New York State Department of Environmental Conservation
Hudson River Estuary Program Biodiversity Outreach
Central Office, 5th Floor
625 Broadway, Albany, NY 12233-4750
Phone: (518) 402-8942 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

To: Town of Ancram Conservation Advisory Council
From: Karen Strong, Hudson River Estuary Biodiversity Outreach Coordinator, 518-402-8942, klstrong@gw.dec.state.ny.us
Re: Town of Ancram Habitat Summary
Date: October 2011

Background

This summary was completed upon request to provide information for the Town of Ancram for land use planning and decision-making. It identifies major natural features, as well as significant ecosystems and valuable stream, forest, wetland, and other habitats with important biological resources based on information available to the NYSDEC. It should not be considered a complete biological inventory because it is based only on existing information gleaned from various complementary, but not comprehensive, sources. In the case of Ancram, a large amount of information is available. However, there are areas for which we had no information, particularly in the western part of town. Additional general information about habitats can be found in the *Wildlife and Habitat Conservation Framework* developed by the Hudson River Estuary Program (Penhollow et al. 2006). If you have any questions about this summary, or want to know if it needs to be updated, please contact Karen Strong, Biodiversity Outreach Coordinator.

NYSDEC's Hudson River Estuary Program protects and improves the historic and scenic Hudson River watershed for all its residents. The program was created in 1987 and extends from the Troy dam to the Verrazano Narrows. Its core mission is to:

- Ensure clean water;
- Protect and restore fish and wildlife habitats;
- Provide recreation in and on the water;
- Adapt to climate change; and
- Conserve the scenic landscape.

Upland watershed ecosystems—wetlands, forests, stream corridors, grasslands and shrublands—are not only habitats for abundant fish and wildlife, but also support the estuary and provide many vital benefits to human communities. These ecosystems help clean drinking water, clean air, moderate temperature, clean up pollution, and absorb floodwaters. Conserving a diversity of plants and animals maintains these healthy and resilient ecosystems. The Biodiversity Outreach Program was created in partnership with Cornell University to help communities understand what plants, animals, and habitat are found locally; appreciate the value of these resources; and identify local tools to conserve them.

How to use this summary

Maps and written descriptions are provided for the landscape context, major natural features and each habitat type: streams, forests, and wetlands. There are only written descriptions of grassland and shrubland habitats. Each habitat type is briefly described, including how the map was made (if applicable). Significant plants, animals, and habitats are noted. Major natural features are the most ecologically significant resources in your town based on the information available. The species lists that follow the habitat descriptions list the species

known to occur in your town that are of state-wide conservation concern. You will find links throughout this document that will direct you to the internet for more information, including websites, publications, and fact sheets. There are references listed at the end that identify the sources of the information in this document.

While this summary is limited to existing information and is therefore not a substitute for on-the-ground survey and assessment, it provides a starting point for recognizing important natural areas in your town and in the surrounding areas. Effective conservation occurs across property and political boundaries and therefore necessitates a broader view of natural landscapes. By identifying areas of high-quality resources, this summary will be especially useful for setting priorities that support town planning. Habitat summaries like this one have been used by other communities for open space plans, comprehensive plans, natural resource inventories, and developing critical environmental areas. One Hudson Valley town used the species lists in its comprehensive plan's generic environmental impact statement. Some communities have incorporated their summaries directly into plans, while others use the information to write their own documents.

Though this summary does not contain the detail needed for site planning, it is useful for environmental review. First, a good inventory makes it easier to review projects. By identifying high quality habitats at the town-wide scale, it helps land use decision-makers and applicants understand how a proposed site plan might relate to important areas off-site. Second, the summary informs environmental review by highlighting areas that might need a more detailed assessment. Third, the species lists identify species of conservation concern you may want to address during your reviews.

Please note that some of the habitats and species identified in this document may be protected by state or federal programs. Continue to work with the DEC Region 4 office in Schenectady and other appropriate agencies on those issues.

Conservation

Once you understand the kinds of habitats in your town, you may want to identify conservation actions that protect the resources in order to protect the benefits they provide to the community. Included with this summary are General Conservation Measures for Protecting Natural Areas and Wildlife that can help guide Ancram's plans and land-use decisions. More detailed information on the how and why of local habitat conservation is available in *Conserving Natural Areas in Your Community: Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley* (Strong 2008). The handbook was published by NYSDEC to support the Hudson River Estuary Biodiversity Outreach Program. It describes in more detail why towns should conserve their biological resources, as well as the tools and techniques that local governments can use to conserve natural areas and wildlife. Chapter 5 covers habitat conservation. The document is also available in CD or hard copy upon request.

Species and Habitats of Conservation Concern

Following the general descriptions of habitat, you will find lists of species of state-wide conservation concern that have been recorded for the town to date. There are likely other state-rare species in Ancram that are not yet documented. Species on the lists come from the NY Natural Heritage Program, the New York Amphibian and Reptile Atlas, and the NYS Breeding Bird Atlas. Species are included if they are on the state or federal endangered and threatened species list, listed as a Species of Greatest Conservation Need in New York's Wildlife Action Plan, recognized as a "responsibility species" for the Hudson Valley by Audubon New York, or are other indicators of high quality habitat.

We have some information about species and habitats of regional conservation concern, primarily from the Farmscape Ecology Program at Hawthorne Valley Farm (FEP). FEP has been working in Columbia County to understand the relationship between agriculture, natural areas, and socio-economics. The extensive fieldwork of FEP researchers throughout the county makes them an especially useful source for this summary. Information from the program is distributed throughout.

Tables 3 and 4 are lists of species of regional conservation concern, compiled from information provided by the Farmscape Ecology Program. Regional conservation concern means the species or habitat is rare or uncommon at the Hudson Valley, county, or town scale, more detailed definitions are provided in the tables themselves.

How to find more information

The information in this summary can be enhanced by local knowledge. Local studies, maps, plans, and knowledgeable local people can add to detail to these areas, and may reveal unknown, high- quality ecosystems. Biological information in environmental impact statements may be useful, especially when a town has standards for environmental review. In Ancram, the habitat map created by town residents in 2001 looked at the north central part of town, including areas for which we have little data. As town volunteers continue mapping habitat in the town, this habitat summary will be useful in identifying mapping priorities.

If you want help with incorporating additional information into the summary, please contact Karen Strong, Biodiversity Outreach Coordinator.

Important habitats of the Town of Ancram

Major Natural Features

The first step to understanding the major natural features of Ancram is to consider the town's place in relation to the regional features that extend beyond its borders. Figure 1 shows where Ancram lies in the Roeliff Jansen Kill and Stockport Creek watersheds, as well as regionally significant landscapes identified by the NYSDEC Hudson River Estuary Program in Penhollow et al. (2006). Ancram has two of those landscapes, known as significant biodiversity areas: the Harlem Valley Calcareous Wetlands and the Taconic Ridge. The major natural features map (Figure 2) shows where the significant biodiversity areas are in Ancram as well as areas important for the health of known state-rare plants and animals and significant ecosystems.

Harlem Valley Calcareous Wetlands

The Harlem Valley wetlands run along the eastern-most New York State in Columbia, Dutchess, and Putnam Counties (Figure 1), and cover a large portion of Ancram (Figure 2). This regionally significant landscape is identified as a significant biodiversity area by the NYSDEC Hudson River Estuary Program for the many uncommon plants, animals, and habitats associated with its calcium-rich bedrock and dynamic geologic history (Penhollow et al., 2006):

> "The Harlem Valley Calcareous Wetlands are composed of the valleys and adjacent ridges… The majority of the Harlem Valley Calcareous Wetlands biodiversity area consists of Stockbridge Marble, a metamorphic rock composed of the minerals calcite or dolomite. It is formed when limestone is treated to very high temperature and pressure, such as the [formation of the Taconic mountains]... The result is a preponderance of communities dependent on freshwater upwellings of high pH [calcium-rich] water, namely fens…. Wetland matrix communities consist of red maple-hardwood swamp and floodplain forest. The upland matrix community tends to be Appalachian oak-hickory forest."

Areas with calcium rich bedrock generally have more rare species than other areas (Anderson and Ferree 2010). Many natural areas and species of conservation concern are reported from the Harlem Valley portion of Ancram, including wetland and upland areas.

