Corridors
- Prohibit incompatible uses
- Define which uses need a site plan review

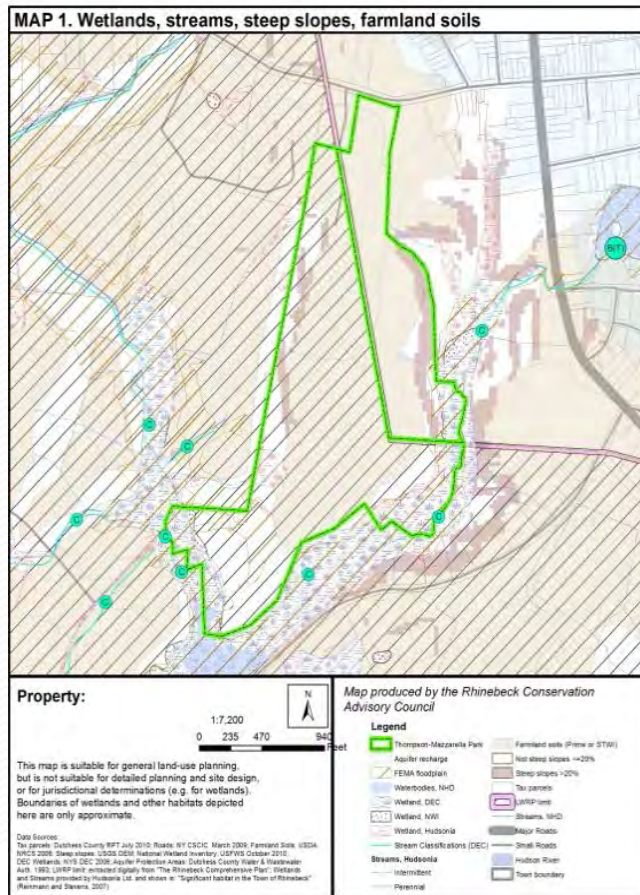


# Wetland and Watercourse Ordinances

- Extend protection to **small streams**, and **small, isolated wetlands** that are of critical importance to ecosystems and water supplies
- Protect **all wetlands** in a municipality (or those above a size threshold), not just on new development sites
- Protect adjacent buffer areas



# Establish a Conservation Advisory Council, or use your existing one to help the Planning Board



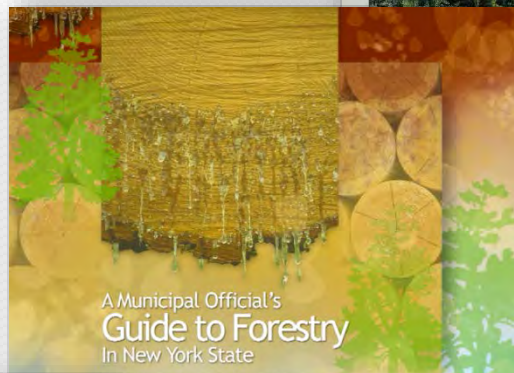
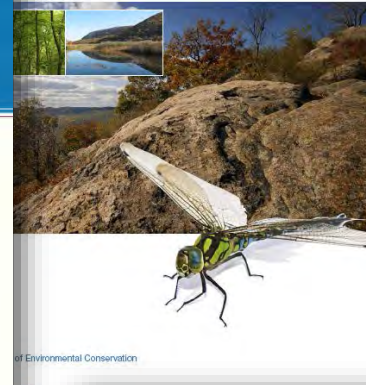
CACs conduct research and advise town agencies on the development, management, and protection of natural resources.

# Where can I get more information?

## Conserving Natural Areas and Wildlife in Your Community:

Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley

## Local Strategies For WETLAND AND WATERCOURSE PROTECTION



A Municipal Official's Guide to Forestry in New York State

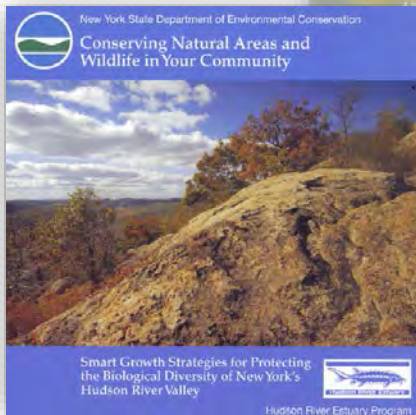
## AN EDUCATIONAL GUIDE

## General Conservation Measures for Protecting Natural Areas and Wildlife



Hudsonia Ltd.

- Protect large, contiguous, unaltered tracts wherever possible.
- Preserve links between natural habitats on adjacent properties.



New York State Department of Environmental Conservation  
Conserving Natural Areas and Wildlife in Your Community

Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley

Hudson River Estuary Program



## Tools for Protecting Nature in Your Community

The NYSDC Hudson River Estuary Program and Cornell University are partnering with communities to encourage biodiversity conservation at the local level to sustain the health and resiliency of the entire estuary watershed. By providing technical assistance, information, and training, the Estuary Program offers strategies for "smart planning" that support economic growth and quality of life, while keeping nature in mind. [www.dew.state.ny.us/hdr/2008.html](http://www.dew.state.ny.us/hdr/2008.html)

### Habitat conservation priorities of the Hudson River Estuary Program

- wetland shorelines
- stream corridors
- wetlands
- grasslands and shrublands
- undisturbed forests
- caves and cliffs

### Steps for conserving biodiversity

- identify resources (What do you have?)
- generate resources (What's your most important?)
- plan, protect, manage (How are you going to preserve it?)

### Local approach to conserving biodiversity

- use town or regional conservation plans to guide land-use decisions
- incorporate habitat conservation early in the planning process
- state "best practice" to prevent habitat fragmentation and ecosystem services

### Overview of Resources Offered by the Estuary Program and Partners

#### 33 Maps, Data, and Conservation Guidance

Hudson River Estuary Wildlife and Habitat Conservation Framework  
The framework provides an overview of biodiversity resources in the Hudson River estuary corridor, describes key sites and some habitats, includes a map and descriptions of Significant Biodiversity Areas in the region, and provides various strategies for their conservation. Available at <http://www.dew.state.ny.us/hdr/2008.html> and on CD-ROM from the Hudson River Estuary Program.

#### Mapping Nature in Your Community: Important Areas Maps

Developed by the New York State Department of Environmental Conservation, these maps include areas important to know populations of rare plants and animals, and to know significant ecosystems. The Important Areas GIS data are currently being distributed to county agencies and municipalities by the Estuary Program for use in open space planning, development of natural resource inventories and master plans, and other regional land use planning efforts.

#### Habitat Surveys

The Hudson River Estuary Program can provide your municipality with a map and summary of documented significant natural resources, rare plants and animals, and other available data on biological resources in your town. Communities in Albany, Rensselaer, Schoharie, and Greene counties can contact input provider at [input.provider@hudsonriverestuary.org](mailto:input.provider@hudsonriverestuary.org) and in Ulster, Dutchess, Orange, Putnam, Sullivan, and Washington, contact data provider at [input.provider@hudsonriverestuary.org](mailto:input.provider@hudsonriverestuary.org).



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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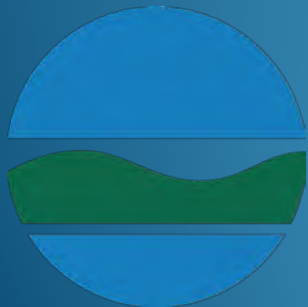
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[www.dec.ny.gov/lands/4920.html](http://www.dec.ny.gov/lands/4920.html)



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