Habitat and Biodiversity Survey Report

Clear Property, 515 Woodstock Road, Millbrook, Town of Washington, Dutchess County, NY

Prepared for

LRC Group

16 July 2024

Edgewood Environmental Consulting, LLC

Thinking outside.

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Habitat and Biodiversity Survey Report

Clear Property, 515 Woodstock Road, Millbrook, Town of Washington, Dutchess County, NY

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ACRONYMS AND ABBREVIATIONS

Name	Description
Ac	Acre
AMSL	Above mean sea level
CEA	Critical Environmental Area
cm	Centimeter
CWA	Clean Water Act
ERM	Environmental Resource Mapper
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GPS	Global Positioning System
HUC-12	12-digit Hydrologic Unit Code
In	Inches
LLC	Limited Liability Corporation
m	Meter
NHD	National Hydrography Dataset
NWI	National Wetlands Inventory
NY	New York
NYSDEC	New York State Department of Environmental Conservation
NYSECL	New York State Environmental Conservation Law
TNW	Traditionally Navigable Water
USA	United States of America
USACE	United States Army Corps of Engineers
USFWS	United States Fish & Wildlife Service
WGS84	World Geodetic System 1984 (geodetic datum)
WOTUS	Waters of the United States
WUI	Wetlands of Unusual Importance

1. INTRODUCTION

Tim and Johna Clear are planning to subdivide their ±90.87-acre property located at 515 Woodstock Road, Millbrook, NY. Planning for this subdivision requires appropriate environmental due diligence to determine if the property contains any regulated or sensitive environmental elements which could influence how the property is subdivided. Therefore, Edgewood Environmental Consulting, LLC (Edgewood) was retained by LRC Group to identify and delineate wetlands and waters, and to inventory biodiversity and natural resources on the site.

Edgewood completed a desktop data review to discover any published data on site conditions and natural resources on the site. Edgewood then visited the site several times between 29 April and 24 May 2024 to delineate wetlands, identify and map ecological communities, assess potential habitats for listed threatened and endangered species, and identify plant and animal species on the site. Multiple methods were used to survey the site for wildlife, as multiple method and multiple observer methods increase probability of detection of wildlife species.

This report summarizes the methods used in this study, and the findings of the desktop data review and field surveys. The wetland delineation is summarized herein, but is documented in greater detail under separate cover. The data and observations presented in this report provide baseline data for assessing potential environmental impacts of proposed changes in land use on the site.

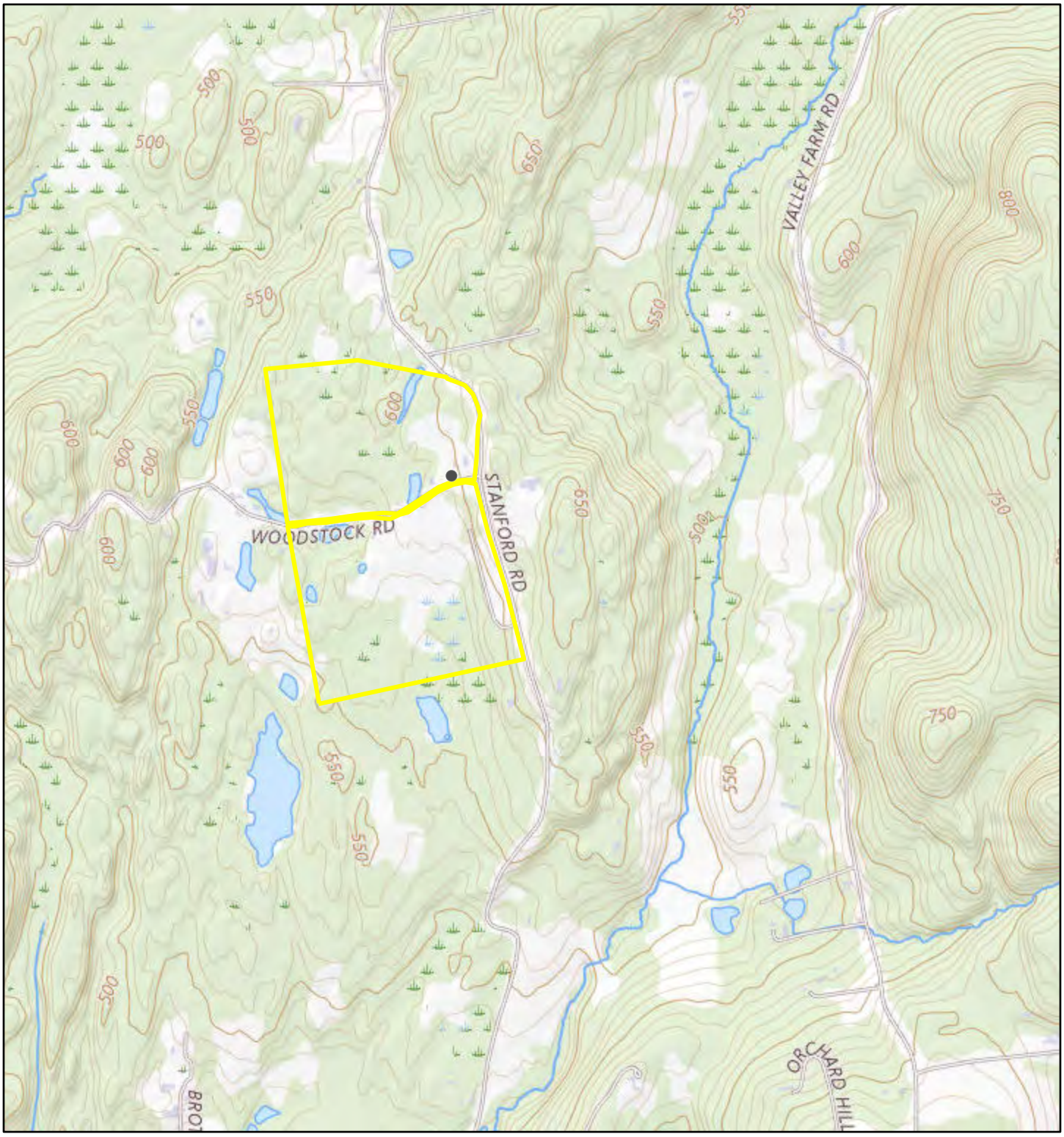
2. SITE LOCATION AND DESCRIPTION

The Study Site was a ±90.87-ac property located on the north and south sides of Woodstock Road, immediately west of Stanford Road, in the Millbrook post office, Town of Washington, Dutchess County, New York (Study Site). The Study Site centroid coordinates were 41.811844°N, 73.708961°W (WGS84 datum, NY State Plane projection). The center of the parcel was located at elevation of 580 feet above mean sea level (AMSL), but sloped gently down to the south and southwest of Woodstock Road to a low elevation of 550 feet AMSL, and up toward Stanford Road to a high point of 620 feet AMSL, just south of Woodstock Road. Topography on the site could be described as a rolling mosaic of small knolls or knobs and depressions. Reference is made to the Site Location Map in ***Figure 1***.

The northern portion of the Study Site, north of Woodstock Road, contained one single-family residential house on the north side of Woodstock Road (#515) with multiple associated outbuildings (*e.g.*, barns, sheds, coops etc.). The southeastern corner of the property north of Woodstock Road was occupied by a large pole barn and smaller agricultural structures, as well as fenced pens for livestock. North of these buildings was a fenced meadow that was probably previously used as a pasture. The western 2/3 of the northern part of the Study Site was divided into mature hardwood forest to the north, a small meadow area in the middle, and a successional shrubland and hardwood forest along the north side of Woodstock Road.

South of Woodstock Road contained another single-family dwelling (#525), which also had several small outbuildings/sheds. West of the house was a mowed lawn and a pond, surrounded by scrub-shrub wetland and shallow emergent marsh habitats. South of the house was a mosaic of successional hardwood forest, conifer plantation, a variety of successional stages (old field, shrubland, and forest), and forested swamp. East of the house was a lawn,

Figure 1. Site Location Map



Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

N

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Legend:

Property Boundary

Edgewood Environmental Consulting, LLC

2021 USGS

and large area of successional old field that formerly used as pasture. South of this pasture was a large wetland complex with multiple successional stages (marsh, shrub-swamp, forested swamp) . East of this wetland complex, the land sloped up to Stanford Road, and was made up of a mixture of successional old fields (former fenced pastures) and successional hardwood forest patches. Edgewood identified 18 ecological cover types on the Study Site, as classified in *Ecological Communities of New York State, Second Edition* (Edinger, *et al*., 2014), which are described in Section 4.2.1. The layout of the property is illustrated in ***Figure 2. Aerial Orthophoto Site Map***

3. METHODS

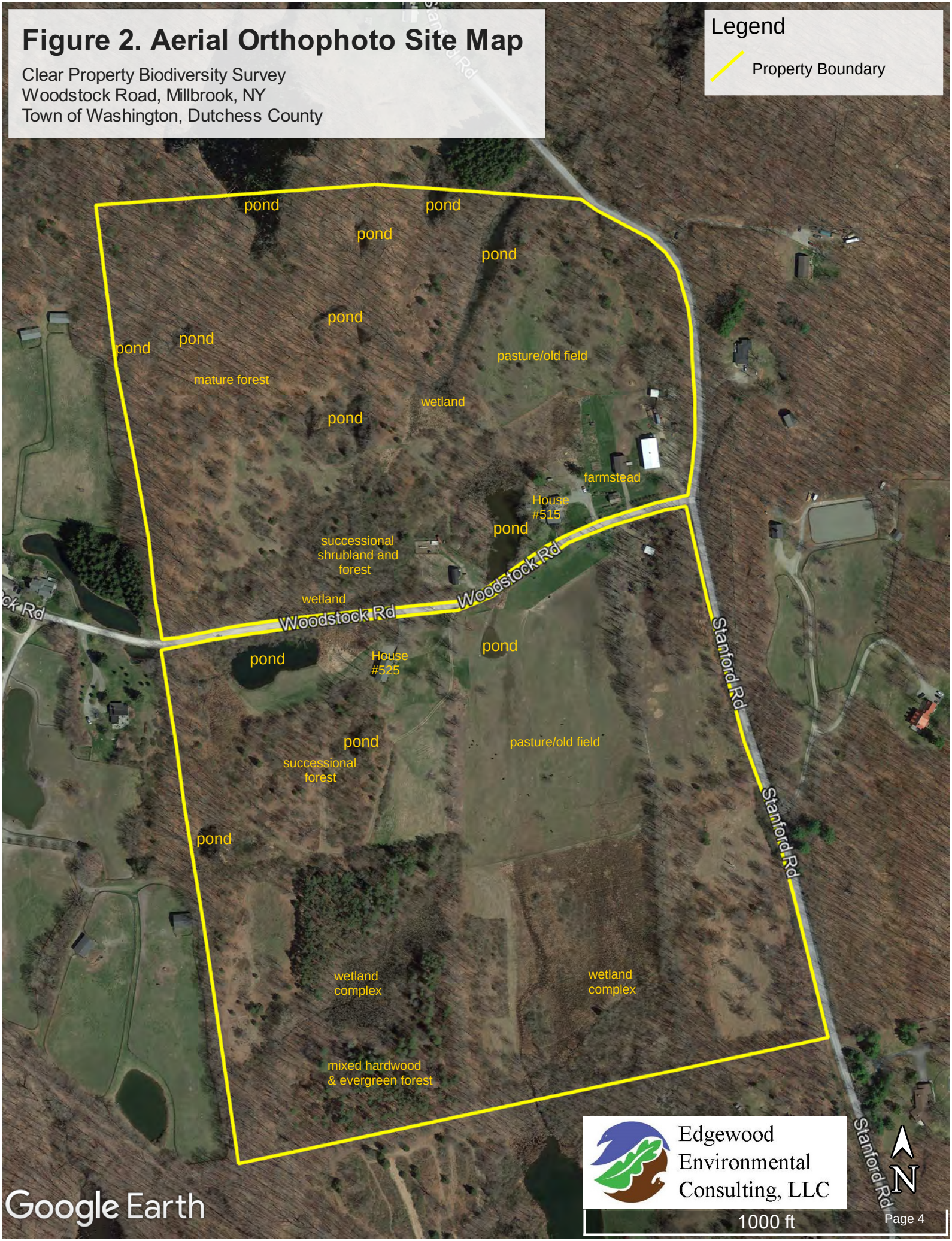
3.1 Desktop Data Review

Edgewood reviewed a variety of data from online sources to determine site conditions, topography, drainage, soils, and ecological communities, wetlands, as well as known records of listed threatened or endangered, or otherwise protected species on or near the Study Site. The data review was organized by Landscape and Soils, Wetlands and Waters, and Protected Species. These data provided a foundation of information about the Study Site and informed the planning and execution of field reconnaissance to ground truth site conditions. Desktop and online data sources that were reviewed included:

- U.S. Geologic Survey Topographic Maps
    - Landscape topography, slopes, watercourses, and landscape features
- Aerial orthophotos (Google Earth Pro)
    - Ecological cover types, buildings, landscape features
- National Wetland Inventory Maps
    - Known potential federal wetlands
- National Hydrography Dataset
    - Connectivity and flow directions of surface waters
- Federal Emergency Management Agency Flood Insurance Rate Maps
    - Occurrence and extent of 1% and 0.02% chance flood zones
- Web Soil Survey
    - Soil types and characteristics
- Critical Environmental Areas (CEA)
    - Areas designated by NYSDEC or local governments as areas of critical environmental significance
- Town of Washington Agricultural Resources
    - Agriculturally important soils
- New York State Freshwater Wetland Maps
    - Known current state-regulated wetlands
- Town of Washington Wetland Maps
    - Known current town-regulated wetlands
- USFWS's Information for Planning and Consultation
    - Known or modeled occurrence of threatened or endangered species

Figure 2. Aerial Orthophoto Site Map

Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County



- NYSDEC's Environmental Resource Mapper and Environmental Assessment Form (EAS) Mapper
    - Occurrences of listed threatened/endangered species and other resources

3.2 Field Survey

Edgewood visited the site over the course of six days (29 April-2 May and 23-24 May 2024) to identify and delineate wetlands and other ecological community types (habitats), assess potential habitats for listed species, and to catalog plant and animal species observed by direct observation.