Calcium-rich Wetlands

Large, high-quality wetlands and wetland complexes are found throughout the Harlem Valley in Ancram, including the wetlands associated with Miller Pond and Drowned Lands Swamp that have two red maple-tamarack peat swamps (50 and 70 acres), a 69 acre shallow emergent marsh with good diversity, and several small fens. Additional small fens are located along the border with the Town of Northeast. Many other state and regionally rare plants and animals are found in Ancram's Harlem Valley wetlands. The only known Columbia County populations of state-listed swamp birch, handsome sedge, and marsh valerian are in Drowned Lands Swamp and the wetlands south of Miller Pond. Known wildlife of conservation concern include the spotted turtle (in abundance), bog turtle, marsh fern moth, the harvester butterfly (rare in Columbia County), and spotted salamander, a vernal pool indicator that is regionally vulnerable (Kiviat and Stevens 2001). Timber rattlesnakes are associated with the Taconic Ridge, but use habitat in the Harlem Valley seasonally for foraging on rodents.

Calcium-rich Uplands

The Farmscape Ecology Program has explored several examples of calcium-rich uplands in Ancram. Several regionally-rare plants are found in the limestone woodland at Drowned Lands Swamp, including round-leaved dogwood, four-leaved milkweed, and upland boneset (Table 3). A calcareous talus slope woodland south of Route 82, has a diverse plant community rich in rare and uncommon native species, including a number of regionally-rare ferns, and four-toed salamander. Finally, red cedar woodlands can be botanically interesting

because they tend to develop on abandoned agricultural lands on thin, calcium-rich soils and are often associated with uncommon native plants. One such example was found south of Drowned Lands Swamp and had the regionally-rare shrubby cinquefoil, showy goldenrod, and pale beardtongue.

The complete list of state-rare species and significant ecosystems known from this area in Ancram is shown in Table 1. Table 3 lists known local and regional rarities. Calcareous, or calcium-rich areas have the potential to support many unique plants and plant communities. This description of the calcium-rich areas in Ancram is not exhaustive and other significant species and habitats will probably be found with further investigation. Look for examples of calcareous wet meadow, fens, carbonate crest ledge and talus habitats, calcareous swamps (e.g., red-maple tamarack swamp), limestone woodland, and calcareous talus slope woodland. The Biodiversity Assessment Manual for the Hudson River Estuary Corridor (Kiviat and Stevens 2001) describes some of these habitats and provides a list of calcium-loving plants in Appendix 5.

Taconic Ridge

The Taconic Ridge runs along New York's border with Massachusetts in Rensselaer and Columbia Counties (Figure 1). This regionally significant landscape is identified as a significant biodiversity area by the NYSDEC Hudson River Estuary Program for its large forests and associated wildlife (Penhollow et al., 2006):

> "The Taconic Ridge encompasses large areas of contiguous, high quality, northern hardwood forest underlain by complex metamorphic bedrock. It serves as a principle watershed and recharge area for numerous rich fens and associated rare plant and animal species. The Taconic Ridge extends nearly 60 miles along the eastern edge of New York State, [along Rensselaer, Columbia, and Dutchess Counties] and is about 12 miles wide at its widest point."

The portion of the Taconic Ridge in Ancram is within Taconic State Park (Figure 2). Four high quality forest types are found here: hemlock-northern hardwood forest, maple-basswood mesic forest, Appalachian oak hickory forest, and chestnut-oak forest. Timber rattlesnakes (state-threatened) and several rare plants are known from the Ridge as well. The complete list of rare species and significant ecosystems known from this area in Ancram is shown in Table 1.

Other Habitats

Streams

Stream corridors, including the stream channel itself, wetlands, floodplains, and shoreline vegetation bordering the channel provide important ecosystem services to people of the town, including clean water, fishing opportunities, and flood management. Hudson River tributary streams and their associated shoreline and floodplain areas provide some of the most productive wildlife habitat in the region.

Most of the land in the Town of Ancram drains to the Hudson River, though the far eastern part drains to Long Island Sound via Ten Mile Creek and the Housatonic River (Figures 1 and 3). Most of the Town of Ancram drains to the Roeliff- Jansen Kill, which drains to the Hudson River at Linlithgo. A tiny portion of northwest Ancram drains to the Claverack Creek, part of the Greater Stockport Creek watershed. For more information on the Stockport creek, visit the Greater Stockport Creek Watershed Alliance online or contact Watershed Coordinator Fran Martino at riverhaggie@peoplepc.com or 518-828-1330.

The Streams map (Figure 3) shows streams from digitized USGS topographic maps, and general stream habitat information, and floodplain forest information from the Farmscape Ecology Program at Hawthorne Valley Farm (Knab-Vispo and Vispo 2010). The USGS stream data may be inaccurate or incomplete and will not show many of the intermittent streams in the town. The stream habitat information was determined based on the NYS

Department of Environmental Conservation water quality classifications. Streams known to have trout (T) or trout spawning (TS) were identified as coldwater habitats. Streams without that designation are identified as warmwater habitats. These data show that there are only warmwater streams known in the Town of Ancram. Keep in mind these are generalized stream habitat types, and they do not reflect site-specific habitat quality.

The Farmscape Ecology Program at Hawthorne Valley Farm has shown that floodplain forests are home to a unique suite of plants and animals that tolerate occasional flooding (Knab-Vispo and Vispo 2010). Floodplain forests in Ancram tend to be characterized by a canopy of silver maple and green ash. Uncommon plants found in these forests included the regionally-rare green dragon. . Of particular ecological interest are "ancient" floodplain forests, which have been forested at least since the 1940s, and likely much longer. Forests that have not been completely cleared during that period, although they might have been used as woodlots for selective timber harvest, have significantly less invasive shrubs and more native forest herbs than recently reforested floodplains. Figure 3 shows the distribution of ancient, as well as reforested floodplains in Ancram. Most of the forested floodplain in Ancram is a mosaic of ancient and recently reforested patches along the Roeliff Jansen Kill.

Forests

The ability of forests to provide wildlife habitat, clean water, and economically viable forest products depends in part on our ability to maintain sizeable tracts of forest. The Large Forests map (Figure 4) shows forests 200 acres and larger in Ancram. The map was created from land cover data developed for the Coastal Change Analysis Program (National Oceanic and Atmospheric Administration 2006). Land cover categories considered 'forest' for this analysis include deciduous forest, evergreen forest, mixed forest, and palustrine forested wetland. Roads were removed from the map to identify unfragmented forest patches. Interstate roads were buffered by a total of 300 feet, state and county roads by 66 feet. Forest patch size classifications follow the Orange County Open Space Plan (Orange County Planning Department 2004) and cited in Strong (2008).

In general, larger forests will provide more ecosystem services and higher quality forest habitat than smaller ones. However, keep in mind that the value of each forest is relative to the values of other forests in your community, watershed, or natural landscape. Even small patches of forest can be extremely valuable, depending on their landscape context. For example, the series of forest patches along a stream (e.g, those shown in Figure 3, rather than Figure 4) can create a riparian corridor that help maintain water quality, provide wildlife habitat, and serve as a travel route for forest plants and animals. Similarly, wooded hedgerows in an agricultural matrix often provide valuable breeding habitat, food sources, and travel routes for animals that would not otherwise use the agricultural landscape.

Ancram's forest is fragmented, although there are several large forests. The largest forest is on the Taconic Ridge, of which only a small portion of which is in Ancram. It is more than 40,000 acres as it extends north, south, and east into neighboring municipalities (and Massachusetts). The largest forest located entirely within the town is just west of Route 22. It is more than 4,500 contiguous acres, and includes the Round Ball Public Conservation Area owned by the Columbia Land Conservancy and Fox Hill. Another large forests is shared with Copake, Gallatin, and Taghkanic (7500 acres).

Overall, we know very little about the habitat quality of most forests in Ancram. However, the fact that records from the Breeding Bird Atlas show three blocks with Worm-eating warbler (two confirmed breeding records, one probable) is one clue that these forests do provide high quality habitat. This bird is considered area-sensitive and requires at least 700 acres of continuous forest to breed most successfully. The botanical composition of these forests depends largely on the underlying soils/bedrock and their management history. Forests that have re-grown on former agricultural fields tend to have more invasive plants and are less likely to provide good habitat for rare or uncommon native plants. Parts of Fox Hill and Round Ball have been forested since at least 1940, and were probably not completely cleared for agriculture. Round Ball harbors some regional rarities, such as leatherwood, mayapple, and the native bush honeysuckle. This public conservation area is a wonderful showcase for the patchwork of soil conditions which is to be expected in the forests of Ancram. Within a

predominantly acidic matrix there are pockets of calcium-rich areas that support their own unique set of plants. Fox Hill has historic records of rocky summit indicators, the regionally-rare dwarf chestnut oak and small-flower bittercress (McVaugh 1957), but it is not known if they are still present.

