

# Biodiversity Conservation and Local Planning



Laura Heady, Biodiversity Outreach Coordinator  
NYSDEC Hudson River Estuary Program and Cornell University  
Ulster County Planning Seminar Series, Stone Ridge, 28 April 09



Cornell University



NYS Department of Environmental Conservation



# Presentation Outline

- 1) What is biodiversity?
- 2) Ulster County biodiversity
- 3) Ecosystem services
- 4) Planning tools and resources
- 5) Case studies



**Land use authority granted  
to promote health, safety,  
welfare of community....**





What about biodiversity?

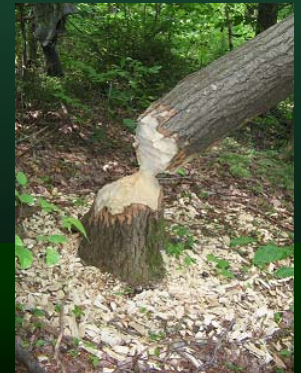




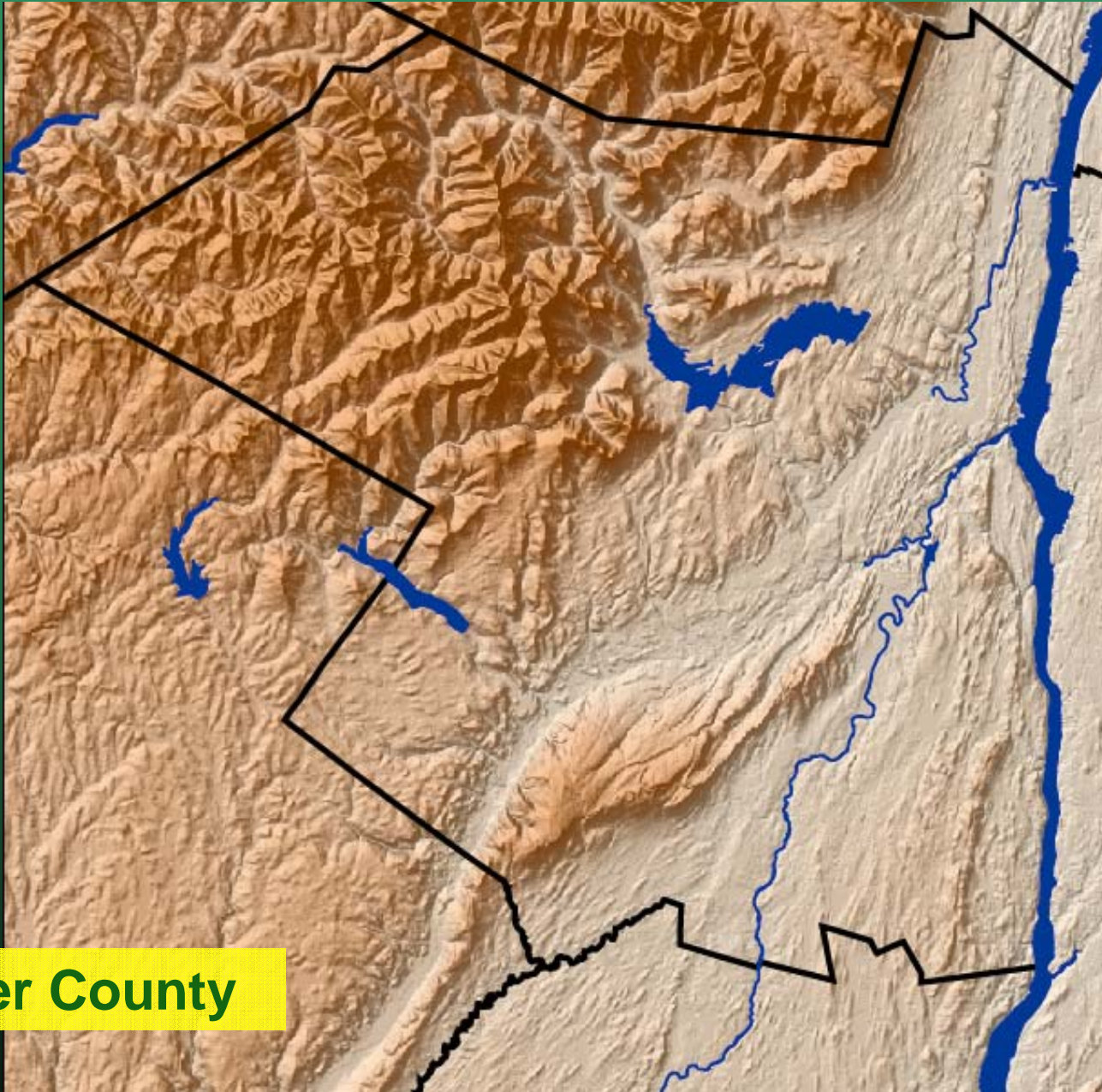
# What is **biodiversity**? variety of life and its processes



genetic diversity  
species diversity  
ecosystem diversity





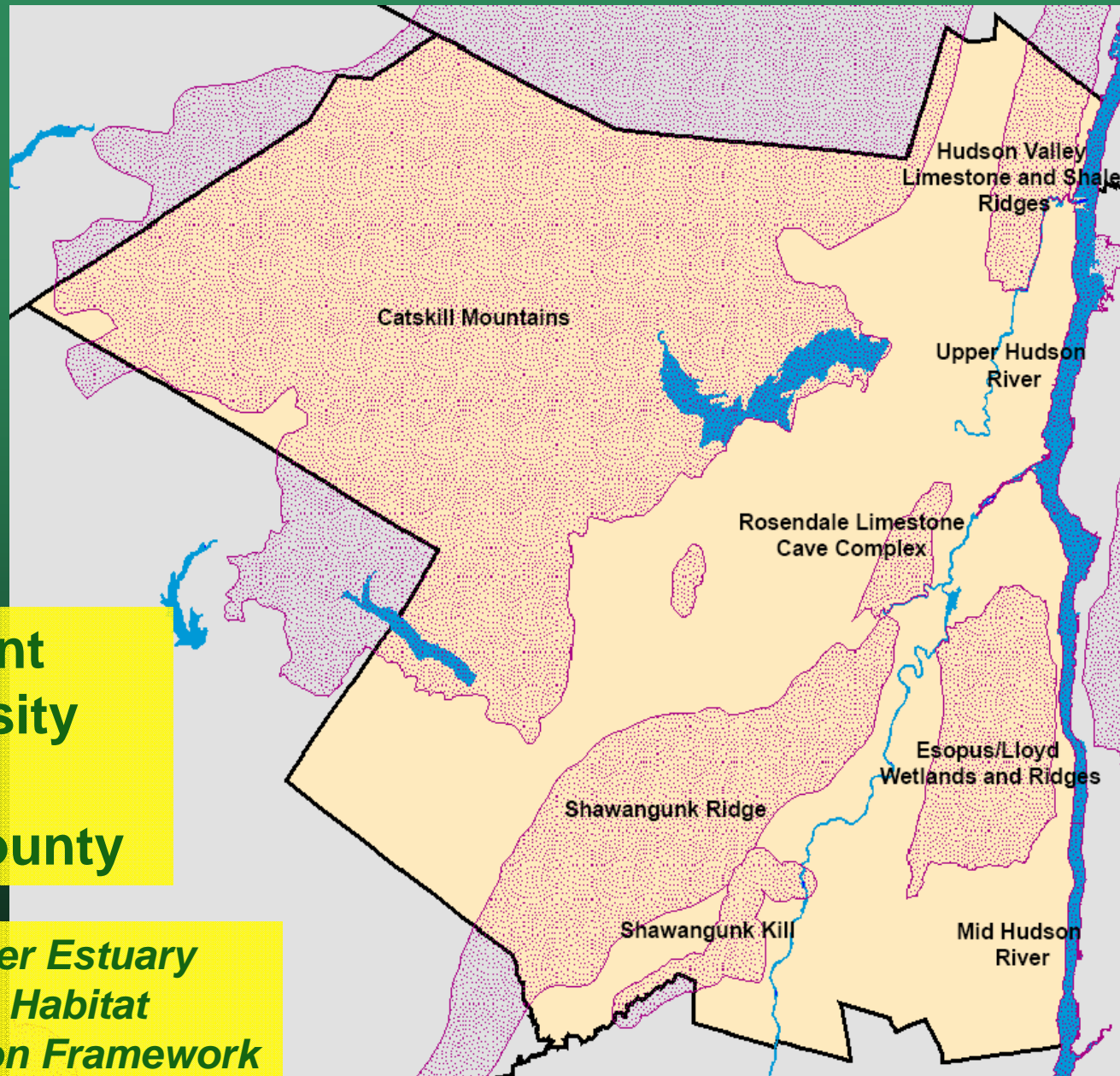


**Ulster County**

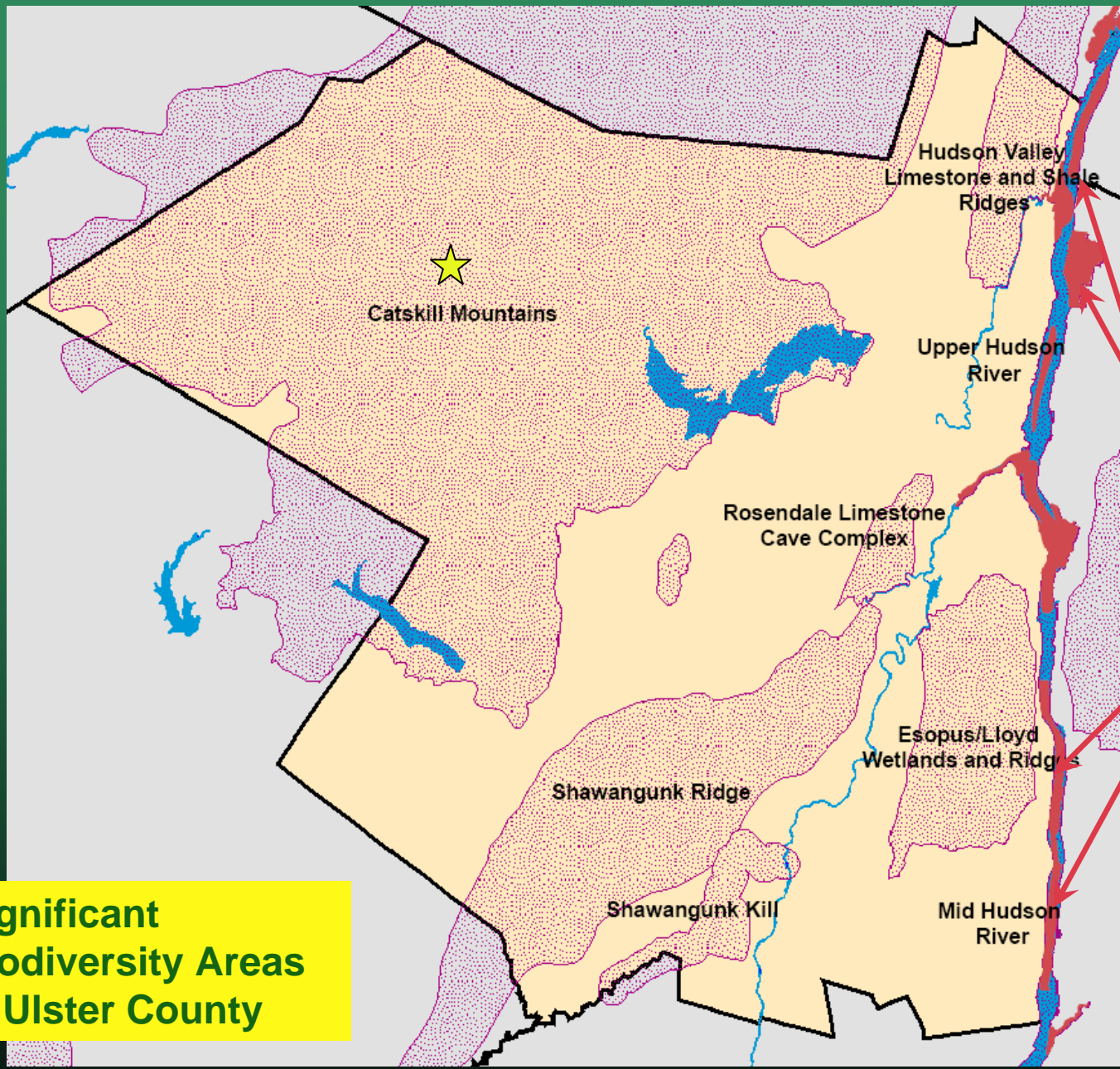


**Significant  
Biodiversity  
Areas in  
Ulster County**

*Hudson River Estuary  
Wildlife and Habitat  
Conservation Framework  
(Penhollow et al. 2006)*