3.2.1 Wetland Delineation Method

Edgewood delineated wetlands using the Routine Delineation Method outlined in the 1987 *United States Army Corps of Engineers (USACE) Wetlands Delineation Manual*, as amended by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (USACE 2012) (Federal Manual). This involved visually sampling vegetation, hydrology, and soil profiles to determine the location at which all three of those elements predominantly indicated the presence of wetlands, and where such predominance was no longer evident, indicating uplands. Sampling was conducted along one transect in each wetland boundary cover type that consisted of at least two (2) sample points: one within the wetland area, and one in the adjacent upland area. Such data points indicated the location on the landscape at which the land transitioned from predominantly wetland to predominantly upland. Wetland boundary flags were plotted with a sub-meter-accurate global positioning system (GPS) unit to accurately plot wetland boundaries on site maps and plans.

Wetlands were also visually searched for amphibian egg masses as part of the biodiversity survey, as well as to determine whether any vernal pool wetlands might qualify as Wetlands of Unusual Importance (WUI) under NYSDEC's proposed 2025 wetland definitions. The wetland delineation was documented in a separate report.

3.2.2 Listed and Candidate Species Assessments

Edgewood assessed the Study Site for general habitat characteristics for listed and candidate species identified in the IPaC Resource List (***Appendix A***). This assessment included a federal protocol Phase 1 Habitat Survey for Indiana bats and Northern Long-eared Bats, but only a general characterization of potential habitats for Bog Turtle and Monarch Butterfly.

3.2.2.1 Indiana Bat and Northern Long-eared Bat

Bat habitat on the Study Site was assessed in a two-step process consisting of desktop data review and field reconnaissance. Desktop data review included reviewing online data sources for information about bat species occurrences on or near the Study Area, and reviewing remote sensing imagery (Google Earth Pro, Google, LLC, Mountain View, CA, USA) to preliminarily identify habitat types and distribution on the Study Area. Google Earth was also used to identify and measure distances to the nearest public forested lands (parks, wildlife management areas, etc.), and potential forest habitat connective corridors among adjacent habitat areas.

Edgewood also reviewed online data resources and prior published records regarding bat occurrences on the Study Site. These included the USFWS's online Information for Planning and Consultation (IPaC) system (***Appendix A***) and the New York State Department of Environmental Conservation's (NYSDEC) online Environmental Resource Mapper (***Figure 11***).

The desktop data review was followed by field reconnaissance, in which habitats on the Study Site were identified, classified per Edinger, *et al.* (2014). Ground level photographs were taken of representative habitats on the Study Area, as well as habitat features that indicated potential bat habitat resources. Indiana Bat Habitat Assessment Data Sheets (also applicable to northern long-eared bats) were completed to document the assessment. Observations and ocular estimates were made of habitat characteristics at multiple spatial scales, including vegetation cover types on and adjacent to the Study Area, connective corridors to adjacent and regional habitat patches, wetland and water resources onsite, percent canopy cover, distribution of tree size classes, dominant tree species, and cover density by canopy level.

3.2.2.2 Bog Turtle

Bog Turtle habitat assessments were preliminary in nature and although they were based on the Phase I Habitat Assessment criteria outlined in, *Guidelines for Bog Turtle Surveys for the Northern Population Range* (hereafter, *Guidelines*; USFWS, 2020), they were not a fully federal protocol-compliant Bog Turtle habitat assessment. The intent of this assessment was to determine if general wetland conditions existed on the Study Site that might justify a more in-depth habitat evaluation.

Edgewood's preliminary Bog Turtle habitat assessment included searching for the three basic habitat criteria that define Bog Turtle Habitat: suitable hydrology, suitable soils, and suitable vegetation, as described in the *Guidelines*. If potential habitat was observed, it was photographed and described, so that further investigation could be implemented later, if necessary.

3.2.2.3 Monarch Butterfly

Monarch Butterflies rely on early successional habitats for foraging and migration, and relay strongly on Common Milkweed (*Asclepias syriaca*) for breeding and metamorphosis, although other milkweed species may be used as well. Therefore, Edgewood searched early successional habitats for patches of milkweed plants, especially Common Milkweed.

3.2.3 General Flora and Fauna Surveys

Flora and fauna were observed by random walk encounter surveys conducted by two observers that noted direct observations of species, as well as wildlife sign (tracks, droppings, or other signs left behind by animals). In addition, two game cameras (Wildgame Innovations Model T68221, GSM Outdoors, Irving, TX) were deployed on the site along apparent wildlife travel corridors to passively capture evidence of wildlife use. One acoustic bat detector (Song Meter MiniBAT, Wildlife Acoustics, LLC, Maynard MA) was also deployed along a large wetland/pond at the north end of the Study Site to passively sample bat calls to identify bats to species. Multiple observer/multiple method surveys are considered more likely to detect more species than single observer or single methods surveys.

4. FINDINGS

4.1 Desktop Data Review

4.1.1 Landscape and Soils

4.1.1.1 U.S. Geologic Survey Topographic Maps

Review of the U.S. Geologic Survey (USGS) Topographic Maps (***Figure 1***) revealed topographic elevations, slopes and drainage patterns, presence of some water bodies and wetland areas. Elevation at the center of the site, along Woodstock Road was ±580 feet AMSL. The site sloped up to the northeast and east to a maximum elevation of ±620 feet AMSL, and down to the east and south to low points of about 550 feet AMSL. Both the northern and southern portions of the site drained generally to the southwest and south. Surface water bodies were indicated in the northeast corner of the Study Site, as well as immediately north of Woodstock Road, west of house #515, immediately south of Woodstock Road, west of house #525, and two small ponds were indicated south and southwest of house #525. None of these ponds were associated with any perennial or intermittent streams as inlets or outlets, but wetland symbols were indicated in the north central area and the south-central area of Study Site.

4.1.1.2 Aerial Orthophotos

Figure 2 indicates that most of the western half of the site is dominated by forest and shrubland cover, whereas the eastern half of the site is predominantly open land (former pasture/currently old field). This corresponds with the previous use of the property as a livestock farm, which primarily occupied the eastern half of the site. The ponds indicated on the USGS Topographic Maps (Figure 1) are also evident, but additional water bodies are indicated in the northwest quadrant of the site, as well as immediately west and southwest of house #515. Several smaller ponds are indicated below the tree canopy in the woods in the northwest portion of the Study Site, suggesting the possibility of vernal or woodland pools on the site. Two large wetland complexes are shown across the southern end of the site, and another forested wetland is indicated north of Woodstock Road, northwest of house #525.

4.1.1.3 Soils Map

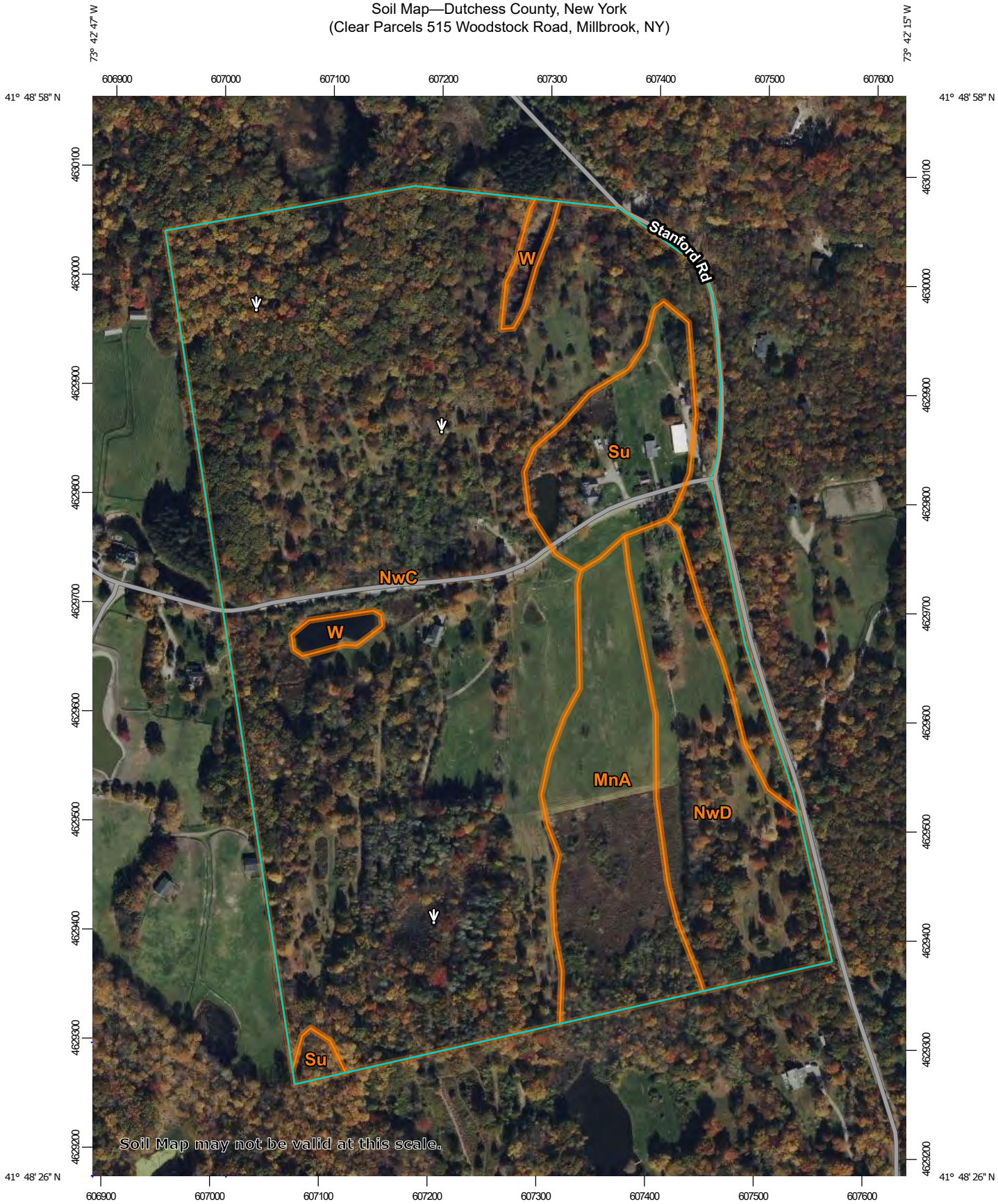
Figure 3. Soils Map indicates four soil types on the Study Site. These soil types include:

- Massena silt loam, 0 to 3 percent slopes (MnA)
- Nassau-Cardigan complex, rolling, very rocky (NwC)
- Nassau-Cardigan complex, hilly, very rocky (NwD)
- Sun silt loam (Su)

Massena silt loam (MnA) was designated as a Prime Farmland Soil, if Drained, and Sun silt loam (Su) was designated as a Farmland Soil of Statewide Importance. Sun silt loam was also considered to be a hydric soil, being saturated for a sufficient period of time during the growing season to render it anaerobic and capable of supporting wetland vegetation. The Nassau-Cardigan complex (NwC and NwD) soils were better drained and rocky, but areas mapped as Nassau-Cardigan complex did support a number of wetlands, possibly in unmapped hydric soil inclusions. The wetland symbols in ***Figure 3*** indicated estimated locations of larger wetland complexes on the site, but did not indicate all the wetlands found on the site.