Wetlands

Wetlands not only provide quality habitat for unique plants and animals, but provide important services for human communities, including pollutant removal, flood storage, and carbon sequestration. The Wetlands map (Figure 5) shows wetlands as mapped by the US Fish and Wildlife Service for the National Wetlands Inventory (NWI) as well as some information on potential wetlands based on county soil maps. "Probable wetlands" are those classified in the soil survey as very poorly drained or poorly drained, and "possible wetlands" are those classified as somewhat poorly drained soils (after Kiviat and Stevens 2001). The National Wetland Inventory data are available for you to view at the US Fish and Wildlife Service website. You will note that the probable and potential wetlands cover a greater area than the NWI wetland layer. NWI maps are known to be inaccurate, generally underestimating wetland area both because on-the-ground wetlands are larger than those shown on the map and because smaller and drier wetlands tend to be missed (Zucker and Lau, unpublished report). Nothing can replace the on-the- ground delineation for understanding wetlands. NYSDEC Freshwater wetlands (12.4 acres and larger) were purposefully not identified on the map. If you want more information on these wetlands, please contact the DEC Region 4 office.

Though we have a good sense of where wetlands might be, we do not know which of these are most important for wildlife. The most recent NYS Breeding Bird Atlas has a probable breeding record for the NYS threatened species, Least Bittern, which depends on large wetlands with dense vegetation. The bird was found somewhere within the block shown on Figure 5. One high quality vernal pool that has been documented at Chaseholm Farm in the south-western part of the town, and records of spotted salamander in the NY Amphibian and Reptile Atlas reveal there are probably more of them. Vernal pools are small wetlands in forests (forested vernal pools are often called woodland pools) that hold water for only part of the year, when they serve as important breeding habitat for a group of forest salamanders. They are usually isolated from surface water flows and unprotected by state or federal programs, however, local governments can fill the gap. Consider identifying these features in a town natural resource inventory or during environmental review. To learn more about vernal pool conservation, visit the woodland pool conservation page on the NYSDEC website.

Shrubland (not mapped)

The presence of shrubland-dependent birds and New England Cottontail indicate that Ancram has important shrubland habitat. In eastern Ancram, there are two records of the New England Cottontail, which is a candidate for listing under the federal Endangered Species Act and a NYS Species of Special Concern. New England Cottontails live in young, shrubby forest and look similar to the common Eastern cottontail. Another indication of important shrubland is that seven shrubland bird species of conservation concern were found in the Breeding Bird Atlas blocks in the town (Table 2).

Grasslands (not mapped)

We know that grassland, or meadow habitat, is also significant in town from several sources: the Farmscape Ecology Program, the Ancram habitat map, and the NYS Breeding Bird Atlas. Table 2 shows six grassland bird species of conservation concern in the state that are known to breed in Ancram. This is not uncommon for a Hudson Valley town with active farmland. Grassland breeding birds respond to vegetation structure rather than the mix of grass species, so hayfields dominated by non-native plants can provide suitable habitat for species of conservation concern as long as they are managed appropriately.

Last year, Farmscape Ecology Program biologists documented a little bluestem meadow in the south-west corner of the Town of Ancram. Little bluestem tends to occur in meadows on shallow soils, usually on hillsides (and is sometimes accompanied by other unusual plants). The biologists found the regionally-rare cobweb

skipper and county-rare Indian skipper. Both are native grassland butterflies whose caterpillars feed only on little bluestem.

Historic Records

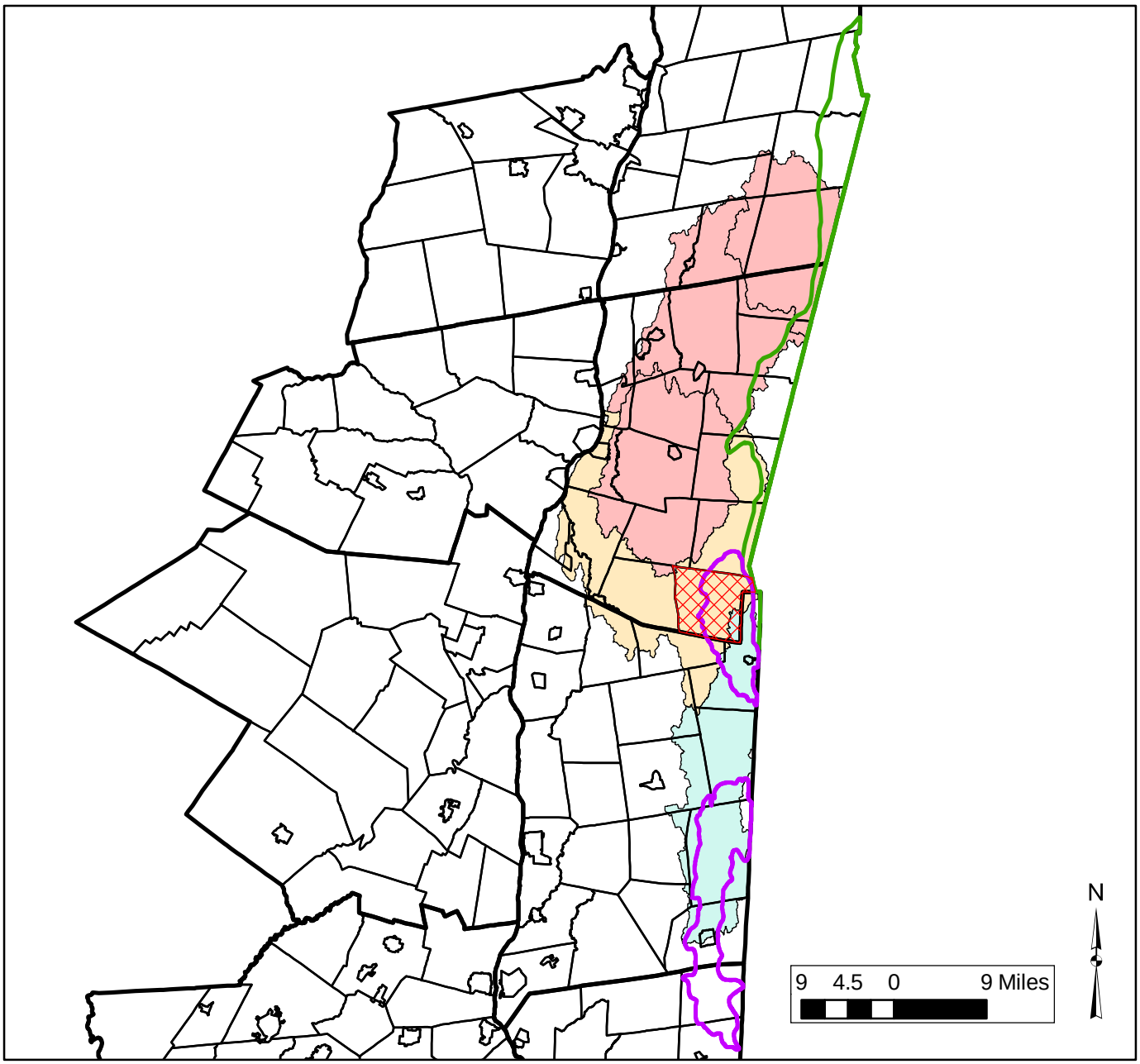
Historic records are reports of species of state-wide conservation concern that were present in the past, but haven't been found at the respective locations in recent years. It is useful to be aware of these lost populations, because they make efforts to safeguard extant species of conservation concern all the more important. the sites are already known to be lost to the town. The NY endangered awned sedge (1936) was found in a pond south of Miller Pond. The handsome sedge (state threatened) was found near the Ancram Lead Mine, now Ancramdale. And an Indiana bat (federally endangered) hibernaculum was known from a limestone cave near the border with the Town of Northeast (1939).

Approximately 50 additional plant species of now regional or County-wide conservation concern had been documented by McVaugh in Ancram in the 1930s, mostly in the calcium-rich wetlands and in the Taconics. That list can be requested from FEP, who is continuing inventories to determine which of these species are still present in the town.

Habitat Mapping by Ancram residents

Representatives from the Town of Ancram took Biodiversity Assessment Training in 2001-2002. They produced a map of ecologically significant habitats using the process outlined by the *Biodiversity Assessment Manual for the Hudson River Estuary Corridor* (Kiviat and Stevens 2001). The map they produced is complementary to the information provided in this summary, and includes some areas of town for which this summary has no information. If you need help understanding how they relate, feel free to contact Karen Strong.

