A. EXISTING CONDITIONS

WETLANDS AND SURFACE WATERS

The Project Site is an unimproved, 5.96-acre property with forested uplands, pond, and associated wetlands. The site is bounded by the New York State Route 9A and Craft Lane roadways on its western and northern borders, and a transmission line right-of-way on its eastern border. The pond is mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) as a palustrine wetland with an aquatic bed that is permanently flooded and has been diked/impounded (PABHh) (see Figure 1 of the EEAF). This pond is not mapped as a New York State Department of Environmental Conservation (NYSDEC)-regulated freshwater wetland but is assumed to be regulated under Chapter 203, "Wetlands Law of the Village of Buchanan" of the Code of the Village of Buchanan. A wetland field investigation conducted on November 30, 2021, by an EcolSciences Professional Wetland Scientist confirmed the wetland boundaries as consistent with the NWI-mapped wetland (see report attached hereto). In addition, the pond is designated by NYSDEC as a Class B waterbody. Class B waters are best used for primary and secondary contact recreation and fishing, and are suitable for fish, shellfish, and wildlife propagation and survival.[1]

ECOLOGICAL COMMUNITIES AND VEGETATION

Ecological communities within the Project Site would be generally classified as forested uplands[2], specifically the chestnut oak forest[3] and successional southern hardwoods[4] communities, according to Edinger et al. (2014). Habitat in the Project Site is varied and includes forested areas with a dense understory of shrubs and herbaceous species, forested areas with virtually no shrub and herbaceous layers, forested areas dominated by invasive vegetation, and the freshwater pond. Dominant vegetation within the Project Site, as observed during a May 30, 2023 reconnaissance by AKRF ecologists, includes: sugar maple (*Acer saccharum*), tree of heaven (*Ailanthus altissima*), black locust (*Robinia pseudoacacia*), green ash (*Fraxinus*

[1] Regulated and defined by Title 6 of the New York Codes, Rules and Regulations (NYCRR), Part 701.

[2] Edinger et al. (2014) defines the forest uplands subsystem of ecological communities as "upland communities with more than 60 percent cover of trees (greater than 5 meters tall); these communities occur on substrates with less than 50 percent rock outcrop or shallow soil over bedrock."

[3] Edinger et al. (2014) defines the chestnut oak forest ecological community as "a hardwood forest that occurs on well-drained sites in glaciated portions of the Appalachians. This forest is similar to the Allegheny oak forest; it is distinguished by fewer canopy dominants and a less diverse shrub layer and groundlayer flora."

[4] Edinger et al. (2014) defines the successional southern hardwoods ecological community as "a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed."

pennsylvanica), black cherry (*Prunus serotina*), white oak (*Quercus alba*), slippery elm (*Ulmus rubra*), Asiatic bittersweet (*Celastrus orbiculatus*), poison ivy (*Toxicodendron radicans*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), common mugwort (*Artemisia vulgaris*), sassafras (*Sassafras albidum*), lowbush blueberry (*Vaccinium angustifolium*), common greenbrier (*Smilax rotundifolia*), and Japanese honeysuckle (*Lonicera japonica*).

WILDLIFE

REPTILES AND AMPHIBIANS

The NYSDEC Herp Atlas Project, a survey conducted from 1990 to 1999 to document the geographic distribution of New York's reptile and amphibian species, recorded 42 species in the census block in which the Project Site is located (*Peekskill* USGS quadrangle, see **Table 1**). Based on the habitat available, and the lack of tidal waters, vernal pools, marshes, and streams, the Project Site has the potential to support the species indicated in bold in **Table 1**. Green frog (*Rana clamitans*) and bullfrog (*Rana catesbeiana*) were observed during the May 30, 2023 reconnaissance investigation.

Table 1
NYS Reptiles and Amphibians (Herp) Atlas (1990-1999) for the Peeksill USGS Quadrangle

Common Name	Scientific Name
Marbled salamander†	*Ambystoma opacum†*
Jefferson salamander†	*Ambystoma jeffersonianum†*
Blue-spotted salamander†	*Ambystoma laterale†*
Spotted salamander	*Ambystoma maculatum*
Red-spotted newt	*Notophthalmus viridescens*
Northern redback salamander	*Plethodon cinereus*
Northern slimy salamander	*Plethodon glutinosus*
Four-toed salamander	*Hemidactylium scutatum*
Spring salamander	*Gyrinophilus porphyriticus*
Northern red salamander	*Pseudotriton ruber*
Northern two-lined salamander	*Eurycea bislineata*
Eastern American toad	***Bufo americanus***
Fowler's toad	***Bufo fowleri***
Gray treefrog	***Hyla versicolor***

