

### **3.5 Wildlife**

#### **3.5.1 Existing Conditions**

##### **3.5.1.a Fauna**

A Site Faunal Survey was conducted at Depot Hill Farm during the period of May 3, 2007 to July 27, 2007. Refer to Appendix Q for the complete Natural Resources Survey Report, including the survey methods employed and the results of each survey. The results of the survey recorded observations of 132 species of naturally occurring vertebrate animals on the project site, including the following:

- 99 species of birds;
- 14 species of mammals;
- 13 species of amphibians;
- 3 species of reptiles; and,
- 3 species of fish.

While a State-listed threatened Northern harrier (*Circus cyaneus*) was observed on two occasions flying over the project site, for reasons discussed in the complete Natural Resources Survey Report in Appendix Q, this species is not nesting on the project site. No other faunal species identified on the project site are Federal- or State-listed as endangered or threatened.

In response to a record of a State-listed threatened timber rattlesnake (*Crotalus horridus*) recorded within 1.5 miles of the project site, several surveys of the on-site and un-posted lands on Rattlesnake Ridge were conducted to determine if suitable denning and basking habitat were present on or near the project site. The results of these surveys indicated that no suitable denning or basking habitat was present on or near the project site and that the most potentially suitable habitat for timber rattlesnake was more likely present on the off-site east-southeast-facing slopes of Rattlesnake Ridge above Webutuck Creek.

The NYSDEC also indicated that a record of the State-listed endangered and Federally-listed threatened bog turtle (*Clemmys muhlenbergii*) existed within 1.5 mile of the project site. Given the extent of suitable habitat off-site within the same wetland system, there is substantial potential for bog turtles to utilize the on-site portion of Wetland A, if only on an infrequent basis.

The most notable animal recorded on the project site is the State-listed special concern marbled salamander (*Ambystoma opacum*). Four (4) adults were found near Wetlands H and BL during a pool-breeding amphibian survey. Several regionally-scarce northern slimy salamanders (*Plethodon glutinosus*) were also discovered. State-listed special concern bird species observed on or flying over the project site included American bittern (*Botaurus lentiginosus*), Cooper's hawk (*Accipiter cooperii*), and yellow-breasted chat (*Icteria virens*). Other birds of regional conservation concern observed on the project site included:

- Worm-eating warbler (*Helmitheros vermivorus*);
- Savannah sparrow (*Passerculus sandwichensis*);
- Blue-winged warbler (*Vermivora pinus*);

- Wood thrush (*Hylocichla mustelina*);
- Ovenbird (*Seiurus aurocapilla*);
- Scarlet tanager (*Piranga olivacea*);
- Bobolink (*Dolichonyx oryzivorus*); and,
- American kestrel (*Falco sparverius*).

No birds of regional conservation concern or cultural interest, such as bald eagles (or their habitats) were observed onsite. The nearest confirmed bald eagle nesting site is on Hudson River in the Tivoli Bay area, approximately 30 miles northwest of the project site. There are also bald eagle nesting sites in Connecticut that are approximately 30 miles to the east of the project site.

#### Project Site Potential Aquatic Macro-invertebrates

Based on the flashy, scoured nature of the intermittent site streams with rock rubble bottoms, the stonefly, caddisfly and mayfly larval fauna presence is expected to be poor. Project site streams are likely to support several taxa of the worm phyla (e.g., flat worms, roundworms and segmented worms), various common isopods such as *Ascellus*; dipteran larvae and a few beetle groups, many of which exhibit a broad range of pollution tolerance and would not likely provide useful interpretative data on water quality conditions. The site ponds and braided stream system within Wetland A are perennial and likely support a substantially higher proportion of aquatic grazers, including midge or chironomid taxa, certain types of caddisfly larvae, as well as populations of predaceous dragonfly and damselfly nymphs, various aquatic beetles and, again, various fly or dipteran larvae and representatives of the flat worm, round worm and segmented worm phyla. Project site aquatic habitats that are likely to support the greatest diversity of aquatic macroinvertebrates include:

- Wetland A and associated Upper and Lower North Pond
- The upper (easterly) portion of Wetland B associated with Upper and Lower Central Ponds
- The upper reach (easterly end) of Wetland K
- Wetlands H and BL

Wetlands J, L and C; the lower two-thirds of Wetland K; most of Wetland C and most of Wetland B below (northwest of) of Central Ponds were considered to be too chronically scoured and eroded or otherwise disturbed; and of too brief or unreliable hydroperiod to support a diverse or populous aquatic macro-invertebrate fauna. A summary of the macro-invertebrate assessment is included in Appendix Q4.

On the project site, the leech (*Placobdella parasitica*) was observed on the hind legs of a male snapping turtle (*Chelydra serpentina*) hand-captured on May 3, 2007 in Wetland A. Adult dragonflies such as common green darner (*Anax junius*), calico pennant (*Celithemis elisa*), saddlebags (*Tramea* sp), common whitetail (*Libellula lydia*), widow skimmer (*Libellula luctuosa*), four-spotted skimmer (*Libellula quadrimaculata*), blue dasher (*Pachydiplax longipennis*), and the damselfly ebony jewelwing (*Calopteryx maculata*), all relatively common species, were observed at Wetland A and the Central and North Ponds during the summer of 2007. It is likely that these mainly lentic communities provide habitat for the larvae of these and other species of dragonflies and damselflies. Larvae of mosquitoes and phantom midges (Cuculidae) and biting

midges (Heleidae) are also likely to be present in project aquatic habitats, particularly in small shallow pools devoid of fish.

