2.3 Steep Slopes

The Croton Bay Watershed is located in the Hudson River Valley and includes the Croton River Valley, thus much of the watershed has steep slopes. Steep slopes develop in river valleys as a result of down cutting from rivers. Steep slopes in the watershed are also the result of glacier advancement and recession.

The definition of a steep slope for the purposes of the Indian Brook-Croton Gorge Watershed Conservation Action Plan includes any slope that is greater than 15% in grade. Figure 2-4 displays steep slopes located in the watershed that are between 15-25% and slopes that are greater than 25%. A total of 33% of the watershed contains steep slopes, with 23% being slopes of 15-25% and 10% being slopes greater than 25%. Unvegetated slopes have greater instability and much higher rates of erosion than vegetated slopes. The root systems of plants help maintain slope stability and reduce the amount of erosion that takes place on steep slopes. Therefore, it is very important to keep steep slopes as natural and as vegetated as possible.

2.4 Soils

Fifty-five soil types exist in the watershed. A majority of the soils found in the watershed were formed from glacial deposits. Most of the soils are loamy, which means that approximately 7-27% of the grain content is clay; 28-50% of the soil is silt and less than 52% of the grain content is sand. The soils found in the watershed are typically deep soils with a depth to bedrock of at least 6 feet and all tend to be acidic. Although the soils have similar parent material, the soils vary in permeability, depth to water table, drainage potential, runoff speed and hydrologic classification. Supplement A: Additional Resources contains a detailed map of the soils in the watershed, descriptions of the soil types, taxonomy and hydrologic classification.

Eleven percent of the soils in the watershed are considered hydric soils, which are formed under conditions of saturation, flooding or ponding for a period long enough to develop anaerobic (low oxygen) conditions. Hydric soils can be indicative of wetlands. Supplement A: Additional Resources also includes information on which soils are considered to be hydric.

Section 2.5 Natural Resources

A. Wetlands

The Croton Bay Watershed contains both federal and state regulated tidal and freshwater wetlands. Approximately 7% (239 acres) of the watershed is wetland (refer to Figure 2-4). Of the 239 acres, 120 acres are New York State Department of Environmental Conservation (NYSDEC) designated wetlands, which are wetlands greater than 12.4 acres. NYSDEC recognizes that not all wetlands are of equal quality. In order to establish the different qualities of wetlands, the NYSDEC developed a four class regulatory system that designates a class to every NYSDEC