Common Name	Scientific Name
Northern spring peeper	*Pseudacris crucifer*
Bullfrog	***Rana catesbeiana***
Green frog	***Rana clamitans***
Wood frog	*Rana sylvatica*
Southern leopard frog†	*Rana sphenocephala†*
Pickerel frog	*Rana palustris*
Common snapping turtle	***Chelydra serpentina***
Common musk turtle	***Sternotherus odoratus***
Spotted turtle†	*Clemmys guttata†*
Wood turtle†	*Glyptemys insculpta†*
Eastern box turtle†	***Terrapene carolina†***
Northern diamondback terrapin	*Malaclemys terrapin*
Red-eared slider	***Trachemys scripta***
Painted turtle	***Chrysemys picta***
Northern fence lizard*	***Sceloporus undulatus****
Five-lined skink	***Eumeces fasciatus***
Northern water snake	***Nerodia sipedon***

Common Name	Scientific Name
Northern brown snake	***Storeria dekayi***
Common garter snake	***Thamnophis sirtalis***
Eastern ribbon snake	*Thamnophis sauritus*
Eastern hognose snake†	***Heterodon platirhinos†***
Northern ringneck snake	*Diadophis punctatus*
Eastern worm snake†	***Carphophis amoenus†***

Common Name	Scientific Name
Northern black racer	***Coluber constrictor***
Black rat snake	***Elaphe alleganiensis***
Eastern milk snake	***Lampropeltis triangulum***
Northern copperhead	***Agkistrodon contortrix***
Timber rattlesnake*	*Crotalus horridus**

Notes: * Denotes state-listed threatened species, † denotes state-listed species of special concern
Sources: NYS Herp Atlas (1990-1999) *Peekskill* USGS Quadrangle

BIRDS

The New York State Breeding Bird Atlas is a periodic census of the distribution of breeding birds across New York State. The most recent completed survey was conducted from 2000 to 2005[5] and documented 76 species as confirmed or probable/possible breeders in the survey block where the Project Site is located (Block 5856A, see **Table 2**). The ecological communities within the Project Site provide potential breeding and wintering habitat for migratory bird species. Migratory bird species which may utilize the Project Site are likely to be tolerant of human activity associated with suburban woodland environments. These include Canada goose (*Branta canadensis*), wild turkey (*Meleagris gallopavo*), mallard (*Anas platyrhynchos*), rock pigeon (*Columba livia*), and mourning dove (*Zenaida macroura*). Canada goose, turkey vulture (*Cathartes aura*), blue jay (*Cyanocitta cristata*), mourning dove, and gray catbird (*Dumetella carolinensis*) were observed during the May 30, 2023 reconnaissance.

Table 2
NYS Breeding Bird Atlas (2000-2005) for Block 5856A

Common Name	Scientific Name
Canada goose	*Branta canadensis*
Mute swan	*Cygnus olor*
Wood duck	*Aix sponsa*
Mallard	*Anas platyrhynchos*
Wild turkey	*Meleagris gallopavo*
Great blue heron	*Ardea herodias*
Green heron	*Butorides virescens*
Black-crowned night-heron	*Nycticorax nycticorax*
Turkey vulture	*Cathartes aura*
Cooper's hawk	***Accipiter cooperii***

Common Name	Scientific Name
Red-tailed hawk	*Buteo jamaicensis*
Killdeer	*Charadrius vociferus*
Spotted sandpiper	*Actitis macularius*
Great black-backed gull	*Larus marinus*
Rock pigeon	*Columba livia*
Mourning dove	*Zenaida macroura*
Yellow-billed cuckoo	*Coccyzus americanus*
Black-billed cuckoo	*Coccyzus erythropthalmus*
Chimney swift	*Chaetura pelagica*
Belted kingfisher	*Megaceryle alcyon*

[5] A Breeding Bird Atlas occurs every 20 years in New York State. The Third Breeding Bird Atlas is currently in progress and will cover the period of 2020–2024.