**Significant Biodiversity Areas in Ulster County**

**Significant Coastal Fish & Wildlife Habitat**





# Catskill Mountains



**northern monk's hood**  
*(federally threatened)*



**red maple – tamarack peat swamp**

*Photo by DJ Evans*



**wide roaming mammals**  
**(bobcat & black bear)**

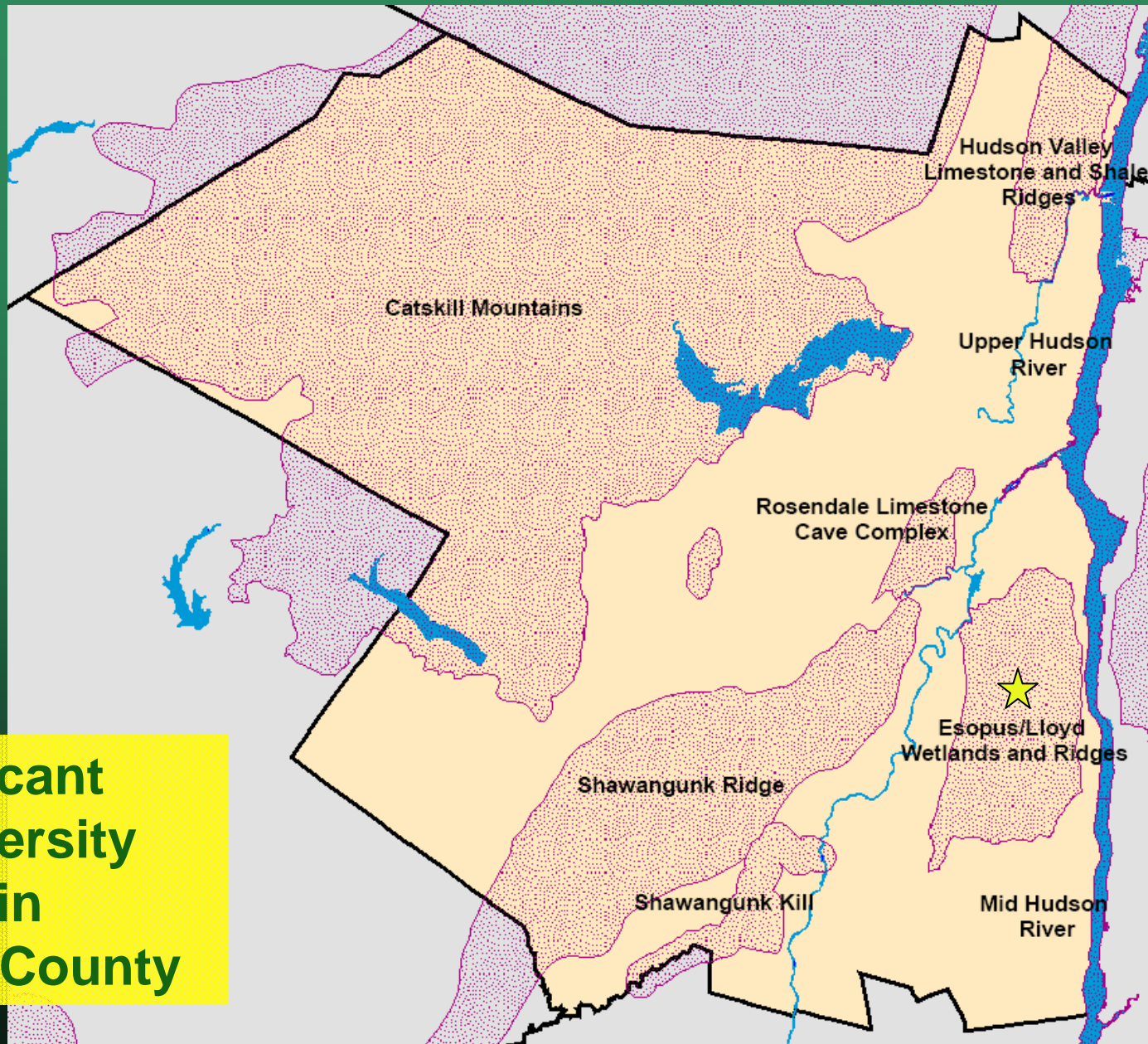


**brook trout**





**Significant  
Biodiversity  
Areas in  
Ulster County**





# Esopus/Lloyd Wetlands and Ridges



**large  
twayblade**  
*photo by  
T. Weldy*

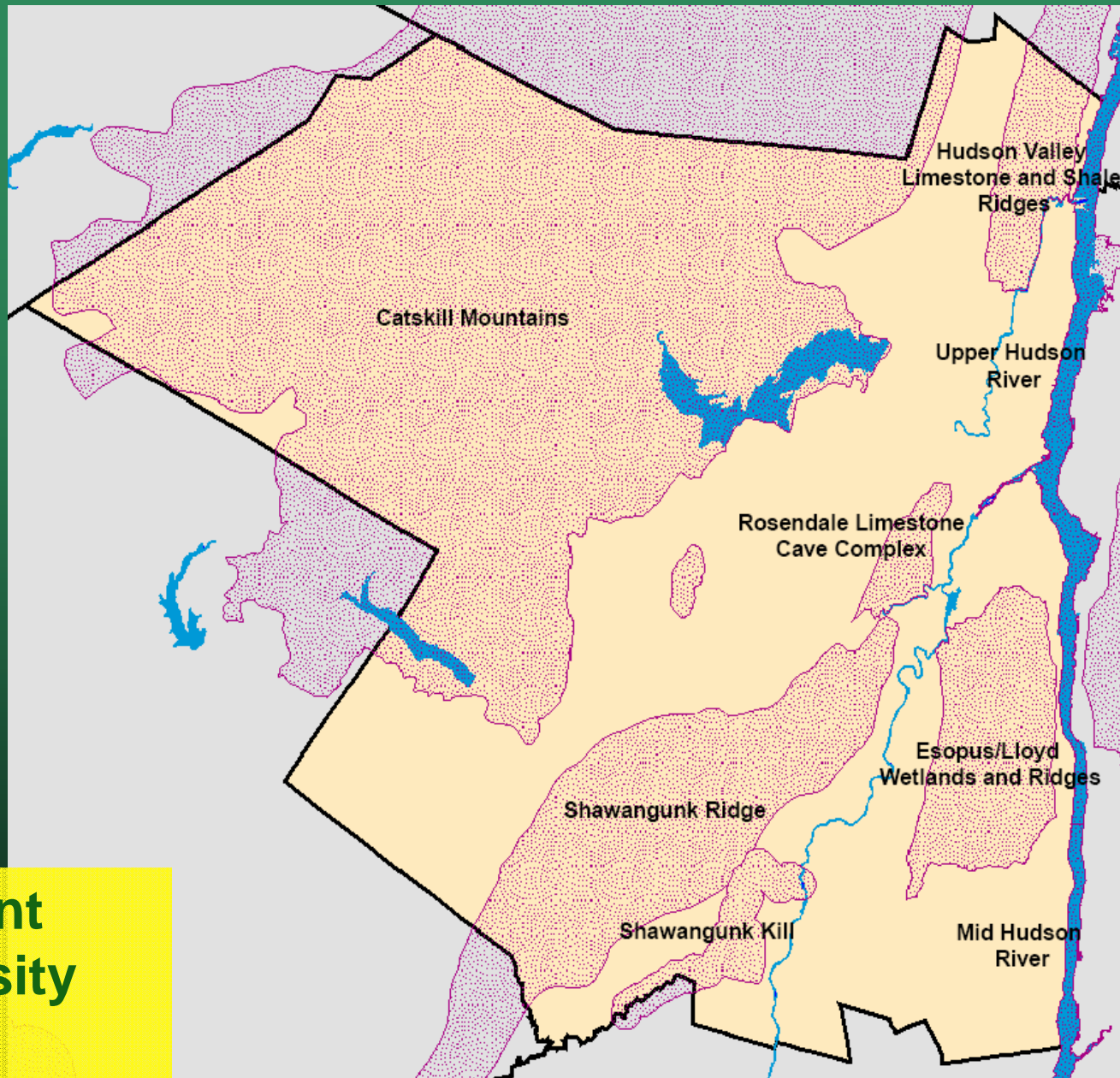


**northern cricket frog  
(state endangered)**  
*photo by J. Jaycox*



**dwarf shrub bog**

**Significant  
Biodiversity  
Areas in  
Ulster County**



NYS Department of Environmental Conservation





***So what?***

Healthy, natural systems provide benefits to our communities:



water quality and quantity

clean air

flood control

climate adaptation

natural pollinators

recreation and education

scenery

**“ecosystem services”**

# water quality and quantity



## Denuded landscapes contribute to:

- compacted soils,
- increased runoff and erosion,
- diminished water quality and availability,
- increased frequency and severity of floods.





# Ecosystem Service

## WATER PURIFICATION

Regional Case Study: NYC water supply system

artificial filtration plant

vs.

watershed protection

\$6-8 billion

(plus annual operating costs of \$300 million)



\$660 million



# Local Case Study: Mt. Kisco drinking water



“While the area’s beauty is clear, the village’s pursuit of the property was based on something it deemed even more compelling: the land drains directly into Byram Lake, the primary water supply for Mount Kisco and its 10,000 residents...”

“...This property is so important to us,” Mr. Cindrich said, citing concerns of runoff from land development that would affect the quality of the lake water. “It is the source of all or almost all our water supply, and we knew that we could not afford to lose this opportunity.”

*“To ensure that it remains undeveloped, the Village of Mount Kisco has agreed to buy the land for \$475,000, Mayor J. Michael Cindrich said.”*

*NY Times, Jan 23, 2009*





# Ecosystem Service

## FLOOD CONTROL

*Wetlands can:*

- slow down floodwaters
- store floodwaters



**A single acre of wetland can store  
1-1.5 million gallons of floodwater.**

*(United States EPA)*



# Ecosystem Service

## FLOOD CONTROL

loss of 5,000 acres  
of wetlands each  
year in the  
Mississippi  
floodplain from  
draining



\$1.5 million annually  
to replace flood  
control function

OR

\$ millions to recover  
from flood damage

*(Study by The Wetlands Initiative)*





# Ecosystem Service

## POLLINATION



**1/3 of human food is derived from plants  
pollinated by wild pollinators.**

**NYS apple crop**



**Over \$185 million in  
2005 (2<sup>nd</sup> in USA)**

The value of pollination services from wild pollinators in the U.S. alone is estimated at \$4-6 billion per year.