Figure 2-4: Steep slopes in the Croton Bay Watershed

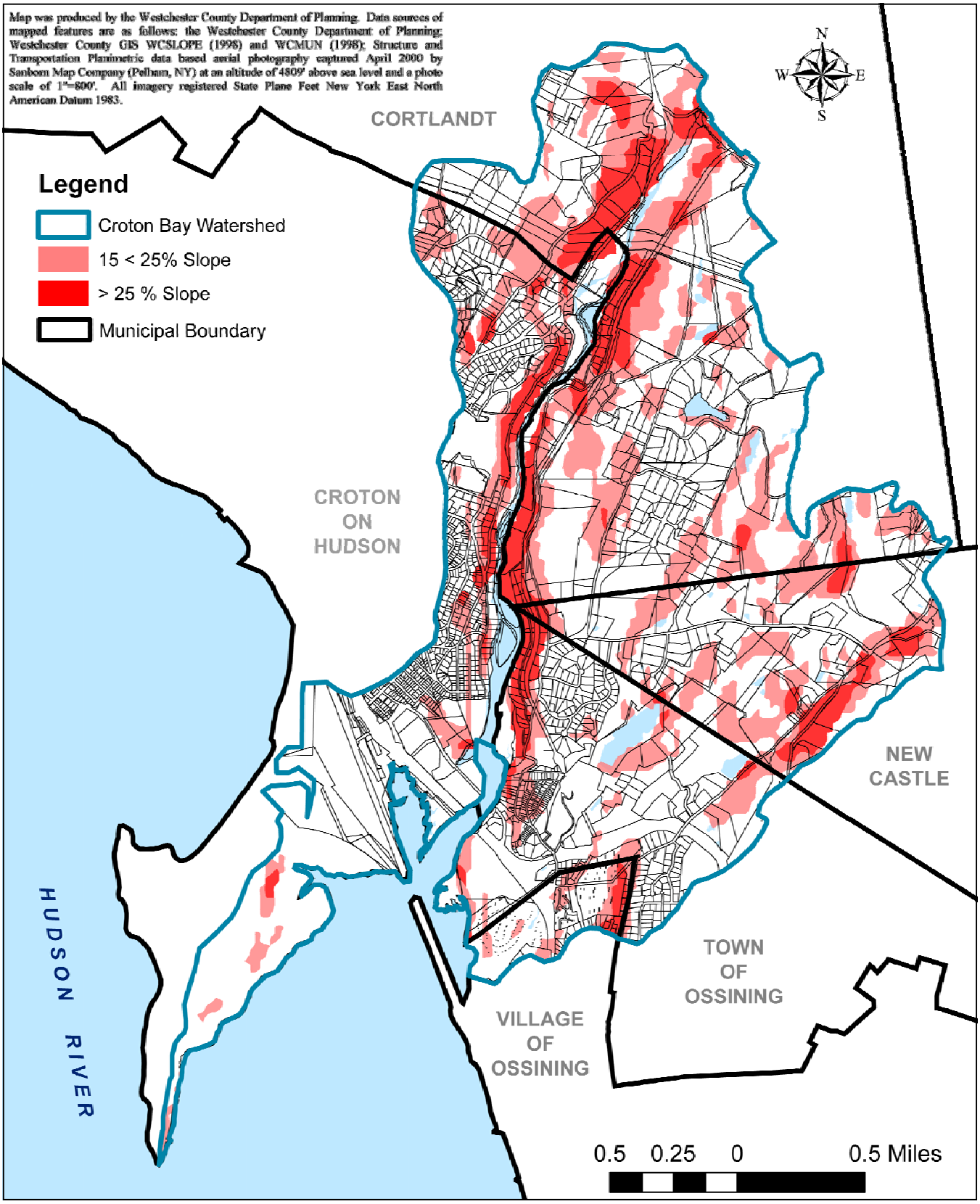


Figure 2-3. Westchester County's Croton Point Park, Croton-on-Hudson, NY

wetland. Class I wetlands are considered to provide the most beneficial qualities in terms of ecological association, special features, hydrologic features and pollution control features. Class IV wetlands provide the least. There are 68.35 acres of Class I, 8.64 acres of Class II and 43.53 acres of Class III wetlands (Need to check these numbers). All of the Class I and Class II designated wetlands are located in the tidal portions of the Croton Bay and the Croton River. The Class III wetland is the largest wetland in the watershed, known as the Glendale Wetland, located in the Town of New Castle. This wetland is currently designated as a nature preserve. Refer to Supplement A: Additional Resources for more information on wetlands.

Even though over 50% of the NYSDEC wetlands in the watershed are designated Class I, over the years they have become degraded due to invasive species. An invasive species is a plant that has an aggressive growth pattern that invades habitats and crowds out native species. Invasive species can also destroy biodiversity, and wildlife food sources. Most of the tidal wetlands in the watershed are dominated by phragmites, a common reed, considered to be an invasive species. The table in Figure 2-5 lists the primary invasive wetland species found in New York State.

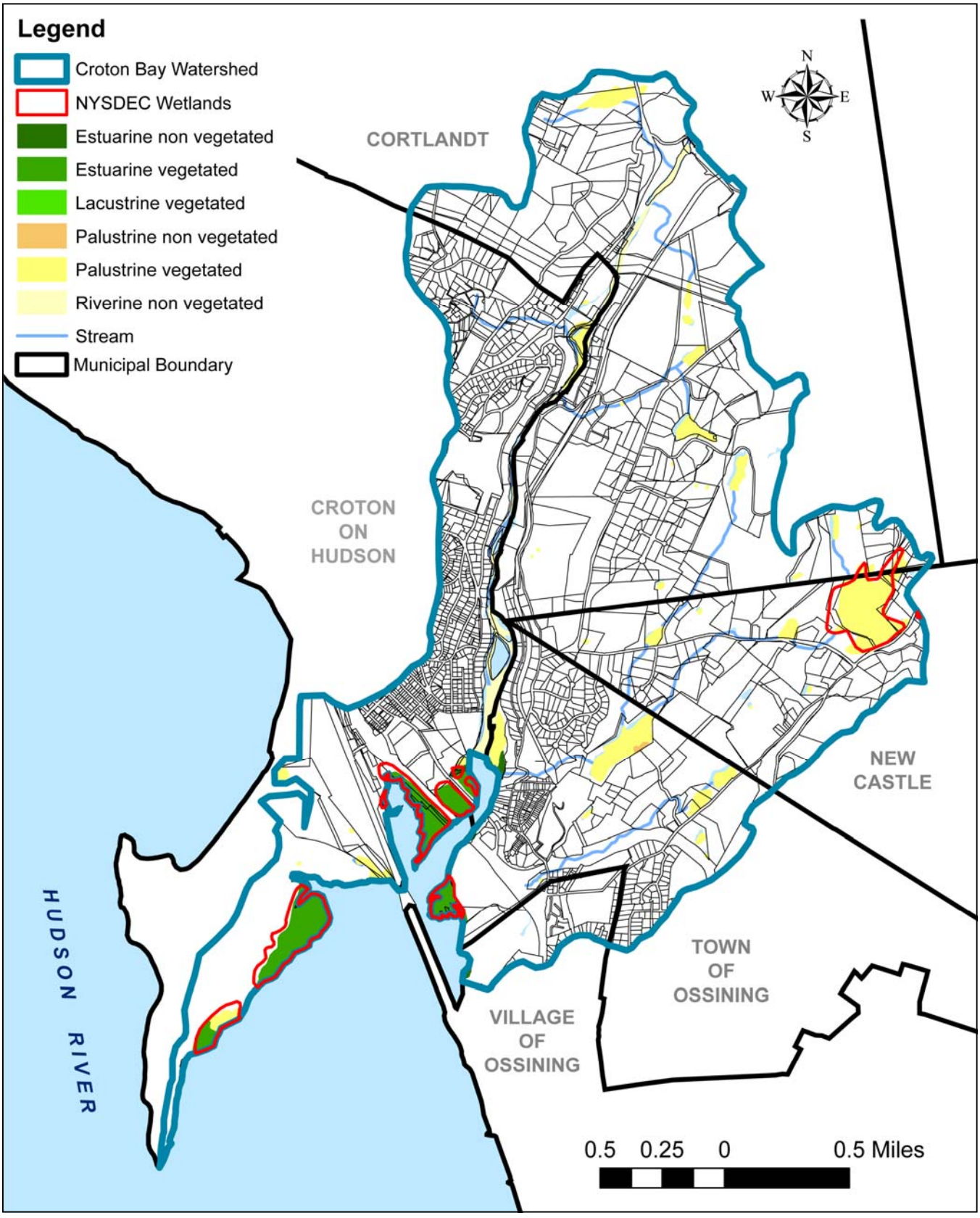
The watershed contains 73.1 acres of estuarine wetlands, in addition to NYSDEC wetlands, that are located in the brackish tidal portions of the Croton Bay near Croton Point Park and the mouth of the Croton River. There are 128.3 acres of palustrine (marsh) wetlands that are found throughout the watershed. There are 37.5 acres of riverine wetlands; all but 1.7 acres are nonvegetated wetlands. Finally, the watershed contains 0.1 acres of lacustrine (lake) wetlands. Listed in Figure 2-5 are

