FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE CROTON WATER TREATMENT PLANT
NATURAL RESOURCES

5.14. NATURAL RESOURCES

5.14.1. Introduction

Natural resource parameters such as upland vegetation; wetlands, waterways, and floodplains; fish and benthic invertebrates; birds; herpetiles; mammals; and endangered, threatened, or rare plant and animal species were assessed at the Eastview Site and the appropriate study area to determine the potential effects resulting from the construction and operation of the proposed Croton Water Treatment Plant (Croton project) project at the Eastview Site.

For the purpose of this analysis, a study area extending 400 feet beyond the project area of the proposed site has been established. For the methodology of this analysis, refer to the Section 4.14, Data Collection and Impact Methodologies, Natural Resources.

5.14.2. Baseline Conditions

The Eastview Site is located in the Town of Mount Pleasant, New York, on 83 acres of City-owned property (Figure 5.14-1). The 83 acres does not include the parcel that was used for a four-acre easement for the Walker Road Extension, along the western side of the site. The proposed site is largely undeveloped with the exception of: (1) water and electrical utility structures and their access roadways, including, the Delaware Aqueduct Connection Chamber (Shaft No. 19) and (2) the historic Hammond House, a private residence listed on the State and National Register of Historic Places (S/NR) that is situated north of Route 100C.

Successional fields and woodland communities, including mature upland woods and successional woods and fields, primarily characterize the property. Mine Brook, a tributary to the Saw Mill River, flows through the central portion of the property, from north to south, creating various wetland communities on-site, including palustrine forested wetlands and palustrine scrub-shrub/emergent wetlands. Table 4.14-1 provides a summary of the natural resources occurring on-site in the Towns of Mount Pleasant, and includes a list of habitat type; habitat characterization; summary of herbaceous, understory and canopy vegetation; and summary of aquatic, terrestrial and avian wildlife.

5.14.2.1. Existing Conditions

5.14.2.1.1. Vegetation

Vegetation consists of the plant life or total plant cover found in a specific area, whether indigenous or introduced by humans. The Highlands Physiographic Province of New York, which encompasses the Eastview Site, contains a diverse mixture of major terrestrial plant habitats, including freshwater marshes, bogs, swamps and floodplains, upland valleys and slopes, upland ridges, and rock outcrops. This diversity of plant communities occurring in relatively small areas is characteristic of habitat conditions and plant communities found in this physiographic province. Table 5.14-2 presents a list of habitat communities and their associated dominant vegetation. Table 5.14-3 provides a summary of all the trees that were identified on-site.

TABLE 5.14-1. SUMMARY OF NATURAL RESOURCES FOUND AT MOUNT PLEASANT

		Vegetation			Wildlife		
Habitat	**Habitat Characterization**	**Herbaceous**	**Shrub/Understory**	**Tree/Canopy**	**Aquatic**	**Terrestrial**	**Avian**
Floodplain Wetland and Red Maple Hardwood Swamp	The majority of forested wetlands are situated adjacent to Mine Brook and its tributaries. A mature wetland forest with large diameter trees occurs in the northeastern corner of the site. Vegetative structure and composition of the forested wetlands are similar. Understory varies form open in the mature forest to moderately dense in the second growth and along the stream.	Skunk cabbage is the dominant ground cover along the streams. Other herbaceous species include garlic mustard, field garlic, Virginia creeper, thyme-leaved speedwell, various goldenrod species, deer-tongue grass, agrimony, common winter cress, soft rush, common reed, swamp buttercup, mannagrass, false helleobore, jewelweed, and sedge species	Common shrub species include multiflora rose, gray stem dogwood, pussy willow, and bush honeysuckle.	Pin oak, black willow, sycamore, white ash, red maple, and Norway maple dominate the canopy layer varying in species composition and dominance depending on location. In general, sycamore and black willow are limited to areas along Mine Brook.	Two-lined Salamander, Red-backed Salamander, Green Frog, Spring Peeper	Gray Squirrel, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	Woodpeckers, Red-eyed Vireo, Eastern Phoebe, Black-and-white Warbler, Black-capped Chickadee, Wood Thrush, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal
Shrub Swamp	This wetland community is characterized primarily as areas of wet successional fields to the west of Delaware Aqueduct Shaft 19. There is also a shrub wetland in an isolated excavation within the successional fields on the northwest portion of the site.	A wide variety of common wetland species occur in the herb layer of this community including horsetail, soft rush, sensitive fern, spicebush, jewelweed, water horehound, cattail, arrow-leaved tearthumb, willow herb, skunk cabbage, goldenrods, New York ironweed, blue vervain, swamp milkweed, boneset, and Joe-pye-weed.	The shrub layer is primarily dominated by silky or grey stem dogwood in association with green ash, pussy willow, multiflora rose and arrowwood viburnum	Not applicable.	Common Garter Snake, Two-lined Salamander, Red-backed Salamander, Green Frog, Spring Peeper	Grey Squirrel, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	American Goldfinch, Yellow Warbler, Song Sparrow, Red-winged Blackbird, Northern Mockingbird, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal

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Reedgrass/ Purple Loosestrife Marsh	A common reed dominated area adjacent to Route 100C where water within Mine Brook collects in a ponded area prior to passing underneath the roadway.	Common reed grass	Not applicable	Not applicable.	Two-lined Salamander, Red-backed Salamander, Green Frog, Spring Peeper	Racoon, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	American Goldfinch, Yellow Warbler, Song Sparrow, Red-winged Blackbird, Northern Mockingbird, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal
Riparian	Mine Brook flows through the central portion of the site, from north to south, creating the various wetland communities. Mine Brook is a Class C tributary of the Saw Mill River.	Not applicable	Not applicable	Not applicable	Two-lined Salamander, Red-backed Salamander, Green Frog, Spring Peeper	Racoon, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	Woodpeckers, Red-eyed Vireo, Eastern Phoebe, Black-and-white Warbler, Black-capped Chickadee, Wood Thrush, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal

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Habitat	**Habitat Characterization**	**Herbaceous**	**Shrub/Understory**	**Tree/Canopy**	**Aquatic**	**Terrestrial**	**Avian**
Oak Tulip Tree Forest	The mature forest community consists of many large diameter trees and occurs on slopes and areas adjacent to Mine Brook and small patches in the southeast portion of the site.	Commonly observed herbaceous species include Virginia creeper, trout lily, cut-leaved toothwort, white wood aster, false Solomon's seal, spring beauty, jewelweed, wood sedge, Canada mayflower and Japanese honeysuckle.	The understory is open consisting of sapling to pole size canopy tree species as well as ironwood, spicebush, blackhaw, chokecherry and basswood.	White oak, Tulip tree, American beech, black birch, black gum, black oak, and Norway maples dominate the canopy.	Not Applicable	Gray Squirrel, Groundhog, Striped Skunk, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	Woodpeckers, Red-eyed Vireo, Eastern Phoebe, Black-and-white Warbler, Black-capped Chickadee, Wood Thrush, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal
Successional Southern Hardwood Forest	The successional upland forest is characterized by successional tree species apparently colonizing abandoned farmland. Successional upland forest exists on the eastern portion of the site between the mature/wetland forest to the north and successional field/mature forest to the south.	Common ground cover species include Virginia creeper, poison ivy, garlic mustard, Japanese honeysuckle, wood sedge, and bramble.	The understory consist of saplings of the canopy tree species as well as multiflora rose, arrowwood viburnum, blackhaw, gray birch, flowering dogwood, bittersweet, grey stem and silky dogwood	Common tree species include American elm, black locust, black cherry, red maple, white ash, tulip poplar, black birch, bigtooth aspen, and apple.	Not Applicable	Gray Squirrel, Racoon, Groundhog, Striped Skunk Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	Woodpeckers, Red-eyed Vireo, Eastern Phoebe, Black-and-white Warbler, Black-capped Chickadee, Wood Thrush, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal

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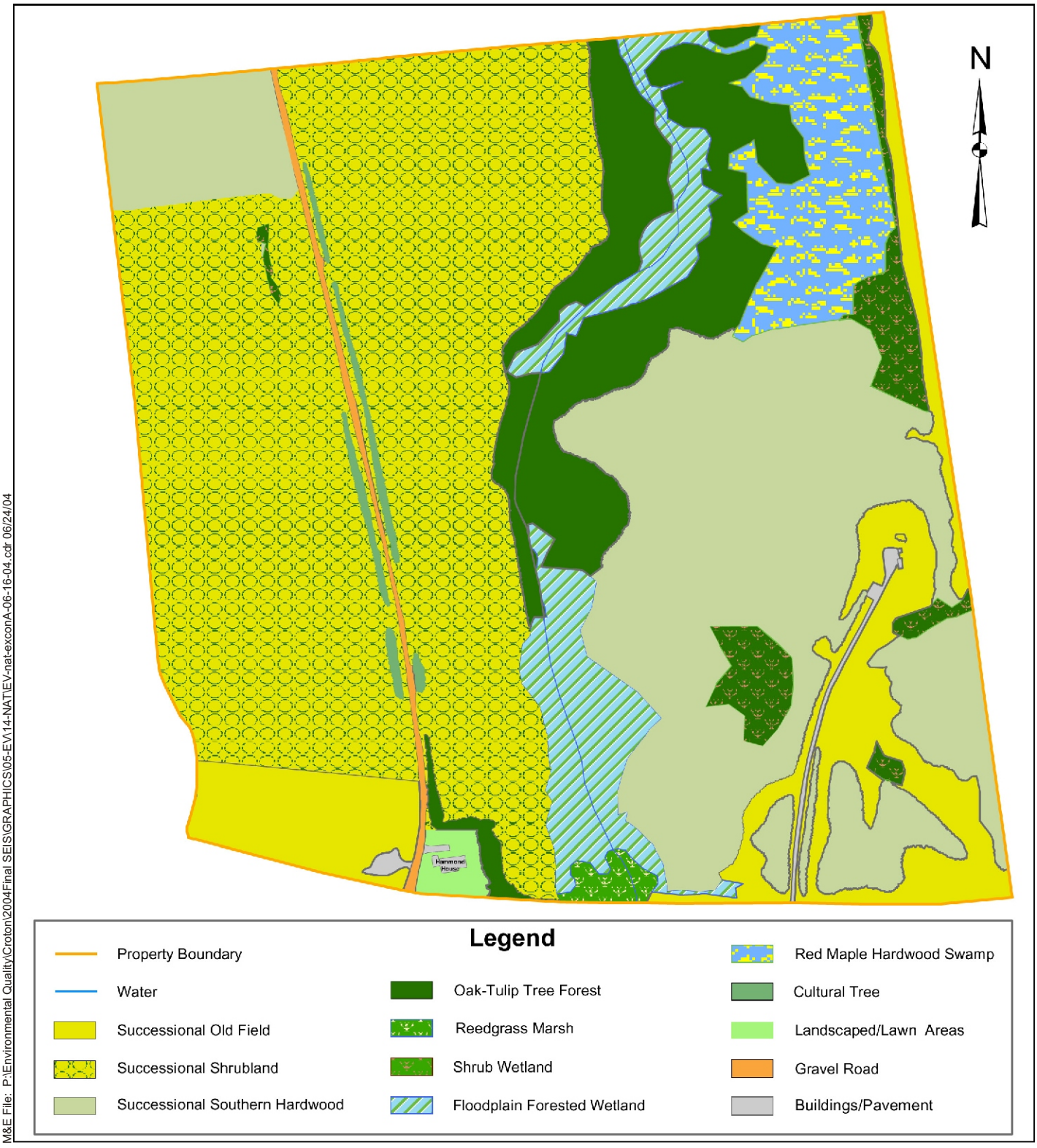
Habitat	**Habitat Characterization**	**Herbaceous**	**Shrub/Understory**	**Tree/Canopy**	**Aquatic**	**Terrestrial**	**Avian**
Successional Shrubland	This is the dominant vegetative community on the site and occurs mainly to the west of Mine Brook. This community results from the recent clearing of this portion of the project site.	Common herbaceous species include daisy fleabane, common wood cress, timothy grass, sweet vernal grass and other grasses, Queen Anne's lace, campion, mugwort, red clover, English plantain, thistle, Virginia creeper, poison ivy, goldenrod, oxeye daisy, and vetch.	Along either side of Hammond House Road this community consists of extremely dense thickets of multiflora rose. The remainder of this community consists of a wide variety of common successional field shrub species including grey stem and silky dogwood, white ash, bittersweet, blackhaw, bush honeysuckle and red maple.	Not applicable	Not Applicable	Eastern Cottontail, Groundhog, Striped Skunk, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	American Goldfinch, Yellow Warbler, Song Sparrow, Red-winged Blackbird, Northern Mockingbird, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal
Successional Old Field	This community type occurs in the southwest corner of the north parcel. It also occurs in the southeast corner of the north parcel east of the existing access road to Shaft 19. These areas are either frequently mowed or are cleared on a more frequent basis than the successional shrubland that occurs on-site		Not applicable	Not applicable	Not applicable	Eastern Cottontail, Groundhog, Striped Skunk, Coyote, Red Fox, Chipmunk, Meadow Vole, Norway Rat, White-Footed Mouse, Flying Squirrel, White-tailed Deer	American Goldfinch, Yellow Warbler, Song Sparrow, Red-winged Blackbird, Northern Mockingbird, Blue Jay, Tufted Titmouse, American Robin, Gray Catbird, Common Yellowthroat, Northern Cardinal



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Feet

Natural Resources During Existing Conditions at Eastview Site

Croton Water Treatment Plant

Figure 5.14-1

The past agricultural use of the Eastview Site has created a mosaic of vegetative communities within its boundaries. The abandoned agricultural fields vary from early successional species (primarily herbaceous) to shrub dominated openings, and successional woodlots. These communities are interspersed with mature or maturing forest and wetland communities. The general areas of forest and field are clearly visible in the aerial photograph shown in Figure 5.14-2.

The vegetative communities found on-site were classified according to the New York State Natural Heritage Program's (NYSNHP) Ecological Communities of New York State, Second Edition[1]. Eight primary vegetative communities were identified on the proposed site. The upland communities consisted of oak-tulip tree forest, successional southern hardwood, successional shrubland, and successional old field. The wetland communities consisted of floodplain forest, red maple hardwood swamp, shrub swamp, and reedgrass/purple loosestrife marsh. The on-site wetlands can also be described in terms of the United States Fish and Wildlife Service's (USFWS) wetland classification system as well and includes palustrine forested wetlands (PFO1), palustrine shrub-scrub wetlands (PSS1), and palustrine emergent wetlands (PEM). The NYSNHP also provides global and state element ranks for each community type. These element ranks carry no regulatory weight but are believed to accurately reflect the relative rarity of the community type. The approximate locations of these vegetative communities in the study area are shown in Figure 5.14-1, and a detailed description of each community is given in Table 5.14-1.

Terrestrial Community Descriptions - Oak-Tulip Tree Forest. As described by Reschke, this community type is a mesophytic hardwood forest that occurs on moist, well drained sites in southeastern New York. The dominant trees in this community include a mix of five or more of the following: red oak, tulip tree, beech, black birch, red maple, scarlet oak, black oak, and white oak. The NYSNHP has given this community a global element rank of G4 (apparently secure globally) and a state element rank of S2 (typically 6 to 20 occurrences making it very vulnerable) and S3 (typically 21 to 100 occurrences indicating limited acreage).

The species composition that most closely matched the oak-tulip tree forest classification are shown on Figure 5.14-1. Previous disturbance of this site and surrounding areas (e.g. fires, filling, grading, alteration of surface drainage patterns, etc.) has affected the composition of species of this plant community from the published description; however, the fundamental aspects of the community are present. On the project site, this mature forest community consists of many large diameter trees and is limited to slopes and areas adjacent to Mine Brook in the extreme northeastern portion of the proposed site.

On the Eastview Site, white oak, American beech, black birch and black gum dominate the canopy. In addtion, Norway Maple is also a dominant part of the canopy. The understory is open, consisting of sapling to pole-size trees (9 to 11 inches in diameter at breast height [dbh] of the aforementioned species). Commonly observed herbaceous species include Virginia creeper, trout lily, white wood aster, jewelweed, Canada mayflower, and Japanese honeysuckle.

[1] Reschke, Carol., et. al. 2002. Ecological Communities of New York State. New York Natural Heritage Program. N.Y.S. Department of Environmental Conservation. Latham, NY.

Terrestrial Community Descriptions – Successional Southern Hardwood. As described by Reschke, this community type is a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees include any of the following: American elm, slippery elm, white ash, red maple, box elder, silver maple, sassafras, gray birch, hawthorns, eastern red cedar, and choke cherry. Certain introduced species are commonly found as well: black locust, tree-of-heaven, and buckthorn. Any of these species may be dominant or codominant. This community is found primarily in the southern half of New York, south of the Adirondacks. The NYSNHP has given this community a global element rank of G5 (demonstrably secure globally) and a state element rank of S5 (demonstrably secure in New York State).

The species composition that most closely matched the successional southern hardwood is shown on Figure 5.14-1. On the project site, the largest extent of this forest community type occurs in the southeastern portion of the parcel. A smaller area of this community occurs on the northwest corner of the parcel. Common tree species in this community found on-site include American elm, black locust, black cherry, red maple, white ash, and tulip poplar. A significant portion of this community type in the central eastern portion of the site is dominated almost entirely by white and green ash. The understory consists of saplings of the aforementioned trees, multiflora rose, arrowwood viburnum,, dogwoods, and grey birch. Common ground cover species include Virginia creeper, poison ivy, garlic mustard, Japanese honeysuckle, and bramble.

Terrestrial Community Descriptions - Successional Shrubland. As described by Reschke this community that occurs on sites that have been cleared or otherwise disturbed and hashave at least 50 percent cover of shrubs. Characteristic shrubs include gray dogwood, eastern red cedar, raspberries, hawthorne, serviceberries, choke cherry, wild plum, sumac, nanny-berry, arrowwood viburnum, and multiflora rose. This community occurs throughout New York State. The NYSNHP has given this community a global element rank of G4 (apparently secure globally) and a state element rank of S4 (apparently secure in New York State).

The species composition that most closely matched the successional shrubland is shown on Figure 5.14-1. This is the dominant vegetative community on the site and occurs west of Mine Brook. It largely results from the more recent history of clearing in this portion of the site. This community consists primarily of extremely dense thickets of multiflora rose along either side of Hammond House Road. Common herbaceous species observed include daisy fleabane, a variety of grasses, Queen Anne's lace, mugwort Virginia creeper, poison ivy, and goldenrod. The general areas of forest and field are clearly visible in the aerial photograph shown in Figure 5.14-2.

