

*Threatened and Endangered Species
Habitat Suitability Assessment Report*

Marlborough Resort
626 Lattintown Road & 255 Ridge Road
Town of Marlborough
Ulster County, NY

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Prepared by:

Michael Nowicki
Ecological Solutions, LLC
121 Leon Stocker Drive
Stratton, VT 05360
(203) 910-4716

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1.0 INTRODUCTION

The 155 acres property located at 626 Lattintown Rd is currently the site of St. Hubert's Lodge & Club, a recreational resort that includes a Bed & Breakfast, lodge, outdoor commercial recreation facility, and kennel. This project proposes to develop and expand on the current hospitality use of the property by re-purposing several of the existing structures and renovating the existing lodge. In addition, several new buildings will be constructed to provide sleeping accommodations, recreational amenities, and other hospitality services. The project will include a hotel and spa, guest cabins, dining rooms, a bar, a distillery and tasting room, small event center, farm market and barbecue, pavilions, recreation space, restroom buildings, staff dorms, a welcome center, and various accessory storage buildings. The project will also include water and sewer extensions, a water storage tank, package wastewater treatment plant, solar arrays, and green infrastructure throughout. Together, these buildings and improvements make up the proposed Resort Hotel use. The plan includes 453 surface parking spaces throughout the property in support of the Resort Hotel use. A small accessory structure on the rear of building 7 will be removed and replaced in the same footprint by an addition. Small accessory structures that are no longer needed will be removed.

The US Fish and Wildlife Service (USFWS) lists the Indiana bat (*Myotis sodalis*), Northern long-eared bat (*Myotis septentrionalis*), Monarch butterfly (*Danaus plexippus*), small whorled pogonia (*Isotria medeoloides*) and the bog turtle (*Glyptemys muhlenbergii*) as federally listed species that may be on the site. The tricolored bat (*Perimyotis subflavus*) is listed as proposed endangered but according to the USFWS this species only needs to be considered if the project includes wind turbine operations.

A field assessment was conducted on July 15, 2024 to review habitats. Habitat cover types are listed in Table 1.

TABLE 1
COVER TYPES IDENTIFIED ON THE SITE

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	4.4	13.9	+9.5
• Forested	49.4	42.9	-6.5
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	33.5	30.4	-3.1
• Agricultural (includes active orchards, field, greenhouse etc.)	31.0	21.1	-9.9
• Surface water features (lakes, ponds, streams, rivers, etc.)	3.1	3.1	0.0
• Wetlands (freshwater or tidal)	30.1	29.9	-0.2
• Non-vegetated (bare rock, earth or fill)	0.0	0.0	0.0
• Other Describe: <u>Lawn</u>	1.1	11.3	+10.2

2.0 HABITAT SUITABILITY ASSESSMENT/CONCLUSION

2.1 Indiana bats

There are several hibernacula currently known in Albany, Essex, Warren, Jefferson, Onondaga and Ulster Counties. To date there are three known hibernacula located in the immediate vicinity of Kingston, New York. The hibernacula are critical to the survival of this species because so few are known to exist. With the coming of spring, Indiana bats disperse from their winter homes, known as hibernacula, some going hundreds of miles. They feed solely on flying insects and presumably males spend the summer preparing for the breeding season and winter that follows. Females congregate in nursery colonies, only a handful of which have ever been discovered. These recently found in the lower Hudson Valley vicinity were located along the banks of streams or lakes in forested habitat, or near existing wetlands that also contain some open water, under the loose bark of shagbark hickories and dead trees, and contained from 50-100 females. A single young is born to each female, probably late in June, and is capable of flight within a month.

Outside the hibernation period, Indiana bats are very mobile and use live and dead trees that contain dead wood in a variety of habitats for roosts during the summer months. Although roosts have been documented in a wide array of hardwood and pine species, trees and snags that have exfoliating bark or crevices, such as shagbark hickory and black locust, appear to be most important to this species because females and their young rest under the bark. Trees, equal to or greater than 9 inches dbh with exfoliating bark/crevices, southern or western exposure, and solar exposure appear to be the most important habitat for maternal colonies during the summer months.

Conclusion - The proposed project requires the removal of 6.5 acres of the total of 49.4 acres of forest on the site. Trees are generally 8-12 inches dbh of varying species with no trees observed to possess exfoliating or peeling bark, or holes, or crevices.

The project sponsor proposes to avoid, minimize, and mitigate impacts by:

- Seasonally restricting construction including tree clearing and grubbing to avoid direct mortality of roosting Indiana bats from October 1 to March 31 and utilizing orange snowfencing to demarcate wooded area to remain so these areas are not inadvertently cleared;
- Implementing soil conservation and dust control best management practices, such as watering dry disturbed soil areas to keep dust down, and using staked, recessed silt fence and anti tracking pads to prevent erosion and sedimentation in surface waters on the site, and;
- Minimizing site lighting by having light fixtures only on the buildings that have tops to direct light downward.