Common Name	Scientific Name
Red-bellied woodpecker	*Melanerpes carolinus*
Downy woodpecker	*Picoides pubescens*
Hairy woodpecker	*Picoides villosus*
Northern flicker	*Colaptes auratus*
Pileated woodpecker	*Dryocopus pileatus*
Eastern wood-pewee	*Contopus virens*
Eastern phoebe	*Sayornis phoebe*
Great crested flycatcher	*Myiarchus crinitus*
Eastern kingbird	*Tyrannus tyrannus*
Yellow-throated vireo	*Vireo flavifrons*
Warbling vireo	*Vireo gilvus*
Red-eyed vireo	*Vireo olivaceus*
Blue jay	*Cyanocitta cristata*
American crow	*Corvus brachyrhynchos*
Common raven	*Corvus corax*
Tree swallow	*Tachycineta bicolor*
Northern rough-winged swallow	*Stelgidopteryx serripennis*
Bank swallow	*Riparia riparia*
Barn swallow	*Hirundo rustica*
Black-capped chickadee	*Poecile atricapillus*
Tufted titmouse	*Baeolophus bicolor*
White-breasted nuthatch	*Sitta carolinensis*
Carolina wren	*Thryothorus ludovicianus*
House wren	*Troglodytes aedon*
Blue-gray gnatcatcher	*Polioptila caerulea*
Wood thrush	*Hylocichla mustelina*
American robin	*Turdus migratorius*
Gray catbird	*Dumetella carolinensis*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
Cedar waxwing	*Bombycilla cedrorum*
Blue-winged warbler	*Vermivora pinus*
Golden-winged warbler	***Vermivora chrysoptera***
Yellow warbler	*Dendroica petechia*
Black-throated green warbler	*Dendroica virens*
Prairie warbler	*Dendroica discolor*
Black-and-white warbler	*Mniotilta varia*
American redstart	*Setophaga ruticilla*
Worm-eating warbler	*Helmitheros vermivorum*
Northern waterthrush	*Seiurus noveboracensis*
Common yellowthroat	*Geothlypis trichas*
Eastern towhee	*Pipilo erythrophthalmus*
Chipping sparrow	*Spizella passerina*
Song sparrow	*Melospiza melodia*
Swamp sparrow	*Melospiza georgiana*
Scarlet tanager	*Piranga olivacea*
Northern cardinal	*Cardinalis cardinalis*
Rose-breasted grosbeak	*Pheucticus ludovicianus*
Indigo bunting	*Passerina cyanea*
Red-winged blackbird	*Agelaius phoeniceus*
Common grackle	*Quiscalus quiscula*
Brown-headed cowbird	*Molothrus ater*
Baltimore oriole	*Icterus galbula*
House finch	*Carpodacus mexicanus*
American goldfinch	*Spinus tristis*
House sparrow	*Passer domesticus*

Notes: Bold face type denotes state-listed species of special concern.
Sources: NYSDEC Breeding Bird Atlas (2000-2005) Block 5856A.

MAMMALS

Suburban, forested upland habitats such as those found within the Project Site typically support disturbance-tolerant mammal species. These include white-tailed deer (*Odocoileus virginianus*), eastern gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*), Virginia

opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). Eastern gray squirrel and signs of white-tailed deer were observed within the Project Site during the May 30, 2023 reconnaissance investigation.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

A review of the NYSDEC Environmental Assessment Form (EAF) Mapper[6] did not indicate any records of state-listed threatened, endangered, or special concern species or significant natural communities within the Project Site. This is consistent with the January 27, 2022 letter from the NYSDEC (attached hereto) stating that no records of rare or state-listed animals, plants, or significant natural communities were found within the Project Site. However, the NYSDEC letter goes on to state that comprehensive field surveys have not been conducted for most sites and, therefore, they cannot make a definitive statement as to the presence or absence of such species. A review of the USFWS Information for Planning and Consultation (IPaC) System[7] for federally listed, candidate, or proposed species, or critical habitat indicated Indiana bat[8] (*Myotis sodalist*; federally and state-listed endangered), northern long-eared bat (*Myotis septentrionalis*; federally and state-listed endangered), and monarch butterfly (*Danaus plexippus*; federal candidate) as having the potential to be affected by activities in the Project Site. No critical habitats have been identified for these species within the Project Site.

The 2000-2005 Breeding Bird Atlas identified Cooper's hawk (*Accipiter cooperii*, state-listed Special Concern) and golden-winged warbler (*Vermivora chrysoptera*, state-listed Special Concern) in the survey block containing the Project Site. According to the DEC Herp Atlas Project and based habitat requirement, the following state-listed threatened or species of special concern occur within the *Peekskill* USGS Quadrangle, which contains the Project Site and have the potential to occur within the Project Site based on available habitat: eastern box turtle (*Terrapene carolina*), eastern hognose snake (*Heterodon platirhinos*), northern fence lizard (*Sceloporus undulatus*), and eastern worm snake (*Carphophis amoenus*).