Common Name	Latin Name
Common buckthorn	Rhamnus cathartica
Smooth buckthorn	Rhamnus frangula
Common reed	Phragmites australis
Curly pondweed	Potamogeton crispus
Eurasian water milfoil	Myriophyllum spicatum
Japanese knotweed	Polygonum cuspidatum
Japanese stilt grass	Microstegium vimineum
Multiflora rose	Rosa multiflora
Porcelain-berry	Ampelopsis brevipedunculata
Purple loosestrife	Ampelopsis brevipedunculata
Purple loosestrife	Lythrum salicaria
Water chestnut	Trapa natans

Figure 2-5. Table of Common invasive plants found in New York State wetlands (Invasive Plant Council of New York)

Figure 2-6. Glendale Wetland, New Castle, NY

Figure 2-7: Wetlands in the Croton Bay Watershed



the different United States Army Corps National Wetland Inventory (NWI) wetlands that are found in the watershed.

According to the NYSDEC wetland regulations, each municipality has the ability to designate wetlands of local significance. Eleven percent of the watershed contains hydric soils, a wetland indicator, and only 7% of the watershed is designated as wetland. There may be other wetlands not identified by the federal or state government that could become designated as wetlands of local significance. No municipality in the watershed to date has designated wetlands of local significance. For more information on wetlands, wetland regulations and regulatory definitions of wetlands refer to Supplement A: Additional Resources.

Figure 2-8. Phragmites dominated tidal wetlands of the Croton Bay

Figure 2-9. Table of US Army Corps NWI of the Croton Bay Watershed

Wetland Type	Acres	Percent of Total Wetlands
Estuarine non vegetated	8	3%
Estuarine vegetated	65	29%
Palustrine non vegetated	1	>1%
Palustrine vegetated	127	53%
Riverine vegetated	2	>1%
Riverine non vegetated	36	15%
Lacustrine vegetated	>1	>0%
Total	**239**	**100%**

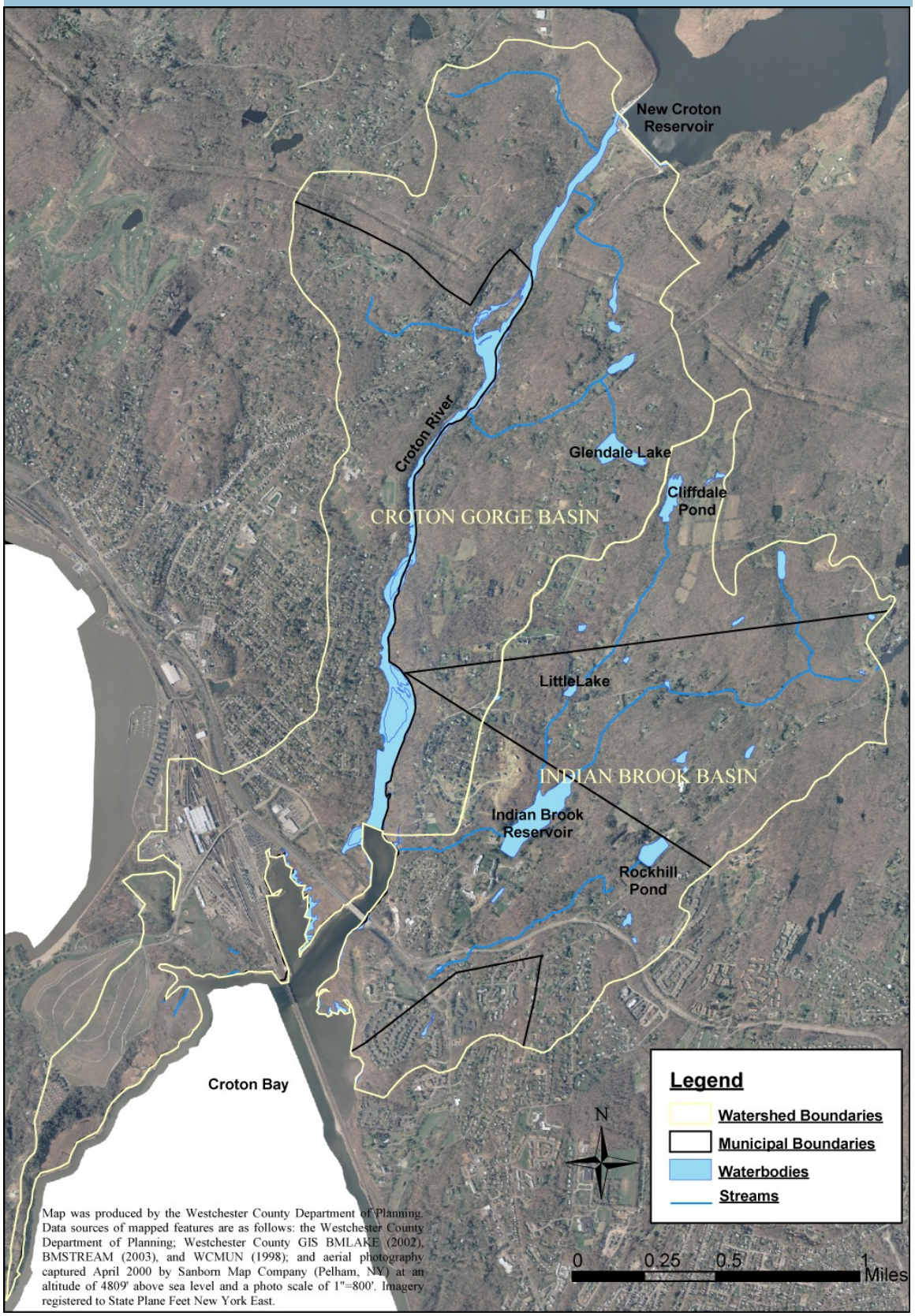
B. Significant Waterbodies

The Croton Bay Watershed consists of 45 acres of waterbodies (refer to Figure 2-5). The Croton River is the main river system in the watershed, flowing approximately three miles from the New Croton Dam and discharging into the Croton Bay. Five tributaries feed into the Croton River and the most significant is the Indian Brook. The Indian Brook Reservoir, a drinking water source for the Town and Village of Ossining, is located in the watershed. Numerous ponds serve as water sources for Croton River tributaries. The Croton River empties into the Hudson River. The Hudson River runs 315 miles from its source in the Adirondacks to the New York Harbor. The lower reaches of the Hudson River, from Newburgh to the New York Harbor, are tidally influenced and contain brackish water. The Croton Bay is part of the tidally influenced portion of the Hudson River.