The value of pollinator-dependent crops and related agricultural products is estimated at \$40 billion per year.

# Ecosystem Service

## RECREATION & EDUCATION

Of all Americans age 16 or older, in 2006:

12.5 million or 5% **hunted** and spent \$23 billion,  
30 million or 13% **fished** and spent \$41 billion, and  
71 million or 31% **observed wildlife** and spent \$45 billion

(2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation)





## In 2006 in New York:

3.5 million wildlife watchers ages 16 and older  
(2.5 million people were birdwatchers)

which resulted in:

- over \$1.4 billion in retail sales  
(estimated total multiplier effect = \$2.7 billion)
- 25,500 jobs
- over \$250 million in state and local tax revenues.

(2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation)





# Ecosystem Service

## PEST CONTROL – HUMAN HEALTH





***What does this  
have to do  
with planning?***

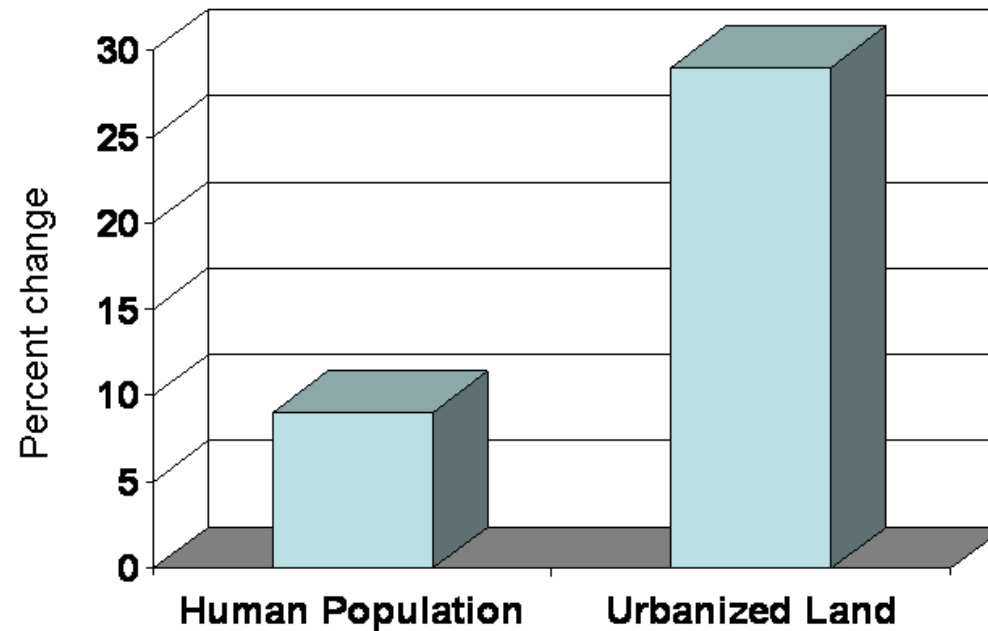
Source: Environmental  
Advocates of New York



**PROBLEM:**

**Open space and wildlife habitat in the Hudson Valley is being consumed at a much faster pace than the population is growing.**

## Increases in Hudson Valley Population and Urbanized Land Area 1982-1997



Source: R. Pendall. 2003. Sprawl without Growth: The upstate paradox. 2003.  
The Brookings Institution Center on Urban and Metropolitan Policy.  
<http://www.brookings.edu>

**Is this smart planning?**



# Biodiversity in the Hudson River Estuary corridor



85% of NY's amphibian species



73% of NY's reptile species



87% of NY's breeding bird species



92% of NY's mammal species



For Hudson Valley biodiversity,

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





# Recommended Conservation Guidelines

Protect large, contiguous, natural habitat areas.

Preserve links between habitats via *broad* connections.

Maintain or restore broad buffer zones of natural vegetation.

Direct development toward altered or least sensitive areas.

Preserve farmland potential.



# Challenges to Conserving Biodiversity

*(from a planning perspective)*

## Land use decision-making process

- many technical considerations = biodiversity often not on the radar
- not enough biological data or it arrives too late = drawn-out process, community polarization
- many project applications = heavy workload
- limited view = “death by 1,000 cuts”



= No time for PLANNING by “Planning” Boards!

LL - LL LL LL LL LL LL

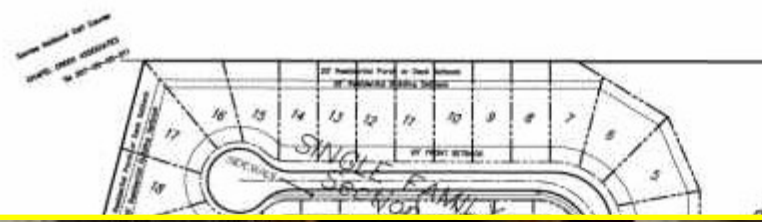


# Recommended Planning Approaches

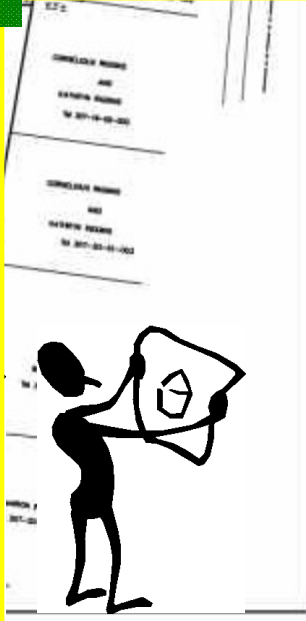
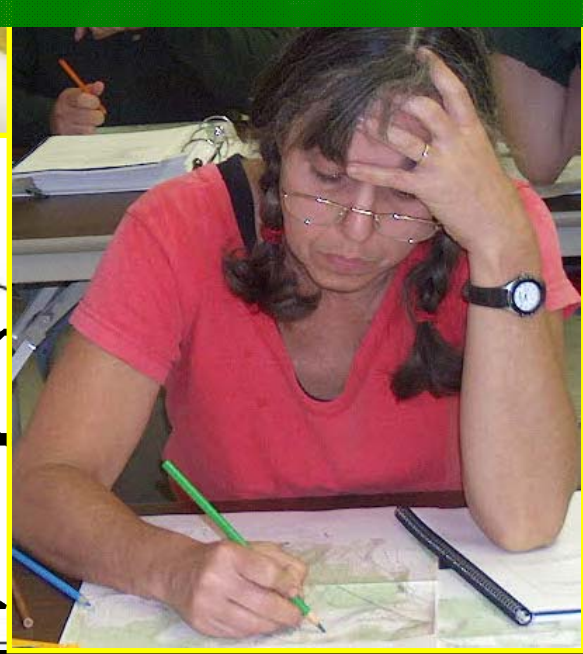
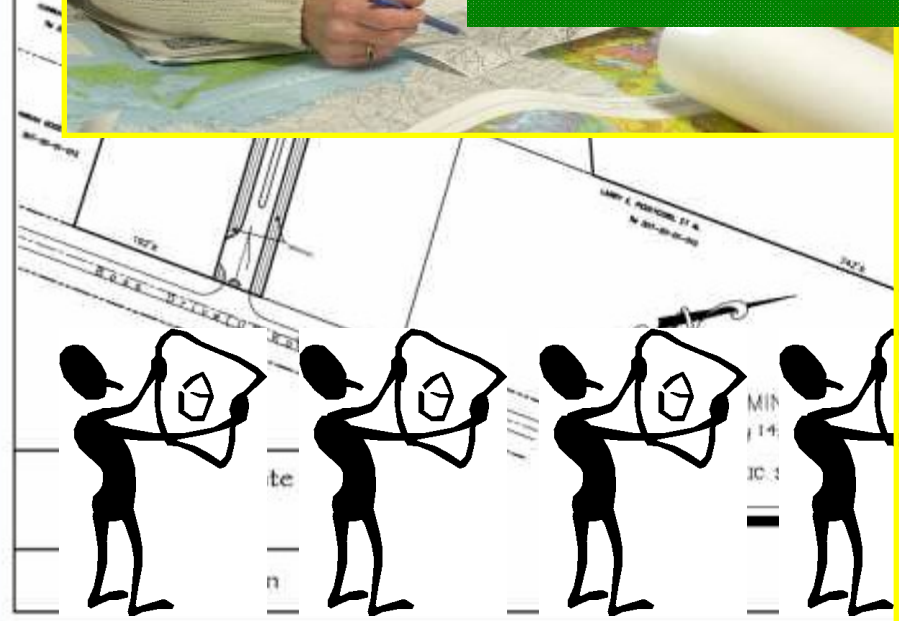
- gather data, use town or regional plans to guide conservation and land-use decisions
  - establishes priorities, community buy-in
- consider habitat conservation *early* in the planning process
  - creates predictable process, less adversarial
- take a “big picture” view to prevent habitat fragmentation and maintain ecosystem services
  - addresses major threat to regional biodiversity



CHAPEL CREEK ASSOCIATES  
SANTEE N



# What's a town to do?





# Solutions for Conserving Biodiversity

*(from a planning perspective)*



1) identify resources

*What do you have?*

2) prioritize resources

*What's important?*

3) plan, protect, manage

*What are you going to do about it?*



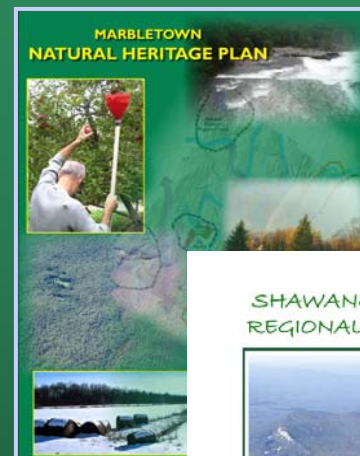
# Tools to Identify, Prioritize, Protect...

## STUDIES

- Natural Resource Inventory
- Habitat Mapping

## PLANS

- Open Space Inventory/Plan
- Comprehensive Plan
- Intermunicipal Conservation Plan
- Watershed Plan



SHAWANGUNK MOUNTAINS  
REGIONAL OPEN SPACE PLAN



Shawangunk Mountains Regional Partnership, December 2008





# Tools to Identify, Prioritize, Protect...

## PROCEDURES and POLICIES

- pre-application meeting
- SEQR
- habitat assessment standards
- conservation ordinances, zoning



# Tools to Identify, Prioritize, Protect...

## PARTNERSHIPS

- local land trusts
- neighboring municipalities
- environmental commission
- landowner associations





**How can we help?**



NYS Department of Environmental Conservation



whatcha got??