Figure 3. Soils Map

Soil Map—Dutchess County, New York
(Clear Parcels 515 Woodstock Road, Millbrook, NY)



Map Scale: 1:4,820 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800

Map projection: Web Mercator Corner coordinates: WGS84

Soil Types:

MnA - Massena silt loam, 0 to 3 percent slopes
NwC - Nassau-Cardigan complex, rolling, very rocky
NwD - Nassau-Cardigan complex, hilly, very rocky
Su - Sun silt loam
W - Water

Legend

Study Site Boundary
Soil Type Boundary
Wetland Symbol

Edgewood Environmental Consulting, LLC

4.1.1.4 Town of Washington Agricultural Resources

Figure 4. Town of Washington Agricultural Resources Map indicates Farmland Soils Classes and properties that received Dutchess County Agricultural Value Assessments. According to Figure 4, the Study Site did receive a Dutchess County Agricultural Value Assessment, and contained both Farmland Soils of Statewide Importance (Sun silt loam) and Prime Farmland Soils, if Drained (Massena silt loam, 0 to 3 percent slopes). The Study Site is located in Dutchess County Agricultural District #021.Wetlands and Waters

4.1.1.5 National Wetland Inventory

Wetlands that are included under the Clean Water Act's (CWA) definition of Waters of the United States (WOTUS) are regulated under that act. Edgewood reviewed the USFWS's National Wetland Inventory (NWI) Map (***Figure 5***) to determine whether such federal-jurisdictional wetlands were previously mapped on or in the vicinity of the Study Site. NWI Maps illustrate the location of wetlands that were identified by remote sensing techniques, so they are intended to be an approximate indication of the location and extent of wetlands on the landscape. Federally-regulated wetlands do not have a minimum size, and must be identified in the field by three (3) criteria: wetland hydrology, wetland vegetation, and wetland (hydric) soils. Whether or not a wetland is mapped on the NWI has no bearing on whether it is regulated under the CWA. In order for a wetland to be regulated under the CWA, it must meet the current definition of WOTUS, based on the *Sackett v. USEPA* Supreme Court decision, which is defined as:

(1) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide (Traditional Navigable Waters, or TNWs);

(2) The territorial seas; or

(3) Interstate waters;

(4) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under (7) below;

(5) Tributaries of waters identified in (1) through (4), above:

   a. That are relatively permanent, standing or continuously flowing bodies of water;

(6) Wetlands adjacent to the following waters:

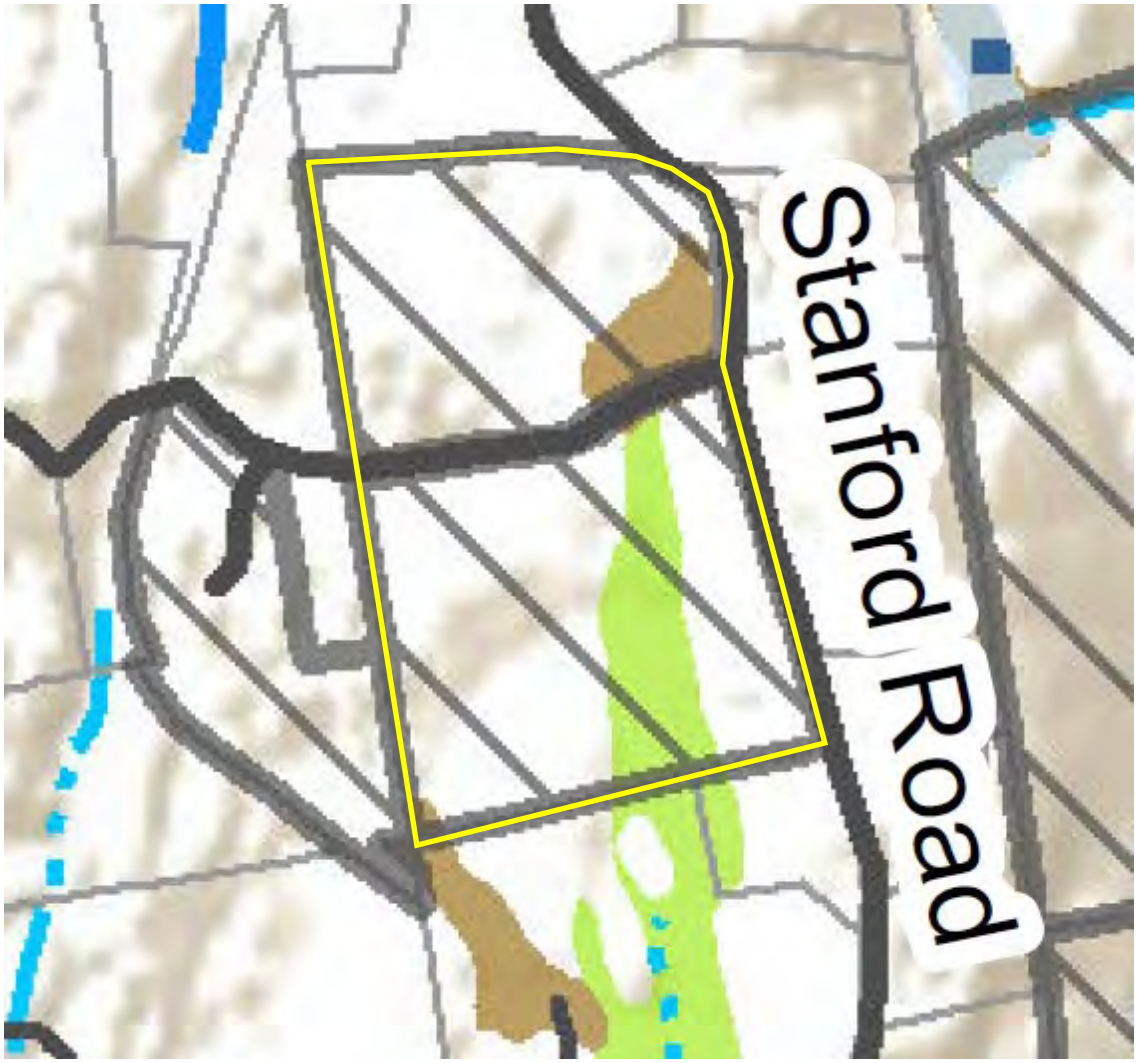
   a. Waters identified in (1), above; or

   b. Relatively permanent, standing or continuously flowing bodies of water identified in (4) or (5), above, and with a continuous surface connection to those waters; or

(7) Intrastate lakes and ponds, streams, or wetlands not identified in (1) through (6), above, that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in (1) through (5), above.

Therefore, in order for a wetland to be regulated as a WOTUS under the CWA, it must have a continuous surface connection to any of the surface waters defined above to be regulated under the CWA.

Figure 4. Town of Washington Agricultural Resources Map



Legend

- Washington Boundary
- Municipal Boundary
- Parcel Boundary
- Taconic State Parkway
- Major Road
- Local Road
- Waterbody
- Perennial Stream
- Intermittent Stream
- Wetland
- Study Site Boundary
- Parcel receiving Dutchess County Agricultural Value Assessment

Farmland Soil Class

- Prime farmland
- Farmland of statewide importance
- Prime farmland if drained

Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

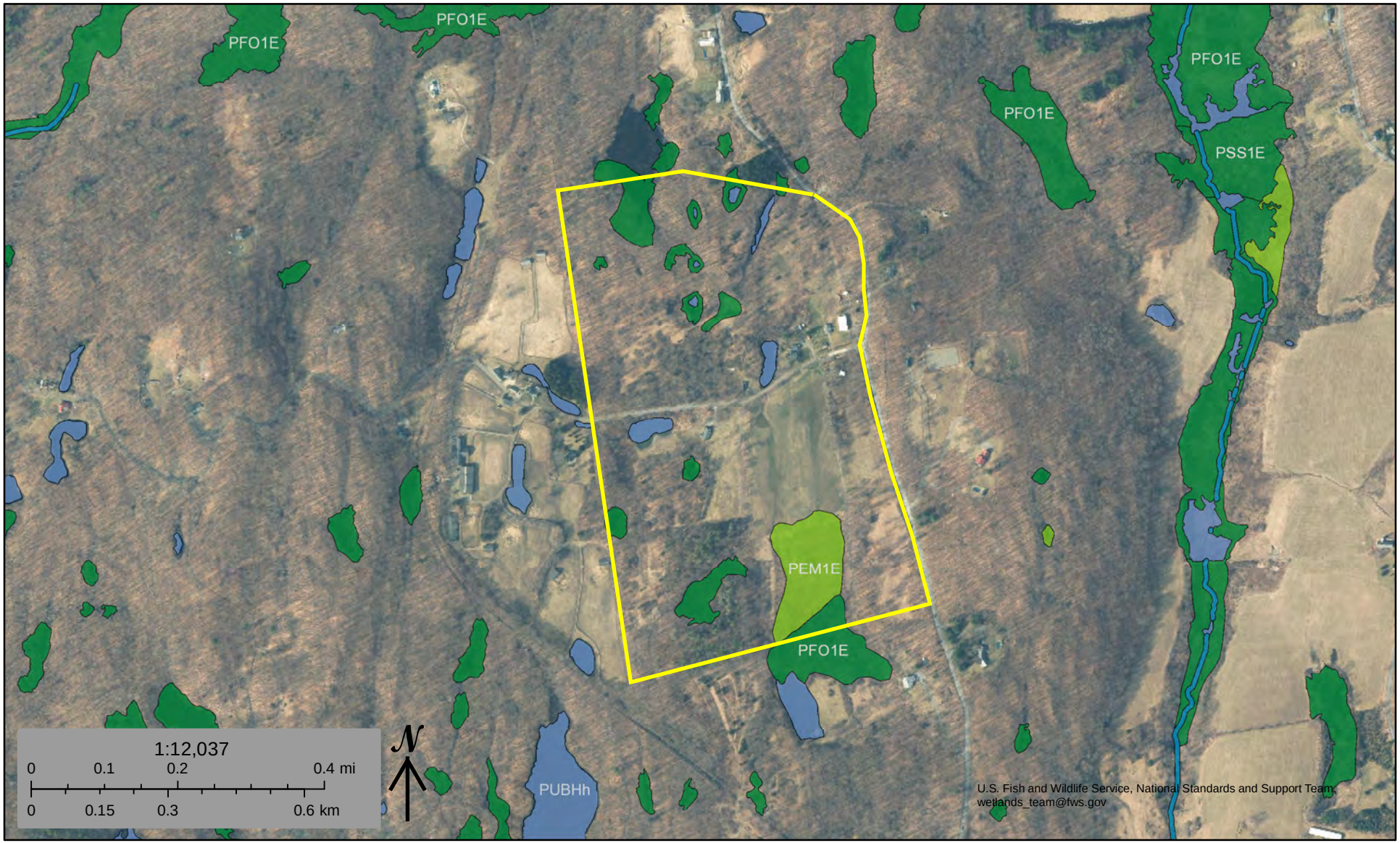
N

Edgewood Environmental Consulting, LLC

Source: Town of Washington Agricultural Resources Map. Enlarged to show detail.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 5. National Wetland Inventory Map



Clear Property Biodiversity Study
Woodstock Road, Millbrook, NY
Town of Washington
Dutchess County

Legend

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Study Site Boundary

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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The NWI (***Figure 5***) indicated 12 forested/shrub wetlands, one large freshwater emergent wetland, and 5 freshwater ponds on the Study Site. None of these wetlands were mapped contiguous with perennial or intermittent watercourses that connected them via surface waters to any TNW or other water defined above. This suggests that wetlands on the site do not have continuous surface connections to TNWs, and are therefore not subject to regulation under the CWA.

4.1.1.6 National Hydrography Dataset

The National Hydrography Dataset (NHD) illustrates the flow and connections of surface waters. Data from the NHD indicate how a wetland drains and its association with surface waters, as well as how it may or may not connect to interstate waters. This information is used to determine a wetland's status as a water of the United States (WOTUS), which would make it a regulated feature under the CWA. ***Figure 6. National Hydrography Dataset Map*** illustrates the local surface waters and their connections to TNWs and other waters. These maps were used to determine whether a physical surface connection existed between wetlands on the Study Site and TNWs in the region. The NHD map indicated that none of the wetlands or ponds on the Study Site were connected via surface waters to any TNWs offsite.

4.1.1.7 Federal Emergency Management Agency Flood Insurance Rate Maps

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) (***Figure 7***) indicate the extent of known 100-year flood plains along perennial watercourses. A 100-year floodplain has a 1% chance of flooding annually, and a 500-year floodplain has 0.2% chance of flooding annually. Any construction within a 100-year floodplain must meet certain criteria to remain eligible for federal flood insurance protection. The FIRM for the Study Site (***Figure 7***) was reviewed to determine whether the Site fell within a potential flood hazard area.

Figure 7 illustrates that the Study Site was located in an area of minimal flood hazard (Zone X). This means that the property does not fall within 100-year or 500-year flood plains of any waterway.