The State of New York adopted regulations (NYCRR §703) that identify stream use classifications and water quality regulations. The regulation's standards legally set the maximum amount of pollutants allowed in a waterbody and still be considered clean. The maximum amount of pollution varies depending on the assigned stream use classification. Each stream is assigned the highest use classification that it could reach as determined by the State of New York.

The waterbodies in the watershed have different NYSDEC Surface Water Classifications. Table 2-3 lists the surface waterbodies and their respective surface water classifications. In the watershed, the Class A surface waterbodies are all associated with the drinking water sources of either the Croton aquifer or the Indian Brook Reservoir. Class B was designated to all of the lakes and ponds not used as drinking water sources. Class C waters are tributaries of the Croton River or the Indian Brook. The tidal portion of the Croton River is designated as Class SC. Refer to Supplement A: Additional Resources for more information about NYSDEC Surface Water Classifications.

Figure 2-10: Waterbodies in the Croton Bay Watershed



Croton Gorge Waterbodies

The Croton River runs three miles from the New Croton Dam and discharges into the Croton Bay on the Hudson River. Prior to the 1800's, mills were built along the riverfront and the Croton River was used as a harbor. In the early 1800's, the Croton River was dammed to create the Croton Reservoir, a drinking water source for New York City. In 1906, the existing New Croton Dam was completed. The Croton River below the dam shrunk in size, resulting in the river becoming unable to support the industries along its riverfront. Today, the Croton River primarily supports wildlife and recreational uses. Portions of the Croton River are stocked with approximately 900 rainbow trout yearlings, 100 two year old (12-15 inches) brown trout and 200 brown trout yearlings each March and April by the NYS DEC.

The Croton River receives its water flow from New Croton Reservoir water releases, dam spillway overflow, sheet flow and storm drain outfalls. The water re-

Figure 2-11. Croton River

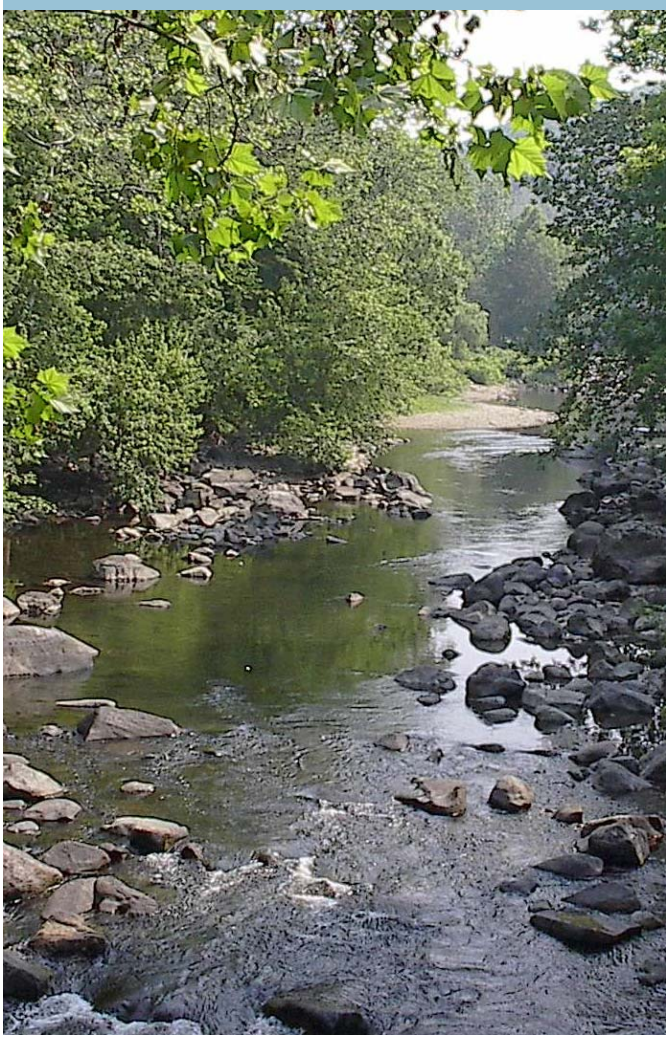


Figure 2-12. Table of Croton Bay Waterbodies and New York State Surface Water Classifications

Waterbody	NYS DEC Classification
Croton River	
New Croton Dam to Glendale Lake Tributary	A
Glendale Lake Tributary to Tidal Portion	B
Tidal Portion	SC
Indian Brook	
Indian Brook from Source to Reservoir	C
Indian Brook Reservoir	A
Indian Brook from Reservoir to Croton River	A
Other Waterbodies	
Other Croton River Tributaries	C
Cliffdale Pond	B
Glendale Lake	B
Little Lake	B
Rockhill Pond	B
Small Pond near Glendale Lake	B

leases into the Croton River from the New Croton Reservoir are connected to precipitation, stormwater runoff, reservoir storage status, water demand of New York City and the status and legal constraints of the remaining NYC water supply sources. Like all dammed rivers that are located in developed areas, the Croton River at times experiences fluctuations in its stream flow. Some fluctuation is normal for a river, but extreme fluctuation can cause increased erosion of the stream banks, excessive silting and drastic temperature changes. These severe changes can cause damage to fish and in-stream wildlife habitats.