INDIANA BAT

The Indiana bat is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases-hibernation and reproduction. Indiana bats emerge from the caves in which they hibernate (i.e., hibernacula) in early spring; males disperse and remain solitary until mating season at the end of the summer while pregnant females form maternity colonies in which to rear the young. Maternity roosts, roosting sites of post-lactating females, and roosting sites of solitary males are usually under loose bark or in the crevices of trees. Indiana bat roosting sites have been documented in numerous species of deciduous trees. Tree availability, diameter, altitude, bark characteristics, and sun exposure appear to be the most important factors in roost site selection (Kurta 2004, USFWS 2007). Roosts in New York (Britzke et al. 2006) and elsewhere

[6] New York State Department of Environmental Conservation (NYSDEC) Environmental Assessment Form Mapper. (Accessed on November 4, 2022. Available at: https://gisservices.dec.ny.gov/eafmapper/)

[7] United States Fish and Wildlife Service's (USFWS) Information, Planning, and Conservation (IPaC) System (Accessed on March 13, 2023. Available at: https://ipac.ecosphere.fws.gov/)

[8] This species was also noted as having the potential to occur on the Site in the November 22, 2021 report by EcolSciences.

(USFWS 2007) are typically in large trees with a diameter greater than 16 inches and a height taller than 52 feet, but roosts in smaller trees can occur (USFWS 2007). The trees are usually dead or nearly dead and decayed (Menzel et al. 2001, Kitchell 2008).

The Indiana bat often roosts near forest gaps or edges where trees receive direct sunlight for much of the day (Callahan et al. 1997, Menzel et al. 2001). Habitats used by the Indiana bat during summer are varied and include riparian, bottomland/floodplain, and upland forests (Humphrey et al. 1977, Britzke et al. 2006, Watrous et al. 2006) often within agricultural landscapes (Murray and Kurta 2004, Watrous et al. 2006, USFWS 2007). Maternity colonies are typically located in areas with abundant natural or artificial freshwater sources (Carter and Feldhamer 2005, Kurta et al. 2002, Watrous et al. 2006, USFWS 2007). Spring and autumn habitats of the Indiana bat have not been well described but appear to be largely similar to their summer habitat (Britzke et al. 2006, USFWS 2007).

During autumn, Indiana bats mate and deposit fat stores before entering their hibernaculum for the winter. Hibernacula are typically in caves or abandoned mines where ambient temperatures remain above freezing (USFWS 2007). There are eight known Indiana bat hibernaculae in New York State; of these, two are in Orange and Putnam counties, adjacent to Westchester County, where the Project Site is located. The Project Site contains trees that have the potential to be used by Indiana bats for roosting. As the Indiana bat is known to travel significant distances beyond the hibernaculum during foraging periods, this species has the potential to occur within the Project Site.

NORTHERN LONG-EARED BAT

The northern long-eared bat is a temperate, insectivorous bat that hibernates in caves or mines during winter and then emerges in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. Outside of the winter hibernation period, northern long-eared bats generally inhabit mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes (Owen et al. 2003, Carter and Feldhammer 2005, Ford et al. 2005), usually within 60 miles of their hibernaculum (Caceres and Barclay 2000, USFWS 2014). Unlike many other bats of the Northeast, northern long-eared bats will glean prey from leaves and other surfaces rather than strictly hawking flying insects in the air, and are thereby well-adapted to foraging in cluttered, structurally complex, forest interior habitat (Owen et al. 2003, Lacki et al. 2007). Most foraging occurs above the understory and below the canopy of forested hillsides and ridges (Brack and Whitaker 2001, Harvey et al. 2011, USFWS 2014). Foraging activity is greatest in interior areas with a tall and closed canopy (Owen et al. 2003, Patriquin and Barclay 2003, Adams 2013). In contrast to strictly aerial-foraging bat species, northern long-eared bats do not frequently concentrate along riparian corridors or other linear landscape features (Owen et al. 2003, Ford et al. 2005, Harvey et al. 2011, USFWS 2014), and most radio-telemetry and acoustic studies have found that they typically avoid roads and other sharp forest edges (Owen et al. 2003, Patriquin and Barclay 2003, Carter and Feldhammer 2005, Morris et al. 2010). Mature forest is the most important foraging habitat for the northern long-eared bat (USFWS 2013, 2014). The long-eared bat is considered a forest-dependent species that is sensitive to fragmentation and urbanization and requires interior forest for both foraging and breeding (Foster and Kurta 1999, Broders et al. 2006, Henderson et al. 2008). NYSDEC records indicate

that northern long-eared bat occurs in winter in the adjacent town of Cortlandt, New York[9]. As discussed above, the 5.96-acre Project Site is fragmented and bounded by roadways and a transmission line right-of-way, thus much of the Project Site boundary would be considered edge habitat rather than undisturbed interior forest. The minimum forested patch size for suitable northern long-eared bat habitat is defined by USFWS as 10 acres. While the Project Site contains trees with the potential to be used as roosting habitat, the woodlands within the Project Site may not be suitable for this highly disturbance-intolerant species. Therefore, the northern long-eared bat is unlikely to occur within the Project Site.