Figure 1: Landscape context of the Town of Ancram



Legend

- Town of Ancram
- Greater Stockport Creek watershed
- Roeliff-Jansen Kill watershed
- Ten Mile River watershed

Significant biodiversity areas

- Harlem Valley Calcareous Wetlands
- Taconic Mountains
- Municipal Boundaries
- County Boundaries

This map shows the location of the Town of Ancram, Columbia County in relation to its watersheds and other major natural areas. This map was produced as part of a Habitat Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Biodiversity Outreach Coordinator Karen Strong at (518) 402-8942.

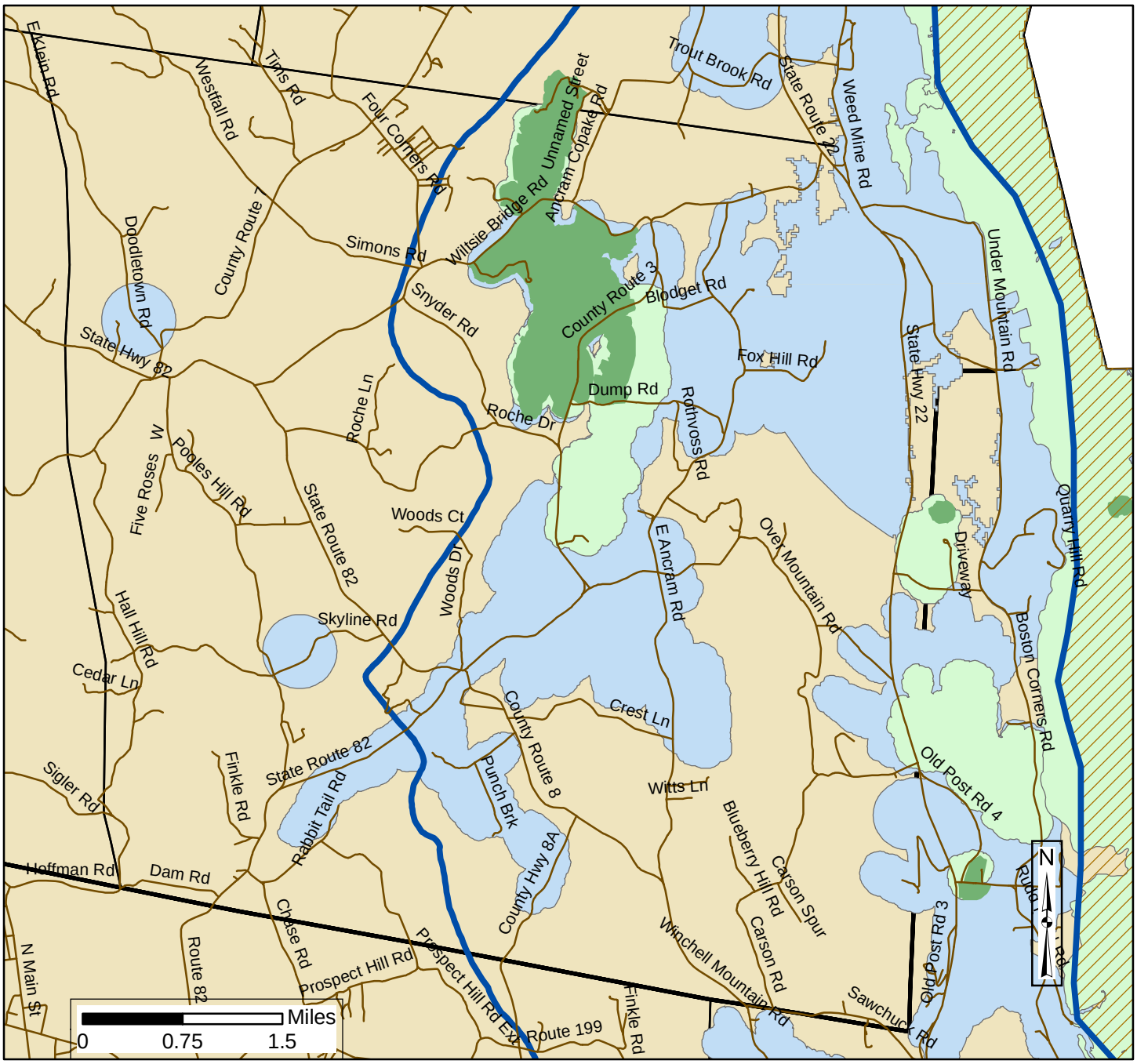
Data Sources:
US Geological Survey
New York State Department of Environmental Conservation
National Resources Conservation Service
New York State Office of Cyber Security and Critical Infrastructure Coordination

Map Created 20 June 2011

Hudson River Estuary

Cornell University

Figure 2: Major Natural Features in the Town of Ancram, Columbia County, NY



Legend

- Harlem Valley Calcareous Wetlands
- Taconic Mountains
- Areas important for significant ecosystems
- Areas imporant for rare plants
- Areas important for rare animals
- Municipal Boundaries
- County Boundaries
- Roads

This map shows the most significant *known* natural features in the Town of Ancram, Columbia County based on currently available information.
his map was produced as part of a Habitat Summary for the Town.
For more information, please contact NYSDEC's Hudson River Estuary Biodiversity Outreach Coordinator Karen Strong at (518) 402-8942.

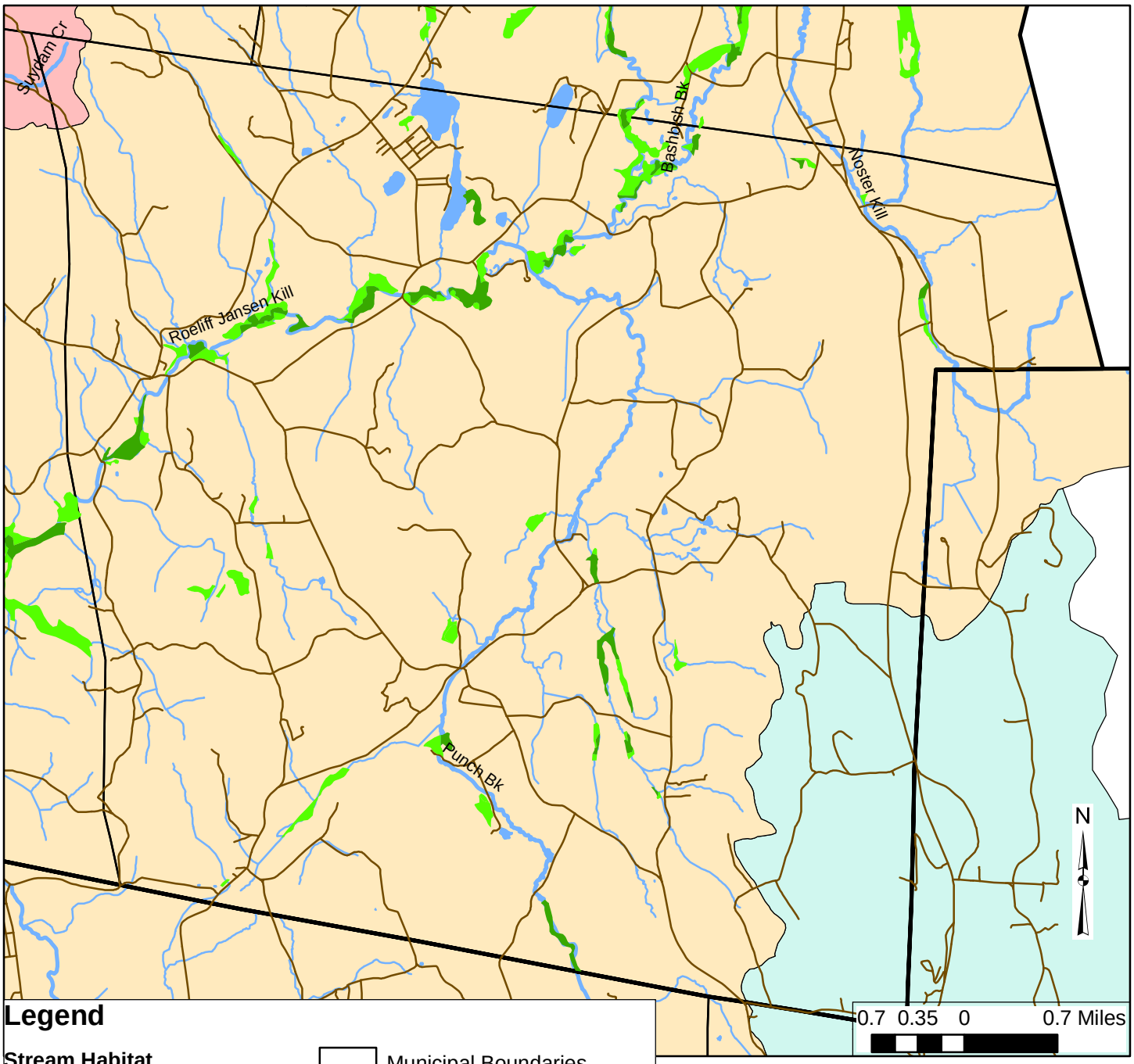
Data Sources:
New York State Department of Environmental Conservation
New York Natural Heritage Program
New York State Geological Survey
NYS Department of Transportation