**Maps and Data**

**Conservation Guides**

**Training and Education**

**Publications**

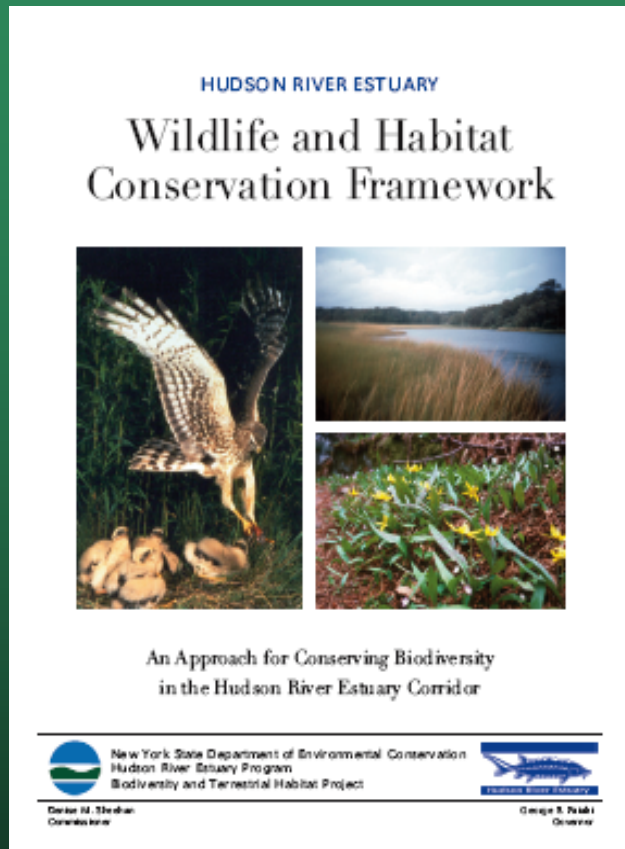
**Funding**

sweet.

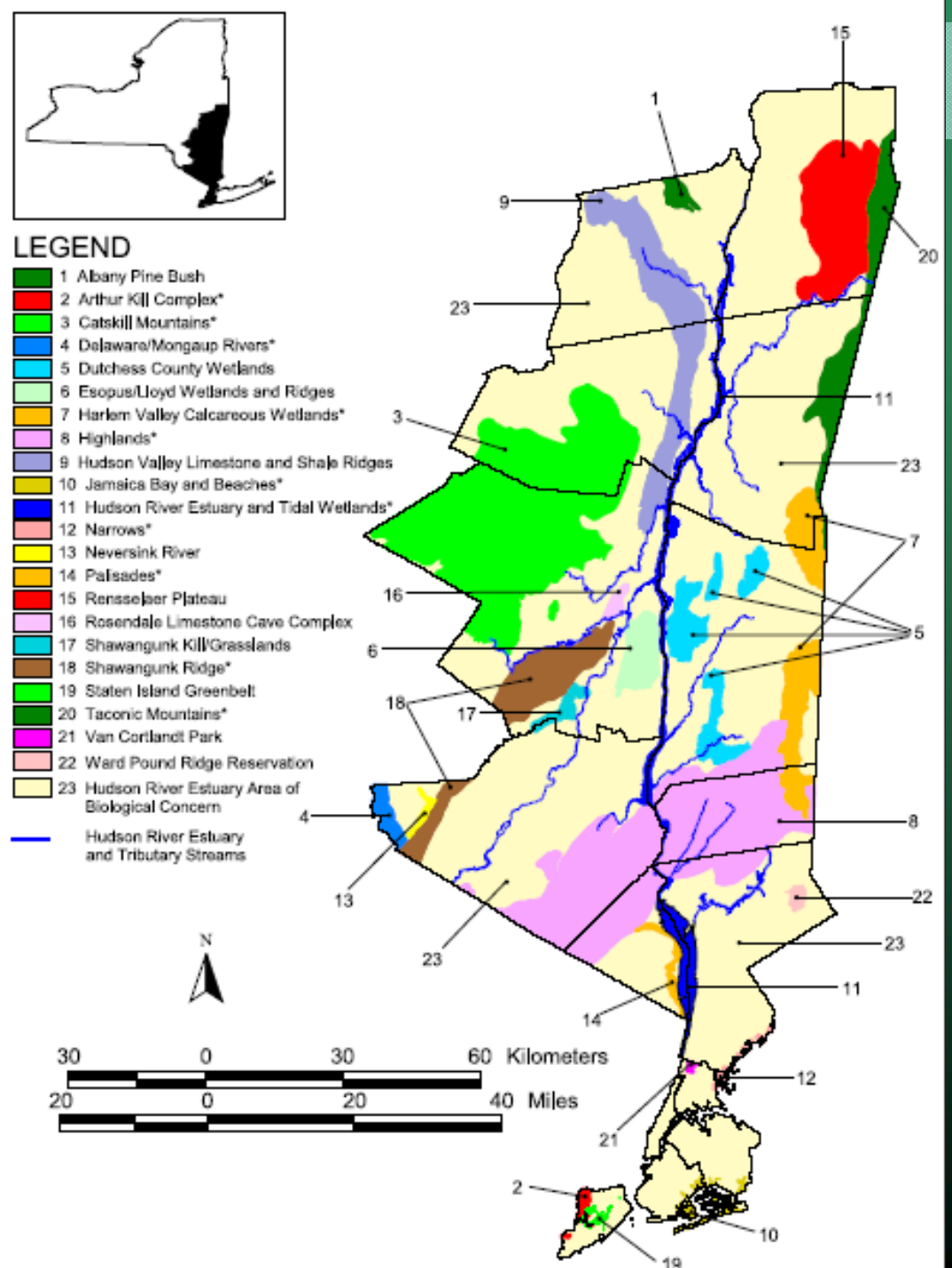




# Maps and Data



Identifies habitat, threats, and strategies for conserving wildlife and habitat diversity throughout the region.



# Maps and Data

## Mapping Nature in Your Community: Important Area Maps

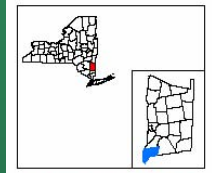
Include areas important to known populations of rare plants and animals, and to known significant ecosystems.

### Mapping Nature in Your Community

Areas Important for the Health of Known Rare Animals, Rare Plants, and Significant Ecosystems

2006

**Town of Fishkill  
Village of Beacon  
City of Beacon**  
and surrounding area



The maps on this page shall not be used for legal, regulatory, or survey purposes. The maps on this page do not replace on-site field surveys, such as those that may be necessary for environmental review.



The Hudson River Estuary Program of the NYS Department of Environmental Conservation provides assistance to municipalities in support of programs to conserve the water, wildlife, and other natural resources of the Hudson River watershed.

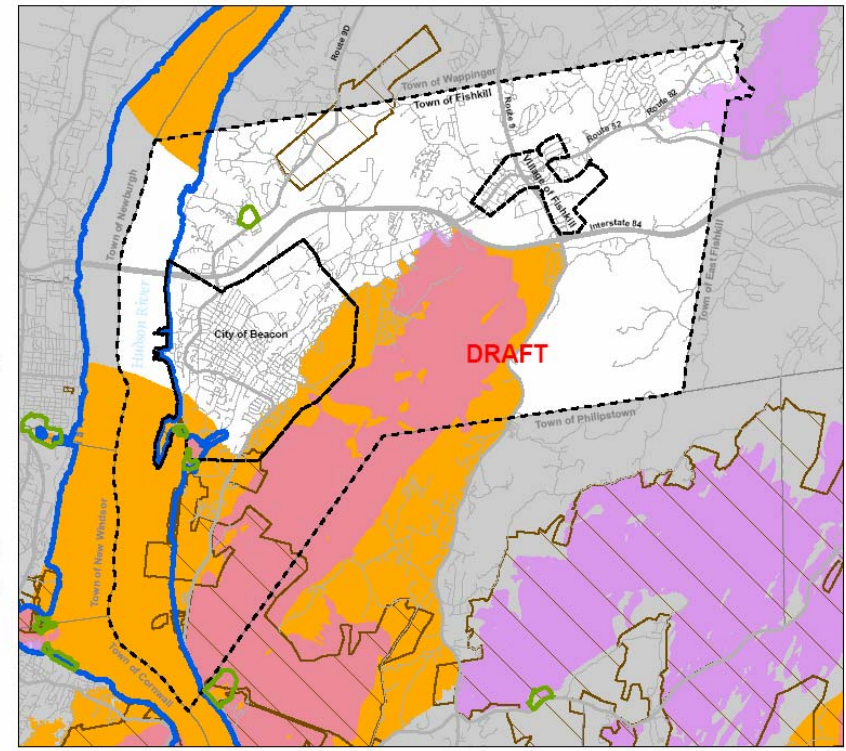


The New York Natural Heritage Program (NYNHP) is a partnership between the New York Department of Environmental Conservation and The Nature Conservancy. Our mission is to enable and enhance conservation of rare animals, rare plants, and significant ecosystems. We combine through field inventories, scientific analyses, expert interpretation, and the most comprehensive database on New York's distinctive biodiversity to deliver the highest quality information for natural resource planning, protection, and management.

Visit us at [www.nynhp.org](http://www.nynhp.org)  
Base map data from NYS DEC and NYS DOT.  
Map created by NYNHP on April 18, 2006 (JJS)



**DRAFT**



- Key to Important Areas**
- Public land
  - Hudson River Important Area
  - Plants
  - Animals
  - Natural Communities
  - Community/Plant Overlap

- Natural Communities**
- Aldic Talc Slope Woodland
  - Appalachian Oak-Hickory Forest
  - Blackish Tidal Marsh
  - Brackish Interstitial Mudflats
  - Brackish Subtidal Aquatic Bed
  - Chestnut Oak Forest
  - Floodplain Forest
  - Freshwater Tidal Marsh
  - Freshwater Interstitial Mudflats
  - Freshwater Tidal Swamp
  - Hemlock-Northern Hardwood Forest
  - Oak-Tulip Tree Forest
  - Pitch Pine-Oak-Heath Rocky Summit
  - Red Cedar Rocky Summit
  - Tidal Creek
  - Tidal River

- Animals**
- Bald Eagle (*Haliaeetus leucocephalus*)
- Plants**
- Blah Blah (*Temprosius verbagli*)