Fingernail clams (Sphaeriidae) and pouch snails (*Physa* sp) were also observed in Wetland A in May, 2007. However, because there is sparse rock substrate in these aquatic environs, stonefly and mayfly larvae (reasonably reliable indicators of "good" water quality), may not be well-represented and consequently, it may also be difficult to narrowly interpret water quality conditions based on the composition of the aquatic macro-invertebrate community of these habitats.

#### 3.5.1.b Project Site Biodiversity

The number of wildlife species recorded on the Depot Hill Farm project site comprises a broad array of biological species, which include the following:

Fauna: 132 species

- 13 species of amphibians;
- 3 species of reptiles;
- 99 species of birds;
- 3 species of fish; and,
- 14 species of mammals.

Refer to Appendix Q for the complete Natural Resources Survey Report, including the survey methods employed and the results of each survey.

#### 3.5.2 Potential Impacts

Areas of the project site supporting the greatest numbers of animal species are largely avoided. Approximately 88% of all ecological communities on the project site will remain undisturbed, including 97% of Hemlock-Northern Hardwood Forest community which supports the greatest number of plants and animals of conservation concern.

##### *Birds*

Potential impacts to birds as a result of the proposed development of Depot Hill Farm include loss of cover and potential breeding habitat, and, depending on the season and duration of construction, breeding failure. Birds most likely to be adversely impacted are development sensitive species associated with Tree/Shrub Row, Pastureland and Successional Oldfield ecological communities. These species listed by habitat in which they are known to nest, include:

##### Tree/Shrub Row

- Prairie warbler (*Dendroica discolor*);
- Eastern towhee (*Pipilo erythrophthalmus*);

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Pastureland and Successional Oldfield

- Bobolink (*Dolichonyx oryzivorus*);
- Savannah sparrow (*Passerculus sandwichensis*);
- Field Sparrow (*Spizella pusilla*); and,
- Blue-winged warbler (*Vermivora pinus*).

While adults of these bird species utilize other habitats as well (Bobolink and Savannah sparrow less so) and are mobile and can quickly move away from disturbance, construction impacts during the breeding season could adversely impact their successful breeding. However, substantial areas of these ecological communities will remain undisturbed and exist elsewhere on the project site for these species. Only relatively small areas of these community types are proposed for removal.

American kestrel nested successfully in 2007 (two adults and one fledgling were seen on two occasions), likely in or near one of the farm buildings near the sharp turn in Depot Hill Road. This small raptor is commonly associated with farmland buildings, and is often seen perching on telephone lines along roadsides. Development of the project site is not likely to adversely impact this raptor.

*Reptiles and Amphibians*

Proposed development on the project site will not have an impact on State-listed endangered, threatened, special concern or regionally rare or scarce reptiles and amphibians because the habitats in which these species occur are not present in areas of proposed development. Development of the project site will not result in the removal of any critical habitat for such species, nor will proposed development result in fragmentation of habitats which could adversely affect the movement of these species within the regional landscape. There is ample landscape scale habitat for bog turtle, particularly off-site to the north where this species has been found, timber rattlesnake (all of Rattlesnake Ridge with the better potential habitat occurring on the easterly side of the Ridge), marbled salamander and northern slimy salamander, which utilize forested upland areas with large trees, fallen logs, and dense leaf litter in the southeasterly corner of the project site. The nearest important vernal pool supporting adult marbled salamander and other amphibians of conservation concern is located more than 900 feet from the nearest proposed development.

Small numbers of common herptiles, such as American toad, green frog, spring peeper gray tree frog, pickerel frog, redback salamander and common garter snake, which utilize habitats proposed for construction, may be impacted. However, as for other species on the project site, substantial areas of other similar on-site habitats will remain undisturbed for the greater portion of these populations.

*Mammals*

Impacts to mammals as a result of proposed development are likely to be negligible and limited to those species associated with Tree/Shrub Row communities and Pastureland. Loss of cover and bedding habitat and den/breeding sites may adversely affect common mammals such as

white-tailed deer, woodchuck, white-footed mouse, eastern cottontail and eastern chipmunk. These mammals are well represented on the project site and occur in other similar habitats on the project site, which will remain undisturbed. Adults of these species are very mobile and capable of moving to undisturbed areas during project construction. Consequently, any loss of a few of these common mammals or their habitat on the project site will not have a significant impact on their local populations.

### *Fish*

Potential impacts to fish on the project site will be temporary and limited to a small section of the Central Stream, approximately 0.017 acre of streambanks and streambed, where a road crossing is proposed. No direct impacts (filling or other forms of disturbance) to Site Ponds or other site streams are proposed. The location of the proposed crossing is a chronically eroded stream channel, which is very shallow and occasionally dry. It provides only limited habitat value for common amphibians and minnows.