Maintaining river flows for wildlife and wildlife habitats downstream from water supply reservoirs is inherently complicated and requires a difficult balance between human demands and sustainable flows to conserve the ecological health of a river. The Croton River below New Croton Reservoir is no exception. During certain years, and during certain months of those years, the flow rate in the Croton River (below the reservoir) is only a fraction of what naturally would be observed under pre-dam conditions. The health of the three-mile section of the Croton River between the Croton Reservoir and the tidal Hudson River is highly influenced by manipulation of the New Croton Reservoir.

Aquatic ecosystems are sensitive to flow changes and fluctuations. An individual high, low or extreme flow event can influence the aquatic ecosystem of a river. Data documenting ecological impacts of the New Croton Reservoir on the Croton River are sparse. The information available on the dam release and the effects of sheet flow and storm drain discharges on Croton River baseflow is limited. However, the available data does demonstrate that the Croton River does experience fluctuations that could adversely affect the River's ecosystem. As a result, additional studies are needed to determine how flow changes actually affect wildlife in the Croton River corridor. For more information on the New Croton Dam release please see Supplement A: Additional Resources.

Indian Brook Waterbodies

In 2002, a streamwalk was conducted by the residents of the Town of Ossining in the Indian Brook subwatershed. All sections of ponds, lakes, wetlands and streams in the subwatershed were included in the stream assessment surveys, which provided information regarding potential water quality and habitat concerns. The segment survey assessment forms were designed to act only as a preliminary identification tool to pinpoint those areas needing more in-depth investigation.

Overall, according to streamwalk surveys the Indian Brook subwatershed contains fair to good water quality ratings. Poor ratings were noted in the following areas:

- Barriers to Fish Movement,
- In-stream Fish Cover, and
- Pools.

Poor ratings for these parameters are typical ratings for streams that have an average depth of less than one foot. A majority of the streams in the Indian Brook Subwatershed had a stream depth of less than one foot when they were assessed. Even though the Indian Brook Subwatershed is a fairly healthy watershed, the prominent areas of concern listed as part of the Streamwalk assessment include stream bank erosion and runoff of polluted stormwater from roadways. Excessive erosion can cause increased turbidity and silting of the reservoir, streams and other ponds. Sections that are receiving runoff from roadways will have poorer water quality as a result of stormwater discharge pollutants such as nutrients, metals, sediments and petroleum products. For more details on the individual sections that were assessed as part of the Indian Brook Streamwalk please see Supplement A: Additional Resources.

The Indian Brook Reservoir serves as a drinking water source for the Town and Village of Ossining. In 2004, the Indian Brook Plant pumped over 15 million gallons of water each month from the Reservoir, with a maximum of 58 million gallons, totaling 555 million gallons for the year. The Indian Brook Reservoir is surrounded by forest. Three inlet streams to the Reservoir and one outlet stream exist and vary between 4-10 feet wide and vary between 3-8 inches deep. The overall water quality rating based on the Indian Brook Streamwalk for the Reservoir was good. The noted areas of concern for the Reservoir included streams that were flowing directly into it. Streambank erosion was identified along the northern inlet stream. This erosion can contribute to increased turbidity and silting of the stream

Figure 2-13. Indian Brook Reservoir, Ossining, NY

and the Reservoir. The eastern inlet stream of the Reservoir was reported to have poor canopy cover, which can affect the habitat quality for stream organisms. It was also noted to exhibit poor insect and invertebrate habitat, which can affect the viability of the stream ecosystem.

Portions of the Indian Brook that run parallel to Glendale Road and eventually discharge into the Reservoir might contribute stormwater pollutants to the Reservoir. Runoff discharges into the stream during storm events through outfalls or sheet flow. Two drainage pipes that discharge untreated stormwater directly into the stream were identified along the Glendale Road segment. The first discharge pipe drains runoff from Glendale Road and the second collects runoff from surrounding residences. Other segments of the Indian Brook are located in private backyards that can also receive stormwater runoff and pollutants associated with landscape management activities.

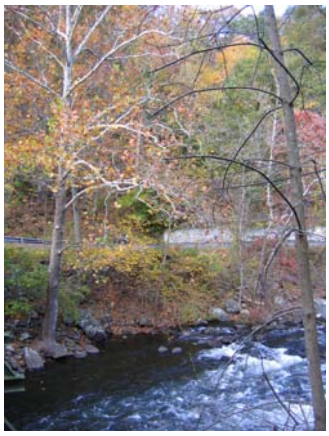
C. Groundwater

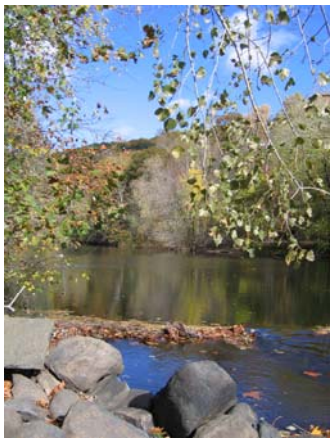
The Croton Bay Watershed contains one bedrock aquifer that is used as a drinking water source for the Village of Croton-On-Hudson. The Village well field is located downstream from the New Croton Dam. The natural groundwater that flows through the aquifer runs parallel to and in the same direction of flow as the Croton River. According to a 2004 report by the Chazen Companies, groundwater near the well fields is drawn towards the wells under pumping conditions. In non-pumping conditions the water table of the well fields is, generally, in equilibrium with the elevation of the river. Recharge to this system comes from a number of sources including precipitation, surface flow from the Croton River and groundwater flow from upland overburden and bedrock formations.