Terrestrial Community Descriptions – Successional Old Field. As described by Reschke , this community type is a meadow dominated by forbes and grasses that occurs on sites that have been cleared and plowed and then abandoned. Characteristic herbaceous species associated with this type of habitat include goldenrods, bluegrasses, timothy, quackgrass, sweet vernal grass, orchard grass, common chickweed, common evening primrose, New England aster, wild strawberry, Queen Anne's lace, ragweed, hawkweed, and ox-tongue. Shrubs would have less than 50 percent cover and could include gray and silky dogwood, arrowwood viburnum, and eastern red cedar. This community occurs throughout New York State. The NYSNHP has given

this community a global element rank of G4 (apparently secure globally) and a state element rank of S4 (apparently secure in New York State).

The species composition that most closely matched the successional old field, is shown on Figure 5.14-2. On the project site, this community type occurs in the southwest corner of the parcel. It also occurs in the southeast corner of the parcel east of the existing access road to Shaft No. 19. These areas are either frequently mowed or are cleared on a more frequent basis than the successional shrubland plant community classification. Typical vegetation found in the successional old field habitats include English plantain, aster, Queen Anne's lace, timothy, thistle, red clover, thyme leaved speedwell, daisy fleabane, oxe-eye daisy, wintercress, common mugwort, field garlic, and garlic mustard.

TABLE 5.14-2. DOMINANT VEGETATION AT THE EASTVIEW SITE STUDY AREA

VEGETATIVE COMMUNITY	STRATUM[2]	COMMON NAME	SCIENTIFIC NAME
Oak-Tulip Tree Forest	Tree	White oak	*Quercus alba*
		American beech	*Fagus grandifolia*
		Black birch	*Betula lenta*
		Black gum	*Nyssa sylvatica*
		Norway maple	*Acer platanoides*
		Tulip poplar	*Liriodendron tulipifera*
		Black oak	*Quercus velutina*
		Sugar maple	*Acer saccharum*
		Basswood	*Tilia americana*
		Ironwood	*Carpinus caroliniana*
	Shrub	Spicebush	*Lindera benzoin*
		Blackhaw Viburnum	*Viburnum prunifolium*
		Choke cherry	*Prunus virginiana*
	Vine	Japanese honeysuckle	*Lonicera japonica*
		Virginia creeper	*Parthenocissus quinquefolia*
	Herbaceous	Trout lily	*Erythronium americanum*
		Cutleaved toothwort	*Dentaria laciniata*
		White wood aster	*Aster divaricatus*
		False Solomon's seal	*Similacina racemosa*
		Spring beauty	*Claytonia virginica*

[2] Trees are greater than four inches dbh; shrubs are woody vegetation less than four inches dbh that can include trees.

TABLE 5.14-2. DOMINANT VEGETATION AT THE EASTVIEW SITE STUDY AREA

VEGETATIVE COMMUNITY	STRATUM[2]	COMMON NAME	SCIENTIFIC NAME
		Jewelweed	*Impatiens capensis*
		Wood sedge	*Carex pensylvanica*
		Canada mayflower	*Maianthemum canadense*
Successional Southern Hardwood Forest	Tree	American elm	*Ulmus americana*
		Black locust	*Robinia pseudoacacia*
		Black cherry	*Prunus serotina*
		Red maple	*Acer rubrum*
		White ash	*Fraxinus americana*
		Green Ash	*Fraxinus pennsylvanica*
		Tulip poplar	*Liriodendron tulipifera*
		Black birch	*Betula lenta*
		Bigtooth aspen	*Populus grandidentata*
		Apple	*Pyrus malus*
		Gray birch	*Betula populifolia*
		Flowering dogwood	*Cornus florida*
	Shrub	Multiflora rose	*Rosa multiflora*
		Arrowwood viburnum	*Viburnum recognitum*
		Blackhaw viburnum	*Viburnum prunifolium*
		Gray stem dogwood	*Cornus foemina*
		Bramble	*Rubus sp.*
		Silky dogwood	*Cornus amomum*
	Vine	Bittersweet nightshade	*Solanum dulcamara*
		Virginia creeper	*Parthenocissus quinquefolia*
		Japanese honeysuckle	*Lonicera japonica*
		Poison ivy	*Toxicodendron radicans*
	Herbaceous	Garlic mustard	*Alliaria petiolata*
		Woodsedge	*Carex pensylvanica*
Successional Shrubland	Tree	White ash	*Fraxinus americana*
		Red maple	*Acer rubrum*
	Shrub	Multiflora rose	*Rosa multiflora*

TABLE 5.14-2. DOMINANT VEGETATION AT THE EASTVIEW SITE STUDY AREA

VEGETATIVE COMMUNITY	STRATUM[2]	COMMON NAME	SCIENTIFIC NAME
		Gray stem dogwood	*Cornus foemina*
		Silky dogwood	*Cornus amomum*
		Blackhaw viburnum	*Viburnum prunifolium*
		Bush honeysuckle	*Lonicera sp.*
	Vine	Bittersweet nightshade	*Solanum dulcamara*
		Virginia creeper	*Parthenocissus quinquefolia*
		Poison ivy	*Toxicodendron radicans*
	Herbaceous	Daisy fleabane	*Erigeron annuus*
		Timothy grass	*Phleum pratense*
		Sweet vernal grass	*Anthoxanthum odoratum*
		Queen Anne's lace	*Daucus carota*
		Campion	*Lychnis sp.*
		Mugwort	*Artemisia vulgaris*
		Broad-leaved dock	*Rumex obtusifolius*
		Red clover	*Trifolium pratense*
		English plantain	*Plantago lanceolata*
		Thistle	*Cirsium sp.*
		Goldenrod	*Solidago sp.*
		Burdock	*Arctium minus*
		Oxeye daisy	*Chrysanthemum leucanthemum*
		Curly-leaved dock	*Rumex crispus*
		Vetch	*Vicia sp.*
Successional Old Field	Herbaceous	Timothy grass	*Phleum pratense*
		Thistle	*Cirsium sp.*
		Red clover	*Trifolium pratense*
		Thyme leaved speedwell	*Veronica serpyllifolia*
		Daisy fleabane	*Erigeron annuus*
		Oxeye daisy	*Chrysanthemum leucanthemum*
		Winter Cress	*Barbarea vulgaris*
		Common Mugwort	*Artemisia vulgaris*
		Field garlic	*Allium vineale*

TABLE 5.14-2. DOMINANT VEGETATION AT THE EASTVIEW SITE STUDY AREA

VEGETATIVE COMMUNITY	STRATUM[2]	COMMON NAME	SCIENTIFIC NAME
		Garlic mustard	*Alliaria petiolata*
Floodplain Forest and Red Maple Hardwood Swamp	Tree	Pin oak	*Quercus palustris*
		Black willow	*Salix nigra*
		Sycamore	*Platanus occidentalis*
		White ash	*Fraxinus americana*
		Red maple	*Acer rubrum*
		Norway maple	*Acer platanoides*
	Shrub	Multiflora rose	*Rosa multiflora*
		Gray stem dogwood	*Cornus foemina*
		Viburnum sp.	*Viburnum sieboldii*
		Pussy willow	*Salix discolor*
		Bush honeysuckle	*Lonicera sp.*
	Vine	Virginia creeper	*Parthenocissus quinquefolia*
	Herbaceous	Skunk cabbage	*Symplocarpus foetidus*
		Garlic mustard	*Alliaria petiolata*
		Field garlic	*Allium vineale*
		Thyme-leaved speedwell	*Veronica serpyllifolia*
		Goldenrod	*Solidago sp.*
		Deer-tongue grass	*Panicum clandestinum*
		Agrimony	*Agrimonia sp.*
		Common winter cress	*Barbarea vulgaris*
		Soft rush	*Juncus effusus*
		Common reed	*Phragmites australis*
		Swamp buttercup	*Ranunculus septentrionalis*
		Manna grass	*Glyceria sp.*
		False hellabore	*Veratrum viride*
		Jewelweed	*Impatiens capensis*
		Cleavers	*Galium aparine*
		Sedge	*Carex sp.*
Shrub Swamp Wetland	Tree	Green ash	*Fraxinus pennsylvanica*
	Shrub	Silky dogwood	*Cornus amomum*
		Gray stem dogwood	*Cornus foemina*
		Pussy willow	*Salix discolor*
		Multiflora rose	*Rosa multiflora*
		Spicebush	*Lindera benzoin*

TABLE 5.14-2. DOMINANT VEGETATION AT THE EASTVIEW SITE STUDY AREA

VEGETATIVE COMMUNITY	STRATUM[2]	COMMON NAME	SCIENTIFIC NAME
		Arrowwood viburnum	*Viburnum recognitum*
	Herbaceous	Horsetail	*Equisetum sp.*
		Soft rush	*Juncus effusus*
		Sensitive fern	*Onoclea sensibilis*
		Jewelweed	*Impatiens capensis*
		Water horehound	*Lycopus sp.*
		Broad-leaf cattail	*Typha latifolia*
		Arrow-leaved tearthumb	*Polygonum sagittatum*
		Willow herb	*Epilobium sp.*
		Skunk cabbage	*Symplocarpus foetidus*
		Grass-leaved goldenrod	*Euthamia graminifolia*
		Goldenrod	*Solidago sp.*
		New York ironweed	*Vernonia noveboracensis*
		Blue vervain	*Verbena hastata*
		Swamp milkweed	*Asclepias incarnata*
		Boneset	*Eupatorium perfoliatum*
		Avens	*Geum sp.*
		Common winter cress	*Barbarea vulgaris*
		Joe-pye-weed	*Eupatorium maculatum*
		Common reed	*Phragmites australis*
Reedgrass/Purple Loosestrife Marsh		Common reed	*Phragmites australis*

Notes:
Based on field surveys conducted in May 2002.

TABLE 5.14-3. SUMMARY OF TREES IDENTIFIED ON THE EASTVIEW SITE

Common Name	Scientific Name	Number	Percent of Total Trees Counted
American Basswood	*Tilia americana*	8	0.27
American Beech	*Fagus grandifolia*	115	3.95
America Elm	*Ulmus americana*	176	6.05
American Sycamore	*Platanus occidentalis*	15	0.52
Apple	*Malus sp.*	68	2.33
Bebb's Willow	*Salix bebbiana*	11	0.38
Black Birch	*Betula lenta*	61	2.10
Black Cherry	*Prunus serotina*	210	7.22
Black Locust	*Robinia pseudoacacia*	118	4.05
Black Oak	*Quercus velutina*	10	0.34
Black Walnut	*Juglans nigra*	9	0.31
Black Willow	*Salix nigra*	35	1.20
Box Elder	*Acer negundo*	57	1.96
Cottonwood	*Populus deltoides*	3	0.10
Eastern Hophornbeam	*Ostrya virginiana*	2	0.07
Elm	*Ulmus sp.*	2	0.07
European Buckthorn	*Rhamnus cathartica*	1	0.03
Flowering Dogwood	*Cornus florida*	2	0.07
Green Ash	*Fraxinus pennsylvanica*	494	16.98
Grey Birch	*Betula populifolia*	4	0.14
Hickory	*Carya sp.*	2	0.07
Honey Locust	*Gleditsia triacanthos*	3	0.10
Horse Chestnut	*Aesculus hippocastanum*	1	0.03
Ironwood	*Carpinus caroliana*	7	0.24
Mockernut Hickory	*Carya tomentosa*	6	0.21
Norway Maple	*Acer platanoides*	185	6.36
Norway Spruce	*Picea abies*	30	1.03
Oak	*Quercus sp.*	1	0.03
Osage Orange	*Maclura pomifera*	1	0.03
Pignut Hickory	*Carya glabra*	2	0.07
Pin Oak	*Quercus palustris*	157	5.40
Plum	*Prunus sp.*	1	0.03
Quaking Aspen	*Populus tremuloides*	11	0.38
Red Maple	*Acer rubrum*	201	6.91
Red Oak	*Quercus rubra*	36	1.24
Shagbark Hickory	*Carya ovata*	18	0.62
Silver Maple	*Acer saccharinum*	35	1.20
Blackhaw Viburnum	*Viburnum prunifolium*	1	0.03
Sugar Maple	*Acer saccharum*	226	7.77
Sweet Cherry	*Prunus avium*	1	0.03

TABLE 5.14-3. SUMMARY OF TREES IDENTIFIED ON THE EASTVIEW SITE

Common Name	Scientific Name	Number	Percent of Total Trees Counted
Sycamore Maple	*Acer pseudoplatanus*	18	0.62
Tree of Heaven	*Ailanthus altissima*	21	0.72
Tulip Tree	*Liriodendron tulipifera*	18	0.62
Unknown		1	0.03
White Ash	*Fraxinus americana*	493	16.94
White Birch	*Betula papyrifera*	1	0.03
White Mulberry	*Morus alba*	2	0.07
White Oak	*Quercus alba*	23	0.79
Willow	*Salix sp.*	7	0.24
	Totals	**2,910**	**100**

5.14.2.1.2. Wetlands, Waterways, and Floodplains

Wetlands are areas where water saturation is the dominant factor determining the nature of soil development and the types of plants and animal communities living in the soil and on its surface. Wetlands are transitional areas between terrestrial and aquatic systems, and are important biological habitats of ecological and socioeconomic value. Wetlands moderate extremes in water flow, aid in the natural purification of water, and may be areas of groundwater recharge.

Mine Brook is a Class C[3] tributary of the Saw Mill River and runs in a north-south direction through the center of the study area. Some of the wetlands found are associated with this particular surface water body and its adjacent tributaries. Some wetlands are also found at higher elevations, which ultimately drain into Mine Brook, while other wetlands are isolated, having no association with surface water. Below is a description of the wetland communities found on-site. In total, the study area contains approximately 13 acres of non-contiguous wetlands.[4] These wetlands are regulated by the Army Corps of Engineers (ACOE), as certified by site inspection conducted on October 30, 2001. The approximate location of these the wetland communities in the study area is shown in Figure 5.14-1. Refer to Table 5.14-2 for a list of the vegetative species identified within the wetland communities located on the Eastview Site.

Palustrine Community Description - Floodplain Forest Wetland. As described in Reschke, this community consists of a hardwood forest that occurs on mineral soils on low terraces of river floodplains and river deltas. These sites are characterized by their flood regime: low areas are annually flooded in the spring and high areas are flooded irregularly. Some sites

[3] The New York State Department of Environmental Conservation (NYSDEC) classifies stream quality based on potential usage from A through D, with D being the lowest classification.

[4] The NYSDEC regulates contiguous wetlands greater than 12.4 acres. While the project site contains 13 acres of wetlands they are not contiguous and so do not fall under NYSDEC jurisdiction.

may be quite dry by late summer while other sites may be flooded with heavy precipitation associated with tropical storms. This is a broadly defined community that is quite variable and may be very diverse. Floodplain forests are throughout New York State north of the Coastal Lowlands ecozone. The NYSNHP has given this community a global element rank of G3 (either rare and local throughout its range, or found locally in a restricted range, or vulnerable to extinction throughout its range due to other factors) and G4 (apparently secure globally) and a state element rank of S2 (demonstrably vulnerable in New York State) and S3 (limited acreage or miles of stream in New York State). The USFWS classification for these wetlands is Palustrine Forested (PFO1) Wetland.

The species compositions that most closely matched the Floodplain Forest Wetland is shown on Figure 5.14-1. On the project site, the majority of forested wetlands identified within the study area are situated adjacent to Mine Brook and its tributaries and associated with hillside seepages. In general, the vegetative composition and structure of forested wetlands are similar across the study area. The understory of this community is moderately dense along the stream.

Species within the Eastview Site include pin oak, black willow, sycamore, white ash, and red maple, which dominate the canopy layer and vary in species composition depending upon location. The invasive Norway Maple is also a canopy dominant species. Common shrub species include multiflora rose, dogwood, pussy willow, and bush honeysuckle. Skunk cabbage is the dominant groundcover along the streams. Other herbaceous species include garlic mustard Virginia creeper, goldenrod, soft rush, common reed, jewelweed, and sedge species.

The hydrologic regimes of the floodplain wetlands are governed by the waters within Mine Brook. Low lying areas along the brook are flooded periodically during the spring and higher elevations are flooded less frequently usually after heavy rains in the spring or tropical storms in the fall. Overland runoff of surface water both from off-site and on-site sources also contributes to the hydrologic regime of the floodplain wetlands. The hydrology of the floodplain wetlands south of Route 100C also appears to have a groundwater component that support areas of skunk cabbage through groundwater fed seepages.

Palustrine Community Description - Red Maple Hardwood Swamp Wetland. As described by Reschke, this community consists of a hardwood swamp that occurs in poorly drained depressions, usually on inorganic soils. This is a broadly defined community with many regional variants. In any one stand, red maple is either the only canopy dominant, or is codominant with one or more hardwoods including ashes, elms, yellow birch, and swamp white oak. Other trees with low percent cover include butternut, bitternut hickory, black gum, ironwood, and white pine. This type of forested wetland is found throughout New York State. The NYSNHP has given this community a global element rank of G3 (either rare and local throughout its range, or found locally in a restricted range, or vulnerable to extinction throughout its range due to other factors) and G4 (apparently secure globally) and a state element rank of S2 (demonstrably vulnerable in New York State). The USFWS classification for these wetlands is also Palustrine Forested (PFO1) Wetland.

The species composition that most closely matched the red maple hardwood swamp wetland is shown on Figure 5.14-1. On the project site, this community is composed of a mature forest in

the extreme northeastern corner of the Eastview Site. Large diameter trees in this community, while similar in species composition to other forested wetlands in the study area, dominate this mature forest. Pin oak, black willow, sycamore, white ash, and red maple dominate the canopy layer varying in species composition depending upon location. In addition, the invasive Norway Maple is also a dominant part of the canopy. There is an open understory in this community and the herbaceous layer is dominated by skunk cabbage, garlic mustard, Jack-in-the-pulpit, jewelweed, swamp buttercup, and sensitive fern.

The northern half of the red maple hardwood swamp in the northeast corner of the project site is supported primarily by surface water runoff from off-site locations. Shallow groundwater at this location also contributes to the hydrologic regime of this section of wetlands. The southern half of this wetland, however, is dependent upon surface water runoff from off-site exclusively.