**New York  
Natural Heritage  
Program**

NYS Department of Environmental Conservation

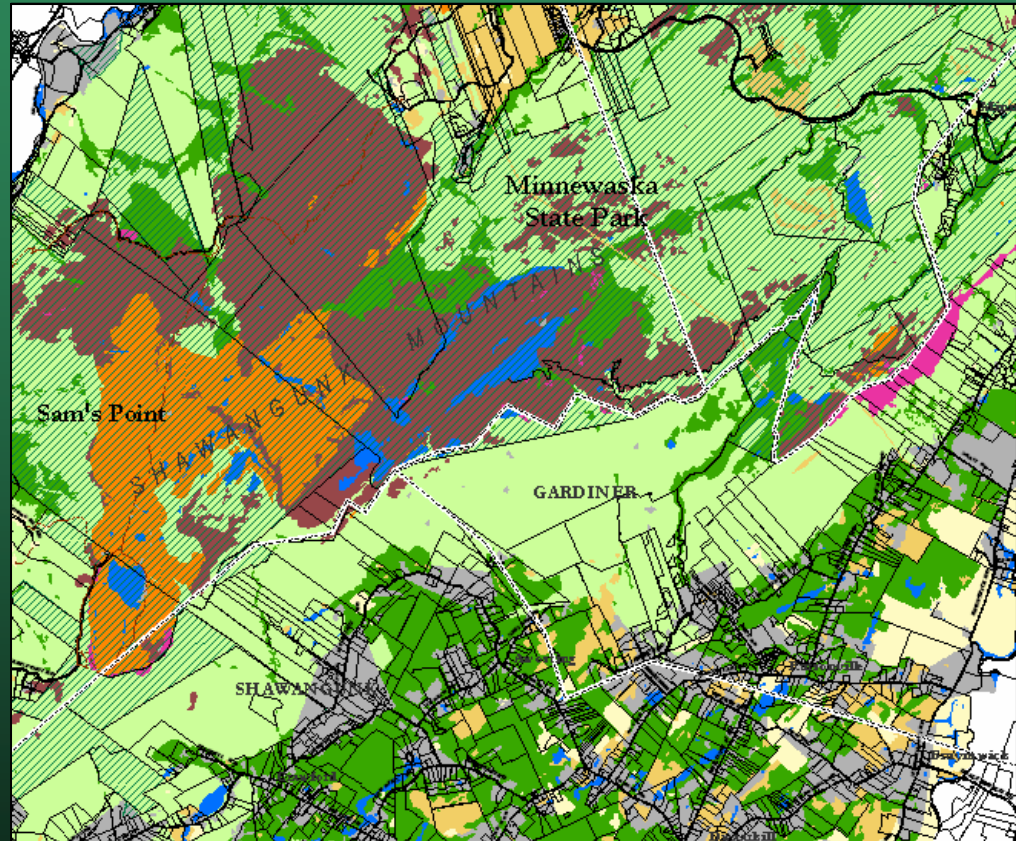




# Maps and Data

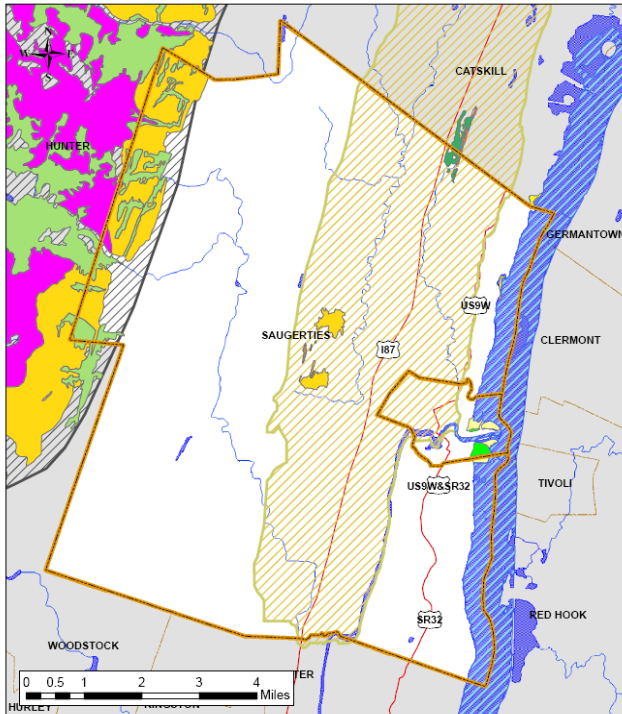
## Shawangunk Ridge Biodiversity Partnership – Green Assets Program

Contact:  
The Nature Conservancy  
255-9051



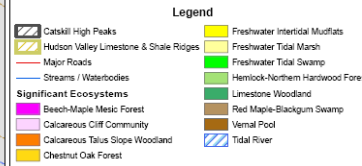
# Maps and Data

## Documented Significant Ecosystems in the Town of Saugerties, NY



This map shows significant ecosystems in the Town of Saugerties as documented by the NY Natural Heritage Program. The NY Natural Heritage Program tracks significant ecosystems, or habitat types that are either rare or of exceptional high quality when compared to other examples in New York. Those displayed here are not necessarily all of those present in the Town. For more information on the NY Natural Heritage Program please visit: [www.nynhp.org](http://www.nynhp.org)

Significant Biodiversity Areas, as identified by the Hudson River Estuary Program, are displayed using hatches (see legend below). For descriptions of ecosystems please refer to the Town's Habitat Summary.



This map was provided as part of DEC's Hudson River Estuary Program. For more information on this program please contact Amanda Stein, Hudson River Estuary Program, NYS Department of Environmental Conservation, 61 West Street, Albany, NY 12242-4901. Phone: (518) 485-2561. Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)

Map created 04 April 2006 by Amanda Stein, Hudson River Estuary Program, NYS Department of Environmental Conservation, 61 West Street, Albany, NY 12242-4901. Phone: (518) 485-2561. Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



**New York State Department of Environmental Conservation**  
Hudson River Estuary Program, Region 3  
21 South Platt Corners Road, New Paltz, New York 12561-1620  
Phone: (845) 255-9115 • FAX: (845) 255-3049  
Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



To: Town of Hyde Park  
From: Karen Strong, Hudson River Estuary Biodiversity Outreach Program, 845.256.3061  
Re: Habitat Summary for the Town of Hyde Park  
Date: April 2006

This assessment was submitted to the Hyde Park Town Board upon the request of the Town of Hyde Park Zoning Corrections committee. It identifies high quality biological resources in the Town of Hyde Park and may serve as a basis for establishing priorities for conservation. Species listed in this report are either rare or indicators of high quality habitat. It is based only on existing information available to the NYS DEC, and should not be considered a complete biological resource inventory. Information about conservation of these resources was also included upon request.

Why should I care about biological resources?

1. Forests, wetlands, and stream corridors work together to keep our water supply clean and abundant.
2. Protected natural areas can provide economic benefit through increased tourism and reduced cost of town services.
3. Plants and animals and the intact landscapes that support them are an important part of community character and local quality of life.
4. Nature keeps your family healthy - by cleaning air, cleaning water, lowering stress, and lowering risk of disease.

Major natural resources of Hyde Park:

The Town of Hyde Park has very significant biological resources spread over a large area of town. The major natural resources are the Hudson River, Blanding's turtle important area, and Hogback Hill forest.

Known areas of high quality habitat:

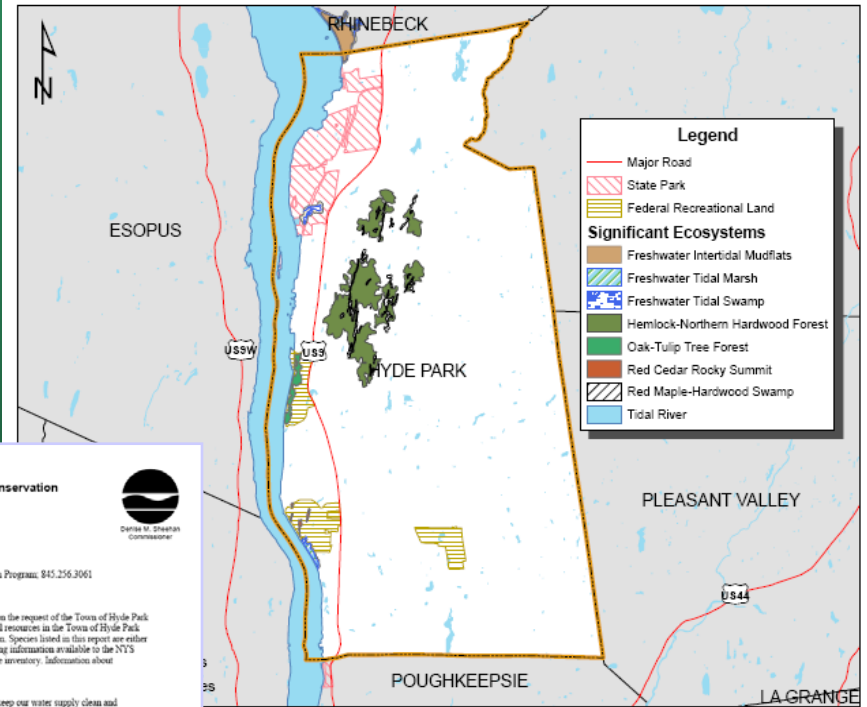
Blanding's Turtle Important Area

The Blanding's Turtle important area in the Town of Hyde Park was created by the NY Natural Heritage Program based on more recent records of turtles and the habitat that they use throughout their life cycles. Blanding's turtles use several different kinds of habitats and move more than one half mile from their primary winter and spring habitats. One known site in Hyde Park no longer supports turtles. The reason the area is so large is because the turtles move long distances, and need different kinds of habitats to nest, feed, and overwinter. This obviously makes balancing development and conservation a challenge, but one that can be met. Be aware that there may be more turtle sites within the town that have not yet been discovered. The important area is shown on the map entitled, "Documented Important Areas for Rare Plants and Animals in the Town of Hyde Park" in orange.

Conservation:

It was requested that the program provide specific information that could be used locally to proactively conserve Blanding's turtles. Blanding's Turtles are a NYS Threatened species, and some of the suggestions in this document replace the need for the applicant and planning board to work with DEC Regional Office in New Paltz.

## Documented Significant Ecosystems in the Town of Hyde Park, NY



Significant ecosystems in the Town of Hyde Park as documented by the NY Natural Heritage Program. Those displayed here are not necessarily all of those present in the Town. For more information on the NY Natural Heritage Program please visit: [www.nynhp.org](http://www.nynhp.org)

This map was provided as part of DEC's Hudson River Estuary Program. For more information on this program please contact the Hudson River Estuary Biodiversity Outreach Coordinator at 845-256-3061.

Map created 12 April 2006 by Karen Strong, Hudson River Estuary Program, NYS Department of Environmental Conservation, 61 West Street, Albany, NY 12242-4901. Phone: (518) 485-2561. Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)

Data Sources:  
NY Natural Heritage Program,  
NYS Department of Environmental Conservation,  
U.S. Geological Survey

Map created 12 April 2006 by Karen Strong, Hudson River Estuary Program, NYS Department of Environmental Conservation, 61 West Street, Albany, NY 12242-4901. Phone: (518) 485-2561. Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



Habitat summaries can be prepared by the Hudson River Estuary Program.

For more information on the NY Natural Heritage Program please visit: [www.nynhp.org](http://www.nynhp.org)

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# Conservation Guides



- HOME
- ANIMAL GUIDES
- PLANT GUIDES
- COMMUNITY GUIDES
- SEARCH GUIDES

- Summary
- Conservation Issues
- Habitat
- Range
- Identification Comments
- Taxonomy
- Additional Resources

## Longtail Salamander

*Eurycea longicauda* (Green, 1818)

**Family:** (Plethodontidae)

**State Protection:** Not Listed  
**Federal Protection:** Not Listed

### Did you know?

Lungs are absent in the longtail salamander, as well as in all salamanders of the family Plethodontidae. Respiration is accomplished through the skin and the lining of the mouth (Conant and Collins 1998).

Amphibians

[Printer Friendly Version](#)



Longtail Salamander Jesse W. Ja

### State Ranking Justification

Approximately ten historical locations were noted by Bishop (1941), but only one location has recently been confirmed. Approximately 12 locations were reported in 1998 and 1999 for the New York State Amphibian and Reptile Atlas. Since 1999, one additional location was reported in 2002. New York is at the northern limit of the range and the state range may be more restricted or localized than is suggested by Conant and Collins (1998). The species may also have fairly specific habitat requirements but future survey efforts are likely to confirm additional populations.

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Online animal, plant, and community guides include description, habitat, distribution, places to see, conservation issues...  
[guides.nynhp.org](http://guides.nynhp.org)



The NY Natural Heritage Program enables and enhances conservation of the state's biodiversity by delivering high-quality information from field inventories, expert interpretation, and the most comprehensive database on New York's distinctive biodiversity. The following conservation guides are designed to help land managers, decision-makers, planners, scientists, consultants, and the interested public better understand the rare species and natural communities that characterize New York. Funding from the Hudson River Estuary Program made the initial development of these guides possible.

Search Guides  Search

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- #### Additional Links
- Rarity Rank Definitions
  - Community System Descriptions
  - Key to Systems and Subsystems
  - Acknowledgements
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Each guide has a printer-friendly version.

New England Cottontail Guide - New York Natural Heritage Program - Microsoft Internet Explorer

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New York Natural Heritage Program

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Summary Conservation Issues Habitat Range Identification Comments Taxonomy Additional Resources

**New England Cottontail**  
*Sylvilagus transitionalis* (Bangs, 1895)

**Family:** Rabbits and Hares (Leporidae)

**State Protection:** Special Concern Species  
**Federal Protection:** Candidate For Listing

**State Rarity Rank:** S1  
**Global Rarity Rank:** G3

**Did you know?**  
Due to the decline of over 80% of its range since the 1960s, the New England Cottontail is a candidate for Federal threatened or endangered status (US Fish and Wildlife Service 2004).