The extent to which the Croton River influences the water located in the aquifer is not completely known. As indicated by the 2004 Chazen Companies report, when the well fields were investigated according to NYSDOH guidance document PWS-42 (Public Water Supply 42) protocols there was no evidence that the wells should be designated as Ground Water Under the Direct Influence (GWUDI) GWUDI is a federal regulatory term that specifically refers to groundwater sources where conditions are such that pathogens are proven or have a high potential to travel from nearby surface waters into the groundwater source. The EPA left it up to the states to develop programs to make the determination of whether or not a source is GWUDI. With respect to the Croton-on-Hudson aquifer, the 2004 Chazen Companies report acknowledges that the zone of contribution from each well does include the Croton River. At the present time, the Westchester County Department of Health has not made its final decision regarding the Croton-on-Hudson well fields GWUDI determination. Even if the well fields end up not being designated as GWUDI, there still might be surface water interactions from the Croton River into the underlying aquifer.

Some of the residents in the Towns of New Castle and Cortlandt have private drinking water wells. Currently no government oversight regarding monitoring water quality of private drinking water wells exists. It is the homeowner's responsibility to monitor their well water. Both the New Castle and Cortlandt attempt to provide groundwater quality protection in the watershed through overlay protection zones, but the current provisions do not provide adequate protection for groundwater drinking water sources.

Figure 2-14. The Croton River





Section 2.6 Wildlife and Significant Wildlife Habitats

The Croton Bay Watershed has a diversity of plants, animals and habitats, despite a relatively small land area that has significant development. The diversity of plants, animals and habitats, (biodiversity), provides many benefits to the surrounding communities. Natural areas are important because they provide recreational opportunities, enhance the quality of life and contribute to keeping water clean. Whether public or private, natural areas help define community identity by connecting residents to the natural landscape in which they live. Open space, pedestrian and bicycle trailways and native plant gardens are just some of the ways to connect residential areas to the surrounding natural environment. The watershed provides many recreational opportunities including hiking, boating, bird-watching, fishing and outdoor photography.

Providing habitats for biodiversity helps to preserve good water quality while providing a community connection to nature. Wetlands, stream corridors and forests all work together to clean, replenish and store water and poorly planned development can displace habitats. Suburban and urban sprawl threaten habitats on both developed and conserved lands. Poorly planned development can disrupt groundwater flow, spread invasive species and cut off essential wildlife corridors, adding more stress to already fragile ecosystems. As healthy habitats are lost, the many benefits that natural ecosystems provide may be lost as well. It is possible, however, to sustain a healthy economy and environment if community growth is prepared with nature in mind.

A. Significant Habitats and Species

The Croton-to-Highlands Biodiversity Plan was a result of a collaborative planning effort between the Towns of Yorktown, New Castle, Cortlandt and Putnam Valley, the Wildlife Conservation Society's Metropolitan Conservation Alliance (WCS/MCA), NYSDEC Hudson River Estuary Program and the Westchester Community Foundation. The eastern portions of the Croton Bay Watershed (in Cortlandt and New Castle) were described in the biodiversity plan as high quality habitats for reptiles, amphibians and breeding birds.

Amphibians, Reptiles and Breeding Birds

The Croton-to-Highlands Biodiversity Plan found that the Croton Bay Watershed is home to many different species of amphibians, reptiles and breeding birds. Signifi-

cant species identified include the Eastern box turtle, Northern copperhead, Worm-eating warbler, Prairie warbler, Kentucky warbler, Canada warbler and Wood thrush. Figure 2-17 is an inventory of the common and Latin names of focal species identified in the Croton Bay Watershed portion of the Croton to Highlands Biodiversity Plan. Table 2-6 also lists if the species can be found under the NYS-DEC or Westchester County Endangered Species Programs, or the Audubon Watch List. More species may exist than those listed in Figure 2-17 in the watershed but they have not been identified in the Biodiversity Plan or they may be located in areas outside of the Plan's study area.

Croton Bay and Croton River

The tidally influenced Croton Bay and River are important aquatic habitats. The bay is one of the largest shallow bay areas in the lower Hudson that is sheltered from strong currents and wind. The mouth of the Croton River is documented as a migratory fish hub used as a resting, foraging and nursery area. Currently, portions of the river are stocked each year by the NYS DEC with trout. The federally endangered shortnose sturgeon has been found to use the Croton River. The NYS-DEC Hudson River Estuary Program has noted that spawning use of the Croton River by blueback herring and alewife fish species could potentially increase if minimum flow requirements were established for the Croton River.

Figure 2-16. Great Blue Heron, (above), Pickerel frog (below) source: U.S. Fish and Wildlife Service

The Croton Bay has a productive year-round habitat for resident warm-water fish, such as largemouth bass, brown bullhead, carp and panfish. It contains 120 acres of submerged aquatic vegetation (SAV) beds full of native water celery. SAV is critical to the aquatic ecosystem of the estuary, providing habitat and food for larval and adult fish, waterfowl and invertebrate species.

In New York, brackish tidal wetlands and swamps are found only in the Hudson River north of the Tappan Zee Bridge. They are a prominent shoreline feature of the mouth of the Croton River and the Croton Bay, covering nearly 100 acres. More than 90 of those acres of tidally influenced wetlands are found on the Bay's shoreline but are dominated by invasive vegetation, such as the Common Reed (Phragmites). The productive aquatic habitat of the Croton Bay is important for the migrating osprey, which is a threatened species. Eight acres of wooded swamp are found in higher areas. Trees found in the wooded swamp are primarily locust and willow, with some sycamore, ash and maple. The understory of the swamp is dominated by invasive species such as catbriar, honeysuckle, grape and false bamboo.