Palustrine Community Description - Shrub Swamp Wetland. As described by Reschke, this community consists of inland wetlands dominated by tall shrubs that occur along the shores of a lake or river, in a wet depression or valley not associated with a lake, or as a transition zone between a marsh, fen, or bog and a swamp or upland community. The substrate is usually mineral soil or muck. This is a very broadly defined community type and is very common and quite variable. Characteristic shrubs that are common include meadow-sweet, steeple-bush, gray dogwood, swamp azalea, highbush blueberry, maleberry, smooth alder, spicebush, willows and arrowwood viburnum. This type of wetland is found throughout New York State. The NYSNHP has given this community a global element rank of G5 (demonstrably secure globally) and a state element rank of S5 (demonstrably secure in New York State). The USFWS classification for these wetlands is palustrine shrub-scrub (PSS1) wetland.

The species composition that most closely matched the shrub swamp wetland is shown on Figure 5.14-1. On the project site, this wetland community is best characterized on the Eastview Site as areas of wet successional fields. Such wetlands are found west of Delaware Aqueduct Shaft No. 19 and in an isolated excavation within the successional fields on the northwest portion of the Eastview Site.

Despite differences in vegetative structure, the species composition of this community is generally similar across the study area. The shrub layer is primarily dominated by dogwoods, green ash, pussy willow, multiflora rose, and arrowwood viburnum(Table 5.15-2). A wide variety of common wetland species occur in the herb layer of this community including horsetail, soft rush, sensitive fern, spicebush, jewelweed, cattail, skunk cabbage, goldenrod, New York ironweed, blue vervain, boneset, and joe-pye-weed.

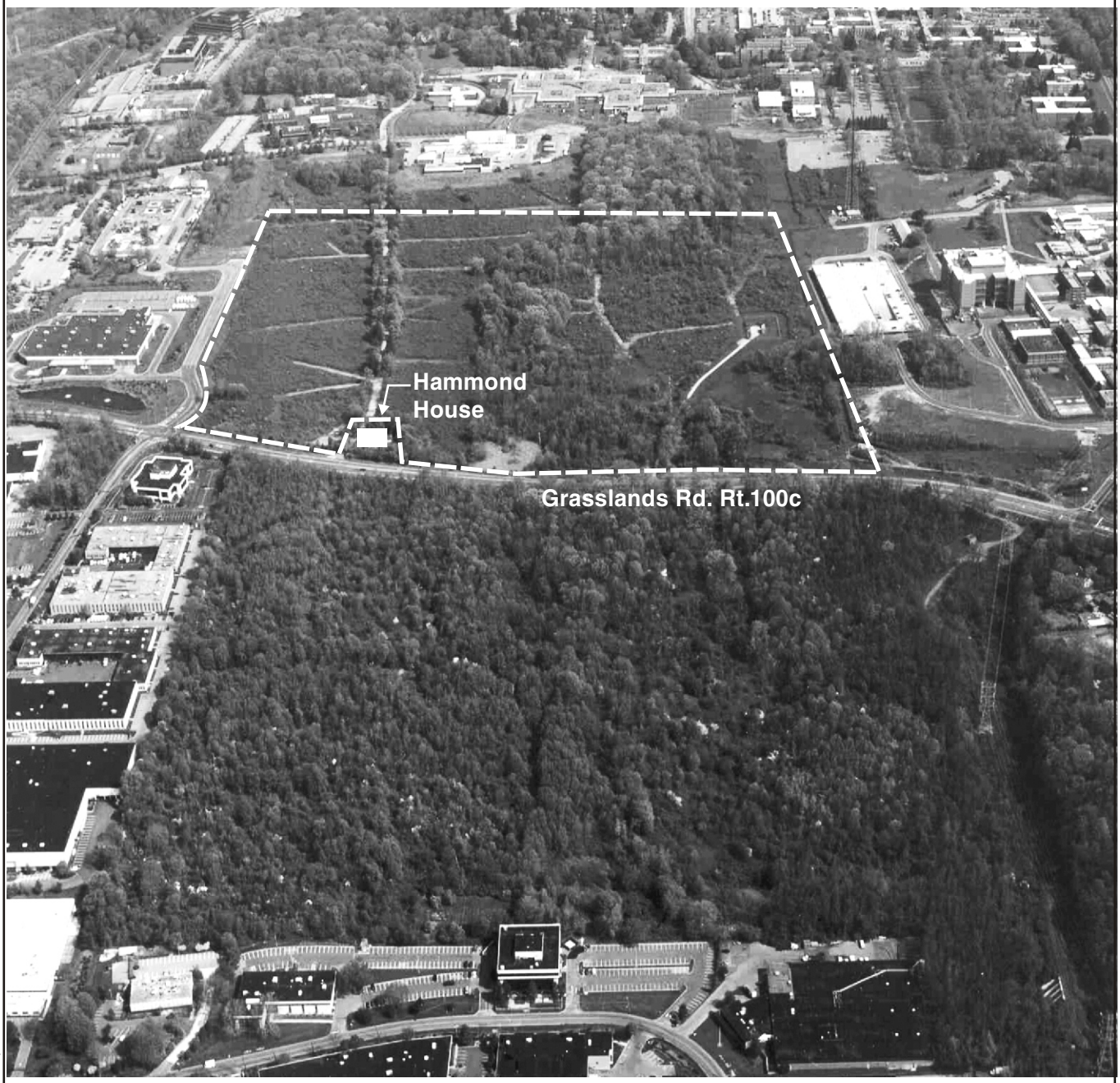
The shrub swamp wetlands in the Eastview Site are supported hydrologically by surface water runoff from off-site sources to the east of the project site. However, the small shrub swamp wetland to the west of Hammond House Road is supported by surface water runoff from on-site sources.

A subsequent field investigation conducted on May 24, 2004 identified approximately 0.25 acres of additional emergent wetlands east of the access road to Shaft 19. During the original site investigation conducted in 2000, this area was a maintained lawn with no signs of wetland

hydrology or presence of hydrophytic vegetation. On December 19, 2001 wetland limits on the Eastview Site received a Jurisdictional Determination (JD) from the USACOE verifying wetland limits. Since that time, the area has been unmaintained. Vehicular traffic appears to have caused soil compaction with standing water observed in old tire ruts. Lack of regular maintenance and potential changes to hydrology in this area have led to the development of hydric soils and the establishment of an emergent wetland community dominated by hydrophytic vegetation.

Palustrine Community Description - Reedgrass/Purple Loosestrife Marsh Wetland. As described by Reschke, a marsh that has been disturbed by draining, filling, and/or road salts in which reedgrass or purple loosestrife has become dominant. This community is common along highways and railroads. This type of wetland is found throughout New York State. The NYSNHP has given this community a global element rank of G5 (demonstrably secure globally) and a state element rank of S5 (demonstrably secure in New York State). The USFWS classification for these wetlands is Palustrine Emergent (PEM) Wetland.

The species composition that most closely matched the reedgrass/purple loosestrife marsh wetland is shown on Figure 5.14-1. On the project site, the *Phragmites* dominated area adjacent to Route 100C occurs where water within Mine Brook collects in a ponded area prior to passing underneath the roadway. The ponded area is caused by a weir that controls the flow of Mine Brook.



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Natural Resources Eastview Site

Croton Water Treatment Plant

Figure 5.14-2

5.14.2.1.3. Fish and Benthic Macroinvertebrates

Examination of the primary north-south flowing stream on-site, Mine Brook, revealed a moderate diversity of benthic macroinvertebrates, principally taxa characterized as tolerant or moderately intolerant of poor water quality. Field measurements of temperature, dissolved oxygen, and pH showed that the brook has generally favorable properties with respect to these parameters. The baseflows of the intermittent drainage features which discharge surface water to Mine Brook were generally low to non-flowing except during rain events.

In May 2000, an inspection of Mine Brook was conducted. During this inspection, observations were made on the stream's physical characteristics, the general benthic macroinvertebrate community, and field measurements of water temperature, dissolved oxygen, and pH at several locations along the stream were obtained. The measured pH levels within the stream at the time of the survey were uniformly pH 7.2 and temperature was 13 to 14 degrees Celsius. Dissolved oxygen concentrations ranged from a low of 7.22 mg/l (70 percent saturation) at the northernmost sampling point, to a high of 10.65 mg/l (103 percent saturation) at a southerly sampling point, indicating a general improving trend in dissolved oxygen concentration as the stream flows southward through the City-owned property.

At the northern portion of the study area, the stream has a broad (15 to 30 foot wide) channel with a cobbly-bouldery substratum alternating with depositional areas of sand and silt. A brownish film of diatoms was evident over the silty sediments, while mosses (*Fontinalis*) and filamentous green algae were evident on the rocks. Animal taxa observed included caddisflies (Trichoptera; Psychomiidae), pulmonate snails (*Physa*) and their egg masses, and water striders (Gerridae).

As the stream flows south across the study area, the channel shows the typical alternating sequences of pools and riffles. Examination of submerged rocky substrata revealed the continuing occurrence of the invertebrate taxa cited above, as well as web-spinning caddisflies (Hydropsychidae), chironomid larvae (Diptera; Chironomidae), and black fly larvae (Diptera; Simulidae). Submerged substrata continued to support growths of diatoms and filamentous green algae.

As the stream approaches Route 100C, water velocity declines, and the stream bottom takes on a more depositional appearance. Just north of the roadway, the stream broadens into a large, dense stand of *Phragmites* before being conveyed beneath the roadway. The stream is conveyed by a culvert under Route 100C, and discharges to a pool area south of this road. Benthic invertebrates noted in this pool area and the downstream riffles included chironomid larvae, black fly larvae, pulmonate snails, caddisfly larvae, and beetle larvae.

5.14.2.1.4. Reptiles and Amphibians

Within the study area, one species of reptile and four species of amphibians were observed. The one reptile species observed within the study area was limited to three garter snakes (*Thamnophis sirtalis*) located beneath debris within a scrub-shrub wetland area. Of the

four amphibians observed, three were identified in water/wetland habitats as follows: (1) the Northern two-lined salamander (*Eurycea bislineata*) and green frog (*Rana clamitans melanota*) were found within the stream corridor of Mine Brook, and (2) a solitary calling spring peeper (*Hyla crucifer*) was found within an open water area of a palustrine scrub-shrub/emergent wetland on the proposed site. Numerous spring peepers were identified during the evening survey from off-site wetlands located west of the Eastview Site. The redback salamander (*Plethodon cinereus*) was commonly encountered under decaying logs throughout the forested upland communities.

In addition to the species found on-site, the NYSDEC Amphibian and Reptile Atlas Project maintains lists of herptiles (reptiles and amphibians) that have been identified within the White Plains Quadrangle (1998). The list includes nine amphibians and four reptiles. Most of these species are common, associated with streams, lakes, and wetland ecosystems and may occur within the Eastview Site, including American toad (*Bufo americanus*), bullfrog (*Rana catesbeiana*), green frog (*Rana clamitans melanota*), snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), and Northern water snake (*Nerodia sipedon)*. The two listed species associated with vernal pool wetlands, the spotted salamander (*Ambystoma maculatum*) and wood frog (*Rana sylvatica*), are not anticipated to occur on-site due to the lack of suitable habitat. A listing of herpetiles species that potentially occur on-site is located on the next two pages in Table 5.14-4 (species in bold type were observed on-site).

TABLE 5.14-4. HERPETILE SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name
Salamanders/Newts	
Dusky Salamander	*Desmognathus fuscus*
Eastern Newt	*Notophthalmus viridescens*
Four-toed Salamander	*Hemidactylium scutatum*
Jefferson Salamander	*Ambystoma jeffersonianum*
Spotted Salamander	*Ambystoma maculatum*
Marbled Salamander	*Ambystoma opacum*
Two-lined Salamander	***Eurycea bislineata***
Red-backed Salamander	***Plethodon cinereus***
Red Salamander	*Pseudotriton ruber*
Slimy Salamander	*Plethodon glutinosus*
Frogs/Toads	
American Toad	*Bufo americanus*
Bullfrog	*Rana catesbeiana*
Chorus Frog	*Pseudacris triseriata*
Common Gray Treefrog	*Hyla versicolor*
Eastern Spadefoot	*Scaphiopus holbrooki*
Green Frog	***Rana clamitans melanota***
Pickerel Frog	*Rana palustris*
Spring Peeper	***Hyla crucifer***
Woodhouse Toad	*Bufo woodhousei*

TABLE 5.14-4. HERPETILE SPECIES POTENTIALLY OCCURRING IN THE VICINITY OF THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name
Wood Frog	*Rana sylvatica*
Turtles	
Bog Turtle	*Clemmys muhlenbergii*
Eastern Bog Turtle	*Terrapene carolina*
Painted Turtle	*Chrysemys picta*
Snapping Turtle	*Chelydra serpentina*
Spotted Turtle	*Clemmys guttata*
Stinkpot	*Sternotherus odoratus*
Wood Turtle	*Clemmys insculpta*
Five-lined Skink	*Eumeces fasciatus*
Snakes	
Brown Snake	*Storeria dekayi*
Common Garter Snake	***Thamnophis sirtalis***
Eastern Hognose Snake	*Heterodon platyrhinos*
Eastern Ribbon Snake	*Thamnophis sauritus*
Milk Snake	*Lampropeltis triangulum*
Northern Water Snake	*Nerodia sipedon*
Racer	*Coluber constrictor*
Rat Snake	*Elaphe obsoleta*
Red-bellied Snake	*Storeria occipitomaculata*
Ringneck Snake	*Diadophis punctatus*
Worm Snake	*Carphophis amoenus*

Note: Species in **bold** were observed on-site.
Source: Based on ecological surveys conducted for the former Croton Water Treatment Plant Final EIS (1999) – at the Mount Pleasant Site Alternative, Mount Pleasant, NY in October 14, 1997 and April 14, 1998. The Mount Pleasant Site is located less than a half mile from the Eastview Site. Additional surveys were conducted at the Eastview Site from May through September 2000 for the Eastview study area.

Behler, J.L. and W. King. 1997. Audubon Society Field Guide to North American Reptiles & Amphibians. Alfred A. Knopf. New York.

5.14.2.1.5. Avifauna

During the field surveys conducted in May and June 1998 and April, May and September 2000, 66 species of birds were identified, all of which are common to the region (Table 5.14-5). Of the species identified, 40 were confirmed to breed on-site. Fifty-nine species were observed during the spring and likely represent migrants, although many remain to breed. Of the identified species, 20 likely breed in the region, but were not confirmed breeding within the study area. All of the confirmed breeding species are commonly found in successional fields and second-growth forest habitats and none of the habitats on-site serve as critical breeding or nesting areas for any of these species.

The migrant species observed during the April-May and September 2000 field surveys are all common and anticipated in the region. With the exception of cedar waxwing (*Bombycilla cedrorum)*, which occurred in a large flock of more than 20 individuals, migrating species were generally limited to no more than one or two individuals.

Most of the study area is best characterized as successional field and woodland with abundant edge habitat and indistinct boundaries between habitat types. As a result, there is great overlap in the habitats where woodland and field species were observed. Species typical of fields within the study included American goldfinch, yellow-warbler, song sparrow, red-winged blackbird, and Northern mockingbird. Species typical of the Eastview Site's woodlands included woodpeckers, red-eyed vireo, Eastern phoebe, black and white warbler, black-capped chickadee, and wood thrush. Species typical of fields within the study area are listed below in Table 5.14-5. A number of species displayed frequent overlap between field and woodland communities including blue jay (*Cyanocitta cristata*), tufted titmouse (*Baeolophus (Parus) bicolor*), American robin (*Turdus migratorius*), gray catbird (*Dumetella carolinensis*), common yellowthroat (*Geothlypis trichas*), and Northern cardinal (*Cardinalis cardinalis*). Only one species was limited to the area of mature forest on the Eastview Site, a migrating Swainson's thrush (*Catharus ustulatus*). The remainder of species observed in this successional field habitat was common in other habitats on the study area as well.

It should be noted that the timing of the field investigations allowed for the characterization of spring and fall migrants and summer breeding populations, but not for winter resident avian populations.