MONARCH BUTTERFLY

Monarch butterflies are primarily found in open meadows and fields with wildflowers, coastal beaches with dunes, and man-made butterfly gardens[10,11]. Monarch butterfly larvae feed exclusively on milkweed (*Asclepias* spp.), and the species requires *Asclepias* milkweed plants for reproduction. The November 22, 2021 report by EcolSciences concluded that, "the Site does not provide habitat for the Monarch butterfly as no large open fields or stands of the host plant were found." No wildflower meadows or *Asclepias* milkweed plants were observed within the Project Site during the May 30, 2023 reconnaissance investigation. Therefore, monarch butterflies are unlikely to occur within the Project Site.

COOPER'S HAWK

Cooper's hawk is a woodland raptor which occupies a variety of forested habitats, including deciduous, mixed, and coniferous forests. This species travels through dense tree canopies at high speeds in pursuit of prey. (Poole 2005). Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Therefore, the Cooper's hawk has the potential to occur within the Project Site.

GOLD-WINGED WARBLER

The gold-winged warbler is a neotropical migratory songbird. The breeding range for this species includes the northeastern and north-central United States, as well as some small areas of Ontario and Quebec, Canada. Gold-winged warblers use a variety of shrubby habitats with sufficient herbaceous cover, including successional fields, upland swamps, and pine barrens. This species will use habitats created by natural disturbances as well as human-modified habitats, such as regenerating clearcuts, utility line rights-of-way, and abandoned farmlands. Gold-winged warblers typically nest in red maple (*Acer rubrum*), willow (*Salix* spp.), or alder (*Alnus* spp.) swamps and place egg clusters at or near the ground in clumps of sedges, grasses, or forbs such as goldenrod (*Solidago* spp.) (Confer et al. 2011). Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Therefore, the gold-winged warbler has the potential to occur within the Project Site.

---

[9] NYSDEC "Northern Long-eared Bat Occurrences by Town". (Accessed on March 21, 2023. Available at https://www.dec.ny.gov/docs/wildlife_pdf/nlebtowns.pdf)

[10] New York State Department of Conservation (NYSDEC). *Watchable Wildlife: Monarch Butterfly.* Accessed on December 20, 2021. Available at: www.dec.ny.gov/animals/60392.html

[11] USFWS Environmental Conservation Online System (ECOS). *Monarch butterfly (Danaus plexippus).* Accessed on December 20, 2021. Available at: ecos.fws.gov/ecp/species/9743

EASTERN BOX TURTLE

The eastern box turtle is found in a wide variety of open and successional habitats, including woodlands, pastures, and marshy meadows (Ernst, et al., 1994). This species prefers habitats with sandy, well-drained soils and can usually be found near ponds and streams (Mitchell et al. 2006, Gibbs et al. 2007). Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Therefore, the eastern box turtle has the potential to occur within the Project Site.

EASTERN HOGNOSE SNAKE

The eastern hog-nosed snake is a burrowing species which prefers open pine and deciduous woodlands, old fields, and beaches, but may also be present in marshes and forested bottomlands provided that sandy or sandy loam, well-drained soils are present (Gibbs et al. 2007). Eastern hog-nosed snakes are also known to occur in sandy lowlands and in areas of exposed granite outcroppings. Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Soils within the Project Site are composed of sandy loam and rocky complexes, which may be sufficient to support this species. Therefore, the eastern hog-nosed snake has the potential to occur within the Project Site.

EASTERN WORM SNAKE

Eastern worm snakes are found in second-growth deciduous forests, typically in moist areas near streams, but may occur in drier areas such as sand plains and pitch pine/scrub oak woodlands (Gibbs et al. 2007). This species is also known to occur in rocky forested areas at woodland edges with an abundance of stone cover, old fields and open pastureland near forested areas, and in compost piles and gardens (Hulse et al. 2001, Barbour 1960). Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Therefore, the eastern worm snake has the potential to occur occur within the Project Site.

NORTHERN FENCE LIZARD

The northern fence lizard inhabits dry, open forests with abundant sun exposure and prefers pinelands over deciduous woods (Gibbs et al. 2007). The presence of suitable cover objects such as fallen logs, rocks, stumps, brush piles, and leaf litter is an important component of northern fence lizard habitat. Fence lizards have also been found in open areas of oak-hickory-ash forest with blueberry, laurel, scrub oak, and pine with open rock faces (NYNHP 2011). Based on the site reconnaissance conducted on May 30, 2023, the project site has the potential to provide habitat for this species. Therefore, the northern fence lizard has the potential to occur within the Project Site.