The tidal wetlands provide an ideal habitat for several species of invertebrates, amphibians, reptiles, fish, birds, and mammals. The salinity in the bay water and the abundance of marshes make it an ideal habitat for striped bass, perch, American eels and blue claw crabs. Croton Point Park is home to raccoons, opossums and muskrats that frequent the shoreline foraging for food. Diamondback terrapins, a

species not commonly found in the Hudson Valley, have been observed in the Park. The short-eared owl (state endangered species) is known to use the Park as a wintering area. Bald Eagles, another endangered species, roost at Croton Point and have been seen on the mainland in the Town and Village of Ossining. A variety of waterfowl, such as great blue herons and cormorants also make the tidal wetlands their home at different times of the year.

B. Wildlife Corridors

The Croton-to-Highlands Biodiversity Plan identifies biodiversity areas and connections that provide a habitat for flora and fauna, (Figure 2-16). Biological surveys conducted by the Wildlife Conservation Society defined the areas and where connections are tenuous. Identified biodiversity areas, along with a detailed study of wildlife, exist for areas within the watershed.

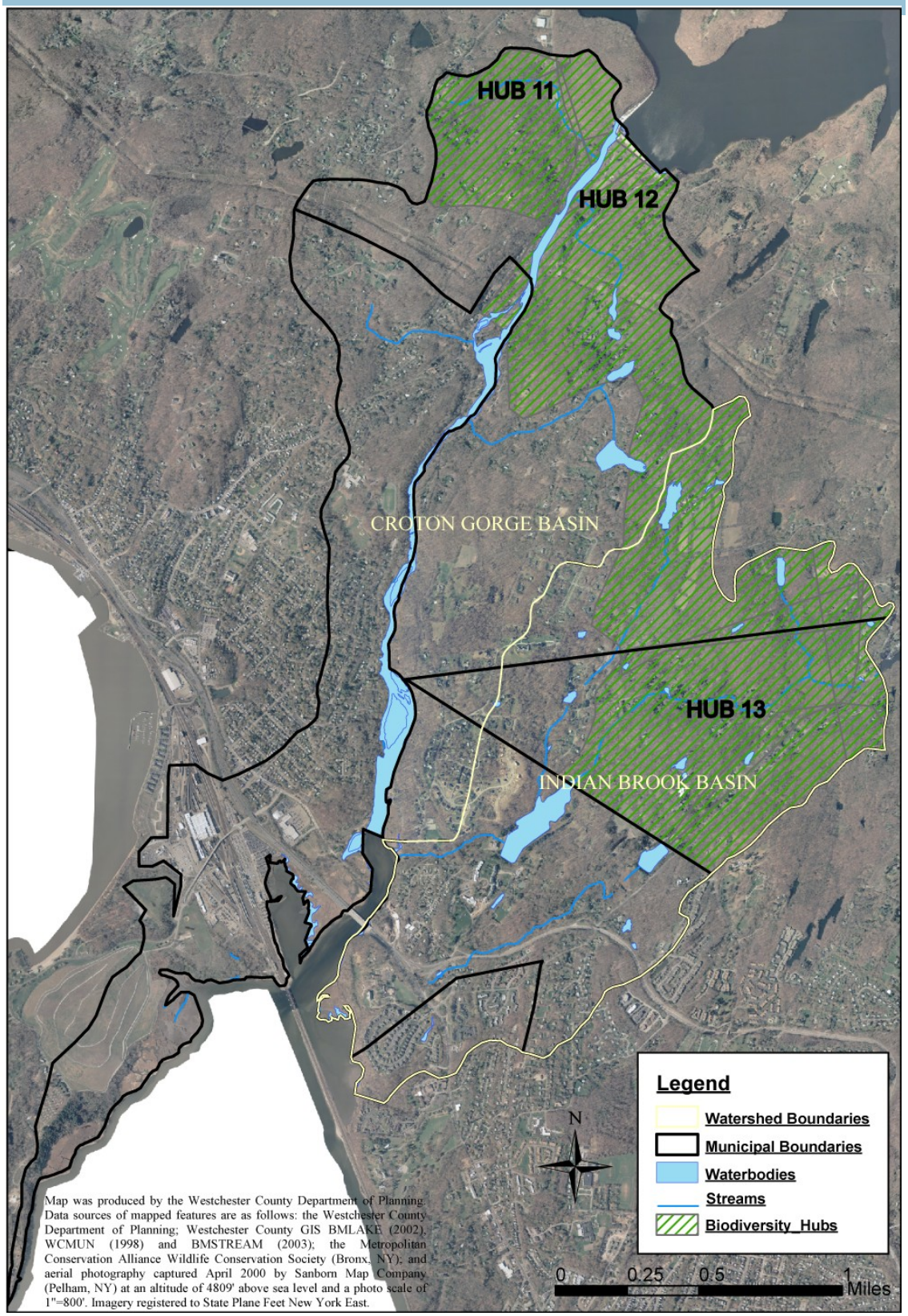
As identified in the Croton-to-Highlands Biodiversity Plan, Biodiversity Hub 11, located in the northwest section of the Croton Bay Watershed west of the Croton Dam, is an important corridor between Teatown Lake Reservation, Blue Mountain Reservation and Hunter Brook. This area contains mostly residential and undeveloped land. According to the Biodiversity Plan this hub contains development sensitive species such as spotted salamanders, black rat snakes, wood frogs, gray treefrogs and Fowler's toads. Conservation-focused land use planning and land preservation efforts may protect or improve the existing biodiversity corridor.

Biodiversity Hub 12, located south of the Croton Dam, includes some of the Briarcliff-Peekskill Trailway and acts as an important connection between Hub 11 and Hub 13, Teatown Lake Reservation. The area is primarily residential with a few parcels of undeveloped land, which could be preserved to continue to provide a wildlife corridor between the two hubs.

Biodiversity Hub 13, Teatown Lake Reservation, is located in the southeast section of the watershed and includes portions of the Indian Brook subwatershed. Wildlife, such as the eastern box turtle and spotted turtle, were identified in this area. Hub 13 abruptly ends at the municipal boundary between the Towns of New Castle and Ossining and it appears that the corridor may continue into the Town of Ossining.