TABLE 5.14-5. AVIAN SPECIES OBSERVED OR ANTICIPATED TO OCCUR AT THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name	Migratory (Y/N)
Double-crested Cormorant	*Phalacrocor axauritus*	N
Great Blue Heron	***Ardea herodias***	N
Green Heron	*Butorides virescens (striatus)*	N
Black-crowned Night-Heron	*Nycticorax nycticorax*	N
Turkey Vulture	*Cathartes aura*	N
Canada Goose	***Branta canadensis***	N
Mute Swan	*Cygnus olor*	N
Wood Duck	*Aix sponsa*	N
American Black Duck	*Anas rubripes*	N
Mallard	***Anas platyrhynchos***	N
Sharp-shinned Hawk	***Accipiter striatus***	Y
Broad-winged Hawk	*Buteo platypterus*	Y
Red-tailed Hawk	***Buteo jamaicensis***	N
American Kestrel	*Falco sparverius*	Y
Ring-necked Pheasant	***Phasianus colchicus***	N
Wild Turkey	***Meleagris gallopavo***	N

TABLE 5.14-5. AVIAN SPECIES OBSERVED OR ANTICIPATED TO OCCUR AT THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name	Migratory (Y/N)
Killdeer	***Charadrius vociferus***	Y
Spotted Sandpiper	*Actitis macularia*	Y
American Woodcock	***Scolopax minor***	Y
Ring-billed Gull	***Larus delawarensis***	N
Rock Dove	***Columba livia***	N
Mourning Dove	***Zenaida macroura***	N
Black-billed Cuckoo	*Coccyzuserythropthalmus*	Y
Yellow-billed Cuckoo	*Coccyzus americanus*	Y
Eastern Screech-Owl	*Otus asio*	N
Great Horned Owl	***Bubo virginianus***	N
Barred Owl	*Strix varia*	N
Ruby-throated Hummingbird	***Archilochus colubris***	Y
Chimney Swift	*Chaetura pelagica*	N
Belted Kingfisher	*Ceryle alcyon*	N
Red-bellied Woodpecker	***Melanerpes carolinus***	N
Downy Woodpecker	***Picoides pubescens***	N
Hairy Woodpecker	***Picoides villosus***	N
Northern Flicker	***Colaptes auratus***	N
Eastern Wood-Pewee	*Contopus virens*	Y
Willow Flycatcher	***Empidonax traillii***	Y
Eastern Phoebe	***Sayornis phoebe***	Y
Great Crested Flycatcher	*Myiarchus crinitus*	Y
Eastern Kingbird	*Tyrannus tyrannus*	N
White-eyed Vireo	***Vireo griseus***	Y
Yellow-throated Vireo	*Vireo flavifrons*	Y
Warbling Vireo	*Vireo gilvus*	N
Red-eyed Vireo	***Vireo olivaceus***	Y
Blue Jay	***Cyanocitta cristata***	N
American Crow	***Corvus brachyrhynchos***	N
Fish Crow	*Corvus ossifragus*	N
Tree Swallow	*Tachycineta bicolor*	Y
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	Y
Bank Swallow	*Riparia riparia*	N
Barn Swallow	***Hirundo rustica***	N
Black-capped Chickadee	***Poecile (Parus) atricapillus***	N
Tufted Titmouse	***Baeolophus (Parus) bicolor***	N
White-breasted Nuthatch	***Sitta carolinensis***	N
Carolina Wren	***Thryothorus ludovicianus***	N
House Wren	***Troglodytes aedon***	N

TABLE 5.14-5. AVIAN SPECIES OBSERVED OR ANTICIPATED TO OCCUR AT THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name	Migratory (Y/N)
Blue-gray Gnatcatcher	*Polioptila caerulea*	Y
Ruby-crowned Kinglet	***Regulus calendula***	Y
Eastern Bluebird	*Sialia sialis*	Y
Veery	*Catharus fuscescens*	Y
Wood Thrush	***Catharus mustelinus***	Y
American Robin	***Turdus migratorius***	N
Gray Catbird	***Dumetella carolinensis***	N
Northern Mockingbird	***Mimus polyglottos***	N
Brown Thrasher	***Toxostoma rufum***	Y
European Starling	***Sturnus vulgaris***	N
Cedar Waxwing	***Bombycilla cedrorum***	N
Blue-winged Warbler	*Vermivora pinus*	N
Tennessee Warbler	*Vermivora peregrina*	Y
Nashville Warbler	*Vermivora ruficapilla*	Y
Northern Parula	***Parula americana***	Y
Yellow Warbler	***Dendroica petechia***	N
Chestnut-sided Warbler	*Dendroica pensylvanica*	Y
Magnolia Warbler	***Dendroica magnolia***	Y
Cape May Warbler	*Dendroica tigrina*	Y
Black-throated Blue Warbler	*Dendroica caerulescens*	Y
Yellow-rumped (Myrtle) Warbler	*Dendroica coronata*	Y
Black-throated Green Warbler	*Dendroica virens*	Y
Blackburnian Warbler	*Dendroica fusca*	Y
Pine Warbler	*Dendroica pinus*	Y
Prairie Warbler	*Dendroica discolor*	Y
Palm Warbler	***Dendroica palmarum***	Y
Bay-breasted Warbler	*Dendroica castanea*	Y
Blackpoll Warbler	*Dendroica striata*	Y
Black-and-white Warbler	***Mniotilta varia***	Y
American Redstart	***Setophaga ruticilla***	N
Worm-eating Warbler	*Helmitheros vermivorus*	Y
Kentucky Warbler	*Oporornis formosus*	Y
Mourning Warbler	*Oporornis philadelphia*	Y
Ovenbird	***Seiurus aurocapillus***	Y
Northern Waterthrush	*Seiurus noveboracensis*	Y
Louisiana Waterthrush	*Seiurus motacilla*	Y
Common Yellowthroat	***Geothlypis trichas***	N
Hooded Warbler	*Wilsonia citrina*	N
Yellow-breasted Chat	*Icteria virens*	Y

TABLE 5.14-5. AVIAN SPECIES OBSERVED OR ANTICIPATED TO OCCUR AT THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name	Migratory (Y/N)
Scarlet Tanager	***Piranga olivacea***	Y
Eastern (Rufous-sided) Towhee	***Pipilo erythrophthalmus***	N
Chipping Sparrow	*Spizella passerina*	N
Field Sparrow	***Spizella pusilla***	Y
Savannah Sparrow	*Passerculus sandwichensis*	Y
Song Sparrow	***Melospiza melodia***	N
Lincoln's Sparrow	*Melospiza lincolnii*	Y
White-throated Sparrow	***Zonotrichia albicollis***	Y
Northern Cardinal	***Cardinalis cardinalis***	N
Rose-breasted Grosbeak	***Pheucticus ludovicianus***	N
Indigo Bunting	***Passerina cyanea***	N
Red-winged Blackbird	***Agelaius phoeniceus***	N
Eastern Meadowlark	*Sturnella magna*	Y
Common Grackle	***Quiscalus quiscula***	N
Brown-headed Cowbird	***Molothrus ater***	N
Orchard Oriole	*Icterus spurius*	N
Baltimore Oriole	***Icterus galbula***	N
House Finch	***Carpodacus mexicanus***	N
Coopers Hawk	***Accipiter cooperii***	N
Hermit Thrush	***Catharus guttatus***	Y
Red Breasted Nuthatch	***Sitta Canadensis***	N
Swainson's Thrush	***Catharus ustalatus***	Y
Swamp Sparrow	***Melospiza melodia***	N
American Goldfinch	***Carduelis tristis***	N
House Sparrow	***Passer domesticus***	N

Note: Species in **bold** were observed on-site.
Source:
Based on the ecological surveys conducted within the Eastview Site in May and June 1998; and April, May, and September 2000. A subsequent survey by NYCDEP in May 2004 found a female bobolink and two Savannah sparrows on site. These species are not State listed threatened or endangered species but may be rare in Westchester County. The New York State Department of Environmental Conservation, New York Breeding Bird Atlas Program was also consulted.

5.14.2.1.6. Mammals

Within the study area, 14 species of mammals were observed. All of the mammals identified are commonly associated with human influenced environments. The relatively large size of the study area also allows the use of the property by larger predators, such as the coyote (*Canis latrans*) and red fox (*Vulpes vulpes*). The presence of large mammalian predators also attests to the study area's support of common small prey mammals such as the observed

chipmunk (*Tamias*), white-footed mouse (*Peromyscus leucopus)*, meadow vole (*Microtus pennsylvanicus)*, Norway rat (*Rattus norvegicus)* and flying squirrel (*Glaucomys sp*.).

The presence of whitetail deer (*Odocoileus virginianus)* was common through the study area, with eastern cottontail (*Sylvilagus floridanus*) being common in the field communities and grey squirrel (*Sciurus carolinensis*) observed within the forest areas. Raccoon (*Procyon lotor*) tracks were abundant along the stream corridor. Groundhog (*Marmota monax)* burrows, as observed by sight, and striped skunk (*Mephitis mephitis*), as observed by olfactory sign, were identified within the upland areas.

The terrestrial list in Table 5.14-6 below includes species observed, directly or by sign, during the diurnal survey and species that potentially occur in the study area. No trapping programs were conducted which would have allowed an inventory of a small mammal/rodent population. The presence of predatory birds and mammals within the study area is a prime indicator that there is a small prey base present in the study area, as is anticipated based on the variety of successional habitats. Species such as red fox and coyote depend on small rodents as an important food source.

TABLE 5.14-6. MAMMALS POTENTIALLY OCCURRING IN THE VICINITY OF THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name
Coyote	***Canis latrans***
Virginia Opossum	*Didelphis virginiana*
Shrews/Moles	
Northern Short-tailed Shrew	*Blarina brevicauda*
Eastern Mole	*Scalopus aquaticus*
Bats	Family Vespertilionidae (Evening Bats)
Eastern Cottontail	***Sylvilagus floridanus***
Rodents	
Chipmunk	***Tamias***
Meadow Vole	***Microtus pennsylvanicus***
Norway Rat	***Rattus norvegicus***
Groundhog	***Marmota monax***
Gray Squirrel	***Sciurus carolinensis***
Muskrat	*Ondatra zibethicus*
House Mouse	*Mus musculus*
White-Footed Mouse	***Peromyscus leucopus***
Flying Squirrel	***Glaucomys sp***
Red Fox	***Vulpes vulpes***
Raccoon	***Procyon lotor***
Striped Skunk	***Mephitis mephitis***
White-tailed Deer	***Odocoileus virginianus***

Notes: Species in **bold** observed on-site.
Sources:
Based on ecological surveys conducted at the Eastview Site between April 2000 and September 2000.

TABLE 5.14-6. MAMMALS POTENTIALLY OCCURRING IN THE VICINITY OF THE EASTVIEW SITE STUDY AREA

Common Name	Scientific Name

Illinois State Museum. 1998. FAUNMAP - An Electronic Database Documenting the Late Quaternary Distribution of Mammal Species in the United States. http://www.museum.state.il.us/research/faunmap/aboutfaunmap.html

Jones, J.K., Jr. and E.C. Birney. 1988. Handbook of Mammals of the North-Central States. University of Minnesota Press. Minneapolis, MO.

Martin, A.C., H.S. Zim, and A.L. Nelson. 1951. American Wildlife and Plants, A Guide to Wildlife Food Habits. Dover Publications, Inc. NY.

Murie, O.J. 1974. A Field Guide to Animal Tracks, The Peterson Field Series. Houghton Mifflin Company. Boston, MA.

Whitaker, J.O. 1980. The Audobon Society Field Guide to North American Mammals. Alfred A. Knopf. White Plains, NY.

Wilson, D.E., and D.M. Reeder (eds). 1993. Mammal Species of the World. Smithsonian Institution Press. Washington, D.C.

5.14.2.1.7. Rare Species Inventory

Threatened or Endangered Species. The United States Fish and Wildlife Service (USFWS) has no records of Federally listed or proposed endangered or threatened species within the study area. However, USFWS noted that the New York State endangered peregrine falcon (*Falco peregrinus*) might be known in the study area. During the survey period, the peregrine falcon was not observed on, over, or in the vicinity of the study area. This was not unusual, since the study area does not provide the necessary habitat requirements, such as, lofty ledges, cliff faces, bridges or tall buildings. Based on subsequent information provided by a NYCDEP wildlife biologist indicating the falcon's absence from this site and the lack of appropriate habitat, it was determined that a specific survey for this species was not necessary.

New York Natural Heritage Database. The New York Natural Heritage Program, in conjunction with NYSDEC and the Nature Conservancy, provides an ongoing, systematic, scientific inventory on the rare plants, animals, and significant ecological communities native to New York State. The New York Natural Heritage Program Database indicated that the Kentucky warbler (*Oporornis formosus*) might occur within the study area. The Kentucky warbler is identified by the Natural Heritage Program as a rare species in the State and has been assigned a Heritage State ranking of S2. An S2 ranking indicates that the species is currently rare in the State (6 to 20 occurrences), making it very vulnerable in New York State. The Kentucky warbler is a southern species with New York State being the northern limit of its range. It has been characterized as a very rare to rare migrant with several confirmed breeding sites in the State, from Long Island to the lower Hudson Valley. The species has a distinctive song and is a persistent singer, allowing for easy identification that the bird is breeding in an area.

Although the study area includes some structural elements of Kentucky warbler breeding habitat, such as moist forest in association with a stream corridor, the understory is generally open and

the forested corridor is generally narrow along the stream. Based on the species-specific survey and other field investigations, this species was not observed within the study area.

Five State listed/regulated plant species were also identified by the New York State Natural Heritage Program as historically occurring in the vicinity of the study area: rattlebox (*Crotalaria sagittalis*), nuttall's tick-clover (*Desmodium nuttallii*), carolina cranesbill (*Geranium carolinianum*), shrubby St. John's wort (*Hypericum prolificum*), and Virginia false gromwell (*Onosmodum virginianum*). Rattlebox, nuttall's tick-clover, and Virginia false gromwell have been classified as endangered in New York State, whereas Carolina cranesbill and shrubby St. John's wort have been classified as threatened species in the State. It should be noted that the records of observation for these species date from the late 1890's and have been assigned the Natural Heritage Program's EO ranking of "F," indicating that the species have not been found recently but that habitat is still there and further field work is justified[5]. All five species are primarily associated with dry, open, sandy barrens or fields. Therefore, the Timed Meander Search Procedure was extended through successional field communities on the Eastview Site during the month of July when these five species are known to be in flower. None of the targeted endangered or threatened vegetative species were identified.

Species of Special Concern. Two avian species that are listed, as New York State Species of Special Concern were observed on-site: a sharp-shinned hawk (*Accipiter striatus*) in April 2000 and a Coopers hawk (*Accipiter cooperii*) in May 2000. Both individuals were observed flying across the study area. The NYSDEC Breeding Bird Atlas Program has reported neither species as breeding in the region and it is most likely that the Sharp-shinned hawk was a migrant species passing through the area. This species is a very common spring migrant in the region. Whether the Coopers hawk was a migrant or a breeding individual is unknown, but Coopers hawk populations have been increasing significantly throughout the region during the past decade.

5.14.2.2. Future Without the Project

The Future Without the Project conditions were developed for the anticipated peak year of construction (2008) and the anticipated year of operation (2010) for the proposed plant. The anticipated peak year of construction is based on the peak number of workers. For each year, two scenarios are assessed: one in which the NYCDEP Catskill/Delaware Ultraviolet Light Disinfection Facility (Cat/Del UV Facility) is not analyzed on the Eastview Site and another in which the Cat/Del UV Facility is included in the site analysis, specifically the Cat/Del UV Facility would be located in the southeastern area of the Eastview Site. It should be noted that the Eastview Site is the only location under consideration for the Cat/Del UV Facility. The scenario without the Cat/Del UV Facility is included because that project has not yet received its necessary approvals, and its inclusion or not would reflect major changes to the site. By the peak construction year, two additional NYCDEP projects could be located on the Eastview Site, namely a Police Precinct and possibly an Administration Building.[6] The Police Precinct may be

[5] EO Rank: a comparative evaluation summarizing the quality, condition, viability, and defensibility of the occurrence of the species.

[6] This depends on the results of a siting evaluation which is currently ongoing. The siting decision will be evaluated and discussed as part of a separate independent environmental review.

located in the southwest corner of the proposed site. The Administration Building is less certain; however, as the Eastview Site is one of several properties currently being evaluated for use as a possible site for that particular building. In addition to these projects, NYCDEP's Kensico-City Tunnel may be under construction at the Eastview Site starting in 2009. All of these NYCDEP projects are analyzed in this Final SEIS to the extent to which information is available. They are all separate actions, subject to independent decision-making from the proposed project and each will undergo their own environmental reviews.

5.14.2.2.1. Without Cat/Del UV Facility at the Eastview Site

In the Future Without the Project, the natural resources on the Eastview Site would change over time through the process of forest succession to a more forested condition. This would occur within the successional forest community most significantly in the next several decades, producing a forest type with a more vertically stratified vegetative composition with well-defined herbaceous, shrub/understory and canopy layers. Increased habitat complexity through the process of forest succession may also increase the diversity of forest-dependent wildlife frequenting the proposed site and would be an overall benefit to the local ecology due to the relative lack of contiguous forested lands. Although the Eastview Site's isolation within a primarily developed setting limits the types of wildlife that could migrate to the site in its future, forested condition, those species which currently exist on-site and rely on forested conditions, including the flying squirrel, turkey, migratory thrushes and warblers, woodpeckers, owls and hawks, and others would benefit. The mature oak-tulip tree forest, floodplain forest wetland, and red maple swamp wetland areas of the site would change the least in the coming decades, although opportunities for regrowth of opportunistic and wind-disseminated vegetation would occur after tree death or damage via natural occurrences (windthrow, etc.). The structure and function of the more mature upland and wetland forest types would change little in the Future Without the Project.

Should the successional shrubland habitats within the Eastview Site be maintained in the future as they have been in the past (through periodic clearing etc.) this habitat type would persist on-site, providing foraging and nesting habitat for those species, especially birdlife, which rely on this community type. However, due to the dominance of multiflora rose within the successional shrubland habitat, succession to a forested condition would improve overall floral diversity. A transition to a more forested condition would result in fewer habitats for species that rely on open or edge conditions, including such birds as killdeer, yellowthroat, catbird, cardinal and goldfinch. Generally speaking, Westchester County has a great deal of edge habitat due to its developing suburban condition. Therefore, loss of the successional shrubland, and its associated edge habitat, caused by a transition to a more uniformly forested condition on the Eastview Site could be expected over time.