Map Created 30 June 2011

Hudson River Estuary

Cornell University

Figure 3: Streams and Watersheds in the Town of Ancram, Columbia County, NY



Legend

Stream Habitat

- Coldwater
- Warmwater
- "Ancient" floodplain forest
- Reforested Floodplain
- Roads
- Municipal Boundaries
- County Boundaries
- Roeliff-Jansen Kill watershed
- Ten Mile River watershed
- Stockport Creek watershed

This map shows streams, waterbodies, and watersheds. floodplain forests and aquatic habitat data for the Town of Ancram, Columbia County. This map was produced as part of a Habitat Summary for the Town. For more information, please contact NYSDEC's Hudson River Estuary Biodiversity Outreach Coordinator Karen Strong at (518) 402-8942.

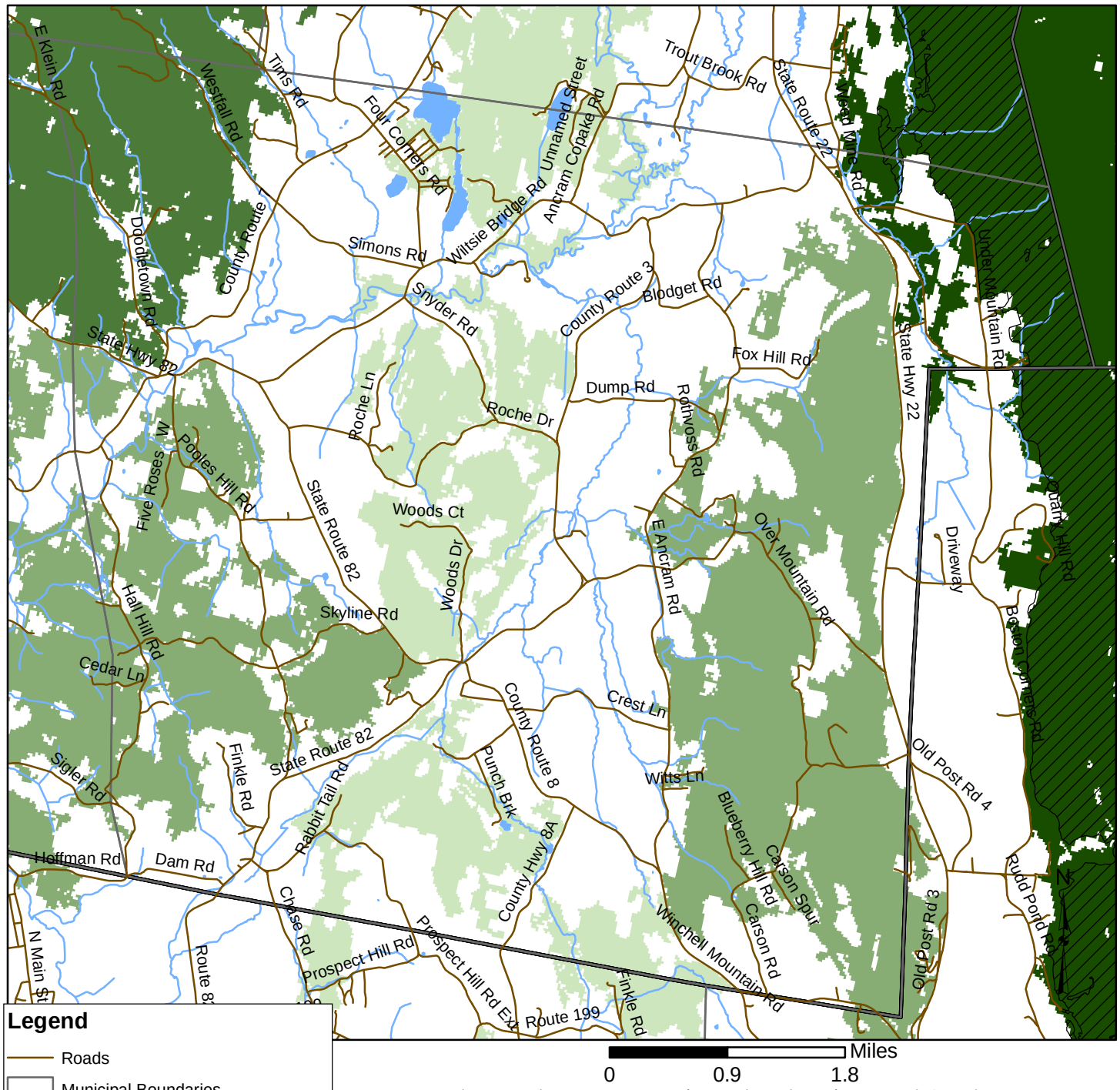
Data Sources:
US Geological Survey
New York State Department of Environmental Conservation
National Resources Conservation Service
Hawthorne Valley Association Farmscape Ecology Program
New York State Office of Cyber Security and Critical Infrastructure Coordination

Map Created 20 June 2011

Hudson River Estuary

Cornell University

Figure 4: Large Forests (200 acres and larger) in the Town of Ancram, Columbia County, NY



Legend

- Roads
- Municipal Boundaries
- County Boundaries
- Significant forest types
- Streams

Forest Patch Size (acres)

acres

- 200 - 1999: Stepping Stone
- 2000 - 4999: Locally Significant
- 5000 - 14999: Regionally Significant
- 15000+: Globally Signfiicant
- Waterbodies

This map shows continuous forested patches of New York State by acreage for the Town of Ancram, Columbia County. It was created using land cover data developed for the Coastal Change Analysis Program to identify forest cover and buffered roads were used to identify forest patches. This map was produced as part of a habitat summary for the town. For more information, please contact NYSDEC's Hudson River Estuary Biodiversity Outreach Coordinator Karen Strong at (518) 402-8942.