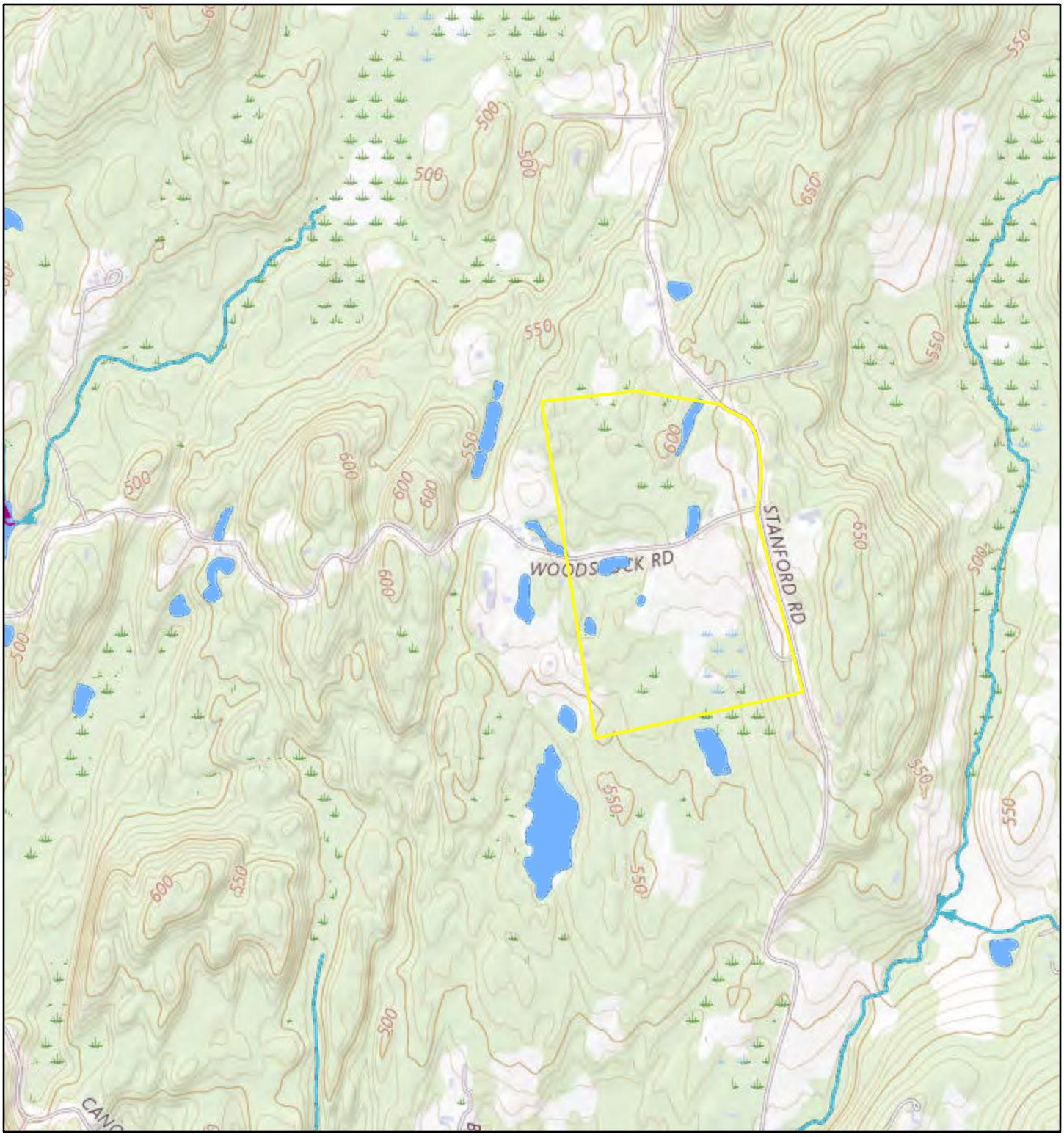
4.1.1.8 NYSDEC Freshwater Wetland Maps

NYSDEC currently regulates wetlands greater than 12.4 acres in area that are mapped on their Freshwater Wetland Maps, prepared pursuant to Article 24 of the New York State Environmental Conservation Law (NYSECL), the Freshwater Wetlands Act. They may also regulate wetlands that fall within 50 meters of such mapped wetlands, or that are hydrologically connected thereto. In addition, NYSDEC also regulates a 100-foot-wide area adjacent to state-regulated wetlands.

Edgewood reviewed the NYSDEC's online Environmental Resource Mapper (ERM), which includes plots of NYSDEC-regulated wetlands from the New York State Freshwater Wetland Maps (***Figure 8***. ***NYSDEC Freshwater Wetlands Map***). No NYSDEC Freshwater Wetlands are mapped on, within 50 meters of, or hydrologically connected to any wetlands on the Study Site. The nearest mapped NYSDEC-regulated wetland is located more than 1,000 feet from the Study Site boundary. Therefore, any wetlands identified on the Study Site are not currently regulated under NYSECL Article 24, the Freshwater Wetlands Act.

However, NYSDEC currently has proposed regulations that will change the definition of regulated wetlands in the state. The new regulations, set to take effect on January 1, 2025, will consider all wetlands greater than 12.4 acres (5 hectares) in area as regulated, whether or not they are mapped on the NYSDEC Freshwater Wetland Maps. On January 1, 2028, the definition

Figure 6. National Hydrography Dataset Map



Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
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1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Legend

- Study Site Boundary
- Watercourse and Flow Direction
- Pond/Lake

Edgewood Environmental Consulting, LLC

Figure 7. FEMA Flood Insurance Rate Map (FIRM)

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

525 Woodstock Road

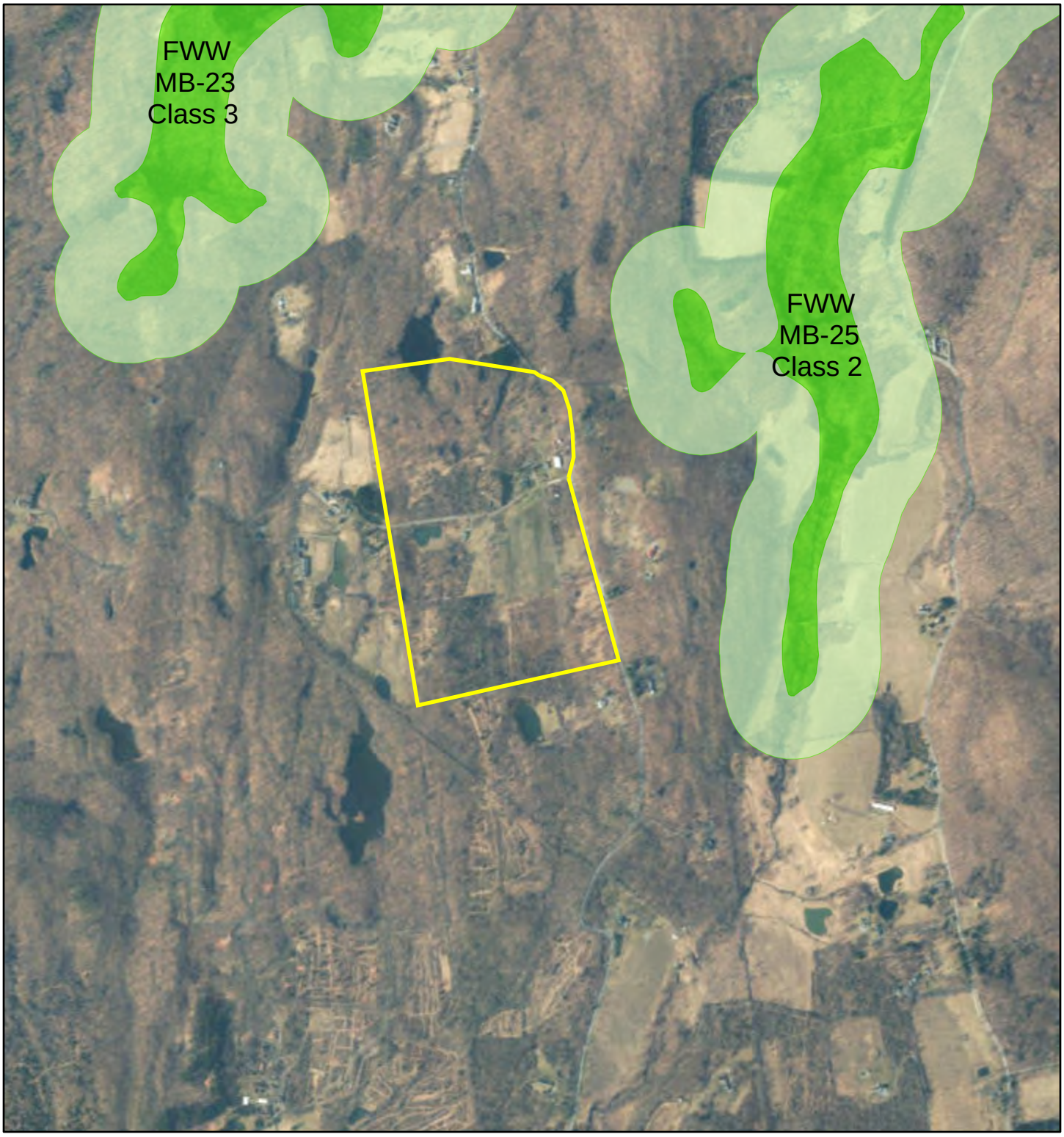
Study Site Boundary

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/26/2024 at 6:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 8. NYSDEC Freshwater Wetland Map



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N

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Legend:

- Study Site Boundary
- Mapped NYSDEC Freshwater Wetland
- NYSDEC Freshwater Wetland Check Zone

Edgewood Environmental Consulting, LLC

will include wetlands down to 7.4 acres in area. In addition, wetlands smaller than 12.4 acres in area may be regulated if they are considered to be of unusual importance. Wetlands of Unusual Importance (WUI) may be designated by any of the following 11 criteria:

1. Located in a 12-digit Hydrologic Unit Code (HUC) that meets three specific criteria that indicate significant flooding risk
2. Located in an urban area, as defined by the U.S. Census Bureau
3. Contains rare plants: contains a plant species occurring in fewer than 35 sites statewide, or having fewer than 5,000 individuals statewide, as documented by NYSDEC
4. Rare Wildlife: meets one or more of the following criteria for rare wildlife, as documented by NYSDEC:
    - Contains habitat for an essential behavior of a species listed as endangered, threatened, or special concern
    - Contains habitat for an essential behavior of a species of greatest conservation need listed in the New York State Wildlife Action Plan (Sept. 2015), with habitat loss having been identified by the department as a moderate to very high threat to New York populations.
5. The wetland is classified as a Class I wetland by NYSDEC.
6. The wetland was previously identified as a Wetland of Unusual Local Importance
7. Is on NYSDEC's list of vernal pools or vernal pool complexes known to be productive for amphibian breeding.
    - In the Hudson-Mohawk Region, it must have 25 or more spotted salamander egg masses, 10 or more wood frog egg masses, 20 or more Jefferson's or blue spotted, or hybrid salamander egg masses, or one or more marbled salamander egg masses.
8. Located in an area designated as a floodway on the most recent Digital Flood Insurance Rate Map (DFIRM) produced by the Federal Emergency Management Agency (FEMA)
9. It was previously mapped by NYSDEC as a freshwater wetland before 31 December 2024
10. Is a wetland of local or regional significance
    - Wetland must be located within a designated Critical Environmental Area (CEA) with specific reference to wetland protection by local government, or must be located within the Adirondack Park.
11. It is considered important for protection of New York State's water quality

None of the wetlands on the site are 12.4 acres or larger (including estimated area of connected offsite wetlands), so none of the wetlands on the site are likely to be considered NYSDEC-regulated wetlands on January 1, 2025, unless they can be designated as WUI. Wetland A is 7.67 acres in area on the site, and this wetland also extends offsite. Therefore, it is large enough to meet NYSDEC's proposed regulatory criteria to be a state-regulated freshwater wetland on January 1, 2028, because it is greater than 7.4 acres in area.

Based on NYSDEC's latest (released 10 July 2024) proposed criteria for WUI designation, several wetlands on the Study Site could potentially be designated as WUI for meeting the proposed criterion for Rare Animals (§664.6(d)). Per §664.6(d), a wetland may be designated as

a WUI if it contains habitat for an essential behavior of a species listed as endangered, threatened, special concern, or is designated as a species of greatest conservation need with habitat loss identified by the department as a moderate to very high threat to New York populations. One Jefferson's salamander (*Ambystoma jeffersonianum*) egg mass was observed in Wetland M during the wetland delineation. Jefferson's salamander is a special concern species in New York, and one egg mass was evidence of its occurrence on the Study Site. If a wetland on site were determined by NYSDEC to provide habitat that supported an essential behavior for this species, then that wetland might be regulated as a WUI. A vernal pool complex[1] was identified north of Woodstock Road, including Wetlands K, L, M, N, O, and Q. However, all of these vernal pools dried prematurely (by 23 May), such that amphibian egg masses observed in Wetlands M (15 spotted salamander [*Ambystoma maculatum*] egg masses and 1 Jefferson's salamander egg mass) and Q (17 spotted salamander egg masses) were unable to hatch or develop into larval salamanders. Therefore, none of these pools should be considered as providing habitat that supports breeding or reproduction as an essential behavior for any amphibian species.

Additionally, none of the vernal pools in this complex should be considered as "productive for amphibian breeding" as defined under §664.6(g). A vernal pool is known to be productive for amphibian breeding within a region of the State where the department has determined one or more of the following exist in a particular vernal pool or vernal pool complex: (1) in the Hudson-Mohawk Region, 25 or more Spotted Salamander egg masses, or 10 or more Wood Frog egg masses." Although 25 or more spotted salamander egg masses were found within a vernal pool complex, none were able to hatch or reach maturity due to short hydroperiod (time of inundation). Therefore, the pool complex was non-productive for amphibian breeding.

4.1.1.9 Town of Washington Wetland Maps

The Town of Washington also regulates wetlands within the Town, under Section 396 of the Town Codes. The Town also regulates activities within 50 feet of wetlands between 0.25 and 1 acre, and within 100 feet of wetland 1 acre or larger.