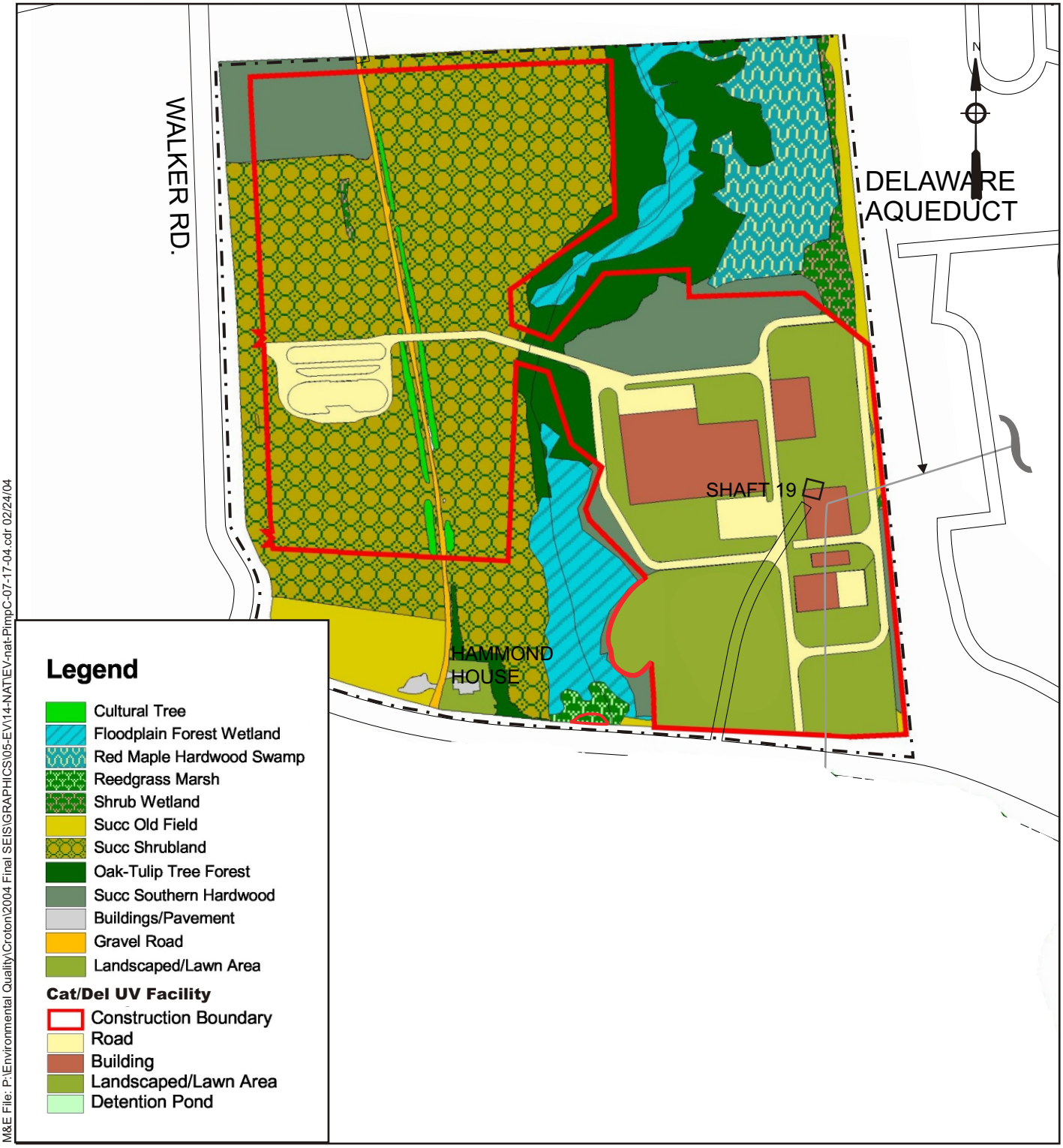
Water quality within Mine Brook is not anticipated to improve or worsen significantly in the Future Without the Project. Surface water runoff from lands east and north of the site, primarily Westchester County facilities, contribute to the somewhat degraded water quality and to high flow rates during storm events, which cause stream scour/erosion. Evidence of recent additions to the stormwater discharge entering the Eastview Site from these developed areas was noted in

the field. Should the County and other local office parks located immediately off-site invest in retrofitting their drainage systems with stormwater control measures per State and County guidelines, improvements to Mine Brook water quality could result. It is anticipated that the current condition of the stream would continue to support a limited aquatic faunal population, consisting predominantly of insects, amphibians and fish tolerant of the existing water quality.

As previously mentioned, by the Operation Year of 2010, several projects could share the Eastview Site. These include the planned construction of a NYCDEP Police Precinct, and the Kensico-City Tunnel (KCT) project. The police precinct site would consist of ±20,500 square-foot precinct building, and the KCT shaft site could potentially occupy approximately one half acre. The staging areas for these projects could overlap with each other. The location and size of KCT project has not been determined. These projects may impact the vegetation, trees and wetlands and the combined effects may restrict the use of the site for migratory birds. These potential impacts would be assessed as part of this project and within their own environmental reviews.

5.14.2.2.2. With the Cat/Del UV Facility at the Eastview Site.

The southeastern portion of the Eastview Site, where the Cat/Del UV Facility would be sited, is a mix of successional old field, successional southern hardwood forest, oak-tulip tree forest, and shrub swamp wetland; the northeast portion of the Eastview Site is characterized by floodplain and red maple hardwood swamp wetlands and oak-tulip tree forest; the areas to the west of Mine Brook are primarily characterized as successional shrubland that is dominated by multiflora rose. A small area of successional southern hardwood occurs in the northwest corner of the site and a small area of successional old field occurs in the southwest corner. The western portion of the site would be used for the security station and parking areas during operation. These areas feature the least vegetation and wildlife diversity on the site. See Figures 5.14-3 for a depiction of the natural resources on the Eastview Site during operating conditions.



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* NOTE: Areas within the Cat/Del UV Facility construction boundary would be restored in accordance with mitigation plans.

Natural Resources With Cat/Del UV Facility at Eastview Site

Croton Water Treatment Plant

Figure 5.14-3

Vegetation. Approximately 3.1 acres of oak-tulip tree forest, 19.9 acres of successional southern hardwood forest, 1.2 acres of floodplain forest wetland, 1.5 acres of isolated shrub swamp wetland, 26.9 acres of successional shrubland, and 4.7 acres of successional old field on the Eastview Site would be reduced as a result of the construction of the Cat/Del UV Facility project. Of the land cleared during construction activities in the Eastview Site, 9.2 acres would be utilized for buildings, roads, and parking with 17.1 acres of maintained lawn or low ground cover landscaped areas surrounding the Cat/Del UV Facility buildings.

There are a total of 1,741 trees greater than four inches in diameter at breast height (dbh) that would be cut within the construction impact area of the Cat/Del UV Facility in the Eastview Site. The Town of Mount Pleasant regulates trees with a dbh of 6 inches or greater. There are 1,081 trees with a dbh of six inches or greater that would be cut within the construction impact area. A total of 354 trees greater than 4-inch dbh adjacent to the construction impact area, although not proposed for removal, may be threatened by construction activity, for example from compacted soils, so their survival is uncertain. There are 259 trees with a dbh of six inches or greater that would potentially be threatened. It should be noted that the threatened trees include 92 trees within the wetland enhancement area along Mine Brook north of the culvert at Route 100C.

In general, the vegetative species and communities found on the site are common in the region and do not constitute rare or exemplary stands of native vegetation. However, the NYSNHP has listed the oak-tulip tree forest, floodplain forest, and red maple hardwood swamp communities as vulnerable within New York State. Permanent vegetative loss to the Eastview Site would be limited to the main disinfection building, roadways, storage areas, the pretreatment forebay, and the security and parking areas. Most of the vegetative reductions on this area of the site would be located within successional old field, successional southern hardwood forest, shrub swamp wetlands. A portion of the oak-tulip tree forest in the Eastview Site would be lost as well. The pretreatment forebay would to be located south of the Cat/Del UV Facility, which would improve stormwater quality, attenuate the storm water flows to Mine Brook, maintaining drainage conditions similar to the existing conditions.

Wetlands, Waterways, and Floodplains. The Cat/Del UV Facility footprint and construction staging areas would encroach into several of the wetland areas previously identified on the Eastview Site. The estimated direct disturbance of on-site wetlands would be approximately 1.5 acres. This wetland encroachment includes the filling of a 0.07 acre isolated shrub swamp wetland to the west of Mine Brook, a 0.3 acre encroachment into the north eastern shrub swamp wetland system that drains to Mine Brook via surface channels, 0.05 acres of floodplain forest wetland along Route 100C associated with surface drainage to Mine Brook, and the filling of three small shrub swamp wetlands (1.1 acres) within the Cat/Del UV Facility building footprint associated with surface ditches that drain to Mine Brook. In addition, a roadway is planned across the Mine Brook stream corridor to provide access to the western side of the site across the Brook. However, this roadway has been designed to avoid on-site wetlands and buffer areas. It is estimated that an additional 1.2 acres of floodplain forest wetland immediately north and west of the Cat/Del UV Facility would be indirectly affected by groundwater dewatering operations. Therefore, the total direct and indirect disturbance of on-site wetlands would be approximately 2.7 acres. A total of 4.9 acres of wetland buffer would be lost as well. These wetland buffers consist mainly of oak-tulip tree forest and successional southern hardwood forest.

The potential for wetland reductions have been minimized to the greatest extent possible while still providing access to the existing aqueducts. A project limiting fence installed prior to construction would prevent unauthorized wetland encroachments during the construction and operational phases of the project. Drains constructed around the facility would be oriented to collect surface water runoff and redirect these flows into the remaining wetland system in order to maintain, to the greatest extent possible, the surface hydrology of the wetlands. Runoff from the facility would be treated in a stormwater detention basin and discharged back into the Mine Brook wetland system in attempt to replicate current surface drainage patterns (see Section 5.15, Water Resources for discussion on the detention basin).

Based on a review of the current site dynamics, the hydrology of the wetlands in Eastview Site appears to be most dependent on surface hydrology including runoff from adjacent undeveloped areas, ponding resulting from precipitation, and flooding associated with Mine Brook. The Cat/Del UV Facility calls for the installation of a stormwater pretreatment best management practice (BMP) system on-site. The BMP, consisting of a pretreatment forebay, enhanced wetland, and a newly created stream channel, would mitigate the untreated storm water runoff by attenuating peak flows and reducing pollutant loads to downstream reaches. This, in turn, minimizes flooding and erosion, improves water quality, and promotes conditions for improved aquatic and wildlife habitats. The pretreatment forebay is adequately sized to detain up to the 3-month storm and provides for water quality treatment by way of removal of sediment, nutrients, and bacteria. Approximately 80% sediment removal can be achieved, and 50% removal of soluble nutrients, such as phosphorus and nitrogen. Removal of bacteria is achieved with less efficiency. Once the water surface elevation in the forebay exceeds that of the weir (El. 301), the flow spills over the weir into the newly created stream segment, and flows towards the existing wetland. It must be noted that an existing *Phragmites* marsh exists at the site of the enhanced wetland. Historical data suggest that the existing *Phragmites* coverage has doubled in the past 3 to 4 years. If this expansion in coverage is not correctly addressed, it could continue encroaching on the upstream floodplain forest wetland. Under this scenario, the existing low-diversity reed

grass marsh would be removed, the area excavated and regraded, and the weir north of Route 100C reconstructed, to optimize upstream storage and creation of a diversely vegetated wetland. The enhanced wetland, consisting of low and high marsh, would be diversely vegetated with native species, such as soft rush, pickerel weed, lizard tail, spicebush, New England aster, and sensitive fern. The construction of the multi-stage weir along with the culvert replacement would allow the flow to be stored and released gradually to the downstream areas, to mitigate the erosivity resulting from stormwater runoff, due to frequent storms. In addition, it would also replenish Mine Brook with the redirected stormwater and groundwater.

Fish and Benthic Macroinvertebrates. As outlined above in the existing conditions, examination of Mine Brook revealed a moderate diversity of benthic macroinvertebrates, principally taxa characterized as tolerant or moderately intolerant of poor water quality. Water quality measurements taken in the field further support the conclusion that the degraded water quality of the stream is likely a function of off-site upstream conditions.

Most of the stream channel, near-stream vegetation, and wetlands are located within the portion of the site that would not be subject to disturbance, thereby not affecting existing aquatic fauna. A pretreatment forebay has been planned to retain and treat stormwater runoff from the developed portions of the site in conjunction with the enhancement of the existing reed grass marsh. This may result in temporary disturbances to flora and fauna that might utilize this section of the channel. Following construction, the affected stream channel would be re-engineered to create a natural stream morphology thereby attenuating stream velocities and improving water quality. Increased water pollutant loadings to the stream and wetlands may occur despite the removal rates anticipated by the basin.

A bridge crossing of Mine Brook is necessary to connect the Cat/Del UV Facility with other project components during construction and operation. The bridge would be lowered in place between two abutments to span the wetland.

Reptiles and Amphibians. The forested and wetland areas of the Eastview Site contain good reptile and amphibian (herpetile) habitat due to the availability of water, high density of leaf litter, and high percent of canopy cover (see Existing Conditions discussion above). Loss of oak-tulip tree, succesional southern hardwood forest, shrub swamp, and forested floodplain wetlands associated with the construction of the Cat/Del UV Facility would decrease the leaf litter and habitat available for herpetile shelter on the site.

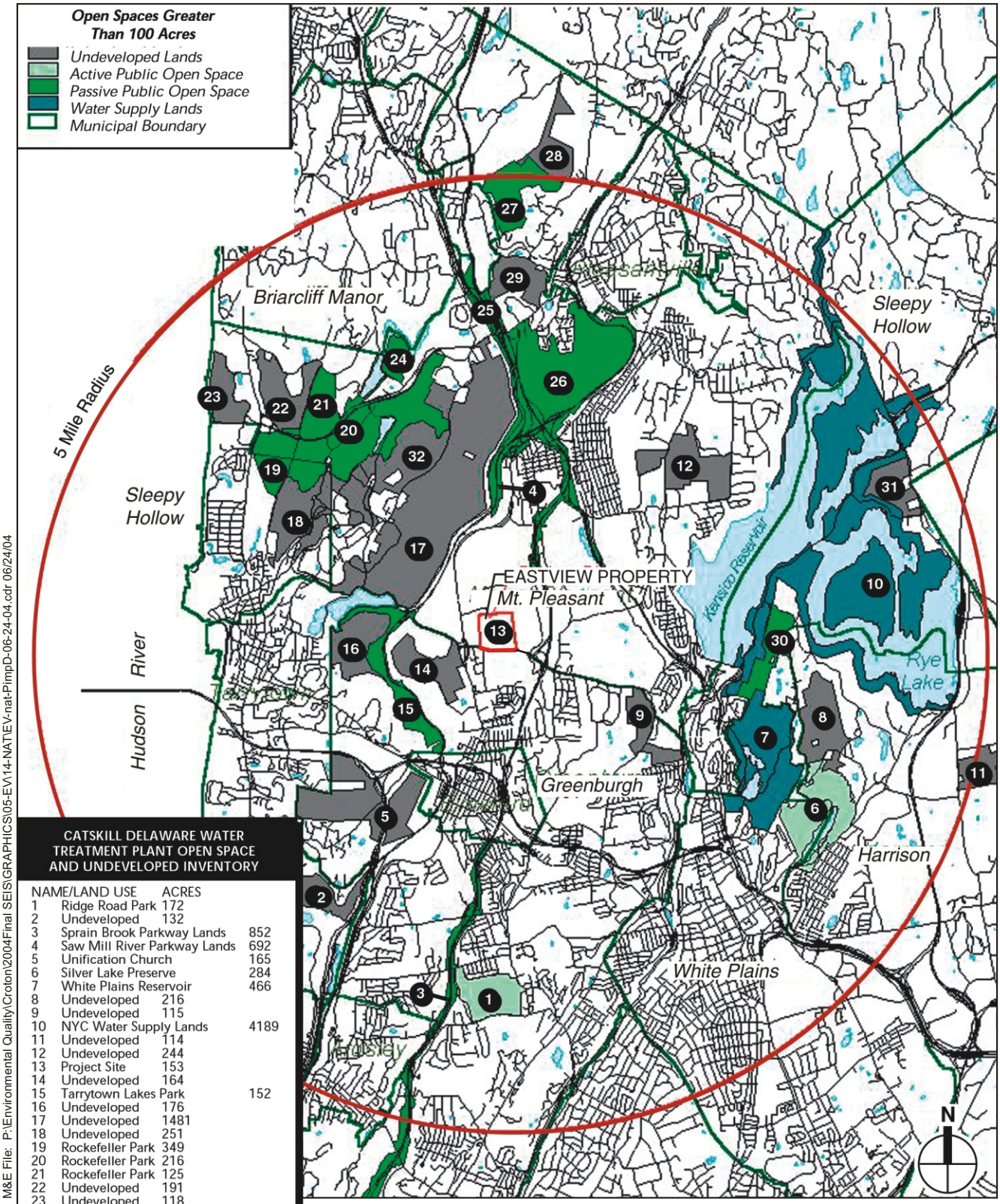
The loss of the forest and wetland habitat associated with the Cat/Del UV Facility could displace some of the local herpetile community (salamanders, green frogs, and garter snakes). The surrounding wetlands, upland forest, and running water through the remainder of the site could provide habitat to support viable communities of herpetile species.

Avifauna. Recent concern has been raised regarding the potential impact of development and forest fragmentation in the northeastern United States, upon neotropical migrant bird species. Although some of the species observed on-site are neotropical migrants, the development of the site should not negatively affect these species. Most of the issues about these species relate to the effects of fragmentation of larger contiguous woodlands and are, therefore, not of concern on

the Eastview Site. The margins of the existing forest outside of the facility footprint would remain as they are under existing conditions. The project impacts at these forest margins would result in lighting at the Cat/Del UV Facility and noise from trucks during the day. Light exiting the site would be minimized through the use of deflectors and proper alignment, and a light wavelength of the lamps would be used to reduce the attraction of night flying moths and other insects. However, most of the birds in this area would have already been acclimated to the presence of buildings and human activities. A total of 3.1 acres of oak-tulip tree forest and 19.9 acres of successional southern hardwood forest in the Eastview Site would be reduced by the Cat/Del UV Facility.

Figure 5.14-4 shows undeveloped parcels of 100 acres or more located within five miles of the Eastview Site. The parcels are primarily forested lands that are either dedicated as passive parkland or currently undeveloped. The permanently protected parcels of land include Rockefeller State Park, Graham Hills Park, Tarrytown Lakes Park, and Hardscrable Wilderness Center to the north and east of the project site and public water supply lands and Cranberry Lake Preserve to the east of the project site. In total, this area of Westchester County contains 32 parcels of open space similar in size and habitat structure to the project site. Although the total acreage of open space within this area of Westchester is significantly larger than the 32 parcels shown, these parcels contain contiguous acres of land that are of greater value from ecological and open space perspectives because these resources have not been fragmented by development. The reduction in the amount of available habitat on-site is less onerous than the loss of a large, contiguous forested parcel shown to provide the necessary habitat for neotropical migrant birds and other wildlife.

The location of the site, near the Hudson and Saw Mill Rivers, may place the property on the fringe of a migratory corridor for migrating passerines (perching birds). All of the migrant species observed during the field surveys (eastern phoebe, red-eyed vireo, cedar waxwing, and black-and-white warbler) are common and anticipated in the region. Observations during the spring and fall of migrating bird populations do not indicate that the Eastview Site is significant in this respect. It is anticipated that the vegetative communities that would remain on-site during operation would continue to provide adequate habitat for migrating passerines that may use the site. The on-site restoration of 23.5 acres of a shrubland/grassland community would include vegetative species that would provide perching habitat and a food source for migratory passerines. No long-term significant adverse impacts to the avifauna of the Eastview Site are anticipated to occur from the proposed Croton project.