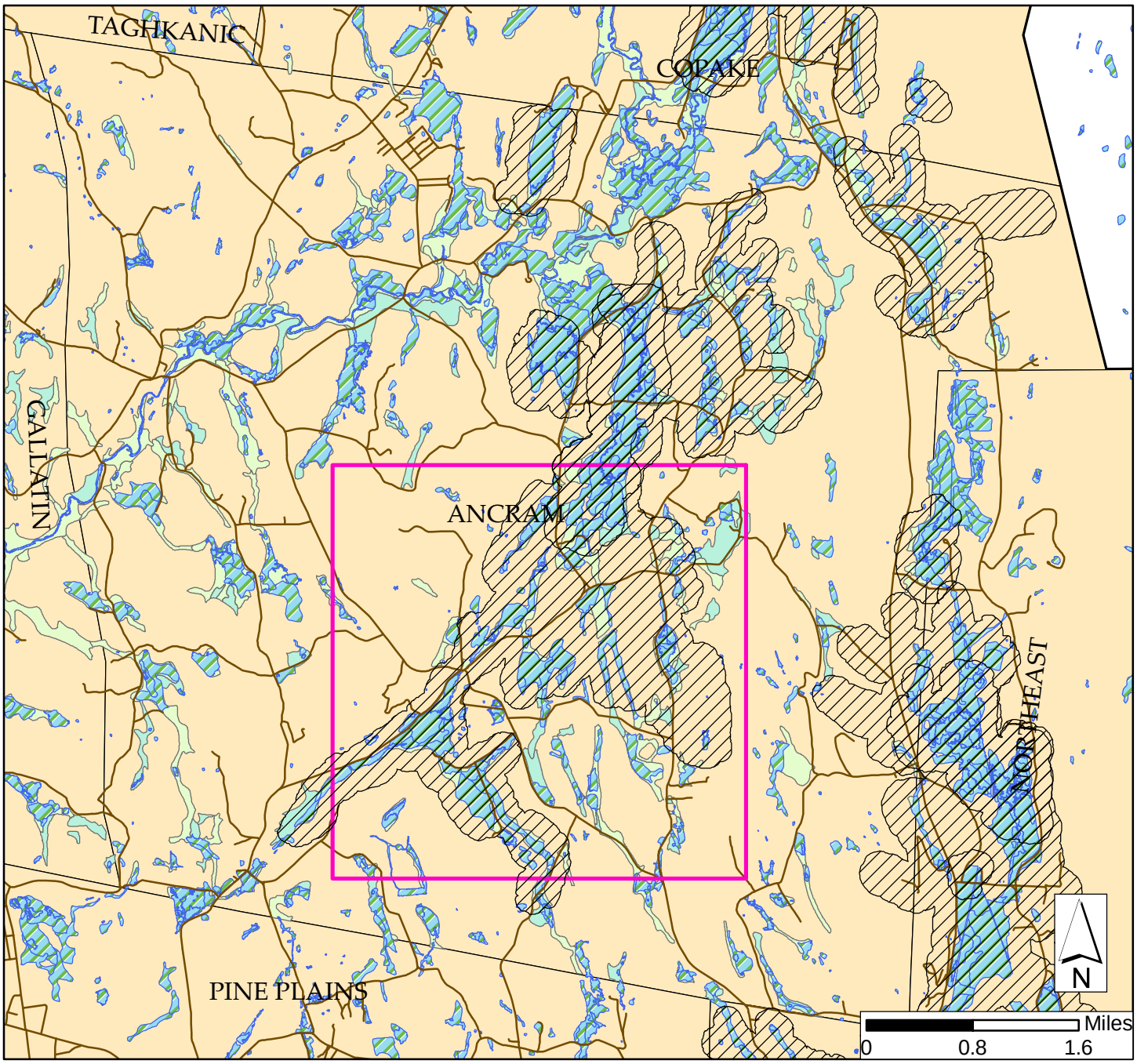
Data Sources: NOAA 2006 Coastal Change Analysis Program
New York State Department of Environmental Conservation
New York State Office of Cyber Security and Critical Infrastructure Coordination

Map Created 4 October 2011

Hudson River Estuary

Cornell University

Figure 5: Wetlands in the Town of Ancram, Columbia County, NY



Legend

- Significant wetland habitats
- Least Bittern
- Roads
- Wetlands (National Wetland Inventory)
- Columbia County Possible wetland
- Columbia County Probable wetland
- Municipal Boundaries
- County Boundaries

This map shows wetlands for the Town of Ancram, Columbia County, NY. Probable and possible wetlands were identified by drainage class on the Columbia County Soil Survey. See the habitat summary text for details. This map was produced as part of a Habitat Summary for the Town.
For more information, please contact NYSDEC's Hudson River Estuary Biodiversity Outreach Coordinator Karen Strong at (518) 402-8942.
Data Sources: NYS Geological Survey
Columbia County Soil and Water Conservation District
New York State Department of Environmental Conservation
NYS Department of Transportation

Map Created 5 August 2011

Hudson River Estuary

Cornell University

Species and Ecosystems of Conservation Concern

Table 1. Plants, Animals and Ecosystems by Major Natural Area in the Town of Ancram. This information comes from the New York Natural Heritage Program biodiversity databases (NYNHP), the NY Amphibian and Reptile Atlas (NYARA), and the Farmscape Ecology Program at Hawthorne Valley Farm (FEP). Data from the NY Natural Heritage Program here.is publically available from the New York Nature Explorer. More information can be found at http://guides.nynhp.org. Other species have been reported from Ancram in the NY Amphibian and Reptile Atlas, but only those that indicate high quality habitat are included.

Common Name	Description	Scientific Name	Stream-associated Species	Source
Harlem Valley Calcareous Wetlands Plants, Animals, and Ecosystems				
Bog turtle[1,5,7]	Rare animal	*Glyptemys muhlenbergii*		NYNHP, NYARA
Calcareous talus slope woodland	Rare ecosystem			FEP
Culver's root[4]	Rare plant	*Veronicastrum virginicum*		FEP
Four-toed salamander[1]	Salamander species of concern	*Hemidactylium scutatum*		FEP
Handsome sedge[4]	Rare plant	*Carex formosa*		NYNHP
Limestone woodland	Rare ecosystem			FEP
Marsh valerian[5]	Rare plant	*Valeriana uglinosa*		NYNHP
Marsh fern moth[1]	Rare animal	*Fagitana littera*		NYNHP
Red maple-tamarack peat swamp	Rare ecosystem			NYNHP
Rich graminoid fen	Rare ecosystem			NYNHP
Rich shrub fen	Rare ecosystem			NYNHP
Shallow emergent marsh	High quality common ecosystem			NYNHP
Spotted salamander	Vernal pool indicator	*Ambystoma maculatum*		NYARA
Spotted turtle[1,2]	Turtle species of concern	*Clemmys guttata*	Y	NYARA
Swamp birch[4]	Rare plant	*Betula pumila*		NYNHP, FEP
Timber rattlesnake[1,4]	Rare animal	*Crotalus horridus*		NYNHP, NYARA
Upland boneset	Regionally rare calcicole, on NYNHP review list.	*Eupatorium sessilifolium var. brittonianum*		FEP
Taconic Ridge Plants, Animals, and Ecosystems				
Appalachian oak- hickory forest	High quality common ecosystem			NYNHP
Chestnut-oak forest	High quality common ecosystem			NYNHP
Hemlock-northern hardwood forest	High quality common ecosystem			NYNHP
Maple-basswood mesic forest	High quality common ecosystem			NYNHP
Timber rattlesnake[1,4]	Rare animal	*Crotalus horridus*		NYNHP, NYARA
Wild pink[3]	Rare plant	*Silene caroliniana* spp. *pensylvanica*		NYNHP
Plants, Animals, and Ecosystems in other Areas				
Davis' sedge[4]	Rare plant	*Carex davisii*	Y	FEP
New England cottontail[1,6]	Rare animal	*Sylvilagus transitionalis*		NYNHP
Nodding trillium	Potentially rare plant, on NYNHP review list.	*Trillium cernuum*	Y	FEP
Spotted turtle[1,2]	Turtle species of concern	*Clemmys guttata*	Y	NYARA
Historic Records				
Handsome sedge[4]	Rare plant	*Carex formosa*		NYNHP

Indiana bat[1,8]	Rare animal	*Myotis sodalis*		NYNHP
Marsh valerian[5]	Rare plant	*Valeriana uglinosa*		NYNHP

[1]NYS Species of Greatest Conservation Need (SGCN)
[2]NYS Species of Special Concern
[3]NYS Vulnerable Species
[4]NYS Threatened Species
[5]NYS Endangered Species
[6]Candidate for Federal Endangered Species Listing
[7]Federally Threatened Species
[8]Federally Endangered Species

Table 2. Known Significant Birds of the Town of Ancram. Data from New York Breeding Bird Atlas 2000 [Internet]. 2000 - 2005. Release 1.0. Albany (New York): New York State Department of Environmental Conservation. [updated 2007 Jun 11; cited 2011 June 16]. Conservation Priority, habitat type, and links from Audubon NY (2009)UH Data are from blocks that are more than 50% in Ancram, Shown here is a subset of that list, we selected birds identified as a "special conservation responsibility" for the Hudson Valley by Audubon NY.