**Printer Friendly Version (PDF)**

**State Ranking Justification**  
New England cottontails have disappeared from many historical locations including Warren County, the Catskills, and Long Island. It was last documented in Rensselaer County in the 1960s (Benton and Atkinson 1964). Recent surveys suggest that it continues to decline throughout its range due to forest maturation, habitat loss, habitat fragmentation, and competition with eastern cottontails (Litvatis et al. 2006). In New York, it is now limited to a few fragmented populations in Columbia, Dutchess, Putnam, and Westchester counties. If current trends continue, the species will likely become extirpated in the state.

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javascript:openWindow("image.php?id=10070",531+2,600+20)

## New England Cottontail



New England cottontail



Photo credits: Michael N. Marchand

**Scientific Name** *Sylvilagus transitionalis*  
(Bangs, 1895)

**Family Name** Leporidae  
Rabbits and Hares

### Did you know?

Due to the decline of over 80% of its range since the 1960s, the New England Cottontail is a candidate for Federal threatened or endangered status (US Fish and Wildlife Service 2004).

## Summary

**Protection** Special Concern Species in New York State, candidate for listing federally.

This level of state protection means: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection un

This level of federal protection means: this species is a candidate for listing.

**Rarity** G3, S1

A global rarity rank of G3 means: Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.

A state rarity rank of S1 means: Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology makes it especially vulnerable in New York State.



# Environmental Resource Mapper

[www.dec.ny.gov/animals/38801.html](http://www.dec.ny.gov/animals/38801.html)

Address <http://www.dec.ny.gov/animals/38801.html>

Go Links

NEW YORK STATE



DEPARTMENT OF ENVIRONMENTAL CONSERVATION



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[Home](#) » [Animals, Plants, Aquatic Life](#) » [Species Conservation](#) » Environmental Resource Mapper

## Environmental Resource Mapper

The Environmental Resource Mapper is an interactive mapping application that can be used to identify some of New York State's natural resources and environmental features that are state protected, or of conservation concern.

### Currently included on the maps are locations of:

- Freshwater wetlands regulated by the State of New York (outside the Adirondack Park).
- New York's streams, rivers, lakes, and ponds; water quality classifications are also displayed.
- Animals and plants that are rare in New York, including those listed as Endangered or Threatened (generalized locations). [Updated January 2007]
- Significant natural communities, such as rare or high-quality forests, wetlands, and other habitat types. [Updated January 2007]

These maps are intended as one source of information for landowners, land managers, citizens, local officials, and project sponsors engaged in land use decision making, conservation, or

Page Applies To:



All Regions

### Contact for this Page:

NYSDEC Division of Fish, Wildlife and Marine Resources  
625 Broadway  
Albany, New York  
12233-4756  
518-402-8903  
[email us](#)

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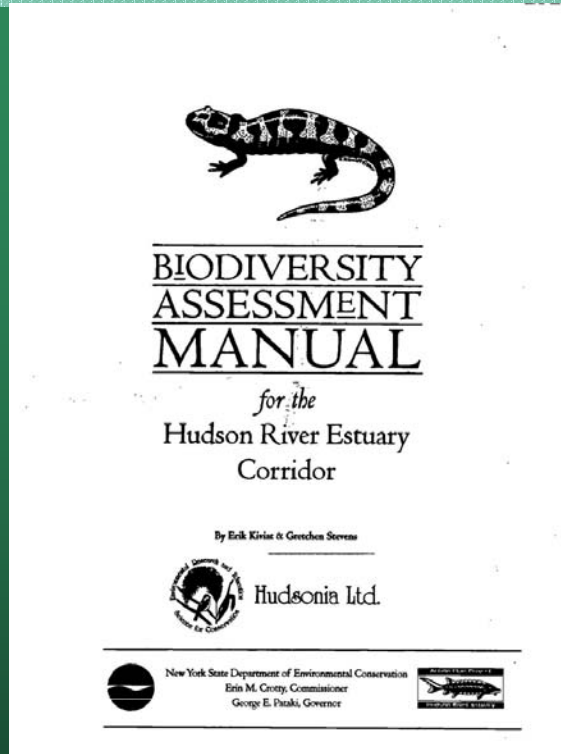
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Internet

# Training and Education



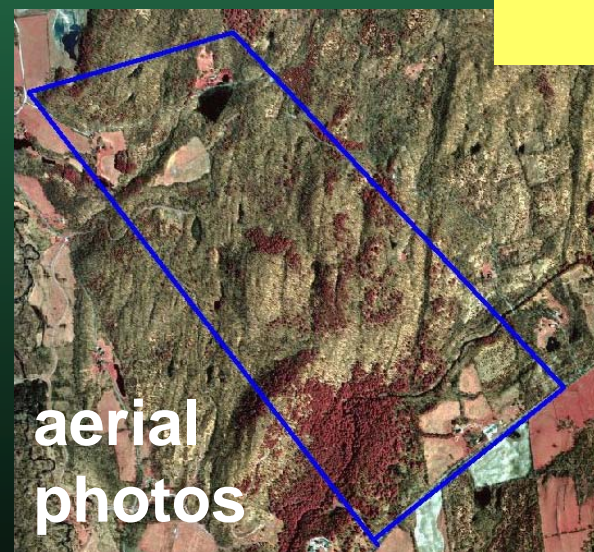
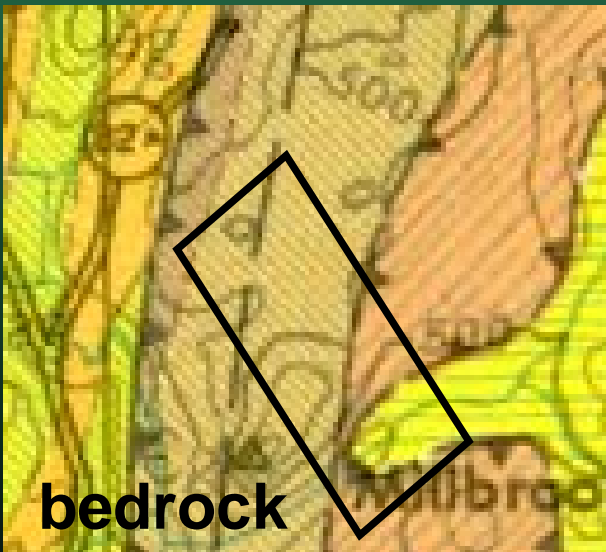
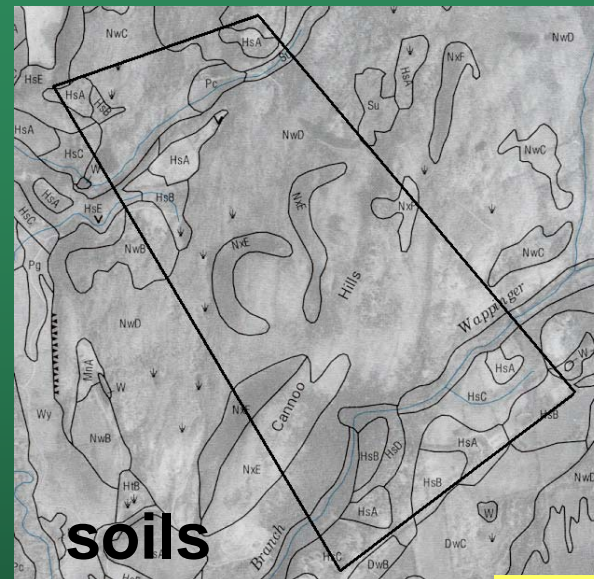
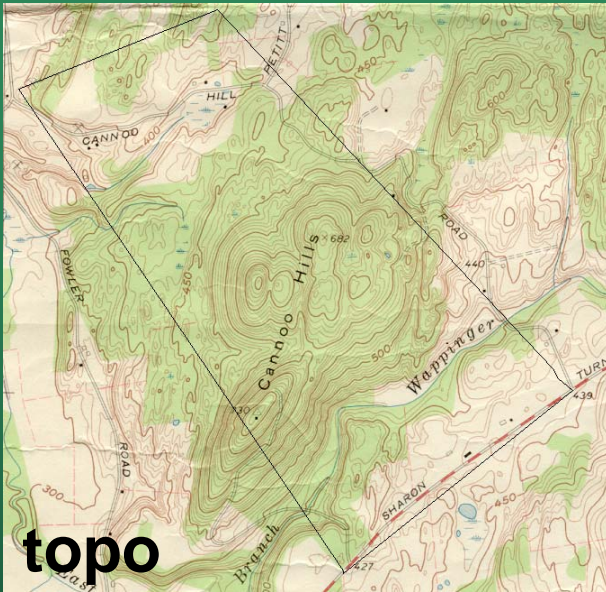
Hudsonia Biodiversity Assessment

[www.hudsonia.org](http://www.hudsonia.org)

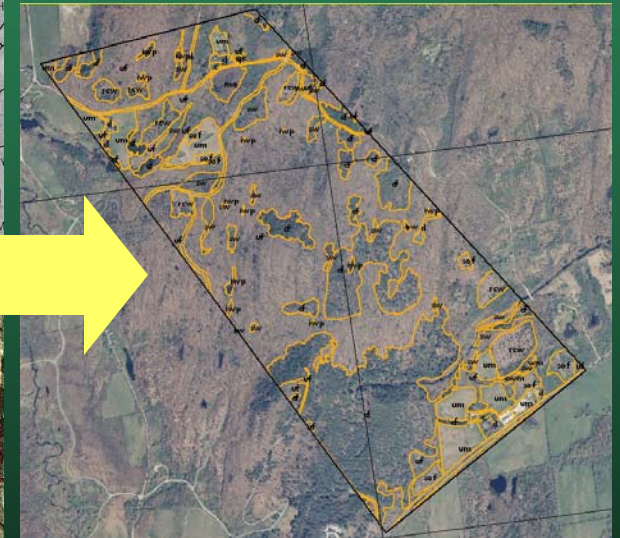
10-Month Training and 3-day Short Course...



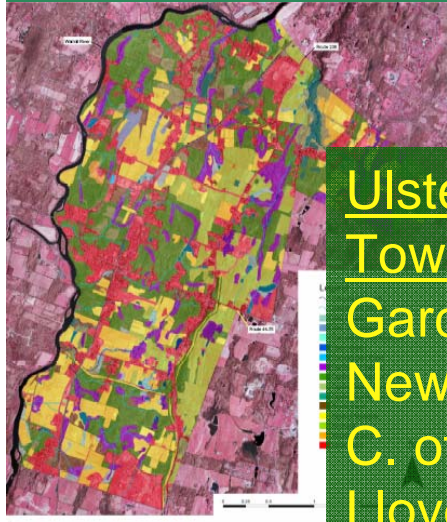
...teach remote sensing and habitat identification to land-use decision makers.



to land-use decision makers.