Despite the rich biodiversity of the project site, project impacts are considered relatively moderate to negligible and can be offset by appropriate and reasonable mitigation measures.

### 3.5.3 Mitigation Measures

The alignment of proposed Depot Hill Farm roads and the location and orientation of the proposed residential cluster units will not result in habitat fragmentation nor prevent the movement of any species of animals through the project site and across the regional landscape. The extent of undisturbed land across the breadth of the project site will continue to support viable wildlife populations of the area. New landscaping areas will be vegetatively reclaimed using a planting palette of largely native plant species, additional areas of hayfields and wildflower meadow will also be created to expand and enhance habitat for grassland-associated fauna.

The following mitigation activities are being considered in order to offset the potential limited adverse impacts to site ecological communities and their inhabitants:

### *Birds*

- Develop and implement a native tree and shrub planting plan comprised of native wildlife-valuable vegetation, particularly fruit trees and shrubs for birds, around residential units to mitigate the removal of portions of Tree/Shrub Row community.
- Convert areas of row crops to hayfield-wildflower meadow to mitigate the removal of Successional Oldfield and Pastureland communities.
- Develop a tree and shrub planting plan for residential areas in Neighborhoods 1, 2 and 3, which will be built mainly in Pastureland or similar communities.

- Improve the condition of the southern Tree/Shrub community by removing the highly invasive non-native tree-of-heaven stand therein; removing dumped material located therein and planting native trees to replace removed tree-of-heaven.

Potential impacts to the eight species of birds of conservation concern observed or heard on the project site will be avoided, or mitigated as follows:

- Worm-eating warbler, wood thrush, ovenbird, and scarlet tanager are forest interior birds and generally do not breed or forage in the type of habitats where development is proposed on the project site (Andrle and Carroll 1988, *The Atlas of Breeding Birds in New York State*). No development in forest interior areas which would adversely affect these species is proposed.
- Blue-winged warbler nests in a wide range of mid-succession habitats ranging from lightly grazed pasture land with few trees to areas with up to 90% tree cover (Andrle and Carroll 1988). On the project site, blue-winged warbler was heard or seen consistently in shrubby old fields at forest edges. Proposed development generally avoids this habitat complex.
- Bobolink and savannah sparrow, regular inhabitants of project site paddocks and associated grasslands, and may currently attempt to breed, but are likely unsuccessful because of regular mowing of site grasslands associated with the paddocks. Construction of Neighborhood 2 near Wetland B will remove potential breeding habitat for bobolink. However, the proposed conversion of row crops to field/meadowland along the easterly and westerly boundary of wetland A, which will limit mowing during the breeding season of these birds (approximately May to late July) will mitigate the removal of limited areas of their potentially suitable breeding habitat, presently compromised by regular mowing.

Water quality mitigation measures discussed in Water Resources, Section 3.2.3, will, to a great extent, protect reptiles, amphibians and fish found on the site. More specifically, the following mitigation measures will be undertaken:

#### *Reptiles and Amphibians*

- No new equestrian trails will be developed within the outer limit of pool-breeding amphibian Critical Terrestrial Habitat identified as within 750 feet of the edge of important amphibian breeding pools (mole salamander and wood frog breeding pools).
- Areas of proposed construction near water resources such as ponds, wetlands and streams will be cordoned off with properly installed and maintained silt fencing to prevent sedimentation of aquatic resources and to help keep herptiles from entering the construction area. Open trenches, pits, etc. should be properly cordoned off to prevent herptiles and other animals from being trapped therein. Trenches and pits should be kept clear of herptiles (removed by hand or with a large, lidded plastic bucket) and closed as soon as possible.

- All stormwater runoff will be properly treated in accordance with current best management practices before being discharged into a receiving system.
- A summary of existing conditions, proposed conditions and mitigation measures to aid in a USFWS and NYSDEC determination of potential impacts on bog turtles and whether limited activities such as the presence of stormwater management features or roadways within the recommended 300-foot set back adequately protect species of concern. This information is included in Appendix V.

#### *Fish*

- To the extent practicable, initiate required in-stream construction during late summer when stream flow is likely to be low; avoid working during rainy periods.
- Cordon off the in-stream work area and temporarily divert any stream flow using best management practices which minimize generation of sediment plumes.
- Consider widening and deepening the stream slightly and installing a few rock features downstream of the crossing to improve fish habitat.
- Upon completion of construction of the stream crossing, stabilize the banks using bioengineering techniques; e.g., the planting on native shrub wattles and other native plants associated with stream banks; e.g., blue flag (*Iris versicolor*) and cardinal flower (*Lobelia cardinalis*).
- Plant several native shade trees at strategic locations along streambanks, which will eventually shade the stream and help maintain ambient water temperatures.
- Implementation and maintenance of erosion, sedimentation and stormwater controls.
- Avoid the use of deicing compounds on the stream crossing and to the extent practicable, direct span runoff into shallow swales at the foot of the span to treat runoff before it enters the stream.

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