B. IMPACTS ANALYSIS

WETLANDS AND SURFACE WATERS

Construction of the Proposed Project would not occur within mapped wetland boundaries. However, the proposed fire access drive would be located within the 100-foot wetland buffer regulated by the Village of Buchanan and would thus require a permit from the Village. Most of the proposed fire access drive would be located approximately 60 feet away from the pond's

edge, except for a small portion, which extends to approximately 12 feet from the pond's edge. Erosion and sediment control measures (e.g., silt fencing and hay bales) would be implemented during construction to prevent indirect impacts to wetlands and waterbodies. In addition, a vegetated buffer would be maintained between the proposed fire access drive and the pond edge to further limit indirect operational impacts to the wetland. Construction of the Proposed Project would result in an additional 1.99 acres of impervious surface within the Project Site. However, the proposed fire access drive would be composed of grasscrete, a pervious, lightly vegetated surface that would allow infiltration of stormwater runoff and minimize indirect impacts to water quality. The Proposed Project would also construct two subsurface stormwater management areas, which would receive and treat stormwater from the proposed multi-family building, parking lot, and roadways before discharging into the pond and offsite. A comprehensive Stormwater pollution Prevention Plan (SWPPP) would be prepared in accordance with State and local regulations and would be reviewed during the Site Plan and Special Permit review. Therefore, with these protections in place, the Proposed Project would not adversely affect wetlands and surface waters.

ECOLOGICAL COMMUNITIES AND VEGETATION

The Proposed Project would result in the permanent loss of 2.41 acres of forested land within the Project Site. The Proposed Project would result in the permanent conversion of 0.28 acres of forested land to meadow, grassland, and brushland and 1.99 acres of forested land to impervious surfaces within the Project Site.

The forested upland community found within the Project Site is similar to the surrounding forested landscape, and the permanent loss of woodlands would not result in the loss of rare or critical ecological communities. All work would be performed in compliance with local laws pertaining to tree removal. A landscaping plan prioritizing diverse, native tree and shrub plantings would be prepared for the Proposed Project. The successional southern hardwoods and chestnut oak communities are common in the surrounding landscape, and the permanent loss of these ecological communities is relatively small compared to their abundance in the vicinity of the Project Site. In addition, landscaping associated with the Proposed Project would offset some of the effects associated with the proposed vegetation clearing. Therefore, the Proposed Project would not result in significant adverse impacts on ecological communities and vegetation in the Project Site.

WILDLIFE

REPTILES AND AMPHIBIANS

Measures would be taken to avoid impacts to reptiles and amphibians within the Project Site. The installation of silt fencing and the implementation of other sediment control measures would minimize the potential for individual reptiles or amphibians to enter the construction area and would minimize impacts to water quality by preventing sediment runoff from the construction area into the pond. The majority of habitat being removed under the Proposed Project is upland habitat that is not critical to the reptile and amphibian species that have the potential to occur within the Project Site. While construction of the Proposed Project may result in a loss of habitat for reptiles and amphibians, the Project Site is surrounded by similar available habitat, and any reptiles and amphibians displaced by the Proposed Project would likely relocate to similar nearby habitat during construction. Therefore, the Proposed Project would not adversely affect reptiles and amphibians at the population level.

BIRDS

As discussed under "Existing Conditions," 76 species were documented as confirmed or probable/possible breeders within Block 5856A of the 2000-2005 Breeding Bird Atlas. During construction measures would be taken to avoid impacts to breeding birds within the Project Site. To avoid or mitigate potential impacts to the maximum extent practicable, tree removals and grubbing would occur either between November 1 and March 31 (outside of the breeding season), or in accordance with NYSDEC requirements if conducted between April 1 and October 31. The loss of successional southern hardwoods and chestnut oak forest ecological communities would be limited to 2.41 acres of forest and 0.28 acres of brushland. Similar habitat exists in the vicinity of the Project Site. Thus, individuals would be expected to relocate to suitable habitat during construction. Therefore, the Proposed Project would not result in adverse impacts on bird populations within the Project Site.

MAMMALS

Habitat within the Project Site limits the mammalian community to species with some level of tolerance for disturbance. Construction of the Proposed Project would result in a change to available habitat within the Project Site, but suitable habitat for these species would continue to exist nearby, and the loss of 2.41 acres of forest and 0.28 acres of brushland under the Proposed Project would not constitute a significant loss of habitat. Mammals within the Project Site would be expected to relocate to similar nearby habitat during construction. Therefore, the Proposed Project would not result in adverse impacts to mammals.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

Based upon available information on habitat availability, the following threatened, endangered, and special concern species have the potential to occur within the Project Site: Indiana bat, Cooper's hawk, gold-winged warbler, eastern box turtle, eastern hog-nosed snake, eastern worm snake, and northern fence lizard. To avoid or mitigate potential impacts to the maximum extent practicable, tree clearing activities would occur between November 1 and March 31 to avoid impacts to roosting Indiana bat and nesting Cooper's hawk and gold-winged warbler, or if tree clearing occurs between April 1 and October 31 it shall be conducted in accordance with NYSDEC requirements. Silt fencing would be utilized to exclude reptiles and amphibians from the Project Site during construction. Therefore, the Proposed Project would not have the potential to result in significant adverse impacts to threatened, endangered, candidate, or special concern species. The Proposed Project would not adversely affect any significant natural communities.