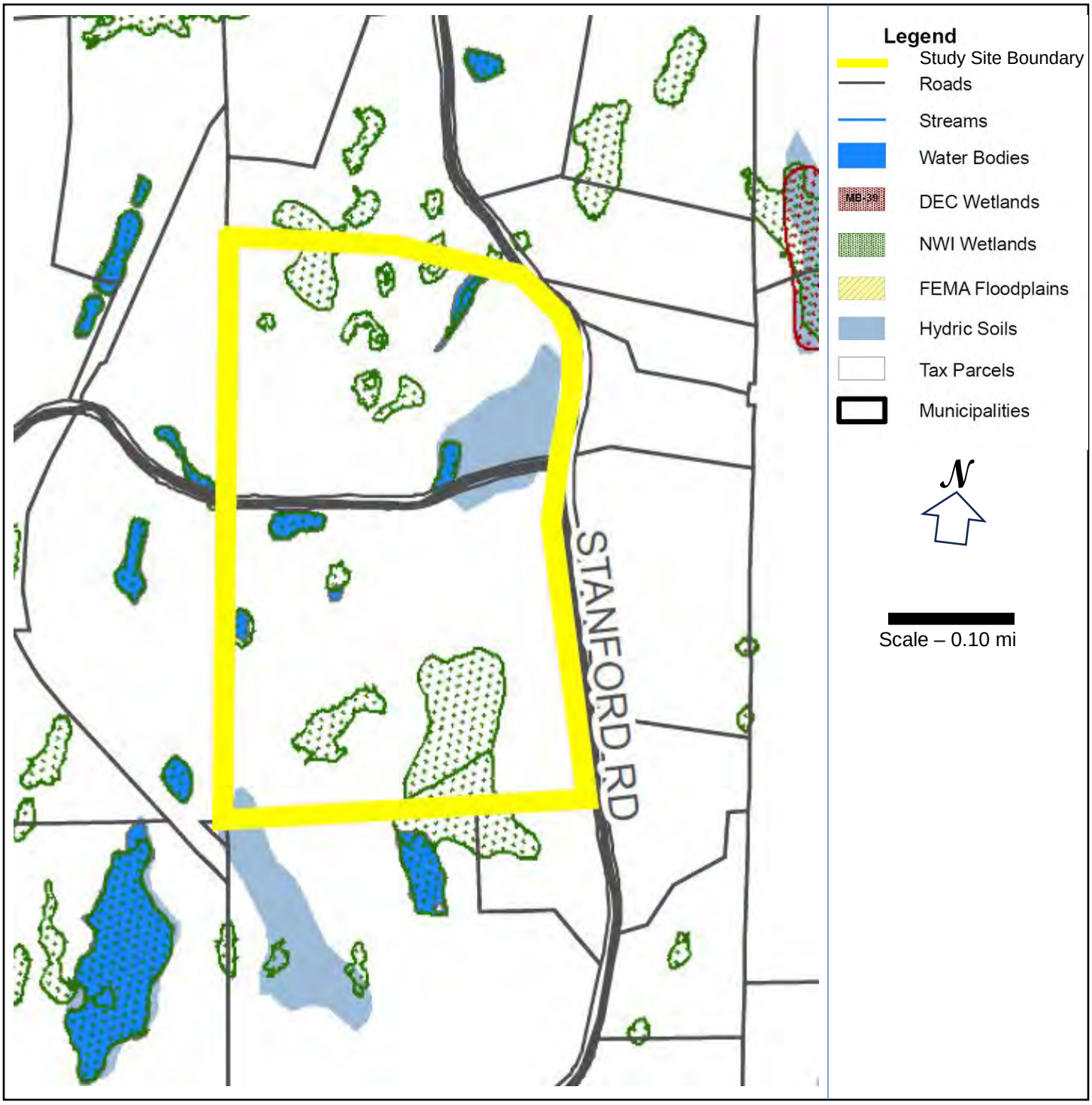
Edgewood reviewed the Town of Washington Wetland Map (***Figure 9. Town of Washington Wetland Map***) to determine whether any town-regulated wetlands were indicated.

Wetlands indicated on ***Figure 9*** were virtually identical to those exhibited on ***Figure 5. National Wetland Inventory Map***, because the Town Wetland Map was based on the federal map. The Town Wetland Map did not differentiate among different wetland classifications (emergent, shrub, forested) as the NWI map does, but it does call out water bodies, and identifies the same ones identified on both ***Figure 1***. ***Site Location Map*** (USGS Topographic Map). In addition to these wetlands, the Town Wetland Map also identifies an area of hydric soils that corresponds to the area identified as Sun silt loam on ***Figure 3. Soils Map***.

Based on Edgewood's wetland delineation, the Town of Washington regulates 10 wetlands on the Study Site: Wetlands A, C, E, F, G, H, I, J, O, and P. Wetlands A, C, E, H, and I also have 100-foot regulated adjacent areas (also called buffers, or controlled areas). Wetlands F, G, J, O, and P have 50-foot regulated adjacent areas. Any development activities proposed within these wetlands or regulated buffers would require a wetland permit from the Town of Washington.

[1] defined under 6 CRR-NY Part 664.2(ah) as, "a grouping of individual vernal pools in which each pool is 50 meters (approximately 164 feet) or less from at least one other vernal pool in the grouping"

Figure 9. Town of Washington Wetland Map



Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

Edgewood Environmental Consulting, LLC

Source: Town of Washington Wetland Map. Enlarged to show detail.

4.1.1.10 Critical Environmental Areas

Figure 10. Critical Environmental Areas illustrates the locations of designated Critical Environmental Areas (CEA) in the Study Site Region. The Study Site is not located in or immediately adjacent to any designated CEA. The nearest CEA is the Hibernia Hamlet, designated as having an exceptional or unique character, located in the Town of Clinton, about 2.3 miles west of the Study Site

4.1.2 Protected Species

4.1.2.1 USFWS Information for Planning and Consultation (IPaC) System

The USFWS online Information for Planning and Consultation (IPaC) System identifies federally listed or candidate threatened or endangered species and other federally protected species, that either occur on or near a selected location, or may occur, based on habitat modeling. It is used as a preliminary indicator of what species may occur on a given site, if appropriate habitat is present.

The IPaC Resource List (***Appendix A***) for the Study Site indicated the following listed or candidate species as being possible occurrences in the region:

- Indiana Bat (*Myotis sodalis*) – endangered
- Northern Long-eared Bat (*Myotis septentrionalis*) – endangered
- Bog Turtle (*Glyptemys muhlenbergii*) – threatened
- Monarch Butterfly (*Danaus plexippus*) – candidate

In addition, ***Appendix A*** also indicated potential occurrence of Bald Eagle (*Haliaeetus leucocephalus*) and Golden Eagle (*Aquila chrysaetos*), which are protected under the Bald and Golden Eagle Protection Act (BGEPA). Bald Eagles have increased in number in recent years throughout New York, establishing new nesting sites throughout the state. Golden Eagles are not known to nest in New York, but are occasional visitors during migration.

The IPaC Resource List also identified 13 other species of migratory birds that are protected under the Migratory Bird Treaty Act (MBTA), that are also considered to be Birds of Conservation Concern (BCC). BCCs are non-game migratory birds, “that without additionlia conservation action are likely to become candidates for listing under the Endangered Species Act (ESA). Listing on the BCC list is based on conservation assessments by the USFWS that include population abundance and trends, threats to breeding and non-breeding grounds, and size of breeding and non-breeding ranges.

The list of BCC birds provided in the IPaC Resource List included:

- Belted Kingfisher (*Magaceryle alcyon*)
- Black-billed Cuckoo (*Coccyzus erythropthalmus*)
- Bobolink (*Dolichonyx orizivorus*)
- Canada Warbler (*Cardellina canadensis*)
- Chimney Swift (*Chaetura palagica*)

Figure 10. Critical Environmental Areas

Legend

Clear Property

Critical Environmental Areas

Clear Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

Edgewood Environmental Consulting, LLC

- Eastern Meadowlark (*Sturnella magna*)
- Eastern Whip-poor-will (*Antrostomus vociferus*)
- Evening Grosbeak (*Coccothraustes vespertinus*)
- Golden-winged Warbler (*Vermivora chrysoptera*)
- Lesser Yellowlegs (*Tringa flavipes*)
- Pectoral Sandpiper (*Calidris melanotos*)
- Red-headed Woodpecker (*Malanerpes erythrocephalus*)
- Wood Thrush (*Hylocichla mustelina*)

It is important to note that not all of these species occur on the Study Site, but rather the Study Site falls within their general geographic range. The Study Site has potential habitat for some of these species (*e.g.*, Belted Kingfisher, Canada Warbler, Wood Thrush), but does not have suitable or sufficient habitat to support some others (*e.g.*, Bobolink, Lesser Yellowlegs).

4.1.2.2 NYSDEC Environmental Resources Mapper

The NYSDEC's online Environmental Resource Mapper (ERM, ***Figure 11***) provides information on occurrences of regulated or potentially sensitive natural resources within New York State. The resources it identifies include:

- Unique Geologic Features
- Waterbody Classifications for Rivers, Streams, and Lakes
- Waterbody Inventory/Priority Waterbodies List
- State-regulated Wetlands and associated 500-foot Wetland Check Zones
- Significant Natural Communities
- Mussel Screening Ponds and Streams
- Rare Plants and Animals, including state-listed species
- Base Flood Elevations

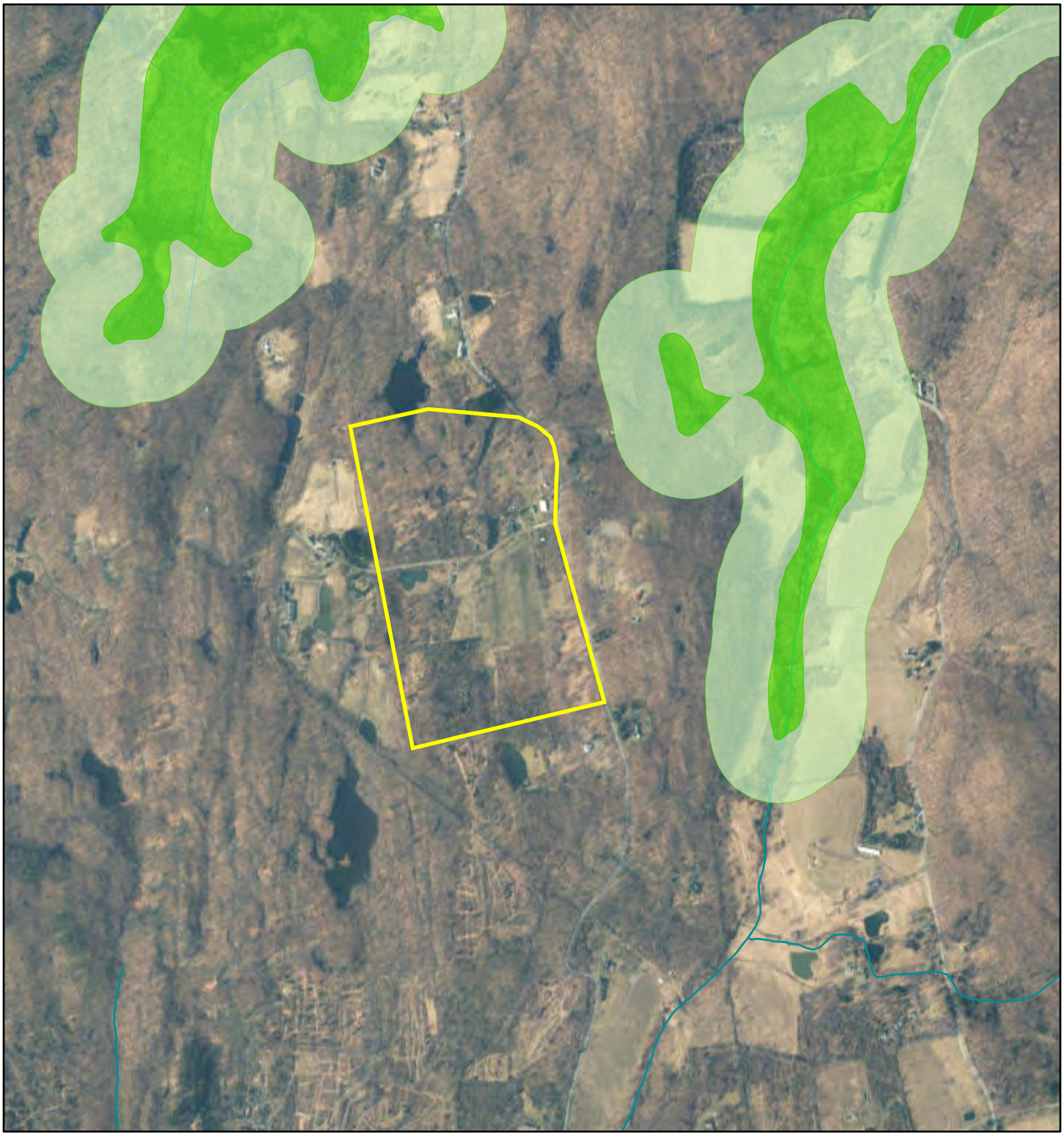
The ERM also identifies federally mapped wetlands, but that information was also provided by the National Wetland Inventory Maps in ***Figure 5***, so ERM was not used for those data.

Figure 11 did not indicate any natural resource elements on or immediately adjacent to the Study Site. The nearest mapped regulated or sensitive natural resources were two state-regulated wetlands, both of which were located more than 500 feet from the Study Site.

4.1.2.3 NYSDEC Environmental Assessment Form Mapper

The NYSDEC's online Environmental Assessment Form (EAF) Mapper is a tool designed to assist environmental assessors in completing the State Environmental Quality Review Act (SEQRA) Environmental Assessment Form (EAF). It provides a summary of regulated or sensitive environmental elements that range from coastal resources, to spill/remediation history, cultural resources, agricultural resources, and many of the natural resource elements identified by the ERM.