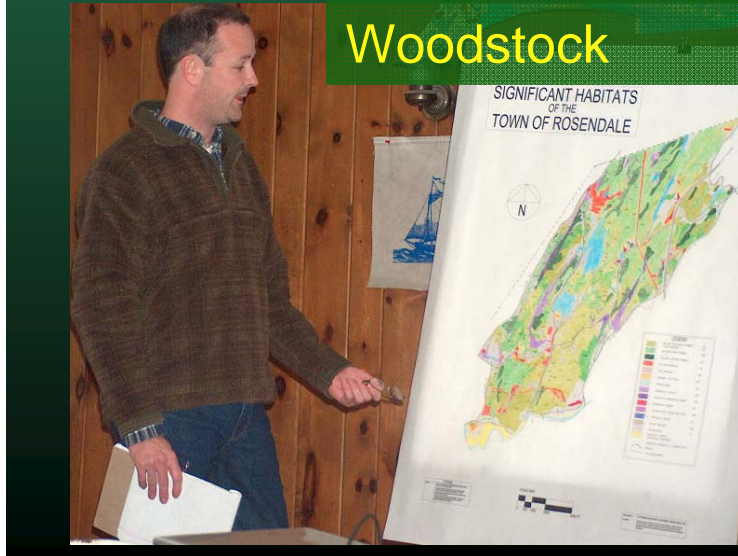
Gardiner DRAFT HABITAT MAP

Study Area:  
Gardiner, New York - East of Wallkill River  
1950 Topographic Quadrangles: Gardiner and Otsego

Map Date:  
Habitat map prepared by Gardner Biodiversity Team of Gardner ECC  
Digital Cartography: Spring 2001, New York State GIS Clearinghouse

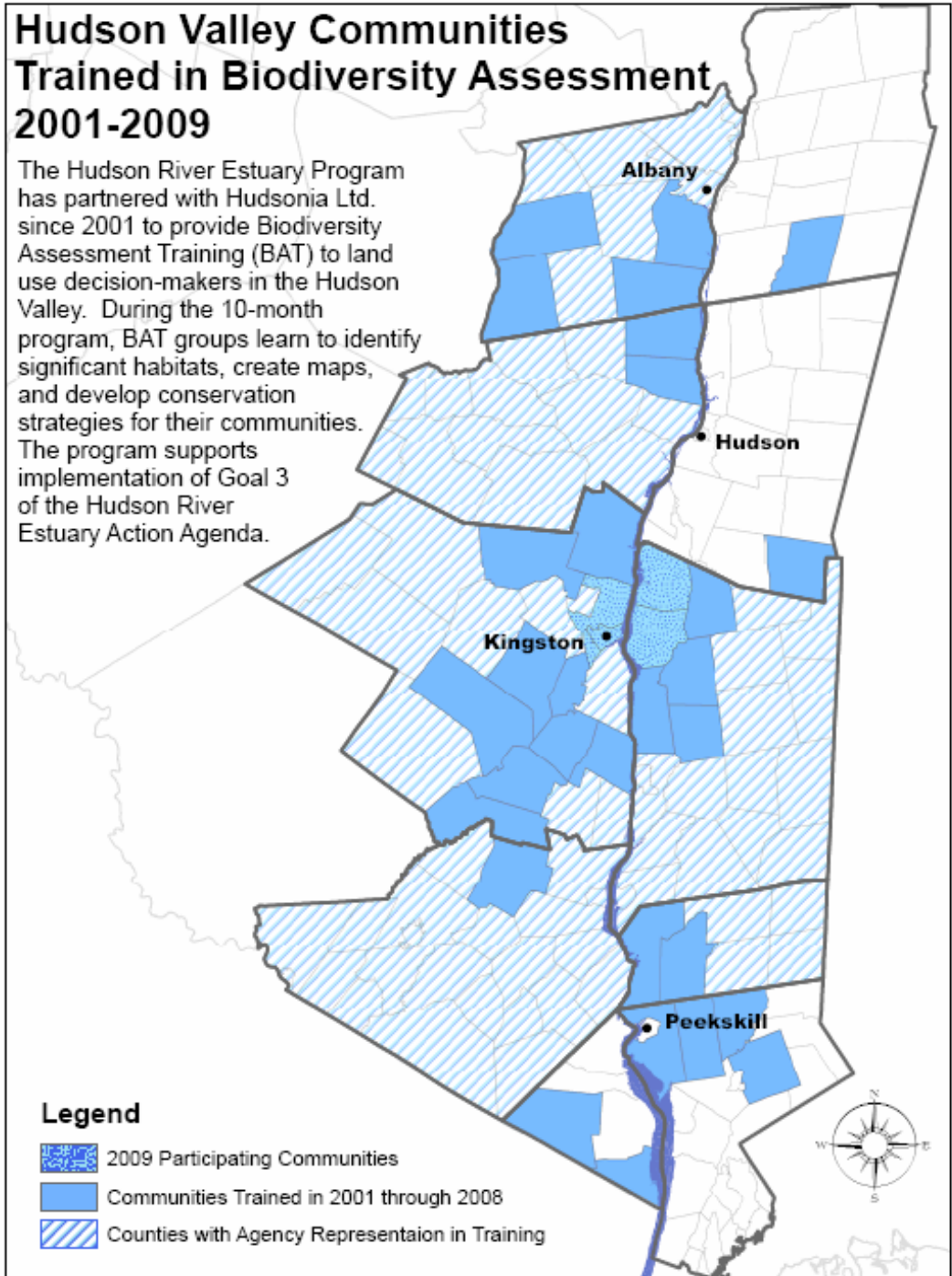
Biodiversity Training By:  
Funding by Hudson R.  
The draft map is a work in progress and should  
not be used for public display or other purposes.

**Ulster County  
Towns with Maps:**  
Gardiner  
New Paltz  
C. of Kingston  
Lloyd  
Marbletown  
Rosendale  
Saugerties  
Shawangunk  
Ulster  
Woodstock






## Hudson Valley Communities Trained in Biodiversity Assessment 2001-2009

The Hudson River Estuary Program has partnered with Hudsonia Ltd. since 2001 to provide Biodiversity Assessment Training (BAT) to land use decision-makers in the Hudson Valley. During the 10-month program, BAT groups learn to identify significant habitats, create maps, and develop conservation strategies for their communities. The program supports implementation of Goal 3 of the Hudson River Estuary Action Agenda.



### Legend

-  2009 Participating Communities
-  Communities Trained in 2001 through 2008
-  Counties with Agency Representation in Training



# Publications



## Metropolitan Conservation Alliance

[http://www.ecostudies.org/mca\\_technical\\_papers.html](http://www.ecostudies.org/mca_technical_papers.html)

Croton-to-Highlands Biodiversity Plan



Eastern Westchester Biotic Corridor:  
Bedford Addendum



Northern Walkkill Biodiversity Plan



Balancing Development  
and Environmental Stewardship  
in the Hudson River Estuary Watershed

Metropolitan Conservation Alliance



MCA Technical Paper Series: No. 13

Southern Walkkill Biodiversity Plan

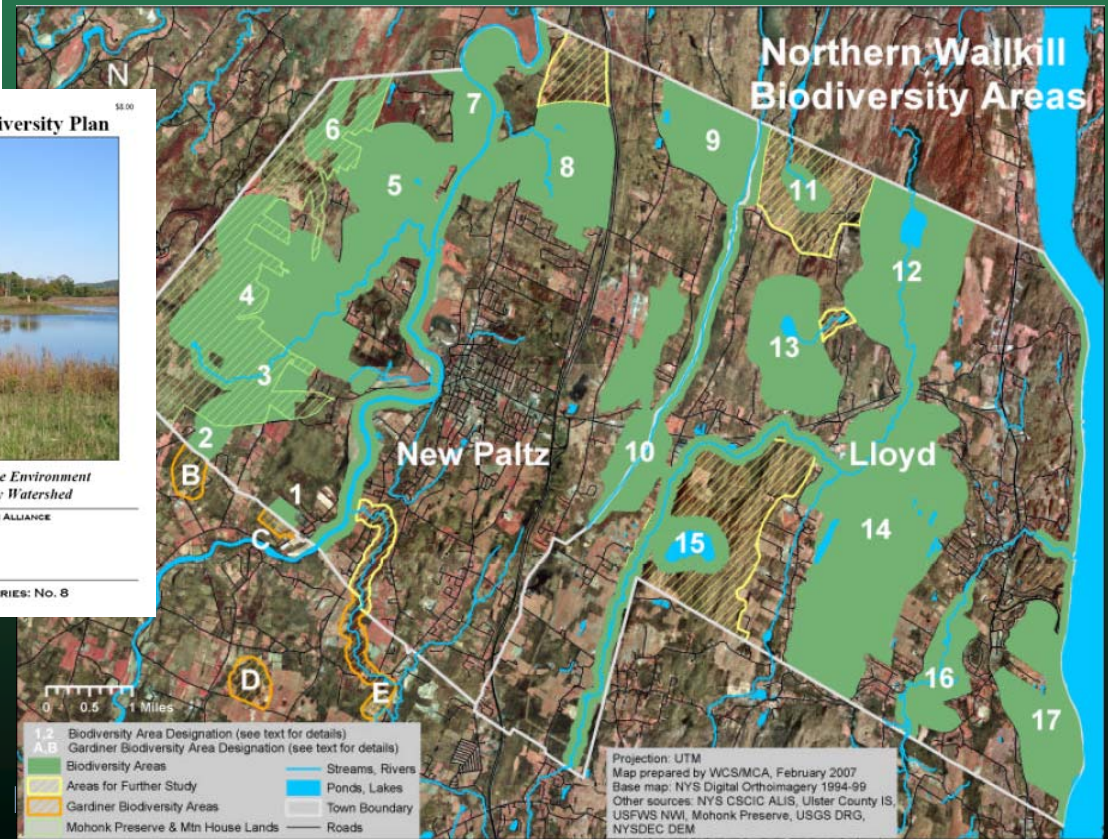


Balancing Development and the Environment  
in the Hudson River Estuary Watershed

METROPOLITAN CONSERVATION ALLIANCE



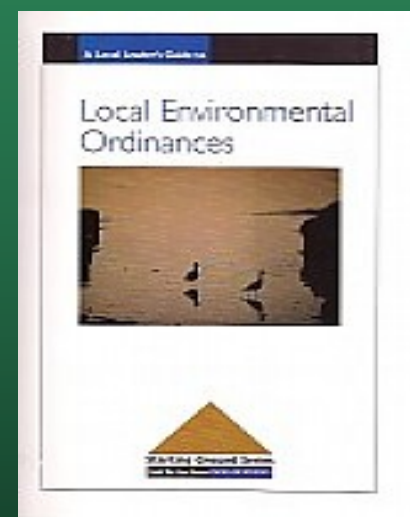
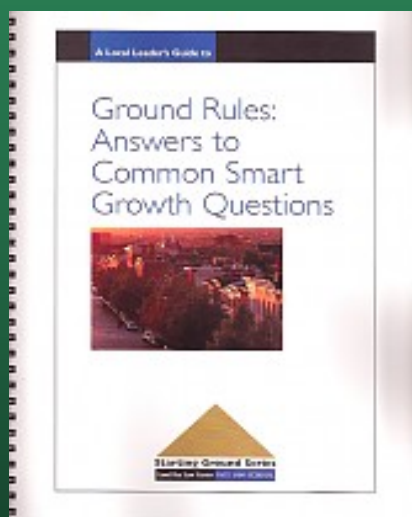
MCA TECHNICAL PAPER SERIES: No. 8



# Publications



Pace Land Use Law Center  
[www.landuseleaders.com](http://www.landuseleaders.com)