C. REFERENCES

Adams, A.M. 2013. Assessing and analyzing bat activity with acoustic monitoring: challenges and interpretations. Ph.D. Dissertation, University of Western Ontario, London, Canada. Available from: http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=2679&context=etd

Barbour, R.W. 1960. A study of the worm snake, Carphophis amoenus, Say in Kentucky. Transactions of the Kentucky Academy of Science 21: 10-16.

Bishop, S.C. 1941. The salamanders of New York. New York State Museum Bulletin No. 324. Albany, NY.

Brack, V., Jr.; Whitaker, J.O., Jr. 2001. Foods of the northern myotis, Myotis septentrionalis, from Missouri and Indiana, with notes on foraging. Acta Chiropterologica. 3(2): 203-210.

Britzke, E.R., A.C. Hicks, S.L. Von Oettingen, S.R. Darling. 2006. Description of spring roost trees used by female Indiana bats in the Lake Champlain Valley of Vermont and New York. Am Midland Nat 155:181-187.

Broders, H.G., G.J. Forbes, S. Woodley and I.D. Thompson. 2006. Range extent and stand selection for roosting and foraging in forest-dwelling northern long-eared bats and little brown bats in the Greater Fundy Ecosystem, New Brunswick. Journal of Wildlife Management 70:1174-1184.

Brown, W. S. 1993. Biology, status, and management of the Timber rattlesnake (Crotalus horridus): a guide for conservation. Herpetological Circ. 22. Society for the Study of Amphibians and Reptiles, Lawrence, Kansas.

Burke, R. and J. Feinberg. 2013. Amphibians and reptiles of Long Island, Staten Island, and Manhattan. Hofstra University. Available from: http://people.hofstra.edu/russell_l_burke/HerpKey/

Caceres, M. and R.M.R. Barclay. 2000. Myotis septentrionalis. Mammal Species 634:1-4.

Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.

Callahan, E.V., R.D. Drobney and R.L. Clawson. 1997. Selection of summer roosting sites by Indiana bats (Myotis sodalis) in Missouri. Journal of Mammalogy 78:818-825.

Carter, T.C., and G.A. Feldhamer. 2005. Roost tree use by maternity colonies of Indiana bats and northern long-eared bats in southern Illinois. Forest Ecology and Management 219:259-268.

Colburn, E.A. 2004. Vernal pools: natural history and conservation. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Conant, R., Collins, J.T. 1998. A Field Guide to Reptiles & Amphibians: Eastern and Central North America. Third Edition, Expanded. Houghton Mifflin Company. New York.

Confer, J.L., P. Hartman, and A. Roth. 2011. Golden-winged Warbler (Vermivora chrysoptera), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/020doi:10.2173/bna.20

Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Ernst, C., J. Lovich, R. Barbour. 1994. Turtles of the United States and Canada. Washington D.C.: Smithsonian Institution Press.

Ford, W.M., M.A. Menzel, J.L. Rodrigue, J.M. Menzel, and J.B. Johnson. 2005. Relating bat species presence to simple habitat measures in a central Appalachian Forest. Biological Conservation 126: 528-539.

Foster, R.W., and A. Kurta. 1999. Roosting ecology of the Northern Bat (Myotis septentrionalis) and comparisons with the endangered Indiana Bat (Myotis sodalis). Journal of Mammalogy 80(2):659-672.

Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler, and R.C. Bothner. 2007. The amphibians and reptiles of New York State. Oxford University Press, New York.

Harding, J. 1997. Amphibians and Reptiles of the Great Lakes Region. Ann Arbor: University of Michigan Press.

Harding, J. 1991. A twenty year wood turtle study in Michigan: implications for conservation. Chapman University, Orange, California: In: Proceedings of the First International Symposium on Turtles and Tortoises: Conservation and Captive Husbandry.

Harvey, M.J., J.S. Altenbach, and T.L. Best. 2011. Bats of the United States and Canada. Johns Hopkins University Press, Baltimore.