Figure 11 NYSDEC Environmental Resource Map



Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

Legend

- Study Site Boundary
- NYSDEC Freshwater Wetland
- NYSDEC Freshwater Wetland Check Zone

N

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Edgewood Environmental Consulting, LLC

The EAF Mapper Summary Report (***Appendix B***) indicated that the Study Site contained surface waters that were potentially federal waters (WOTUS). It also indicated that the Study Site was within an agricultural district (Dutchess County Agricultural District 021). No other environmental resources were indicated by this source.

4.2 Field Survey

Field visits to the Study Site were conducted from 29 April through 2 May and 23 May through 24 May 2024. Ecological communities were characterized and mapped, wetlands were identified and delineated, and plants and animals were observed, identified, and documented.

4.2.1 Ecological Communities

Edgewood identified 18 distinct ecological communities on the Study Site. Ecological communities were classified according to *Ecological Communities of New York State, Second Edition* (Edinger, *et al*., 2014). The locations and approximate extent of ecological communities on the Site are illustrated in ***Figure 12. Ecological Communities***. The ecological cover types identified on the Site are listed below, with abbreviations that were used to label them in Figure 11:

1. Eutrophic Pond (EP)
2. Deep Emergent Marsh (DEM)
3. Shallow Emergent Marsh (SEM)
4. Shrub Swamp (ShSw)
5. Red Maple Hardwood Swamp (RMHS)
6. Vernal Pool (VP)
7. Successional Old Field (SOF)
8. Successional Shrubland (SuSh)
9. Appalachian Oak-Hickory Forest (AOHF)
10. Successional Southern Hardwoods (SSH)
11. Conifer Plantation (CP)
12. Mowed Lawn with Trees (MLT)
13. Mowed Lawn (ML)
14. Mowed Roadside Pathway (MRP)
15. Unpaved Road/Path (UPRP)
16. Rural Structure Exterior (RSE)
17. Interior of Barn/Agricultural Building (IBAB)
18. Interior of Non-Agricultural Building (INAB)

None of these ecological communities is rare or unusual in New York. The site contained 6 vernal pools, all of which were located in the mature forested northwest quadrant of the Study Site. These were interspersed with some larger and deeper eutrophic ponds that were located both north and south of Woodstock Road. Edgewood searched all vernal pools for amphibian egg masses, as field surveys were conducted during a time when all except wood frogs would

Figure 12. Ecological Communities

Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

Legend

- Study Site Boundary
- Delineated Wetlands
- ABC Ecological Community (See report text for abbreviations)

Woodstock Rd

Stanford Rd

Edgewood Environmental Consulting, LLC

700 ft

N

Google Earth

be evident (wood frog tadpoles were observed in some vernal pools). By the final field visit (24 May) the vernal pools had completely dried, before salamander egg masses had a chance to hatch, and left wood frog tadpoles stranded. Thus, these vernal pools may have provided dispersal habitat for amphibians, allowing these water-dependent animals to cross the landscape by using these pools and the small woodland pools on the site as stepping stones, but they were not suitable for breeding pools, as they did not remain inundated for sufficient time to allow egg masses to hatch or larval amphibians to develop into dispersing adult forms.

Land use adjacent to the Study Site included low-density, rural private residences to the north, east, and west, some associated with equestrian farms. Lands to the north and east were predominantly forested, but to the west, properties were largely lawn or pasture. To the south of the site was the Orvis Sandanona Private Shooting Preserve, which was a patchwork of forest, shrublands, grasslands, and water bodies.

4.2.2 Wetlands

Edgewood identified and delineated 18 wetlands on the Study Site, and labeled them alphabetically from A through R. ***Figure 13. Wetlands and Waters*** depicts each wetland identifier letter, location, extent, area, and Cowardin Wetland Classification (Cowardin, et al., 1979) for each wetland.

4.2.2.1 Federal Jurisdictional Wetlands and Waters of the United States

Based on Edgewood's field data collection and review of USGS Topographic Maps (Figure 1), National Wetland Inventory Maps (Figure 5), and National Hydrography Dataset Maps (Figure 6), we determined that none of the wetlands have surface connections to relatively permanent waters, Traditional Navigable Waters, or interstate waters. Therefore, none of the wetlands on the site meet the definition of Waters of the United States, so none are subject to regulation under the Clean Water Act.

4.2.2.2 New York State-Jurisdictional Wetlands

None of the wetlands on the Study Site currently appear on any NYSDEC Freshwater Wetland Maps. None of the wetlands are located within 50 meters of, or are hydrologically connected to any wetlands mapped on the NYSDEC Freshwater Wetland Maps. Therefore, none of the wetlands on the Study Site are currently subject to regulation under NYSECL Article 24, the Freshwater Wetlands Act.

None of the wetlands on the Study Site are 12.4 acres or larger in area (including estimated extent of contiguous offsite wetlands), so they will not be subject to NYSDEC regulation under the new regulations due to take effect in 2025 that will regulate all wetlands 12.4 wetlands or larger, regardless of whether they appear on the State's Freshwater Wetlands Maps. Wetland A (7.67 acres), at the south end of the site, would be eligible for NYSDEC regulation in 2028, when the size threshold for regulated wetlands is proposed to be reduced to 7.4 acres. Smaller wetlands on the Study Site would not be regulated unless designated as Wetlands of Unusual Importance if NYSDEC documents habitat within them that supports an essential behavior of a listed or conservation concern species, per the criteria outlined in Section 4.1.2.4.

Figure 13. Wetlands and Waters

Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County

Legend

- Study Site Boundary
- Delineated Wetland Boundary
- A — Wetland ID
- ## ac — Area of Wetland (acres)
- PUB3... — Cowardin Wetland Classification

P
0.53 ac
PUB3H/FO1C

R
0.17 ac
PUB3H/FO1B

Q
0.26 ac
PUB3C/FO1B

M
0.14 ac
PUB3C/FO1B

L
0.04 ac
PUB3C/FO1B

N
0.03 ac
PUB3C/FO1B

O
0.26 ac
PUB3C/FO1B

K
0.05 ac
PUB3C/FO1B

I
1.91 ac
PUB3H/FO1B/EM1B

H
1.57 ac
PUB3H/FO1B/EM1B

J
0.32 ac
PFO1C

G
0.87 ac
PEM1B

C
1.84 ac
PUB2H/EM1B/SS1B

F
0.36 ac
PUB3H/EM1B

B
0.09 ac
PUB3H

D
0.21 ac
PUB3H

A
7.67 ac
PEM1/SS1/FO1B

E
1.80 ac
PFO1H/B

Stanford Rd

Woodstock Rd

Edgewood Environmental Consulting, LLC

N

Google Earth

700 ft

4.2.2.1 Town of Washington Jurisdictional Wetlands

The Town of Washington regulates wetlands that are greater than ¼ acre in area, plus adjacent areas of 50 feet for wetlands greater than 1/4-acre, but less than 1 acre; and adjacent areas of 100 feet for wetlands greater than 1 acre in area. Therefore, the Town regulates 10 wetlands on the Study Site: Wetlands A, C, E, F, G, H, I, J, O, and P. Wetlands A, C, E, H, and I also have 100-foot regulated adjacent areas (also called buffers, or controlled areas). Wetlands F, G, J, O, and P have 50-foot regulated adjacent areas.

The wetlands identified on the site are summarized in Table 1, below, along with their respective areas, Cowardin classifications, and regulatory status.

Table 1. Wetlands on the Clear Property, Woodstock Road, Millbrook, NY

Wetland ID	Area (ac)	Cowardin Class	Federal Jurisdiction	State Jurisdiction	Town Jurisdiction	100-foot Buffer	50-foot Buffer
A	7.67	PEM1/SS1FO1B	No	No	Yes	X	
B	0.09	PUB3H	No	No	No		
C	1.84	PUB2H/EM1B/SS1B	No	No	Yes	X	
D	0.21	PUB3H	No	No	No		
E	1.80	PFO1H/B	No	No	Yes	X	
F	0.36	PUB3H/EM1B	No	No	Yes		X
G	0.87	PEM1B	No	No	Yes		X
H	1.57	PUB3H/FO1B/EM1B	No	No	Yes	X	
I	1.91	PUB3H/FO1B/EM1B	No	No	Yes	X	
J	0.32	PFO1C	No	No	Yes		X
K	0.05	PUB3C/FO1B	No	No	No		
L	0.04	PUB3C/FO1B	No	No	No		
M	0.14	PUB3C/FO1B	No	No	No		
N	0.03	PUB3C/FO1B	No	No	No		
O	0.26	PUB3C/FO1B	No	No	Yes		X
P	0.53	PUB3H/FO1C	No	No	Yes		X
Q	0.15	PUB3C/FO1B	No	No	No		
R	0.17	PUB3H/FO1B	No	No	No		

4.2.3 Listed & Candidate Species Habitats

Neither USFWS nor NYSDEC indicated any existing records of known occurrences of these species on or near the Study Site, but they all occur within this general range, and potential habitat assessment is the first step toward determining whether the site could potentially support these species.

4.2.3.1 Indiana Bat and Northern Long-eared Bat Potential Habitat

Review of aerial orthophotography revealed that the Study Site was surrounded in all directions by extensive privately owned forested habitat, providing travel corridors for listed bat species in virtually all directions. Indiana Bats are known to travel longer distances to avoid crossing large open habitats, although the exact size of such open habitats that restricts their movement is unclear (Murray and Kurta, 2004). The only potential barriers to regional movement were large open field areas located to the south, on the south side of U.S. Route 44, between Stanford Road and State Route 82, and large open fields to the east of the Study Site, on the west side of Valley Farms Road. Hedgerows across some of these fields could provide protective travel corridors to cross these fields, however.

Forested public and private lands within 5 miles of the Project Site provide potential habitat for bats and may also provide habitat stepping stones across the landscape, allowing bats to migrate from winter hibernation sites and commute to nearby potential foraging or roost sites. Bats may travel up to 5 miles in foraging bouts, so they could use connected forested lands, or bats on those lands could potentially use the Project Site. Therefore, the habitat assessment included a review of aerial photos and maps to identify forested public lands within 5 miles of the Project Site. Such forested lands are summarized in **Table 2**.

Table 2. Forested public lands within 5 miles of the Study Site.

Public Land Name	Direction	Distance (mi)
Sandanona Shooting Preserve	South	adjacent
Whitlock Preserve	North-northwest	2.0 mi
Stanford Wildlife Preserve	North-northwest	2.7 mi
Taconic-Hereford Multiple Use Area	South-southwest	4.7 mi

There is ample fragmented forested habitat interspersed with residential, commercial, and institutional development within 5 miles of the Project Site. Bats likely have sufficient forest cover in the local landscape to move to and from the site under forest cover from the north, east, south, and west. Seasonal migration from the nearest known Indiana bat hibernaculum near Rosendale, NY may occur at the Mid-Hudson Bridge, which could be a Hudson River crossing location for bats (they may fly across the river under the cover of the bridge to avoid crossing the open river). Such river crossings have not been observed, but are likely to occur, as Indiana bats are found east of the Hudson River.

Edgewood's assessment of ecological communities on the site (see Section 4.2.1 and ***Figure 12***) revealed that most of the Study Site was forested with hardwood, or mixed evergreen and hardwood forest. Mature forest stands contained large trees up to about 30 inches diameter at breast height (DBH), occasional snags (standing dead trees) and dead branches that exhibited exfoliating bark or cracks and crevices that provided potential roost structure for *Myotis* species

bats. These mature forest stands were also interspersed with small water bodies, both perennial and ephemeral, which provided suitable potential watering and foraging habitat for bats.

Both listed bat species tend to prefer to remain under the protective cover of tree canopies, so generally prefer to remain within forested areas, or close to forested edges if they venture into shrubby or old field habitats. Indiana bats tend to avoid flying across large open areas, but will fly along edge habitats, close to forest cover. Northern Long-eared Bats are considered a forest interior species, and are not typically found in or near open field habitats. Approximately 16 acres of the property were wide open fields with small, few, or no trees, and were considered unsuitable potential habitat for these species. A ±1.2-acre patch of evergreens in the southwest quadrant of the site was not considered suitable potential habitat for listed bats, as neither species typically uses evergreens for roosting. Approximately 1 acre of this evergreen patch was cleared adjacent to an existing old field, creating a patch of non-suitable habitat about 1.9 acre in area. About 1 acre of forest at the south end of the site was dense young growth, which did not provide open sub-canopy habitat for bats to fly, so it was also not considered to be suitable potential habitat. In all, about 19 acres of the Study Site were not considered to be suitable potential bat habitat. These areas are shown in ***Figure 14. Potential Listed Bat Habitat***.

4.2.3.2 Bog Turtle Potential Habitat

Bog Turtles rely on 3 primary habitat elements for suitable potential breeding sites: suitable hydrology, suitable soils, and suitable vegetation. Suitable hydrology for bog turtles occurs in groundwater/spring-fed wetlands that have at least saturated soil year-round. Such wetlands may be interspersed with dry and wet pockets, and often have flow, either at or below the surface. Inundated small animal trails, or even drainage ditches may be used as travel corridors through a wetland. Bottom substrates (soils) of Bog Turtle wetlands are typically saturated organic or mineral soils with soft, mucky or peaty texture.