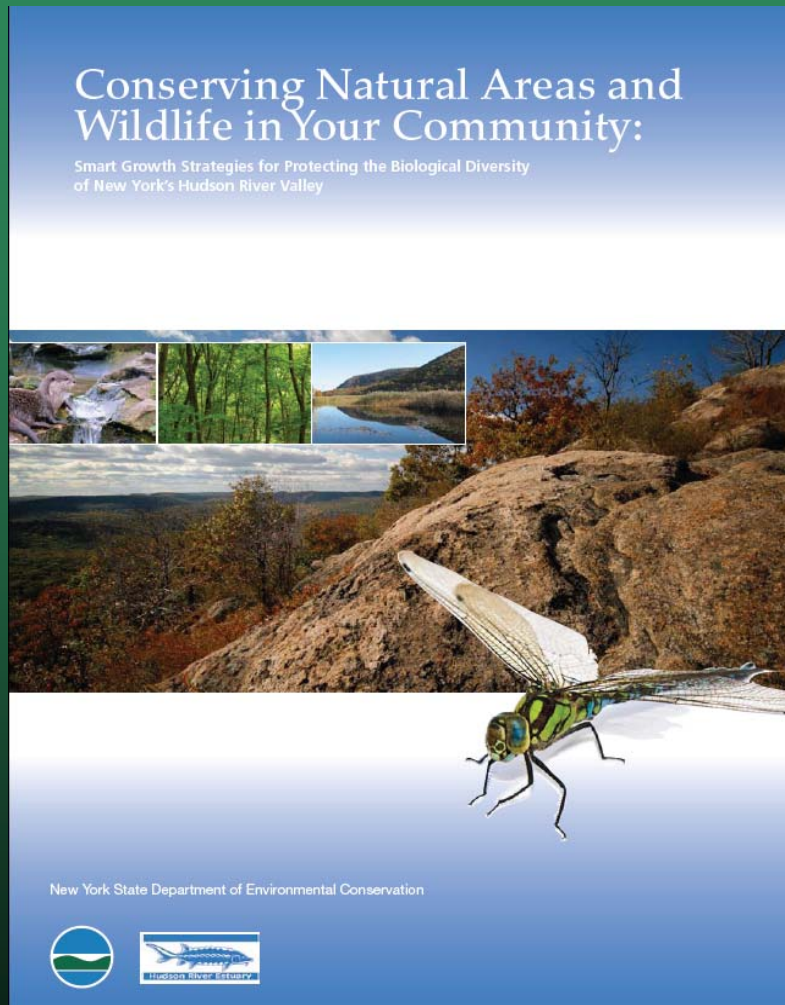
## Gaining Ground Ordinance Database

A free, online database of land use resources and ordinances from across the United States: [landuse.law.pace.edu](http://landuse.law.pace.edu).





# Publications



A local government handbook from the Hudson River Estuary Program

*Conserving Natural Areas and Wildlife in Your Community: Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley*



# Funding

[www.dec.ny.gov/lands/5091.html](http://www.dec.ny.gov/lands/5091.html)



New York State  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## 2008 Hudson River Estuary Action Agenda Grants Program

In preparation for the 2009  
Hudson-Fulton-Champlain Quadricentennial  
Application and Instructions

Deadline: June 27, 2008



New York State  
Department of Environmental Conservation

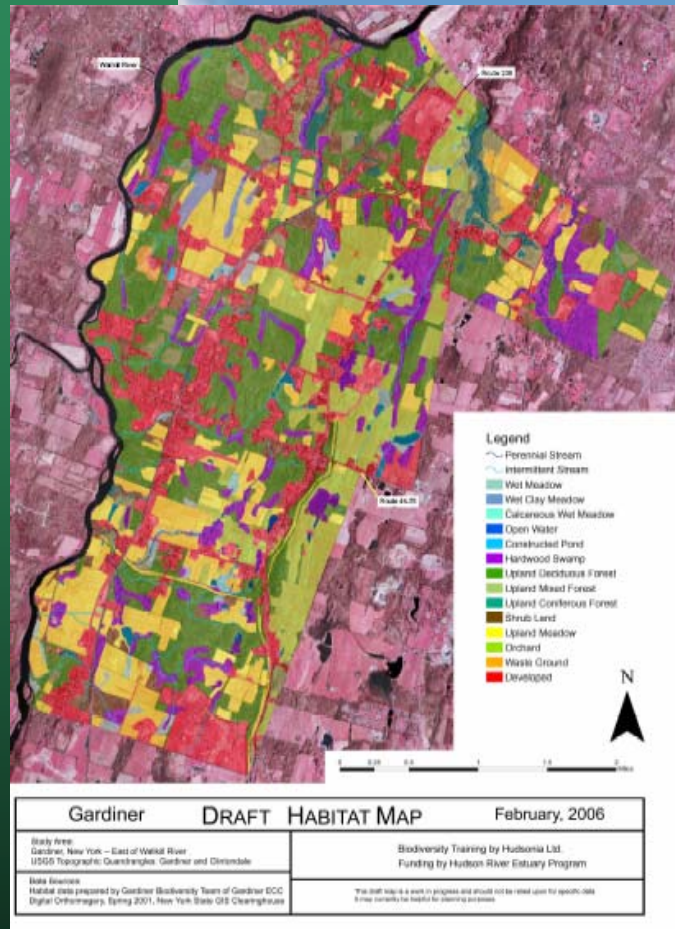


show me  
da money!





# Example: Intermunicipal Habitat Mapping



- Towns of Gardiner and Shawangunk
- Biodiversity Assessment Training
- \$30,000 Estuary Grant for intermunicipal habitat mapping



# Example: Active Environmental Commission

## Volunteer helps protect Pleasant Valley's environment

By Dan Shapley  
Poughkeepsie Journal

Theodora Luzzi Southworth is Pleasant Valley to the core.

Known as Teddi, Southworth grew up on milk from Albrecht's, the landmark dairy, and eggs from a farm just down the road from land her family has owned since the days when her grandfather cared for Franklin D. Roosevelt's Scottish terrier.

Early in life, she developed a love of the outdoors while tromping through a tributary of the Wappinger Creek and exploring the fields and forests around her home.

"My grandfather, who we lived next door to, would find little animals, mostly turtles, and he would show them to me," Southworth said. "He always told me to let the ani-

mals go. They don't belong to you."

Southworth is carrying the idea of gentle coexistence with nature to town planners as they consider construction proposals in Pleasant Valley.

Since 2002, landowners and developers have proposed more than 1,000 houses, apartments and condominiums. More than 600 have been approved. The others are under consideration.

Because of Southworth, planners had a wealth of information about the environment at their fingertips as they considered those proposals, so they could steer development to avoid damaging water supplies or wildlife habitat.

She and the other members of the town's conservation advisory council trained

to use computer mapping software and went on field trips to identify and catalog natural resources. Conservation advisory councils are volunteers appointed by town officials to advise them on environmental issues.

"That way you can plan. You build around the habitats. You can teach your children about them. You don't want to erase them," Southworth said. "It's not fair to the animals, and it's not fair to humans."

### State funds training

The training, which volunteers in several Hudson Valley communities have undergone, is provided by Hudsonia, an Annandale research group, and paid for by the state Hudson River Estuary Program.

Southworth has taken

another step. She creates detailed natural resource maps of the area around each proposed development, so the planning board has information about the site and neighboring properties, their natural resources and their relative importance.

"Thanks to her work, they can add consideration of important habitats — both on the site and beyond — to their environmental review," said Laura Heady, director of education for Hudsonia. "Understanding how ecological resources on a site are connected to those of the greater landscape is essential to good planning. Thanks to Teddi, that information is available in Pleasant Valley."

Michael Gordon, a member of the planning board, said planners need to know

### Neighbor

#### Theodora Luzzi Southworth

Age: 53

Lives: Pleasant Valley.

Family: Husband, Wayne Southworth, daughters Tracy Heuer, of Pleasant Valley, and Jodi Southworth, of Charlotte, N.C.

Volunteer work: Conservation advisory council and American Legion Post 739.

Hobbies: Photography and wildlife watching.

Neighbor appears each Monday. To suggest a can-



Lee Ferris/Journal

Southworth strives to save habitats.

date, please telephone 845-437-4834.

what lies beyond the property lines on documents provided by developers.

"The maps have been

very useful," he said.

Dan Shapley can be reached at [dshapley@poughkeepsiejournal.com](mailto:dshapley@poughkeepsiejournal.com)

"She creates detailed natural resource maps of the area around each proposed development, so the planning board has information about the site and neighboring properties, their natural resources and their relative importance."

NYS Department of Environmental Conservation





# Example: **Habitat Assessment Guidelines**

## **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 Buff 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-ny.gov](http://www.milan-ny.gov).

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

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



# Example: Biodiversity Assessment Standards



**LINDA D. PUGLISI**  
TOWN SUPERVISOR

**TOWN BOARD MEMBERS**

Joseph D. Cerreto  
Francis X. Farrell  
Ann Lindau  
John E. Sloan

## TOWN OF CORTLANDT PLANNING BOARD

TOWN HALL, 1 HEADY STREET, CORTLANDT MANOR, NY 10567  
914-734-1080  
FAX 914-788-0294  
[www.townofcortlandt.com](http://www.townofcortlandt.com)  
Planning Staff e-mail:  
kenv@townofcortlandt.com  
chrisk@townofcortlandt.com

Steven Kessler  
Chairman  
Loretta Taylor  
Vice-Chairperson  
Members:  
John D. Bernard  
Thomas A. Bianchi  
Robert Foley  
Ivan Kline  
Susan Todd

**Wildlife and Plant Biodiversity Assessments**  
**Town of Cortlandt Planning Board**  
adopted 5/7/02

**“Surveys are required for development applications located along river and stream corridors, in the vicinity of lakes, pond, and wetlands; adjacent to areas of open space; and adjacent to obvious corridors of open space...”**

**[www.townofcortlandt.com](http://www.townofcortlandt.com)**

NYS Department of Environmental Conservation





# Example: Local Wetland Protection

The New York Times  
nytimes.com

November 13, 2005  
Westchester

## How Much Restriction Is Too Much, a Town Asks

By [DEBRA WEST](#)

Lewisboro

IN 2003, Peter Manbeck of Cross River got a town permit to build a pool, a pool house and an extension on the white oak family have lived in since 1997. This spring, as inspectors came back to check on the construction, they noticed a new tree in Manbeck's backyard. They also noticed that a large stand of red maples had been cleared. All were violations of the town

The law, the narrowest in Westchester, was adopted in 2004 by the Town of Lewisboro, in which Cross River is one of the protected "buffer" zone around a wetland to 150 feet, from 100 feet, and increases the fines that the town can impose on a violation to \$7,500 per day.

Yet it does not specify any minimum size for a wetland requiring protection. According to several experts, the vagueness, at least theoretically, that if a square foot of marshy property were deemed a wetland, and the law's distance guidelines were encircling that square foot would be considered a buffer zone to a radius of 1.75 acres.

Town officials say the law is necessary to protect the quality of drinking water. Mr. Manbeck and his wife, Alexandra, say the law violates their civil rights.



Town of Lewisboro wetland law,  
passed in 2004, protects wetlands and  
150 ft buffers, with no minimum size.

([www.lewisborogov.com](http://www.lewisborogov.com))

NYS Department of Environmental Conservation



# Solutions for Conserving Biodiversity

*(from a planning perspective)*

## Summary

- gather data, set priorities
- use plans and policies to establish a 'BIG picture' approach
- consider biodiversity data early in the planning process
- engage and educate the community





# Laura Heady

*Biodiversity Outreach Coordinator*

NYSDEC Hudson River Estuary Program &  
Cornell University Dept. of Natural Resources



Cornell University

**NYSDEC**

**21 South Putt Corners Road**

**New Paltz, NY 12561**

**845-256-3061**

**ltheady@gw.dec.state.ny.us**

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



*Unless otherwise noted, all photos by  
Laura Heady.*

NYS Department of Environmental Conservation