Henderson, L.E., L.J. Farrow, and H.G. Broders. 2008. Intra-specific effects of forest loss on the distribution of the forest-dependent northern long-eared bat (Myotis septentrionalis). Biological Conservation 141:1819-1828.

Hulse, A. C., C. J. McCoy, and E. Censky. 2001. Amphibians and Reptiles of Pennsylvania and the Northeast. Cornell University Press, Ithaca, NY.

Humphrey, S.R., A.R. Richter, J.B. Cope. 1977. Summer habitat and ecology of the endangered Indiana bat, Myotis sodalis. J Mammal 58:334-346.

JP Gibbs, Amphibian movements in response to forest edges, roads, and streambeds in southern New England: Journal of Wildlife Management, vol. 62, no. 2, pp. 584-589, Apr 1998.

Kitchell, M.E. 2008. Roost selection and landscape movements of female Indiana bats at the Great Swamp National Wildlife Refuge, New Jersey. M.S. thesis, William Patterson University of New Jersey. 178pp.

Klemens, M.W. 1993. Amphibians and reptiles of Connecticut and adjacent regions. State Geological and Natural History Survey of Connecticut - Bulletin No. 112.

Kurta, A. 2004. Roosting ecology and behavior of Indiana bats in summer. Pp. 29-42 In: Proceedings of the Bat and Coal Mining Interactive Forum, K.C. Vories and A. Harrington, Eds. U.S. Department of Interior, Office of Surface Mining, Alton, Illinois.

Lacki, M.J., S.K. Amelon, and M.D. Baker. 2007. Foraging ecology of bats in forests. Pp. 83-127 in: Bats in forests: conservation and management (M.J. Lacki, J.P. Hayes, and A. Kurta, eds.). Johns Hopkins Press, Baltimore, MD.

Mannan, R. W., W. A. Estes, and W. J. Matter. 2004. Movements and survival of fledgling Cooper's Hawks in an urban environment. Raptor Res. 38(1):26-34.

Menzel, M.A., J.M. Menzel, T.C. Carter, W.M. Ford and J.W. Edwards. 2001. Review of the forest habitat relationships of the Indiana bat (Myotis sodalis). USDA Forest Service Gen. Tech. Rep. NE-284. Newtown Square, PA. 21 p.

Merovich, C.E. and J.H. Howard. 2000. Amphibian use of constructed ponds on Maryland's eastern shore. Journal of the Iowa Academy of Science 107:151-159.

Mitchell, J.C., A.R. Breisch, K.A. Buhlmann. 2006. Habitat management guidelines for amphibians and reptiles of the northeastern United States. Partners in Amphibian and Reptile Conservation Technical Publication HMG-3. Montgomery, AL. 108 pp.

Morris, A.D., D.A. Miller, and M.C. Kalcounis-Reuppell. 2010. Use of forest edges by bats in a managed pine forest landscape. Journal of Wildlife Management 74: 26-34.

New York Natural Heritage Program. 2011. Online Conservation Guide for Sceloporus undulatus. Available from: http://www.acris.nynhp.org/guide.php?id=7517. Accessed February 27th, 2013.

New York State Department of Environmental Conservation (NYSDEC). 2016. Spotted Turtle Fact Sheet. Available from: http://www.dec.ny.gov/animals/7150.html. Accessed January 6, 2016.

Owen, S.F., M.A. Menzel, W.M. Ford, B.R. Chapman, K.V. Miller, J.W. Edwards, and P.B. Wood. 2003. Home-range size and habitat used by the northern myotis (Myotis septentrionalis). American Midland Naturalist 150:352-359.

Patriquin, K.J. and R.M.R. Barclay. 2003. Foraging by bats in cleared, thinned and unharvested boreal forest. Journal of Applied Ecology 40:646-657

Poole, A. (ed.). 2005. The Birds of North America Online. Cornell Lab of Ornithology, Ithaca, NY.

Tuttle, S. 1996. Master of Science Thesis: Ecology and Natural History of the Wood Turtle (Clemmys insculpta) in Southern New Hampshire. Keene, New Hampshire: Antioch New England Graduate School, Antioch University.

Ulev, E. 2008. Crotalus horridus. In: Fire Effects Information System, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. Available from: http://www.fs.fed.us/database/feis/[2012

U.S. Fish and Wildlife Service (USFWS). 2007. Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision, April 2007. USFWS Great Lakes-Big Rivers Region - Region 3, Fort Snelling, MN.

Watrous, K.S., T.M. Donovan, R.M. Mickey, S.R. Darling, A.C. Hicks, S.L. Von Oettingen. 2006. Predicting minimum habitat characteristics for the Indiana bat in the Champlain Valley. J Wildl Manag 70:1228-1237.