Common Name	Scientific Name	Stream-Associated Species[1]	More information from…
Forest Birds			
Baltimore Oriole	*Icterus galbula*		
Black-and-white Warbler	*Mniotilta varia*		Audubon
Black-billed Cuckoo*	*Coccyzus erythropthalmus*		Audubon
Black-throated Blue Warbler*	*Dendroica caerulecsens*		Audubon
Broad-winged Hawk	*Buteo platypterus*		Audubon
Cooper's Hawk**	*Accipiter cooperii*		Audubon
Downy Woodpecker	*Picoides pubescens*		Audubon
Eastern Wood-Pewee	*Contopus virens*		Audubon
Louisiana Waterthrush*	*Seiurus motacilla*	Y	Audubon
Northern Flicker	*Colaptes auratus*		Audubon
Rose-breasted Grosbeak	*Pheucticus ludovicianus*		Audubon
Ruffed Grouse*	*Bonasa umbellus*		Audubon
Scarlet Tanager*	*Piranga olivacea*		Audubon
Sharp-shinned Hawk**	*Accipter striatus*		Audubon
Veery	*Catharus fuscescens*		Audubon
Wood Thrush*	*Hylocichla mustelina*		Audubon
Worm-eating warbler*	*Helmitheros vermivorum*		Audubon
Yellow-throated Vireo	*Vireo flavifrons*	Y	Audubon
Grassland Birds			
American Kestrel	*Falco sparverius*		Audubon
Bobolink*	*Dolichonyx oryzivorus*		Audubon
Eastern Kingbird	*Tyrannus tyrannus*		Audubon
Eastern Meadowlark*	*Sturnella magna*		Audubon
Grasshopper Sparrow**	*Ammodramus savannarum*		Audubon
Savannah Sparrow	*Passerculus sandwichensis*		Audubon
Shrubland Birds			
Blue-Winged Warbler*	*Vermivora pinus*		Audubon
Brown Thrasher*	*Toxostoma rufum*		Audubon
Eastern Towhee	*Pipilo erythrophthalmus*		Audubon
Field Sparrow	*Spizella pusilla*		Audubon
Indigo Bunting	*Passerina cyanea*		Audubon
Prairie Warbler*	*Dendroica discolor*		Audubon

Common Name	Scientific Name	Stream-Associated Species[1]	More information from…
Willow Flycatcher*	*Empidonax trailli*	Y	Audubon
Wetland Birds			
Least Bittern***	*Ixobrychus exilis*		Audubon, DEC
Marsh Wren	*Cistothorus palustris*		Audubon
Birds of Other Habitats			
Belted Kingfisher	*Megaceryle alcyon*	Y	Audubon
Osprey**	*Pandion haliaetus*	Y	Audubon
Chimney Swift	*Chaetura pelagica*		

* denotes NYS Species of Greatest Conservation Need (SGCN)
** denotes NYS Species of Special Concern and SGCN
*** denotes NYS Threatened Species and SGCN
[1]based on HRV-GAP species models. Smith et al. 2001.

Table 3. Plants of conservation concern in the Hudson Valley or Columbia County. Documented in Ancram by the Farmscape Ecology Program since 2003 (these observations are not based on an exhaustive Town-wide inventory and more rare species will likely be added with additional fieldwork).

Common Name	Habitat in Summary	Scientific Name	State Status[1]	Regionally Status[2]	County Status[3]
alderleaf buckthorn	calcium-rich wetlands	*Rhamnus alnifolia*	S4	R	CCu
American woollyfruit sedge	calcium-rich wetlands	*Carex lasiocarpa ssp. americana*	S5		CCr
bloodroot	streams, calcium-rich uplands	*Sanguinaria canadensis*	S4		CCu
blue cohosh, squaw-root, papoose-root	streams, calcium-rich uplands, forests	*Caulophyllum thalictroides*	S5	S	CCu
bog bedstraw	calcium-rich wetlands	*Galium labradoricum*	S4		CCu
bog goldenrod	calcium-rich wetlands	*Solidago uliginosa*	S3S4		CCr
Canada lily, yellow Canada lily	streams, calcium-rich uplands	*Lilium canadense ssp. canadense*	S5	S	CCu
Canada moonseed	forests	*Menispermum canadense*	S5	S	CCu
cardinal flower	streams	*Lobelia cardinalis*	S4S5		CCu
climbing hempweed	calcium-rich wetlands	*Mikania scandens*	S4	S	CCu
common Solomon's-seal, giant SolomonÆs seal	streams, calcium-rich uplands	*Polygonatum biflorum (=Polygonatum commutatum)*	S5	S	CCu
cutleaf coneflower	streams	*Rudbeckia laciniata var. laciniata*	S5	S	CCu
downy false-foxglove	calcium-rich uplands	*Aureolaria virginica*	S5		CCr
dwarf juniper	calcium-rich uplands	*Juniperus communis var. depressa*	S4		CCu
eastern leatherwood	calcium-rich uplands	*Dirca palustris*	S5	R	CCu
eastern white water-crowfoot	wetlands	*Ranunculus longirostris*	S5		CCr
four-leaved milkweed, whorled milkweed	calcium-rich uplands	*Asclepias quadrifolia*	S5	R?	CCu
glade fern	calcium-rich uplands	*Diplazium pycnocarpon (=Athyrium pycnocarpon)*	S4		CCr
Goldie's woodfern	calcium-rich uplands	*Dryopteris goldiana*	S4		CCr
grass-of-Parnassus	calcium-rich wetlands	*Parnassia glauca*	S4	S	CCr
green dragon	streams	*Arisaema dracontium*	S4	R	CCr
hairy rock-cress, creamflower rockcress	calcium-rich uplands	*Arabis hirsuta var. pycnocarpa*	S5?	S	CCu
halberd-leaf tearthumb, tear-thumb	wetlands	*Persicaria arifolia (=Polygonum arifolium)*	S5	S	CCu

Common Name	Habitat in Summary	Scientific Name	State Status[1]	Regionally Status[2]	County Status[3]
hard-stemmed bulrush	calcium-rich wetlands	*Schoenoplectus acutus var. acutus (=Scirpus acutus)*	S5		CCr
limber honeysuckle	calcium-rich uplands	*Lonicera dioica var. dioica*	S5	S?	CCu
longleaf ground-cherry	grasslands	*Physalis longifolia var. subglabrata*	S4		CCu
maidenhair spleenwort	calcium-rich uplands	*Asplenium trichomanes ssp. trichomanes*	S4?		CCu
marsh mermaidweed	calcium-rich wetlands	*Proserpinaca palustris var. crebra*	S4		CCu
May-apple, Indian-apple, wild-mandrake	calcium-rich uplands	*Podophyllum peltatum*	S5	S	CCu
New Jersey tea	calcium-rich uplands	*Ceanothus americanus*	S5	R	CCu
northern maidenhair-fern	calcium-rich uplands	*Adiantum pedatum*	S4		CCu
oblong-leaf serviceberry	calcium-rich wetlands	*Amelanchier canadensis*	S5		CCr
pale beardtongue	calcium-rich uplands	*Penstemon pallidus*	S5		CCr
pale jewel-weed	streams, calcium-rich uplands	*Impatiens pallida*	S4		CCu
poison sumac	calcium-rich wetlands	*Toxicodendron vernix*	S4		CCu
prostrate tick-trefoil	calcium-rich uplands	*Desmodium rotundifolium*	S4		CCu
roundleaf dogwood	calcium-rich uplands	*Cornus rugosa*	S5	R?	CCu
sage willow, hoary willow	calcium-rich wetlands	*Salix candida*	S5	S	CCu
showy goldenrod	calcium-rich uplands	*Solidago speciosa var. speciosa*	S4		CCr
shrubby cinquefoil	calcium-rich wetlands and uplands	*Dasiphora fruticosa ssp. floribunda (Potentilla fructicosa)*	S4		CCu
silky willow	calcium-rich wetlands	*Salix sericea*	S5	S	CCu
silvery spleenwort	calcium-rich uplands	*Deparia acrostichoides (=Athyrium thelypteroides)*	S5	R	CCr
smooth gooseberry	calcium-rich wetlands	*Ribes hirtellum*	S5	S	CCu
swamp dock, water dock	calcium-rich wetlands	*Rumex verticillatus*	S5		CCr
tamarack, American larch	calcium-rich wetlands	*Larix laricina*	S5	S	CCu
Virginia bugleweed	streams	*Lycopus virginicus*	S4		CCu
Virginia springbeauty, eastern spring beauty	streams	*Claytonia virginica var. virginica*	S5	S?	CCu
walking-fern spleenwort	calcium-rich uplands	*Asplenium rhizophyllum*	S4S5	S	CCu
water loosestrife	calcium-rich wetlands	*Lysimachia thyrsiflora*	S4		CCu
winged loosestrife	calcium-rich wetlands	*Lythrum alatum*	S5		CCr
alderleaf buckthorn	calcium-rich wetlands	*Rhamnus alnifolia*	S4	R	CCu
American woollyfruit sedge	calcium-rich wetlands	*Carex lasiocarpa ssp. americana*	S5		CCr
bloodroot	streams, calcium-rich uplands	*Sanguinaria canadensis*	S4		CCu
blue cohosh, squaw-root, papoose-root	streams, calcium-rich uplands, forests	*Caulophyllum thalictroides*	S5	S	CCu
bog bedstraw	calcium-rich wetlands	*Galium labradoricum*	S4		CCu

[1] S1=extremely rare in NYS, S2=very rare in NYS, S3=rare to uncommon in NYS, S4=common in NYS, S5=very common in NYS, as determined by the NY Natural Heritage Program www.nynhp.org

[2] R=rare in Hudson Valley, S=scarce in Hudson Valley, as determined in Kiviat and Stevens (2001)

3 CCr=rare in Columbia County, CCu=uncommon in Columbia County, determined by FEP as of July 2011, subject to change as fieldwork continues

Table 4. County-rare Butterflies and Odonates in Ancram. Documented by FEP from Ancram since 2003 (these observations are not the result of an exhaustive Town-wide survey, more fieldwork will certainly document additional rare species). Status as of July 2011.