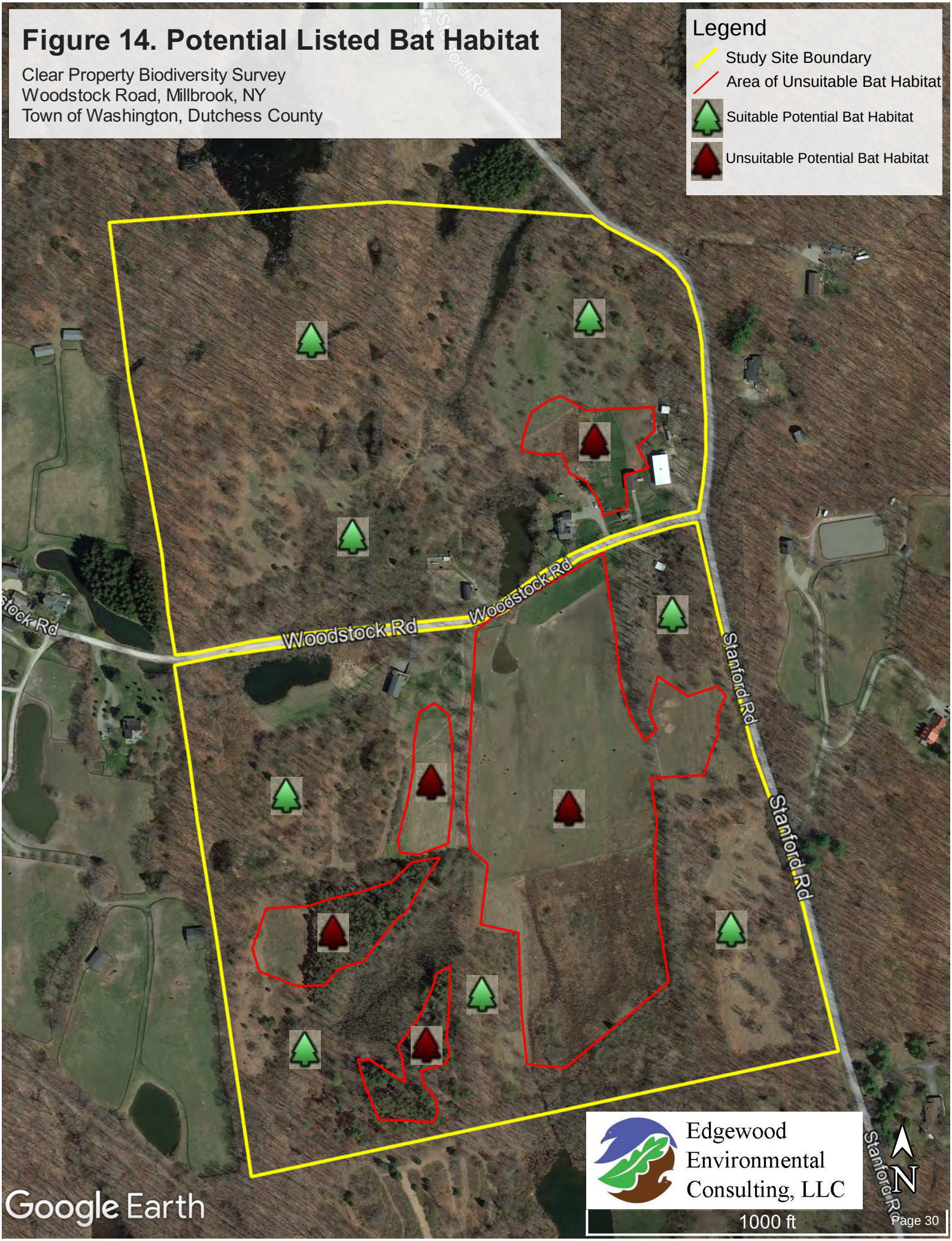
Suitable vegetation in a Bog Turtle wetland varies widely, but includes fens, wet meadows, marshes, drainage swales, and shrub swamps. Swamps of forested wetlands with greater than 50% canopy cover may also provide suitable Bog Turtle habitat, if soils and hydrology are suitable.

Wetland E, pictured on page 30, was a Red Maple-hardwood Forest swamp, with an understory of shallow (±8-12 inches) flooded Tussock Sedge (*Carex stricta*) and Skunk Cabbage (*Symplocarpus foetidus*) in a substrate of mucky loam.

This wetland drained to the south into a shallow forested dell and percolated into the ground. Flow was not detectable in the main body of this wetland, but as the wetland narrowed to the south, shallow surface flow was discernible.

Figure 14. Potential Listed Bat Habitat

Clear Property Biodiversity Survey
Woodstock Road, Millbrook, NY
Town of Washington, Dutchess County



Wetland E, a forested swamp with dense sedge understory and flooded mucky soils.

The western side of Wetland H, and all of Wetland J, both pictured below, exhibited a similar cover type of Red Maple hardwood swamp with an understory of dense Tussock Sedge and Skunk Cabbage, with shallow inundation.

West side of Wetland H (left), and Wetland J (below), both exhibiting forested swamp with a dense understory of sedges, mucky soils, and shallow inundation.

Both of these wetlands drained south under Woodstock Road to wetlands F and C, respectively. Wetland C outflowed to a pond offsite to the west, where it terminated. Wetland F terminated in

an open field south of Woodstock Road, so neither of these wetlands created long travel corridors for turtles, but could be used as a landscape stepping stone.

No other wetlands on the Study Site contained similar habitat that exhibited all three of the critical elements required by Bog Turtles for breeding habitat. Wetlands H, I, and P all contained deeper water habitats, but had minimal shrub or herbaceous cover in the water that is preferred by Bog Turtles, but these wetlands could possibly be used for dispersal or commuting among more suitable habitats.

4.2.3.3 Monarch Butterfly Potential Habitat

Monarch Butterflies may use a variety of early successional habitats for migration and foraging, but rely very specifically on Common Milkweed (*Asclepias syriaca*) for breeding and development. They may use other milkweed species, but tend to show a preference for and have greater breeding success on Common Milkweed. No Monarch Butterflies were observed on the Study Site during this survey, but it was likely too early in the year to observe them.

Despite the large area of early successional habitats on the Study Site, Edgewood did not observe Common Milkweed on the site. This may be a result of the use of many of these habitats as pasture, where Common Milkweed is less likely to grow. Swamp Milkweed (*Asclepias incarnata*) was observed on the site, but not in any substantial concentrations. It is therefore unlikely that Monarch Butterflies rely on this site for breeding or development, though they may migrate through it and forage on other pollen-bearing plants.

4.2.4 Vegetation/Flora

Edgewood identified 180 species of plants, fungi, and lichens on the Study Site. These species are all listed in ***Appendix C. Plants, Fungi, and Lichens List***. This list is not a complete list of all plant species present on the site, but rather is a sample of plants that were evident and identifiable in mid-Spring. A more exhaustive plant list would require sampling throughout the growing season to account for plant species that appear, bloom, and are identifiable only in other parts of the growing season.

Most of the plants identified on the site were common species, typical of the cover types found in the region, and typical of successional natural communities. No rare or listed plant species were identified during this survey, however the ferns that were identified are protected under NYSECL §9-1503 (Lands and Forests), as they are considered exploitably vulnerable native plants. A number of invasive plant species were detected on the Study Site, which are noted as such in ***Appendix C***.

4.2.5 Wildlife/Fauna

Edgewood identified 108 species of wildlife, including 65 avian species, 16 mammalian species, 7 reptiles, 8 amphibians, and 12 insects. These species are all listed by taxa in ***Appendix D. Site Wildlife Species Observed***. Wildlife detected by trail cameras or documented photographically are illustrated in ***Appendix E. Wildlife Photographs***.

The only listed species that was detected on the site was Jefferson's Salamander (*Ambystoma jeffersonianum*), which was detected by the presence of one of its distinctive cylindrical egg masses in one of the vernal pools on the site. Successful breeding of this species was not confirmed, however, as the vernal pool in which the egg mass was observed dried before the eggs hatched. However, the presence of the egg mass did confirm species presence on the Study Site.

All of the bat species that were detected on the site were detected acoustically, and bat sonograms were manually vetted by a bat biologist experienced in acoustic vetting. None of the detected bat species were listed species, but the Little Brown Bat (*Myotis lucifugus*) is under consideration by the USFWS for listing.

5. CONCLUSIONS

This biodiversity survey of the Clear Property included:

- Identification and mapping of ecological communities
- Review of public records of Critical Environmental Areas (CEAs), Soils of Agricultural Importance
- Identification and delineation of freshwater wetlands and waters and professional opinions of jurisdictional status at the federal, state, and town jurisdictions
- Review of public records of listed and candidate threatened and endangered species and habitat assessments for listed species that are known to occur in the region
- Multiple method/multiple observer surveys of plants and wildlife evident in the spring season.

Findings of each of these study elements are summarized below.

5.1 Ecological Communities

Edgewood identified 18 ecological communities on the site, all of which are relatively common natural communities in New York. Communities in the middle portion of the Study Site reflect the property's use as a livestock farm and residential property. The southern end of the site is dominated by successional forest, reflecting past clearing and agricultural use. The northern end of the property has more mature successional forest cover, but also reflects prior use in agriculture.

5.2 Wetlands

Edgewood identified and delineated 18 wetlands on the site, including perennial and seasonal open water, emergent marsh, wet meadow, scrub-shrub, and forested wetland communities. Wetlands ranged in size from 0.03 acre to 7.67 acres. Based on current regulatory definitions of WOTUS and state-regulated freshwater wetlands, none of the wetlands on the site are subject to regulation under CWA Sections 401 or 404, or under NYSECL Article 24, the New York State Freshwater Wetlands Act. The largest wetland on the site, Wetland A, may be subject to state-regulation when the minimum size threshold for regulated wetlands is reduced to 7.4 acres, in 2028. Smaller wetlands on the Study Site would not be regulated by NYSDEC unless the NYSDEC documents any one of the 11 criteria used to designate WUI. Ten (10) wetlands on the site are subject to regulation under Town of Washington Code Section 396, Wetlands and Watercourses Law of the Town of Washington.

5.3 Critical Environmental Areas

No CEAs were identified on or near the Study Site. The nearest designated CEA is located 2.3 miles west of the Study Site.

5.4 Agricultural Soils

The Study Site contains two agricultural soil types: Sun silt loam, which is classifies as a Farmland of Statewide Importance, and Massena silt loam, 0 to 3 percent slopes, which is classified as Prime Farmland if Drained.

5.5 Listed and Candidate Species

Review of federal and state records indicated that endangered Indiana bat and northern long-eared bat, threatened bog turtle, and candidate species monarch butterfly are all known to occur in the local region. There are no known records of any of these species on or immediately adjacent to the Study Site.

Potential habitat exists on the Study Site for Indiana bat and northern long-eared bat in the mature forested areas of the site. Potential habitat for bog turtle occurs in 3 wetlands onsite: Wetlands E, H, and J. Not all potential habitat for these species is necessarily occupied, however. Presence/probable absence surveys for bats would be necessary to determine whether any listed bat species actually occupy the site, if potential bat habitat were proposed to be cleared during the maternity season (1 April through 31 October). An in-depth Phase 1 bog turtle habitat inventory and Phase 2 presence/probable absence survey would provide additional information as to whether the Study Site could support that species, if any impacts were proposed to Wetlands E, H, J, or their immediate surroundings. No suitable breeding habitat for monarch butterfly was identified on the Study Site. Early successional old field habitats on the Study Site may be used by monarch butterflies for foraging and migration.

Jefferson's salamander, a species of special concern, was detected on the site by the observation of one egg mass from this species in Wetland M.

5.6 Plant and Wildlife Diversity

Vegetation and wildlife surveys conducted on the Study Site identified 180 species of plants, fungi, and lichens, and 108 animal species, including 65 avian species, 16 mammalian species, 7 reptiles, 8 amphibians, and 12 insects. These observations represent a sampling of species diversity at a particular time of year (mid-spring), and does not represent a complete or exhaustive list of all species that occur on the site year-round. If year-round surveys were conducted, including both day and night surveys, more species of both plants and animals are likely to be detected.