CATSKILL DELAWARE WATER TREATMENT PLANT OPEN SPACE AND UNDEVELOPED INVENTORY

NAME/LAND USE		ACRES
1	Ridge Road Park	172
2	Undeveloped	132
3	Sprain Brook Parkway Lands	852
4	Saw Mill River Parkway Lands	692
5	Unification Church	165
6	Silver Lake Preserve	284
7	White Plains Reservoir	466
8	Undeveloped	216
9	Undeveloped	115
10	NYC Water Supply Lands	4189
11	Undeveloped	114
12	Undeveloped	244
13	Project Site	153
14	Undeveloped	164
15	Tarrytown Lakes Park	152
16	Undeveloped	176
17	Undeveloped	1481
18	Undeveloped	251
19	Rockefeller Park	349
20	Rockefeller Park	216
21	Rockefeller Park	125
22	Undeveloped	191
23	Undeveloped	118
24	Potantico Lake Park	166
25	Taconic Parkway Lands	144
26	Graham Hills Park	426
27	Hardscrabble Wilderness Center	189
28	Undeveloped	129
29	Undeveloped	127
30	Cranberry Lake Preserve	166
31	Undeveloped	111
32	Hudson Pines Farms	616

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Regional Open Space Parcels

Croton Water Treatment Plant

Figure 5.14-4

Mammals. The Eastview Site is likely inhabited by a variety of small mammals and is utilized by deer, as discussed in the "Existing Conditions." In addition to the loss of the forested habitat described above, the Cat/Del UV Facility would require the clearing 0.05 acres of floodplain forest wetland, 1.5 acres of shrub swamp wetland, and 26.9 acres of successional shrubland on the Eastview Site.

The change to these resources would decrease the amount of food and shelter for many species such as gray squirrel, chipmunk, groundhog, coyote, red fox, and white-tailed deer. Some species requiring forested habitat would probably relocate to the north of the footprint within the remaining oak-tulip tree forest and floodplain/red maple hardwood swamp forested wetlands and south of Route 100C within the oak-tulip tree forest, floodplain forest wetland, and successional southern hardwood forest. However, most of the species found on the site can utilize both forested and shrub/field habitats. Construction noise and activity would also likely cause local wildlife to move to unutilized portions of the project site.

The local mammal fauna, including white-tailed deer, are very common and very adaptable and readily habituate to human presence. Edge species (eastern cottontail, groundhog, striped skunk, coyote, and red fox) would utilize cleared areas and benefit from them. Lighting around the facility and access roads may affect some nocturnal or reclusive animals. However, it is unlikely that reclusive species currently exist in this small fragment of forest surrounded by development and that light exiting the site would be minimized through the use of deflectors and proper alignment. The fauna anticipated to occur around this site typically habituate rapidly to low-level lighting around the Cat/Del UV Facility.

Rare Species Inventory. As indicated above in the Existing Conditions section, no State or Federally listed threatened or endangered, or rare species, as defined by the New York Natural Heritage Program were observed on the Eastview Site, and none are anticipated to occur or be affected by the Cat/Del UV Facility. However, two avian species that are listed as New York State Species of Special Concern were observed flying over the site: a sharp-shinned hawk (*Accipiter striatus*) in April 2000 and a Coopers hawk (*Accipiter cooperii*) in May 2000. The NYSDEC Breeding Bird Atlas Program has reported neither species as breeding in the region and it is most likely that the Sharp-shinned hawk was a migrant species passing through the area. This species is a very common spring migrant in the region. Whether the Coopers hawk was a migrant or breeding individual is unknown, but Coopers hawk populations have been increasing significantly throughout the region during the past decade. It is anticipated that the vegetative communities that would remain on the site during operation would continue to provide adequate habitat for migrating passerines that may use the site.

5.14.3. Potential Impacts

The potential impacts from project and construction activities are represented for the two scenarios described in the Future Without the Project: Without the Cat/Del UV Facility Project at the Eastview Site, and With the Cat/Del UV Facility Project at the Eastview Site. Both include the proposed NYCDEP Police Precinct, Administration Building, and KCT projects[7], but only one scenario includes the Cat/Del UV Facility project to account for the as yet undetermined siting decision regarding the site selection of the Cat/Del UV Facility project. The scenario With the Cat/Del UV Facility at the Eastview Site describes the incremental impacts that would result from the construction and operation of the Croton WTP if the Cat/Del UV Facility were under construction or in operation. The impacts of the construction and operation of the Cat/Del UV Facility by itself are described in the Draft EIS for that project issued by NYCDEP June 1, 2004. Should the Eastview Site be selected for the Cat/Del UV Facility project, both the facility and the proposed Croton WTP would be under construction at the same time.

The proposed KCT is still at the stage of a feasibility study[8]; therefore it is not feasible to assess the full impacts for that project. A discussion of the proposed KCT is located in Section 3.8.4, Treated Water Conveyance Alternatives. The relocation of the historic Hammond House is being considered by NYCDEP. The area where this building currently resides would be available for construction staging during construction, and would be restored as a natural habitat during operation. The potential impacts of this action are described in section 5.12 Historic and Archaeological Resources.

5.14.3.1. Potential Project Impacts

The anticipated year of operation for the proposed plant is 2010. Therefore, potential project impacts have been assessed by comparing the Future With the Project conditions against the Future Without the Project conditions for the year 2010.

5.14.3.1.1. Without Cat/Del UV Facility at the Eastview Site

During the construction of the proposed water treatment plant, up to 30 acres within the construction area would be cleared to accommodate the storage and daily activities of construction vehicles and equipment. The project was designed to minimize impacts on valuable uplands and wetland vegetative communities. However, the proposed plant does require the disturbance of some wetland areas and woodlands. To minimize potential construction period impacts, best management practices (BMP's) would be used to minimize noise, sedimentation, and erosion. Construction equipment and vehicles would be equipped with mufflers to minimize noise. See Figure 5.14-5 for a depiction of the natural resources at the Eastview Site during operating conditions.
+

[7] In addition, both scenarios will include a qualitative assessment of effects during construction and operation of the Croton WTP if the proposed Administration Building is located on the Eastview Site. This project is separate from and independent of the proposed Croton WTP and will be evaluated as part of an independent environmental review.

[8] NYCDEP. 2003. *Feasibility Study: Kensico-City Tunnel*

Vegetation. The configuration of the proposed plant was designed to minimize impacts to natural resources to the greatest extent possible while still allowing reasonable access to the existing aqueducts. The northwest area of the site, where the proposed plant would be sited, is primarily characterized as successional shrubland and successional southern hardwood; the northeast quarter is characterized by floodplain forest wetland, red maple hardwood swamp, shrub wetland, and oak-tulip tree forest; the southwest quarter is primarily characterized by successional old field and successional shrubland, and southeast area is primarily characterized as successional old field and successional southern hardwood, with floodplain forest wetlands mainly located along the Mine Brook corridor and areas of shrub wetlands interspersed between habitat areas. The majority of development would be located in areas of extremely dense multiflora rose in the northwestern portion of the site. These areas feature the least vegetation and wildlife diversity on the site. The western portion of the site, with its extensive areas of multiflora rose thickets, would be largely developed with the proposed treatment buildings, security station, parking areas, wetland mitigation area, and stormwater detention basin.

All of these facilities have been designed to minimize potential impacts on wetlands and the upland woods. The project was designed to protect these areas through the use of retaining walls to minimize loss of slope and reduce land grading and clearing to minimize loss of vegetative communities and wetlands.

Approximately 30 acres would be cleared to facilitate the installation of the proposed plant and related facilities. Of this, approximately 10.5 acres would be required for the placement of buildings, roadways, and other impervious features that represent the footprint of the permanent proposed structures.

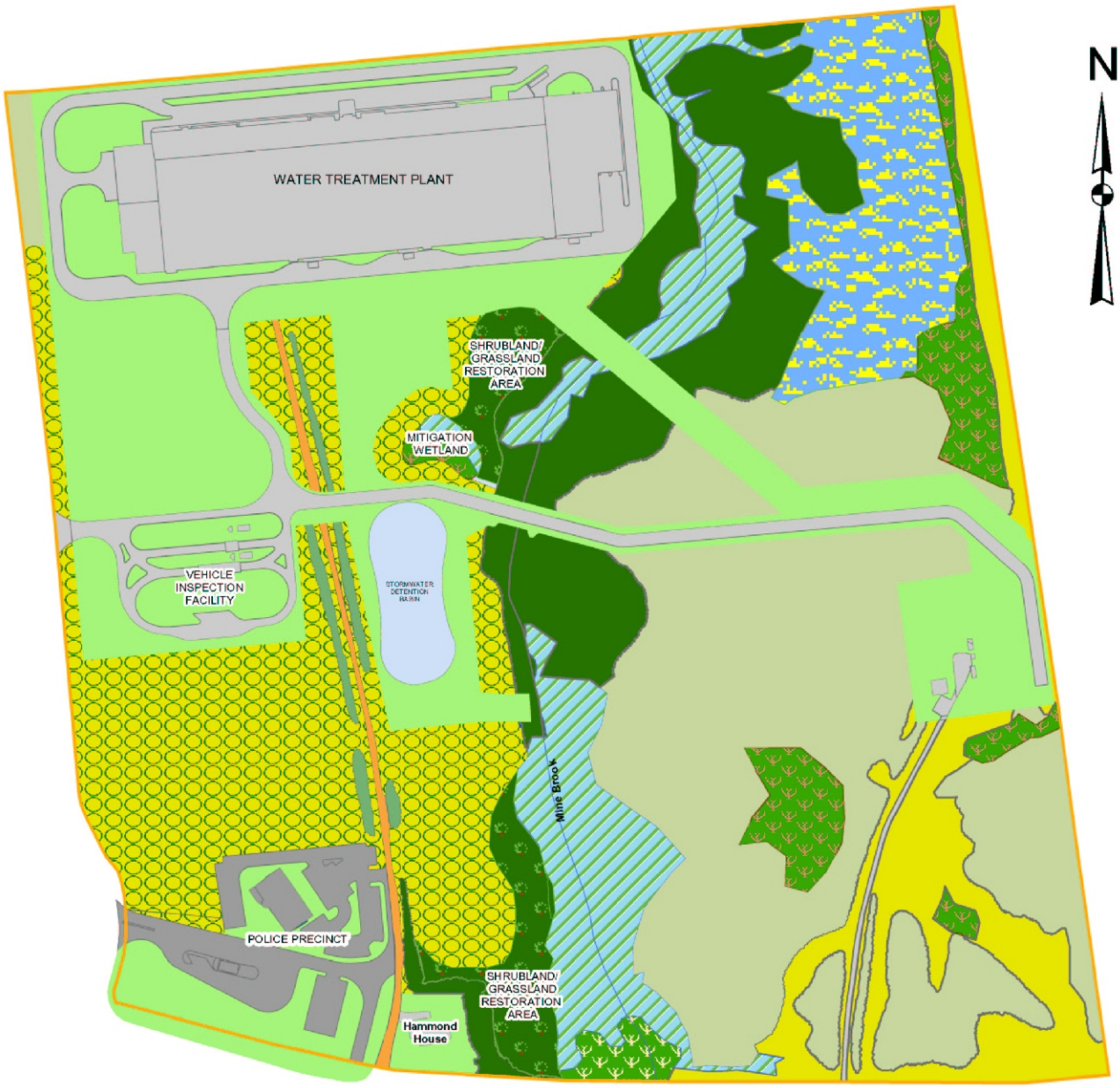
Approximately 15.2 acres of additional disturbance surrounding the proposed buildings would be maintained lawn, landscaped, or restored areas. The shallow marginal areas within the stormwater detention basin would be vegetated and maintained annually to promote the drainage function (initially it would be maintained every six months until the site is vegetated). These disturbances would also constitute a permanent loss of the existing on-site vegetation. Table 5.14-7 quantifies changes in cover type that would occur as part of the proposed project.

Four hundred ninety four trees greater than four inches at diameter at breast height (dbh) would be cut within the construction impact area (Table 5.14-8). Two hundred fifty four trees greater than six inches dbh (the size regulated by the Town of Mount Pleasant) would be cut within the construction impact area. An additional 214 trees greater than 4-inch dbh are immediately adjacent to the construction impact area (Table 5.14-9). Although they are not proposed for removal, they may be threatened by construction activity, for example from compacted soils, so their survival is uncertain. Of the 214 trees potentially threatened, 124 trees are greater than 6-inch dbh.

As discussed in the section above, Future Without the Project, several other projects are planned that would share the Eastview Site with the Croton WTP. These include the planned construction of a NYCDEP police precinct, the Kensico-City Tunnel (KCT) project, and the Cat/Del UV Facility. The police precinct site would occupy approximately 3.5 acres. The KCT shaft site, if located on the Eastview Site, would occupy approximately one half acre, but

approximately two acres would be used for construction. The Administration Building would be located on NYCDEP property in the Town of Greenburgh. The staging areas for these projects could overlap with each other and the Croton project staging areas, so the total affected area may be less than what was conservatively assumed to be affected for the purposes of the analysis. Together, these projects would impact additional trees and wetlands, and the combined effects would further reduce the habitat and the value of the habitat on the site for wildlife.

In general, the vegetative species and communities found on the Eastview Site are common in the region and do not constitute rare or exemplary stands of native vegetation. However, the NYSNHP has listed the oak-tulip tree forest, floodplain forest, and red maple hardwood swamp communities as vulnerable within New York State. Permanent vegetative impacts to the site would be limited to the water treatment plant, roadways, storage areas, wetland mitigation area, the storm water detention basin, and the security and parking areas. Most of the potential impacts on this area of the site would be located within successional old field and successional southern hardwood forest (Table 4.14-7). A portion of the oak-tulip tree forest would be lost as well. The construction of the stormwater detention basin is proposed to be located south of the proposed facility, which would improve stormwater quality, attenuate the stormwater flows to Mine Brook, and maintain drainage conditions similar to the existing conditions. This detention basin would require approximately one acre of vegetative disturbance to the successional shrubland that characterizes this portion of the site. The majority of the tree rows along Hammond House Road, which lie between the proposed plant and the stormwater detention basin, would be preserved. The loss of trees and habitat that is anticipated with the development of the proposed facility would be a significant impact that would be mitigated for with on-site restoration and habitat replacement/creation (see Section 9.1, Mitigation of Potential Impacts at the Eastview Site).



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Natural Resources During Croton WTP Operating Conditions at Eastview Site

Croton Water Treatment Plant

Figure 5.14-5

TABLE 5.14-7. COVER TYPE CHANGE AT THE EASTVIEW SITE WITH THE PROPOSED CROTON PROJECT

Cover Type	Existing Area (acres)	Future Without the Project (acres)	Future With the Project (acres)	Croton Project Induced Changes (acres)	New York State Natural Heritage Program Cover Type Categories [1]		
					System	Subsystem	Community Type
Floodplain Forest Wetland	4.8	4.8	4.7	-0.1	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest
Red Maple Hardwood Swamp	4.2	4.2	4.2	0.0	Palustrine	Forested Mineral Soil Wetland	Red Maple Hardwood Swamp
Shrub Wetland	2.3	2.3	2.2	-0.1	Palustrine	Open Mineral Soil Wetland	Shrub Swamp
Reedgrass/Purple Loosestrife Marsh	0.4	0.4	0.4	0.0	Palustrine	Palustrine Cultural	Reedgrass Marsh
Oak-Tulip Tree Forest	8.3	8.3	7.0	-1.3	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
Successional Southern Hardwood Forest	20.8	20.8	15.9	-4.9	Terrestrial	Forested Uplands	Successional Southern Hardwoods
Shrubland/Grassland Restoration Area	0.0	0.0	1.9	1.9	Terrestrial	Forested Uplands	Successional Southern Hardwoods
Successional Shrubland	32.2	31.1	9.9	-21.2	Terrestrial	Open Uplands	Successional Shrubland
Successional Old Field	8.1	5.7	4.5	-1.2	Terrestrial	Open Uplands	Successional Old Field
Cultural Trees	0.7	0.7	0.6	-0.1	Terrestrial	Terrestrial Cultural	Mowed Lawn with Trees
Landscaped/Lawn Area	0.4	1.8	17.1	15.2	Terrestrial	Terrestrial Cultural	Mowed Lawn
Roads, Parking, Buildings	1.1	3.2	13.7	10.5	Terrestrial	Terrestrial Cultural	Mixed Community Types
Wetland Enhancement/Creation [2]	0.0	0.0	0.3	0.3	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest

TABLE 5.14-7. COVER TYPE CHANGE AT THE EASTVIEW SITE WITH THE PROPOSED CROTON PROJECT

Cover Type	Existing Area (acres)	Future Without the Project (acres)	Future With the Project (acres)	Croton Project Induced Changes (acres)	New York State Natural Heritage Program Cover Type Categories [1]		
					System	Subsystem	Community Type
Detention Basin	0.0	0	1.0	1.0	Lacustrine	Lacustrine Cultural	Artificial Pond
TOTAL	83.3	83.3	83.3	0.0	--	--	--
Stream Length (feet)	2,345	2,345	2,345	2,345	Riverine	Natural	Perennial Stream

Notes:

1. Reschke, Carol., et. al. 2002. Ecological Communities of New York State. New York Natural Heritage Program. N.Y.S. Department of Environmental Conservation. Latham, NY.
2. Wetland mitigation acreages are based on preliminary engineering designs and are likely to change when final engineering designs become available.