Common Name	Habitat in Summary	Scientific Name	County Status[1]	Larval habitat/food	Description
ashy clubtail	streams	*Gomphus lividus*	rare	Running-water	Dragonfly
black-shouldered spinyleg	streams	*Dromogomphus spinosa*	rare	Running-water	Dragonfly
black-tipped darner	grasslands	*Aeshna tubiculifera*	rare	Still-water	Dragonfly
dusky clubtail	streams	*Gomphus spicatus*	rare	Still-water	Dragonfly
Fritillary, Meadow	grasslands	Boloria bellona	common, but declining	violets	Butterfly
harpoon clubtail	streams	*Gomphus descriptus*	rare	Running-water	Dragonfly
Harvester	calcium-rich wetlands	Feniseca tarquinius	rare	alder aphids	Butterfly
lance-tipped darner	grasslands	*Aeshna constricta*	rare	Still-water	Dragonfly
lilypad clubtail	calcium-rich wetlands	*Arigomphus furcifer*	rare	Both still- and running-water	Dragonfly
river jewelwing	streams	*Calopteryx aequabilis*	rare	Running-water	Damselfly
rusty snaketail	streams	*Ophiogomphus rupensulensis*	rare	Running-water	Dragonfly
shadow darner	wetlands	*Aeshna umbrosa*	rare	Still-water	Dragonfly
Skipper, Cobweb	grasslands	Hesperia metea	rare	bluestem	Butterfly
Skipper, Indian	grasslands	Hesperia sassacus	rare	grasses, inc. bluestem	Butterfly
Swallowtail, Black	grasslands	Papilio polyxenes	common, but declining	parsley, carrot and other umbels	Butterfly
zebra clubtail	streams	*Stylurus scudderi*	rare	Running-water	Dragonfly
ashy clubtail	streams	*Gomphus lividus*	rare	Running-water	Dragonfly
black-shouldered spinyleg	streams	*Dromogomphus spinosa*	rare	Running-water	Dragonfly

[1]Assessment as of July 2011 based on field work and historic and current regional literature

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.
- **Preserve natural disturbance processes**, such as fires, floods, tidal flushing, seasonal drawdowns, landslides, and wind exposures wherever possible. Discourage development that would interfere with these processes.
- **Restore and maintain broad buffer zones** of natural vegetation along streams, along shores of other water bodies and wetlands, and at the perimeter of other sensitive habitats.
- In general, **encourage development of altered land** instead of unaltered land wherever possible.
- **Promote redevelopment of brownfields**, other post-industrial sites, and other previously-altered sites (such as mined lands), "infill" development, and "adaptive re-use" of existing structures wherever possible, instead of breaking new ground in unaltered areas.
- **Encourage pedestrian-centered developments** that enhance existing neighborhoods, instead of isolated developments requiring new roads or expanded vehicle use.
- **Concentrate development along existing roads**; discourage construction of new roads in undeveloped areas. Promote clustered development wherever appropriate, to maximize extent of unaltered land.
- **Direct human uses toward the least sensitive areas**, and minimize alteration of natural features, including vegetation, soils, bedrock, and waterways.
- **Preserve farmland potential** wherever possible.
- **Minimize area of impervious surfaces** (roads, parking lots, sidewalks, driveways, roof surfaces) and maximize onsite runoff retention and infiltration to help protect groundwater recharge, and surface water quality and flows.
- **Restore degraded habitats wherever possible**, but do not use restoration projects as a "license" to destroy existing habitats.

Source: Kiviat, E. & G. Stevens. 2001. Biodiversity Assessment Manual for the Hudson River Estuary Corridor. NYS Department of Environmental Conservation, Albany, NY.

References

Anderson, M. and C. Ferree. 2010. Conserving the stage: climate change and the geophysical underpinnings of species diversity. PLoS ONE 5(7): e11554. doi:10.1371/journal.pone.0011554

Audubon NY. 2009. Bird Conservation in the Hudson River Valley [website] Retrieved from http://ny.audubon.org/BirdSci_HudsonRiverValleyConservation.html on 10 November 2009. Ithaca, NY.

Burger, M. and J. Liner. 2005. Important Bird Areas of New York, 2nd edition. Audubon New York. Albany, NY

Dewan. A.A. 2008. Monitoring biodiversity in our urban world: challenges, threats, and a plan for the future. (dissertation) Cornell University, Ithaca, NY.

Kiviat, E. and G. Stevens. 2001. Biodiversity Assessment Manual for the Hudson River Estuary Corridor. NYS Department of Environmental Conservation, Albany, NY. www.hudsonia.org

Knab-Vispo, C. and. C. Vispo. 2010. The Plant and Animal Diversity of Columbia County NY Floodplain Forests: Composition and Patterns. Report to the NYS Biodiversity Research Institute. Farmscape Ecology Program, Hawthorne Valley Farm. Ghent, NY. www.hawthornevalleyfarm.org/fep (accessed June 2010)

McVaugh, R. 1958. Flora of the Columbia county Area, New York. New York State Museum and Science Service Bulletin No. 360. The University of the State of New York, Albany, NY. http://www.nysl.nysed.gov/scandocs/museumbulletin.htm

New York Amphibian and Reptile Atlas. 1990-1999. Albany (New York): New York State Department of Environmental Conservation. Website: http://www.dec.ny.gov/animals/7140.html

New York State Breeding Bird Atlas 2000 [Internet]. 2000 - 2005. Release 1.0. Albany (New York): New York State Department of Environmental Conservation. [updated 2007 Jun 11; data retrieved November 2009]. Available from: http://www.dec.ny.gov/animals/7312.html

New York Natural Heritage Program, New York State Department of Environmental Conservation. [cited 4 November 2009]. Biodiversity Databases, Element Occurrence Record Digital Data Set. Albany, New York. www.nynhp.org

New York Natural Heritage Program, New York State Department of Environmental Conservation. [updated 1 Jan 2008]. Biodiversity Databases, Important Areas Digital Data Set. Albany, New York. www.nynhp.org

National Oceanic and Atmospheric Administration. 2006. Land Cover data for the Coastal Change Analysis Program. NOAA Coastal Service Center. Charleston, SC. http://www.csc.noaa.gov/

Orange County (N.Y.) Planning Department. 2004. *Orange County Open Space Plan.* Goshen, N.Y. www.co.orange.ny.us (accessed November 2009)

Penhollow, M. E., P. G. Jensen, and L.A. Zucker. 2006. Wildlife and Habitat Conservation Framework: An Approach for Conserving Biodiversity in the Hudson River Estuary Corridor. New York Cooperative Fish and Wildlife Research Unit, Cornell University and New York State Department of Environmental Conservation, Hudson River Estuary Program, Ithaca, NY.

Smith, C. R., S. D. DeGloria, M. E. Richmond, S. K. Gregory, M. Laba, S. D. Smith, J. L. Braden, W. P. Brown, and E. A. Hill. 2001. *An Application of Gap Analysis Procedures to Facilitate Planning For Biodiversity Conservation in the Hudson River Valley, Final Report. Part 1: Gap Analysis of the Hudson River Valley* and *Part 2: Atlas of Predicted Ranges for terrestrial vertebrates in the Hudson River Valley,* New York Cooperative Fish and Wildlife Research Unit, Department of Natural Resources, Cornell University, Ithaca, N.Y.

Strong, K. 2008. Conserving Natural Areas and Wildlife in Your Community: Smart Growth Strategies for Protecting the Biological Diversity of New York's Hudson River Valley. New York Cooperative Fish and Wildlife Research Unit, Cornell University, and New York State Department of Environmental Conservation, Hudson River Estuary Program. Ithaca, N.Y.