These measures will result in avoiding and minimizing impacts that may affect Indiana bats.

2.2 Northern long-eared bat

Winter Habitat: Same as the Indiana bat northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible.

Summer Habitat: During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns and sheds.

Feeding Habits: Northern long-eared bats emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leahoppers, caddisflies, and beetles, which they catch while in flight using echolocation. This bat also feeds by gleaning motionless insects from vegetation and water surfaces.

Conclusion - The northern long eared bat requires/occupies practically the same habitat niche as the Indiana bat. Impacts to habitat and mitigation measures proposed are similar to that required for the Indiana bat.

2.3 Bog turtle

According to the U.S. Fish and Wildlife Service, in the 2001 Bog Turtle (*Clemmys muhlenbergii*), Northern Population Recovery Plan. Hadley, Massachusetts. 103 pp. last revised on April 13, 2006 bog turtle habitat is recognized by three criteria:

1. **Suitable hydrology.** Bog turtle wetlands are typically spring-fed with shallow surface water or saturated soils present year-round, although in summer the wet area(s) may be restricted to near spring head(s). Typically these wetlands are interspersed with dry and wet pockets. There is often subsurface flow. In addition, shallow rivulets (less than 4 inches deep) or pseudo-rivulets are often present.
2. **Suitable soils.** Usually a bottom substrate of permanently saturated organic or mineral soils. These are often soft, mucky-like soils (this does not refer to a technical soil type); you will usually sink to your ankles (3-5 inches) or deeper in muck, although in degraded wetlands or summers of dry years this may be limited to areas near spring heads or drainage ditches. In some portions of the species' range, the soft substrate consists of scattered pockets of peat instead of muck.
3. **Suitable vegetation.** Dominant vegetation of low grasses and sedges (in emergent wetlands), often with a scrub-shrub wetland component. Common emergent vegetation includes, but is not limited to: tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumbs (*Polygonum spp.*), jewelweeds

(*Impatiens spp.*), arrowheads (*Sagittaria spp.*), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum spp.*), other sedges (*Carex spp.*), spike rushes (*Eleocharis spp.*), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Dasiphora fruticosa*), sweet-flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*) or purple loosestrife (*Lythrum salicaria*). Common scrub-shrub species include alder (*Alnus spp.*), red maple (*Acer rubrum*), willow (*Salix spp.*), tamarack (*Larix laricina*), and in disturbed sites, multiflora rose (*Rosa multiflora*). Some forested wetland habitats are suitable given hydrology, soils and/or historic land use. These forested wetlands include red maple, tamarack, and cedar swamps.

Conclusion - The wetland on the site is a complex of forested wetland and a pond area and is not considered bog turtle habitat. There is no habitat on the site consistent with the bog turtle federal recovery plan (U.S. Fish and Wildlife Service, 2001): 1) soft, saturated organic and/or mineral soil; 2) hydrologic regime derived from perennial groundwater discharge; 3) plant community represented by a predominance of low-growing, native flora including sedges, rushes, grasses, forbs, mosses, and sometimes low shrubs; 4) tree canopy cover less than 50% allowing adequate sunlight to reach the ground, and 5) Fen indicator plants (calcicoles) including, shrubby cinquefoil (*Pentaphylloides floribunda*), grass-of-parnassus (*Parnassia glauca*), and tamarack (*Larix laricina*).

Soils in the wetland at the western section of the site are sufficiently mucky and are probably groundwater fed although no seeps, springs, or rivulets were observed to meet some of the criteria to be potential bog turtle habitat. However this wetland is heavily forested with only small openings and is not considered bog turtle habitat.

2.4 Small whorled pogonia

The small whorled pogonia is a member of the orchid family. It usually has a single grayish-green stem that grows about 10 inches tall when in flower and about 14 inches when bearing fruit. The plant is named for the whorl of five or six leaves near the top of the stem and beneath the flower. The leaves are grayish-green, somewhat oblong and 1 to 3.5 inches long. The single or paired greenish-yellow flowers are about 0.5 to 1 inch long and appear in May or June. The fruit, an upright ellipsoid capsule, appears later in the year. This orchid grows in older hardwood stands of beech, birch, maple, oak, and hickory that have an open understory. Sometimes it grows in stands of softwoods such as hemlock. It prefers acidic soils with a thick layer of dead leaves, often on slopes near small streams.

Conclusion - There is no potential habitat for this species since there is no older growth forest on the site.

2.5 Monarch butterfly

Monarchs, like all other butterflies and moths, go through egg, larval (caterpillar), chrysalis (pupa), and adult stages. Monarch caterpillars ingest milkweed that contains a toxic compound. The presence of this toxin is used by the monarch butterfly as a defense against predators.

In late August, masses of monarch butterflies begin an epic migration stretching thousands of miles from areas across the United States and as far north as Canada (east of the Rocky Mountains) to overwinter in mountaintops of Central Mexico.