TABLE 5.14-8. SUMMARY OF TREES CUT ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
Boxelder	Acer negundo	3	0	0	0	0	0	0	**3**
Norway Maple	Acer platanoides	32	25	6	1	2	1	0	**67**
Planetree Maple	Acer pseudoplatanus	4	3	1	2	1	0	0	**11**
Red Maple	Acer rubrum	2	1	1	2	1	0	0	**7**
Silver Maple	Acer saccharinum	2	4	0	0	1	0	3	**10**
Sugar Maple	Acer saccharum	14	5	2	1	3	2	1	**28**
Tree of Heaven	Ailanthus altissima	10	3	5	0	0	0	0	**18**
Black Birch	Betula lenta	13	13	3	0	0	0	0	**29**
White Birch	Betula papyrifera	1	0	0	0	0	0	0	**1**
Grey Birch	Betula populifolia	3	1	0	0	0	0	0	**4**
Hickory	Carya sp.	0	1	0	0	0	0	0	**1**
Mockernut Hickory	Carya tomentosa	1	0	0	1	0	0	0	**2**
American Beech	Fagus grandifolia	5	3	0	0	0	0	0	**8**

TABLE 5.14-8. SUMMARY OF TREES CUT ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
White Ash	Fraxinus americana	45	16	3	0	1	0	0	**65**
Green Ash	Fraxinus pennslyvanica	39	10	0	0	1	0	0	**50**
Black Walnut	Juglans nigra	0	4	0	0	0	0	0	**4**
Tulip Tree	Liriodendron tulipifera	0	0	1	0	0	1	0	**2**
Apple	Malus sp.	20	0	0	0	0	0	0	**20**
Norway Spruce	Picea abies	0	0	4	2	0	1	0	**7**
American Sycamore	Platanus occidentalis	0	0	0	1	0	0	0	**1**
Eastern Cottonwood	Populus deltoides	1	0	0	0	0	0	0	**1**
Quaking Aspen	Populus tremuloides	7	3	0	0	0	0	0	**10**
Sweet Cherry	Prunus avium	0	1	0	0	0	0	0	**1**
Black Cherry	Prunus serotina	14	12	3	0	0	0	0	**29**
White Oak	Quercus alba	0	0	0	2	1	0	2	**5**
Pin Oak	Quercus palustris	58	6	1	0	0	0	2	**67**
Red Oak	Quercus rubra	7	2	2	1	1	0	1	**14**
Oak	Quercus sp.	0	0	0	0	0	0	1	**1**
Black Oak	Quercus velutina	4	0	0	0	0	0	0	**4**
European Buckthorn	Rhamnus cathartica	1	0	0	0	0	0	0	**1**
Black Locust	Robinia pseudoacacia	1	4	0	0	0	0	0	**5**
Willow	Salix sp.	4	1	0	0	0	0	0	**5**
American Elm	Ulmus americana	7	6	0	0	0	0	0	**13**
	TOTAL BY DBH	**298**	**124**	**32**	**13**	**12**	**5**	**10**	**494**

TABLE 5.14-9. SUMMARY OF TREES THREATENED ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
American Basswood	Tilia americana	1	1	1	0	0	0	0	**3**
American Beech	Fagus grandifolia	1	5	3	1	3	0	0	**13**
American Elm	Ulmus americana	16	14	2	0	1	0	0	**33**

TABLE 5.14-9. SUMMARY OF TREES THREATENED ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
American Sycamore	Platanus occidentalis	0	1	0	0	0	0	0	**1**
Apple	Malus sp.	3	0	0	0	0	0	0	**3**
Bebb's Willow	Salix bebbiana	0	1	0	0	0	0	0	**1**
Black Birch	Betula lenta	9	1	0	0	0	0	0	**10**
Black Cherry	Prunus serotina	2	0	0	0	0	0	0	**2**
Black Locust	Robinia pseudoacacia	1	2	0	0	0	1	0	**4**
Black Oak	Quercus velutina	0	1	1	1	0	0	0	**3**
Black Walnut	Juglans nigra	1	0	0	0	0	0	0	**1**
Eastern Cottonwood	Populus deltoides	1	0	0	0	0	0	0	**1**
Eastern Hophornbeam	Ostrya virginiana	1	0	0	0	0	0	0	**1**
Elm	Ulmus sp.	0	1	0	0	0	0	0	**1**
Green Ash	Fraxinus pennslyvanica	19	10	1	0	0	1	0	**31**
Hickory	Carya sp.	1	0	0	0	0	0	0	**1**
Ironwood	Carpinus caroliniana	0	0	0	1	1	0	0	**2**
Mockernut Hickory	Carya tomentosa	0	1	0	1	0	0	0	**2**
Norway Maple	Acer platanoides	15	13	2	1	0	1	1	**33**
Norway Spruce	Picea abies	1	0	0	0	0	0	0	**1**
Pin Oak	Quercus palustris	0	0	0	0	0	0	1	**1**
Quaking Aspen	Populus tremuloides	0	0	1	0	0	0	0	**1**
Red Maple	Acer rubrum	0	0	0	0	1	0	0	**1**
Red Oak	Quercus rubra	0	1	0	0	0	0	0	**1**
Shagbark Hickory	Carya ovata	1	0	0	0	0	0	0	**1**
Silver Maple	Acer saccharinum	2	0	0	0	0	0	0	**2**
Sugar Maple	Acer saccharum	13	8	0	1	1	0	1	**24**
Sycamore Maple	Acer pseudoplatanus	1	0	0	1	0	0	0	**2**
Tree of Heaven	Ailanthus altissima	1	0	0	0	0	0	0	**1**
Tulip Tree	Liriodendron tulipifera	1	2	0	0	0	0	0	**3**
White Ash	Fraxinus americana	23	3	1	0	0	0	0	**27**
White Oak	Quercus alba	0	1	0	0	1	1	0	**3**
	TOTAL BY DBH	**114**	**66**	**12**	**7**	**8**	**4**	**3**	**214**

Wetlands, Waterways, and Floodplains. The overall development of the site has been designed to minimize disturbances to the Mine Brook stream corridor and associated wetland system. However, due to the nature of the proposed project and the location of on-site wetlands, the temporary encroachment into wetlands and the filling of one small wetland (0.1 acres) would be unavoidable. This wetland is isolated and not under ACOE jurisdiction. An additional 0.1 acres of floodplain forested wetland would be disturbed across a stream corridor during construction of a finished water pipeline.

As described in Section 5.15, Water Resources, the underdrains beneath the foundation would slope toward localized sumps, from which the water would be directed to the stormwater detention basin or the overflow swale (a 20-feet wide grass-lined channel). This permanent lowering of the water table may locally decrease streamflow in Mine Brook. However, this replenishment of groundwater from the brook would limit the drawdown of the water table and thereby limit the effects on the wetlands that border the stream. During the summer and early fall, when groundwater levels are normally lowest, the water levels beneath the wetlands might be slightly lower than they would be under natural conditions. However, replenishment of groundwater from the stream would limit that drawdown, and when water levels then rise in the winter and spring in response to the normal annual hydrologic cycle, the saturated conditions necessary to sustain the wetland would return. Therefore, the small diversion of eight gpm to the underdrain system would not adversely affect the wetlands along or east of the brook.

Although the conditions described above for operations would not affect the hydrology, the disturbance to Mine Brook and its associated wetlands during construction, and the filling of the isolated wetland described below would be considered a significant adverse impact, and compensation for this impact would be provided through wetland mitigation and restoration. See Section 9.1, Mitigation of Potential Impacts, for a description of this compensatory mitigated wetland that would be created to offset the loss of wetlands described below.

In order to compensate for this project related impact, a constructed wetland 0.3 acres in area would be planted on-site with native vegetation to compensate for the lost functions and values of the wetlands. A 50-foot buffer area around this wetland would compensate for wetland buffer areas eliminated by the proposed construction elsewhere on the site.

A detailed groundwater and stormwater model of the area influenced by the proposed excavation and subsequent operation of the proposed plant was developed (see Appendix G) and the results are described in Section 5.15, Water Resources.

Fish and Benthic Macroinvertebrates. As outlined above in the existing conditions, examination of Mine Brook revealed a moderate diversity of benthic macroinvertebrates, principally taxa characterized as tolerant or moderately intolerant of poor water quality. Water quality measurements taken in the field further support the conclusion that the degraded water quality of the stream is likely a function of off-site upstream conditions.

Most of the stream channel, near-stream vegetation, and wetlands are located within the portion of the site that would not be subject to disturbance during construction, thereby not affecting

existing flora and fauna. A stormwater detention basin and created wetland have been proposed to retain and treat stormwater runoff and compensate for loss of wetland habitat from the developed portions of the site. This may result in temporary disturbances to flora and fauna that might utilize this section of the channel. Following construction, the affected stream channel would be re-engineered to create a natural stream morphology thereby attenuating stream velocities and improving water quality. No significant adverse impacts to the stream channel are anticipated during the operational phase of the project. Increased water pollutant loadings to the stream and wetlands may occur despite the removal rates anticipated by the proposed basin and wetland.

As proposed, the project would temporarily convey an approximately 50-foot section of the stream through culverts during construction to allow for the installation of underground conduits. Although piping of the stream would result in temporary disturbances to flora and fauna that might utilize this section of the channel, it would protect the water quality of the stream from any potential contaminants eroding from the construction area into the surface water. Following construction, the affected stream channel would be re-engineered to create natural stream morphology complete with riffle and pool dynamics and wetland terraces, thereby attenuating stream velocities and improving water quality.

During the operational phase of the project, no significant adverse impacts are proposed to the stream channel. The restoration of the channel would allow the continued utilization of the channel by indigenous species and would have a beneficial effect by reducing stormwater flow velocities and streambank erosion.

Reptiles and Amphibians. The forested and wetland areas of the proposed site contain good reptile and amphibian (herpetile) habitat due to the availability of water, high density of leaf litter, and high percent of canopy cover (see Existing Conditions discussed above). This loss of habitat would decrease the leaf litter and cover available for herpetile shelter in the northwest portion of the site, which contains a shrub wetland, successional shrubland, and successional southern hardwood. A mitigation plan has been developed to compensate for the filling of the 0.1 acres of shrub wetland and the 0.1 acres of floodplain forested wetland along Mine Brook (see Section 9.1, Mitigation of Potential Impacts).

The loss of the forest and wetland habitat associated with the proposed Croton project could displace some of the local herpetile community (salamanders, green frogs, and garter snakes) but would not represent a potentially significant adverse impact to regional populations. The surrounding wetlands, upland forest, and running water through the remainder of the site could provide habitat to support viable communities of herpetile species. In addition, the planned creation of 0.3 acres of a shrub and floodplain forested wetland with a 50-foot wetland buffer would provide additional criteria needed for the herpetile community (see Section 9.1, Mitigation of Potential Impacts).

Avifauna. No long-term significant adverse impacts to the avifauna of the Eastview Site are anticipated to occur from the operation of the proposed project. Any potential impacts are anticipated to be primarily related to the construction phases of the project (see Section 5.14.3.2 Potential Construction Impacts, for details). The avifauna of the proposed site consists of species

that are common in similar habitats in the region and none are listed as threatened or endangered by New York State or by the USFWS. The most significant impact to birds that would result from the project would be the loss and modification of existing vegetative communities, primarily for breeding species. However, none of the vegetative communities on the site serve as critical breeding or nesting areas for any of the species identified during the field surveys and listed in Table 5.14-5.

Recent concern has been raised regarding the potential impact of development and forest fragmentation in the northeastern U.S. upon neotropical migrant bird species. Although many of the species observed on the site are neotropical migrants, the development of the site should not negatively affect these species. Most of the issues about these species relate to the effects of fragmentation of larger contiguous woodlands and are, therefore, not of concern on the Eastview Site. The margins of the existing forest would remain as they are under existing conditions except an area of forest near the eastern side of the proposed footprint. The impacts to this forest margin would extend into the forest because of light at night and noise from trucks during the day. Light exiting the site would be minimized through the use of deflectors and proper alignment, and a light wavelength of the lamps would be used to reduce the attraction of night flying moths and other insects. However, most of the birds in this area would have already been acclimated to the presence of buildings and human activities. A total of 1.3 acres of oak-tulip tree forest and 4.9 acres of successional southern hardwood forest would be impacted by the proposed project (see Table 5.14-7). An off-site reforestation plan would ultimately replace much of the lost forest community with an equal or better forested habitat (see Section 9.1, Mitigation of Potential Impacts at the Eastview Site).

The location of the site, near the Hudson and Saw Mill Rivers, may place the property on the fringe of a migratory corridor for migrating passerines (perching birds). All of the migrant species observed during the field surveys (eastern phoebe, red-eyed vireo, cedar waxwing, and black-and-white warbler) are common and anticipated in the region. Observations during the spring and fall of migrating bird populations do not indicate that the Eastview Site is significant in this respect. As a result, no significant adverse impacts to migrating birds that may utilize the site are anticipated during operation of the proposed project. It is anticipated that the vegetative communities that would remain on the site during operation would continue to provide adequate habitat for migrating passerines that may use the site. The proposed on-site wetland enhancement area of 0.3 acres would include vegetative species that would provide perching habitat and a food source for migratory passerines.

Mammals. The Eastview Site is likely inhabited by a variety of small mammals and is utilized by deer, as discussed in the "Existing Conditions." The proposed project would require the clearing of 1.3 acres of oak-tulip tree forest, 4.9 acres of successional southern hardwood forest, 0.1 acres of floodplain forest wetland, 0.1 acres of shrub wetland, 21.2 acres of successional shrubland and 1.2 acres of successional old field (see Table 5.14-7). The change to these resources would decrease the amount of food and shelter for many species including gray squirrel, chipmunk, groundhog, coyote, red fox, and white-tailed deer. Species requiring forested habitat would probably relocate to the east of the proposed footprint within the remaining oak-tulip tree forest, floodplain/red maple hardwood swamp forested wetlands, and successional southern hardwood forest. However, most of the species found on the site can

utilize both forested and shrub/field habitats. While a portion of the local wildlife population may be displaced or lost due to a reduction in habitat, no long-term significant adverse impacts to regional wildlife populations are anticipated. The local wildlife community could also experience a decrease in diversity as well due to the loss of habitat.

The local mammal fauna, including white-tailed deer, are very common and very adaptable and readily habituate to human presence. Edge species (eastern cottontail, groundhog, striped skunk, coyote, and red fox) would utilize cleared areas and benefit from them. Regional extirpation would not occur as a result of this proposed project because this forest is common in a regional context. Lighting around the proposed plant and access roads may affect some nocturnal or reclusive animals. However, it is unlikely that reclusive species currently exist in this small fragment of forest surrounded by development. The fauna anticipated to occur around this site typically habituate rapidly to low-level lighting such as that which may penetrate the natural areas around the proposed facility.

Rare, Threatened, and Endangered Species. As indicated above in the Existing Conditions section, no State or Federally listed threatened or endangered, or rare species, as defined by the New York Natural Heritage Program were observed on the Eastview Site, and none are anticipated to occur or be affected by the proposed project. However, two avian species that are listed as New York State Species of Special Concern were observed flying over the site: a sharp-shinned hawk (*Accipiter striatus*) in April 2000 and a Coopers hawk (*Accipiter cooperii*) in May 2000. The NYSDEC Breeding Bird Atlas Program has reported neither species as breeding in the region and it is most likely that the Sharp-shinned hawk was a migrant species passing through the area. This species is a very common spring migrant in the region. Whether the Coopers hawk was a migrant or breeding individual is unknown, but Coopers hawk populations have been increasing significantly throughout the region during the past decade. No significant adverse impacts to migrating birds that may utilize the site are anticipated during the operation phase of the proposed facility. It is anticipated that the vegetative communities that would remain on the site during operation would continue to provide adequate habitat for migrating passerines that may use the site.

Conclusion from Croton Project Impacts. It is anticipated that the amount of area that would be impacted during both construction and operation of the proposed Croton WTP would significantly alter the natural resources on the Eastview Site. Significant adverse impacts to existing habitat, wetlands, and trees would probably displace local wildlife from the site. Reductions in local wildlife diversity can be anticipated as well. However, it should be noted that wildlife species inhabiting the project site are very common and very adaptable and readily habituate to human presence. Project related impacts to natural resources are not anticipated to have serious consequences in a regional context. The availability of large parcels of undeveloped land in Westchester County, many of which are permanently protected, for resident and migratory wildlife in the region demonstrates that the development of the project site would not result in a significant impact on overall species populations of wildlife and the regional ecology.

5.14.3.1.2. With the Cat/Del UV Facility at the Eastview Site.

This section describes the potential additional impacts associated with the construction and operation of the proposed Croton WTP with the Cat/Del UV Facility at the Eastview Site. The proposed Croton WTP would be located in the northwest portion of the Eastview Site. As such, the additional impacts associated with the placement of the proposed Croton WTP on the Eastview Site would be addressed in this section.

The Cat/Del UV Facility project would call for the clearing of approximately 58 acres on the Eastview Site. The proposed Croton project would call for the clearing of the following natural habitats:

- an additional 1.3 acres of oak-tulip tree forest resulting in a total loss of 4.4 acres.
- an additional loss of 0.1 acres of floodplain forest wetland resulting in a total loss of 1.3 acres.
- an additional loss of 1.6 acres of successional shrubland resulting in a total loss of 28.5 acres.
- an additional loss of 0.1 acres of successional southern hardwood forest resulting in a total loss of 20.0 acres.
- an additional loss of 0.1 acres of shrub swamp for a total loss of 1.5 acres.

Approximately 16.7 acres on the Eastview Site would be utilized for roads, parking, and buildings during operation of the Croton WTP with the Cat/Del UV Facility on-site. See Figure 5.14-6 for a depiction of the natural resources at the Eastview Site during operating conditions for the proposed Cat/Del UV Facility and the Croton project.

Vegetation. With the Cat/Del UV Facility on-site, the Croton project would disturb 3.3 additional acres of natural habitat at the Eastview Site. Approximately 15.2 acres surrounding the proposed buildings for the Croton project would be maintained lawn or low ground cover landscaped area. 17.1 acres surrounding the proposed Cat/Del UV facility would be maintained lawn or low ground cover landscaped area. The shallow marginal areas within the stormwater detention basins of the two projects would be vegetated and maintained annually to promote the drainage function (initially it would be maintained every six months until the site is vegetated). These disturbances would also constitute a permanent loss of the existing on-site vegetation. Table 5.14-10 quantifies the incremental change in cover types that would occur as a result of the Croton project with the Cat/Del UV Facility occurring on the Eastview Site.

The introduction of the Croton project would result in the additional removal of 169 trees greater than four inches dbh (Table 5.14-11). Of the trees to be cut, 113 trees are greater than six inches dbh (the size regulated by the Town of Mount Pleasant). A total of 76 trees greater than 4-inch dbh adjacent to the construction impact area, although not proposed for removal, may be threatened by construction activity, for example from compacted soils, so their survival is uncertain (Table 5.14-12). Of the 76 trees, there are 50 trees with a dbh of six inches or greater that would potentially be threatened.

The additional loss of trees and habitat that is anticipated with the introduction of the Croton project to the Eastview Site with the Cat/Del UV Facility project would be a significant impact that would be mitigated with off-site reforestation and wetland creation/enhancement. (see Section 9.1, Mitigation of Potential Impacts at the Eastview Site).