The Croton River is an important biodiversity corridor, even though it is not discussed in the Croton-to-Highlands Biodiversity Plan. The river runs through the Town of Cortlandt, the Village of Croton-on-Hudson and along the northern border of the Town of Ossining. It provides an area for wildlife to move through the watershed with minimal barriers resulting from human development. As noted earlier, the Croton River is also home to many fish species including the endangered shortnose sturgeon. The land adjacent to the river is characterized by large-lot residential and undeveloped parcels. Preserving land from further development along the Croton River corridor may be beneficial to the river ecosystem.

Figure 2-16. Wildlife Corridors Identified in the Croton Bay Watershed as part of the Croton to Highlands Biodiversity Plan



Mallard, Eastern Box Turtle, BullFrog and Northern Flicker

U.S. Fish and Wildlife Service's online digital media library

Figure 2-17. Table of Focal Species of the Croton Bay Watershed

Common Name	Latin Name	Notes
Amphibians		
Spotted salamander	*Ambystoma maculatum*	
Northern two-lined salamander	*Eurycea bislineata*	
Four-toed salamander	*Hemidactylium scutatum*	
Redback salamander	*Plethodon cinereus*	
American toad	*Bufo americanus*	
Gray treefrog	*Hyla versicolor*	
Northern spring peeper	*Pseudacris crucifer*	
Bullfrog	*Rana catesbeiana*	
Green frog	*Rana clamitans*	
Pickerel frog	*Rana palustris*	
Wood frog	*Rana sylvatica*	
Reptiles		
Eastern box turtle	*Terrapene carolina*	A, B
Northern black racer	*Coluber c. constrictor*	
Northern ringneck snake	*Diadophis punctatus edwardsii*	
Black rat snake	*Elaphe obsoleta*	
Eastern garter snake	*Thamnophis s. sirtalis*	
Northern copperhead	*Agkistrodon contortrix mokasen*	C
Breeding Birds		
Mallard	*Anas platyrhynchos*	
Wood duck	*Aix sponsa*	
Canada goose	*Branta canadensis*	
Wild turkey	*Meleagris gallopavo*	
Mourning dove	*Zenaida macroura*	
Red-tailed hawk	*Buteo jamaicensis*	
Yellow-billed cuckoo	*Coccyzus americanus*	
Hairy woodpecker	*Picoides villosus*	
Downy woodpecker	*Picoides pubescens*	
Pileated woodpecker	*Dryocopus pileatus*	
Red-bellied woodpecker	*Melanerpes carolinus*	
Northern flicker	*Colaptes auratus*	
Eastern kingbird	*Tyrannus tyrannus*	
Great crested flycatcher	*Myiarchus crinitus*	
Eastern phoebe	*Sayornis phoebe*	
Eastern wood-pewee	*Contopus virens*	
Blue jay	*Cyanocitta cristata*	
American crow	*Corvus brachyrhynchos*	
Brown-headed cowbird	*Molothrus ater*	
Red-winged blackbird	*Agelaius phoeniceus*	
Baltimore oriole	*Icterus galbula*	
Common grackle	*Quiscalus quiscula*	
House finch	*Carpodacus mexicanus*	
American goldfinch	*Carduelis tristis*	
Chipping sparrow	*Spizella passerina*	

Table of Focal Species of the Croton Bay Watershed, cont.

Common Name	Latin Name	Notes
Field sparrow	*Spizella pusilla*	
Song sparrow	*Melospiza melodia*	
Swamp sparrow	*Melospiza georgiana*	
Eastern towhee	*Pipilo erythrophthalmus*	
Northern cardinal	*Cardinalis cardinalis*	
Rose-breasted grosbeak	*Pheucticus ludovicianus*	
Indigo bunting	*Passerina cyanea*	
Scarlet tanager	*Piranga olivacea*	
Barn swallow	*Hirundo rustica*	
Tree swallow	*Tachycineta bicolor*	
Northern rough-winged swallow	*Stelgidopteryx serripennis*	
Cedar waxwing	*Bombycilla cedrorum*	
Red-eyed vireo	*Vireo olivaceus*	
Warbling vireo	*Vireo gilvus*	
Black-and-white warbler	*Mniotilta varia*	
Worm-eating warbler	*Helmitheros vermivorum*	C,D
Blue-winged warbler	*Vermivora pinus*	D
Yellow warbler	*Dendroica petechia*	
Black-throated green warbler	*Dendroica virens*	
Prairie warbler	*Dendroica discolor*	C,D
Ovenbird	*Seiurus aurocapilla*	
Northern waterthrush	*Seiurus noveboracensis*	
Louisiana waterthrush	*Seiurus motacilla*	
Kentucky warbler	*Oporornis formosus*	D, E
Common yellowthroat	*Geothlypis trichas*	
Canada warbler	*Wilsonia canadensis*	C, D
American redstart	*Setophaga ruticilla*	
Northern mockingbird	*Mimus polyglottos*	
Gray catbird	*Dumetella carolinensis*	
Carolina wren	*Thryothorus ludovicianus*	
House wren	*Troglodytes aedon*	
White-breasted nuthatch	*Sitta carolinensis*	
Tufted titmouse	*Baeolophus bicolor*	
Black-capped chickadee	*Poecile atricapillus*	
Blue-gray gnatcatcher	*Polioptila caerulea*	
Wood thrush	*Hylocichla mustelina*	C, D
Veery	*Catharus fuscescens*	
American robin	*Turdus migratorius*	
Eastern bluebird	*Sialia sialis*	

Notes:
A: NYS Special Concern
B: Westchester County Threatened
C: Westchester County Special Concern
D: Audubon Society Special Concern
E: Westchester County Endangered

Indigo Bunting, Cedar Waxwing, Ovenbird and Woodthrush

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