Conclusion – There is field habitat and potential habitat for the monarch butterfly on the site. Open field areas will remain and will continue to serve as habitat.

3.0 PHOTOGRAPHS

Forested wetland on the site



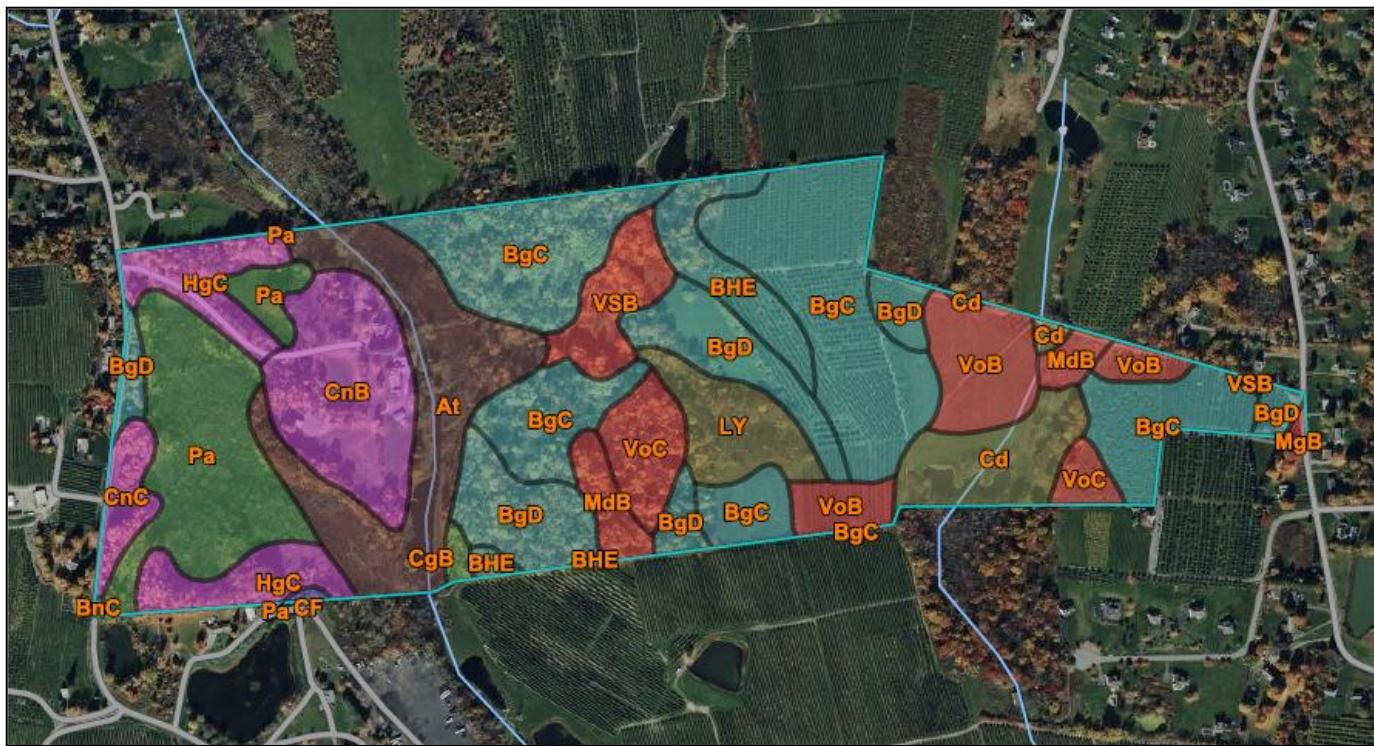
Wetland on the site



Figure 1 Location Map



Figure 2 - Soils Map



Map unit symbol	Map unit name
At	Atherton silt loam
BgC	Bath gravelly silt loam, 8 to 15 percent slopes
BgD	Bath gravelly silt loam, 15 to 25 percent slopes
BHE	Bath very stony soils, steep
BnC	Bath-Neesau complex, 8 to 25 percent slopes
Cd	Cenendagua silt loam, till substratum
CF	Cut and fill land
CgB	Castile gravelly silt loam, 3 to 8 percent slopes
CnB	Chenango gravelly silt loam, 3 to 8 percent slopes
CnC	Chenango gravelly silt loam, 8 to 15 percent slopes
HgC	Hoosic gravelly loam, rolling
LY	Lyons-Atherton complex, very stony
MdB	Mardin gravelly silt loam, 3 to 8 percent slopes
MgB	Mardin-Neesau complex, 3 to 8 percent slopes
Pa	Palms muck
VoB	Volusia gravelly silt loam, 3 to 8 percent slopes
VoC	Volusia gravelly silt loam, 8 to 15 percent slopes
VSB	Volusia channery silt loam, 0 to 8 percent slopes, very stony