TABLE 5.14-10. INCREMENTAL HABITAT COVER TYPE CHANGE OF CROTON AT EASTVIEW SITE WITH THE CAT/DEL UV FACILITY

Cover Type	Existing Area (acres)	Future Without the Project	Future With the CAT/ DEL UV Facility (acres)	Incremental Croton Project Impacts with Cat/Del UV Facility On-Site (acres)	New York State Natural Heritage Program Cover Type Categories [1]		
					System	Subsystem	Community Type
Floodplain Forest Wetland	4.8	4.8	3.6	-0.1	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest
Red Maple Hardwood Swamp	4.2	4.2	4.2	0.0	Palustrine	Forested Mineral Soil Wetland	Red Maple Hardwood Swamp
Shrub Wetland	2.3	2.3	0.9	-0.1	Palustrine	Open Mineral Soil Wetland	Shrub Swamp
Reedgrass/Purple Loosestrife Marsh	0.4	0.4	0.4	0.0	Palustrine	Palustrine Cultural	Reedgrass Marsh
Oak-Tulip Tree Forest	8.3	8.3	5.2	-1.3	Terrestrial	Forested Upland	Oak-Tulip Tree Forest
Successional Southern Hardwood Forest	20.8	20.8	0.9	-0.1	Terrestrial	Forested Uplands	Successional Southern Hardwoods
Successional Shrubland	32.2	31.1	4.2	-1.6	Terrestrial	Open Uplands	Successional Shrubland
Successional Old Field	8.1	5.7	1.0	-0.1	Terrestrial	Open Uplands	Successional Old Field
Cultural Trees	0.7	0.7	0.0	0.0	Terrestrial	Terrestrial Cultural	Mowed Lawn with Trees
Landscaped/Lawn Area	0.4	1.8	18.9	15.2	Terrestrial	Terrestrial Cultural	Mowed Lawn
Roads, Parking, Buildings	1.1	3.2	11.4	8.5	Terrestrial	Terrestrial Cultural	Mixed Community Types
Shrubland/Grassland Restoration	0.0	0.0	31.0	-20.4	Terrestrial	Open Uplands	Successional Old Field

TABLE 5.14-10. INCREMENTAL HABITAT COVER TYPE CHANGE OF CROTON AT EASTVIEW SITE WITH THE CAT/DEL UV FACILITY

Cover Type	Existing Area (acres)	Future Without the Project	Future With the CAT/ DEL UV Facility (acres)	Incremental Croton Project Impacts with Cat/Del UV Facility On-Site (acres)	New York State Natural Heritage Program Cover Type Categories [1]		
					System	Subsystem	Community Type
Wetland Enhancement/Creation [2]	0.0	0.0	1.4	-1.1	Palustrine	Forested Mineral Soil Wetland	Floodplain Forest
Detention Basin/Pretreatment Forebay	0.0	0.0	0.2	1.1	Lacustrine	Lacustrine Cultural	Artificial Pond

TABLE 5.14-11. SUMMARY OF ADDITIONAL TREES CUT ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
American Beech	Fagus grandifolia	3	2	0	0	0	0	0	**5**
American Elm	Ulmus americana	0	1	0	0	0	0	0	**1**
Apple	Malus sp.	9	0	0	0	0	0	0	**9**
Black Birch	Betula lenta	6	13	4	0	0	0	0	**23**
Black Cherry	Prunus serotina	4	4	1	0	0	0	0	**9**
Black Locust	Robinia pseudoacacia	1	2	0	0	0	0	0	**3**
Black Oak	Quercus velutina	1	0	0	0	0	0	0	**1**
Eastern Cottonwood	Populus deltoides	1	0	0	0	0	0	0	**1**
Green Ash	Fraxinus pennslyvanica	1	0	0	0	1	0	0	**2**
Grey Birch	Betula populifolia	1	0	0	0	0	0	0	**1**
Hickory	Carya sp.	0	1	0	0	0	0	0	**1**
Mockernut Hickory	Carya tomentosa	0	0	0	1	0	0	0	**1**
Norway Maple	Acer platanoides	21	14	2	0	0	0	0	**37**
Oak	Quercus sp.	0	0	0	0	0	0	1	**1**

TABLE 5.14-11. SUMMARY OF ADDITIONAL TREES CUT ON THE EASTVIEW SITE

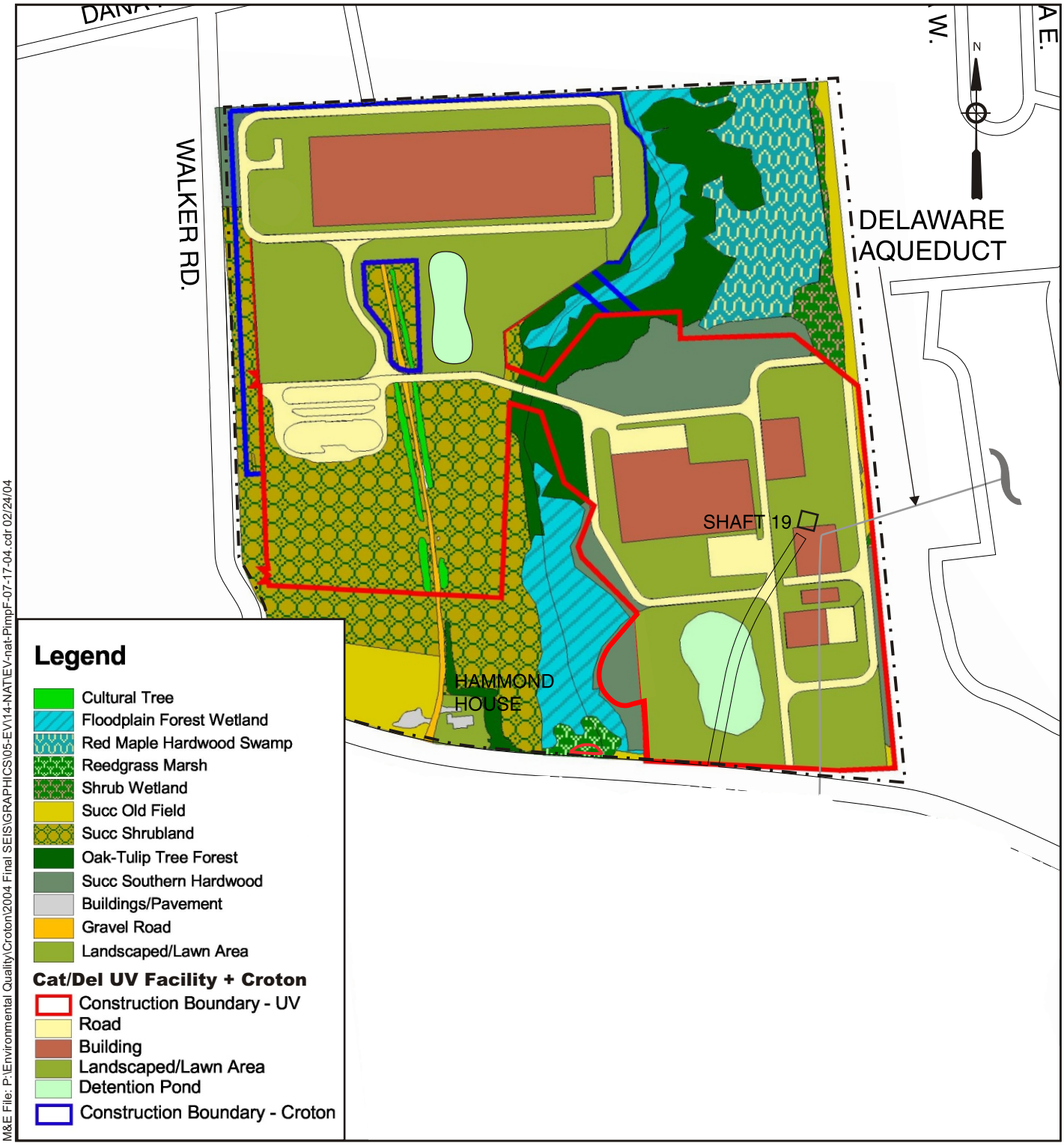
Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
Pin Oak	Quercus palustris	8	2	0	0	0	0	0	**10**
Quaking Aspen	Populus tremuloides	0	1	0	0	0	0	0	**1**
Red Maple	Acer rubrum	2	1	0	1	0	0	0	**4**
Red Oak	Quercus rubra	3	2	2	1	1	0	1	**10**
Silver Maple	Acer saccharinum	1	1	0	0	0	0	1	**3**
Sugar Maple	Acer saccharum	3	1	2	1	0	1	1	**9**
Tree of Heaven	Ailanthus altissima	5	1	2	0	0	0	0	**8**
Tulip Tree	Liriodendron tulipifera	0	0	1	0	0	0	0	**1**
White Ash	Fraxinus americana	10	10	3	0	0	0	0	**23**
White Birch	Betula papyrifera	1	0	0	0	0	0	0	**1**
White Oak	Quercus alba	0	0	0	2	1	0	1	**4**
	TOTAL BY DBH	**81**	**56**	**17**	**6**	**3**	**1**	**5**	**169**

TABLE 5.14-12. SUMMARY OF ADDITIONAL TREES THREATENED ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
American Basswood	Tilia americana	1	1	1	0	0	0	0	**3**
American Beech	Fagus grandifolia	2	5	3	1	3	0	0	**14**
American Elm	Ulmus americana	2	0	0	0	0	0	0	**2**
Black Birch	Betula lenta	2	4	2	0	0	0	0	**8**
Black Cherry	Prunus serotina	1	0	0	0	0	0	0	**1**
Black Locust	Robinia pseudoacacia	3	1	0	0	0	0	0	**4**
Black Oak	Quercus velutina	1	0	0	0	0	1	0	**2**
Eastern Cottonwood	Populus deltoides	0	0	0	1	0	0	0	**1**
Green Ash	Fraxinus pennslyvanica	3	4	0	0	0	0	0	**7**
Hickory	Carya sp.	0	0	0	0	0	1	0	**1**
Ironwood	Carpinus caroliniana	1	1	0	0	0	0	0	**2**
Mockernut Hickory	Carya tomentosa	0	0	1	0	0	0	0	**1**

TABLE 5.14-12. SUMMARY OF ADDITIONAL TREES THREATENED ON THE EASTVIEW SITE

Common Name	Scientific Name	Diameter at Breast Height (inches)							Total By Species
		4-6	7-12	13-18	19-24	25-30	31-36	>37	
Norway Maple	Acer platanoides	3	3	0	1	0	1	0	**8**
Pin Oak	Quercus palustris	0	2	0	0	0	0	0	**2**
Red Oak	Quercus rubra	0	0	0	0	0	0	1	**1**
Silver Maple	Acer saccharinum	0	0	1	0	0	0	0	**1**
Sugar Maple	Acer saccharum	7	0	0	0	0	0	0	**7**
Tree of Heaven	Ailanthus altissima	1	1	0	0	0	0	0	**2**
Tulip Tree	Liriodendron tulipifera	0	0	0	1	0	1	1	**3**
White Ash	Fraxinus americana	3	0	1	0	0	0	0	**4**
White Oak	Quercus alba	0	0	0	0	1	1	0	**2**
	TOTAL BY DBH	**30**	**22**	**9**	**4**	**4**	**5**	**2**	**76**



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* NOTE: Areas within the Cat/Del UV Facility construction boundary would be restored in accordance with mitigation plans.

Natural Resources With the Cat/Del UV Facility and Croton Project

Croton Water Treatment Plant

Figure 5.14-6

Wetlands, Waterways, and Floodplains. The introduction of the proposed Croton project would result in a significant adverse impact to an additional 0.1 acres of floodplain forest wetland associated with Mine Brook, which would result from the proposed treated water conveyance between the Croton WTP and Shaft No. 19. An additional 0.1 acres of shrub swamp wetland would be lost from the construction of the water treatment plant. The disturbance to Mine Brook and its associated wetlands would be considered a significant adverse impact, and compensation for this impact would be provided through off-site wetland enhancement and creation. The on-site wetland enhancement associated with the proposed stormwater best management practice system for the Cat/Del UV Facility would replace an existing monoculture reed grass marsh with diverse, native emergent wetland plantings. This would improve vegetative habitat diversity and provide increased habitat value for aquatic fauna, herptiles, and reptiles. Loss of shrub swamp and floodplain forest wetlands and their associated stormwater attenuation functions would be mitigated with the proposed pretreatment forebay that would provide water quality treatment by way of removal of sediments, nutrients, and bacteria. The lost habitat value would be replaced with a combination of on-site and off-site wetland enhancement and creation of shrub swamp and floodplain forest wetlands. See Section 9.1, Mitigation of Potential Impacts, for a description of this compensatory mitigated wetland that would be created to offset the loss of wetlands associated with the proposed Croton project.

In order to compensate for project related wetland impacts, a minimum of 6.0 acres of wetland enhancement/creation would be undertaken on the NYCDEP properties in Mount Pleasant and the Town of Greenburgh with native vegetation to compensate for the functions and values of the wetlands lost. A 50-foot buffer area around this wetland would compensate for wetland buffer areas eliminated by the proposed construction elsewhere on the site.

Fish and Benthic Macroinvertebrates. As outlined above in the existing conditions, examination of Mine Brook revealed a moderate diversity of benthic macroinvertebrates, principally taxa characterized as tolerant or moderately intolerant of poor water quality. Water quality measurements taken in the field further support the conclusion that the degraded water quality of the stream is likely a function of off-site upstream conditions.

Most of the stream channel, near-stream vegetation, and wetlands are located within the portion of the site that would not be subject to disturbance, thereby not affecting existing flora and fauna. A stormwater detention basin and on-site floodplain wetland creation/enhancement have been proposed to retain and treat stormwater runoff and partially compensate for loss of wetland habitat from the developed portions of the site. Increased water pollutant loadings to the stream and wetlands may occur despite the removal rates anticipated by the proposed basin and wetland.

Reptiles and Amphibians. The forested and wetland areas of the Eastview Site contain good reptile and amphibian (herpetile) habitat due to the availability of water, high density of leaf litter, and high percent of canopy cover (see Existing Conditions). The Croton project would require the removal of forest and wetland cover type that would decrease the leaf litter and habitat available for herpetile shelter.

The additional loss of forest and wetland areas could displace some of the local herpetile community (salamanders, green frogs, and garter snakes). However, no significant adverse impacts to regional populations are anticipated. The surrounding wetlands, mature upland forest, and running water through the remainder of the site would provide habitat to support viable communities of herpetile species. In addition, the planned wetland enhancement/creation and associated 50-foot wetland buffer would provide additional criteria needed for the herpetile community.

Avifauna. No long-term significant adverse impacts to the avifauna of the Eastview Site are anticipated to occur from the operation of the proposed NYCDEP developments. Any potential impacts are anticipated to be short-term and primarily related to the construction phases of the project (see Section 4.14.3.2 Potential Construction Impacts, for details). The avifauna of the site consists of species that are common in similar habitats in the region and none are listed as threatened or endangered by New York State or by the USFWS. The most significant impact to birds would be the loss and modification of existing vegetative communities, primarily for breeding species. However, none of the vegetative communities on the site serve as critical breeding or nesting areas for any of the species identified during the field surveys and listed in Table 4.14-5.

Mammals. The Eastview Site is likely inhabited by a variety of small mammals and is utilized by deer, as discussed in the "Existing Conditions." The Croton project would require the clearing of oak-tulip tree forest, floodplain forest wetland, successional southern hardwood forest, and successional shrubland. The change to these resources would decrease the amount of food and shelter for many species including white-tailed deer. Species requiring forested habitat would probably relocate to the forested wetlands and mature upland forests, and south of Route 100C within the mature upland forests, forested wetland, and successional upland field. However, most of the species found on the site can utilize both forested and shrub/field habitats. Construction noise and activity would also likely cause local wildlife to move to unutilized portions of the project site.

While a portion of the local wildlife population may be displaced or lost due to construction activity and a reduction in habitat, no long-term, significant adverse impacts to regional wildlife are anticipated. The local wildlife community could also experience a decrease in diversity as well due to the loss of habitat.

The local mammal fauna, including white-tailed deer, are very common and very adaptable and readily habituate to human presence. Edge species would utilize cleared areas and benefit from them. Regional extirpation would not occur because this forest is common in a regional context. Lighting around the proposed NYCDEP developments and access roads may affect some nocturnal or reclusive animals. However, it is unlikely that reclusive species currently exist in this small fragment of forest surrounded by development and that light exiting the site would be minimized through the use of deflectors and proper alignment. The fauna anticipated to occur around this site typically habituate rapidly to low-level lighting such as that proposed around the facility.

Rare, Threatened, and Endangered Species. As indicated above in the Existing Conditions section, no State or Federally listed threatened or endangered, or rare species, as defined by the New York Natural Heritage Program were observed on the Eastview Site, and none are anticipated to occur or be affected by the proposed NYCDEP developments. However, two avian species that are listed as New York State Species of Special Concern were observed flying over the site: a sharp-shinned hawk (*Accipiter striatus*) in April 2000 and a Coopers hawk (*Accipiter cooperii*) in May 2000. The NYSDEC Breeding Bird Atlas Program has reported neither species as breeding in the region and it is most likely that the Sharp-shinned hawk was a migrant species passing through the area. This species is a very common spring migrant in the region. Whether the Coopers hawk was a migrant or breeding individual is unknown, but Coopers hawk populations have been increasing significantly throughout the region during the past decade. No significant adverse impacts to migrating birds that may utilize the site are anticipated. It is anticipated that the vegetative communities that would remain on the site during operation would continue to provide adequate habitat for migrating passerines that may use the site.

Conclusion. It is anticipated that the amount of area that would be impacted during both construction and operation of the proposed Cat/Del UV Facility with the Croton project on-site would significantly alter the natural resources on the Eastview Site. Significant adverse impacts to existing habitat, wetlands, and trees would probably displace local wildlife from the site. The loss of mature trees, particularly slow growing, native species that provide wildlife with food from seeds or nuts are a valuable resource. Additionally, the woodlands on-site, with a diverse community of native cover types; especially those stands of trees with an established forest canopy, forest floor, and shrub layers, provide better habitat value than areas of isolated trees and monocultures, such as the areas on-site dominated by multiflora rose. Reductions in local wildlife diversity can be anticipated as well. However, it should be noted that wildlife species inhabiting the project site are very common and very adaptable and readily habituate to human presence. Project related impacts to natural resources are not anticipated to have serious consequences in a regional context. The availability of large parcels of undeveloped land in Westchester County, many of which are permanently protected, for resident and migratory wildlife in the region demonstrates that the development of the project site would not result in a significant impact on regional ecology.