6. REFERENCES

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APPENDIX A IPAC RESOURCE LIST

IPaC **U.S. Fish & Wildlife Service**

Appendix A
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Dutchess County, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699
fw5es_nyfo@fws.gov

3817 Luker Road
Cortland, NY 13045-9385

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Reptiles

NAME	STATUS

NAME	STATUS
Bog Turtle Glyptemys muhlenbergii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6962	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

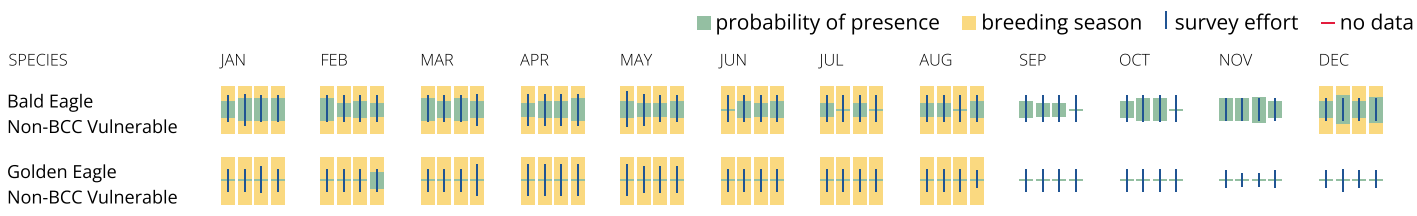
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Belted Kingfisher *Megaceryle alcyon* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 15 to Jul 25
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Meadowlark *Sturnella magna* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 31
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Golden-winged Warbler *Vermivora chrysoptera* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere

Pectoral Sandpiper Calidris melanotos This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

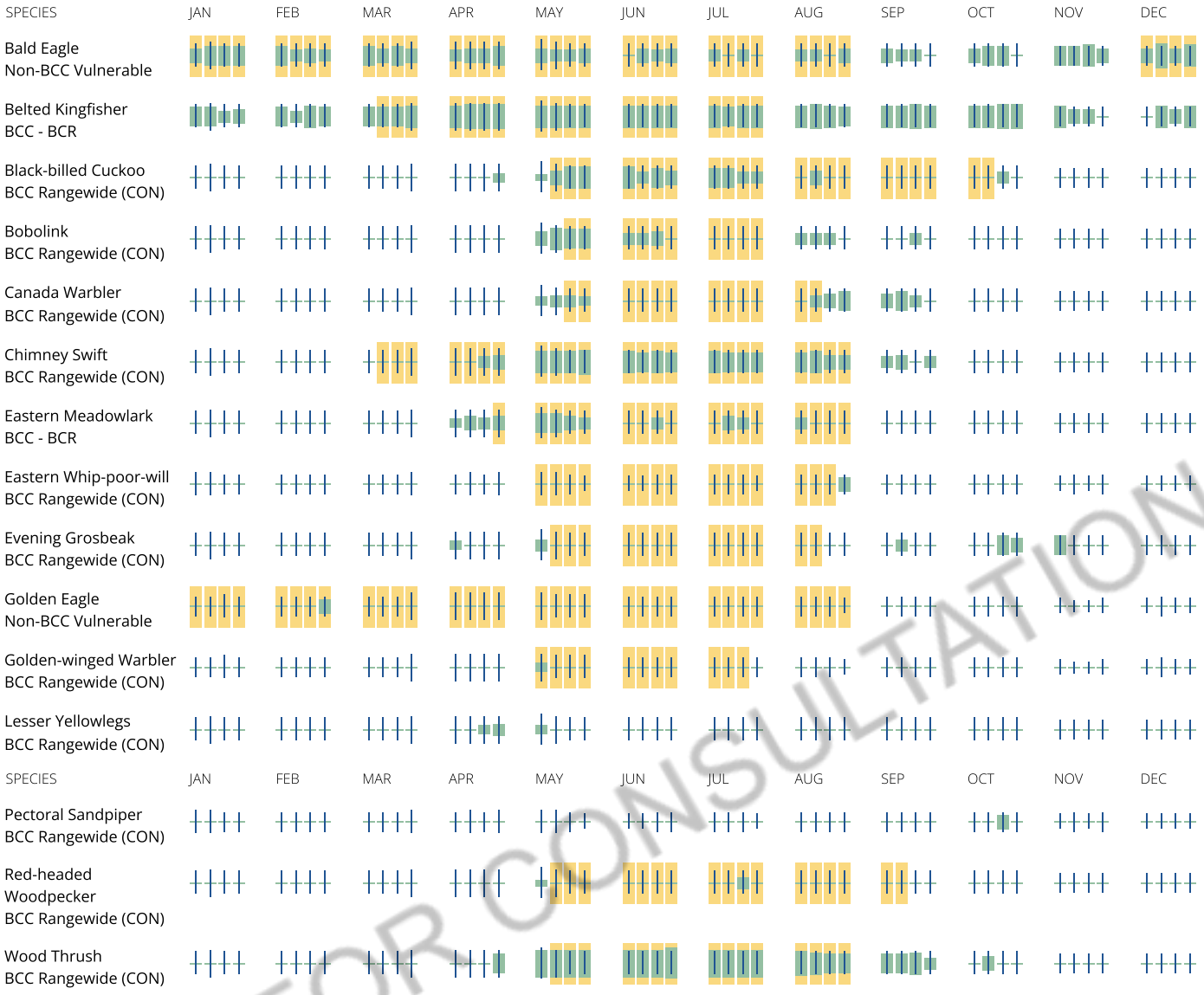
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

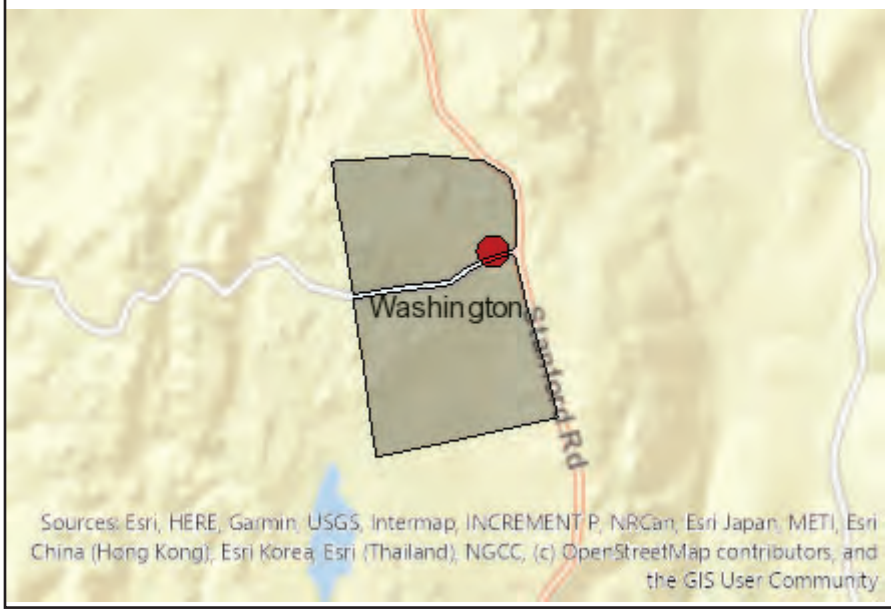
Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX B NYSDEC EAF MAPPER SUMMARY



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	No
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No

E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	Yes
E.3.a. [Agricultural District]	DUTC021
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

APPENDIX C PLANTS, FUNGI, AND LICHENS LIST

APPENDIX C

PLANTS, FUNGI, AND LICHENS LIST
Clear Property, 515 Woodstock Road
Millbrook, Town of Washington, Dutchess County, NY

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR[1] STATUS
FERNS (and allies), CLUBMOSSES & HORSETAILS IDENTIFIED ON SITE		
FERNS AND ALLIES		
Bracken Fern	Pteridium aquilinum	FACU
Christmas Fern	Polystichum acrostichoides	FACU
Cinnamon Fern	Osmundastrum cinnamomeum	FACW
Hayscented Fern	Dennstaedtia punctilobula	FACU
Marsh Fern	Thelypteris palustris	FACW
New York Fern	Thelypteris noveboracensis	FAC
Sensitive Fern	Onoclea sensibilis	FACW
Blunt Woodsia	Woodsia obtusa	NI
HORSETAILS		
Field Horsetail	Equisetum arvense	FAC
AQUATIC PLANTS & MOSSES IDENTIFIED ON SITE		
Duckweed, Common	Lemna minor	OBL
Pondweed	Potamogeton crispus	OBL
Pondweed, Curly Leaf	Potamogeton amplifolius	OBL
Sphagnum Moss	Sphagnum palustre	OBL

1 Wetland indicator status was based on the system used in the National List of Plant Species That Occur in Wetlands (USFWS, 2021): OBL=Obligate Wetland - estimated 99% probability of occurrence in wetlands; FACW=Facultative Wetland – estimated 67-99% probability of occurrence in wetlands; FAC=Facultative – equally likely to occur in wetlands and uplands (34-67% probability); FACU=Facultative Upland – estimated 67-99% occurrence in uplands (1-33% probability in wetlands); UPL=estimated 99% probability of occurrence in uplands (1% probability in wetlands); NI=Non indicator species-insufficient data to determine indicator status.

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR STATUS

GRASSES, RUSHES & SEDGES IDENTIFIED ON SITE

GRASSES

Bamboo - INVASIVE	(Family Poaceae)	NI
Bluegrass	Poa spp.	----
Bluegrass, Canada	Poa compressa	FACU
Bluestem Grass, Little	Schizachrium scoparium	FACU
Fescue	Festuca spp.	----
Japanese Stiltgrass – INVASIVE	Microstegium vimineum (Eulalia vimineum)	----
Orchard Grass	Dactylis glomerata	FACU
Panic Grass	Panicum spp.	----
Poverty Grass	Aristida dichotoma	UPL
Reed (Phragmites) - INVASIVE	Phragmites australis	FACW
Reed Canary Grass – INVASIVE	Phalaris arundinacea	FACW
Sweet Vernalgrass	Anthoxanthum odoratum	FACU
Switch Grass	Panicum virgatum	FAC
Wood Reed Grass	Cinna latifolia	FACW

RUSHES

Path Rush	Juncus tenuis	FAC
Soft Rush	Juncus effusus	FACW

SEDGES

Foxtail Sedge	Carex vulpinoidea	OBL
Lurid Sedge	Carex lurida	OBL
Tussock Sedge	Carex stricta	OBL
Wool Grass	Scirpus cyperinus	FACW

WILDFLOWERS AND OTHER FORBS IDENTIFIED ON SITE

Anemone, Rue	Anemonella thalyctricoides	----
Aster, White Wood	Eurybia divaricate	----
Bedstraw	Galium spp.	----
Birdsfoot Trefoil	Lotus corniculatus	FACU
Bittercress	Cardamine spp.	NI
Bittercress, Narrowleaf	Cardamine impatiens	--
Blue-eyed Grass	Sisyrinchium spp.	FAC/FACW
Blueflag (Wild Iris)	Iris versicolor	OBL
Burdock, Common	Arctium minus	UPL

WILDFLOWERS AND OTHER FORBS IDENTIFIED ON SITE continued

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR STATUS
Buttercup	Ranunculus spp.	----
Campion, White	Silene latifolia	--
Cattail, Broad leaved	Typha latifolia	OBL
Chickweed, Mouse Ear	Cerastium vulgatum	FACU
Chickweed, Common	Stellaria media	UPL
Chive Onion - INVASIVE	Allium spp.	FACU
Cinquefoil, Common	Potentilla simplex	FACU
Cinquefoil, Dwarf	Potentilla canadensis	NI
Cinquefoil, Rough Fruited, or Sulfur	Potentilla recta	FACU
Cleavers - INVASIVE	Galium aparine	FACU
Clover, Red	Trifolium pratense	FACU
Clover, White	Trifolium repens	FACU
Cohosh, Blue	Caulophyllum thalyctricoides	----
Coltsfoot	Tussilago farfara	FACU
Columbine, American	Aquilegia canadensis	FAC
Daffodil	Narcissus spp.	NI
Daisy, Ox-eye	Chrysanthemum leucanthemum (vulgare)	UPL
Dandelion	Taraxacum officinale	FACU
Day-Lily	Hemerocallis fulva	UPL
Dock, Curled	Rumex crispus	FACU
Dogbane (Indian Hemp)	Apocynum cannabinum	FACU
False Solomon's Seal	Mainthemum racemosum	FACU
Forget-Me-Not	Myosotis spp.	OBL/FACW
Gill-Over-The-Ground/Ground Ivy	Glechoma hederacea	FACU
Golden Alexanders	Zizia aurea	FAC
Goldenrod, Canada	Solidago canadensis	FACU
Hawkweed, Field	Hieracium pratense	UPL
Heal-All	Prunella vulgaris	FACW
Hog Peanut	Amphicarpaea bracteata	FAC
Jack-In-The-Pulpit	Arisaema triphyllum	FACW
Jewelweed	Impatiens capensis	FACW
Lamb's Quarters (Pigweed)	Chenopodium album	FACU
Leek, Wild (Ramps)	Allium tricoccum	FACU
Lily-of-the-Valley, Wild (Canada Mayflower)	Maianthemum canadense	FAC
Loosestrife, Purple - INVASIVE	Lythrum salicaria	FACW
Medic, Black	Medicago lupulina	FACU
Milkweed, Swamp	Asclepias incarnata	OBL
Mint, Field	Mentha arvensis	FACW
Motherwort	Leonurus cardiaca	UPL
Mugwort	Artemisia vulgaris	UPL

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR STATUS

WILDFLOWERS AND OTHER FORBS IDENTIFIED ON SITE continued

Mullein, Giant (Common)	Verbascum thapsus	UPL
Mustard, Garlic	Alliaria petiolata	FACU
Nipplewort	Lapsana communis	NI
Parsley, Cow - INVASIVE	Anthiscus sylvestris	--
Plantain, Common	Plantago major	FACU
Plantain, English	Plantago lanceolata	UPL
Polygala, Fringed	Polygala paucifolia	FACU
Queen Anne's Lace (Wild Carrot)	Daucus carota	UPL
Ragwort, Golden	Packera aurea	FACW
Rattlesnake Weed	Hieracium venosum	UPL
Rue, Meadow	Thalyctricum pubesceus	FACW
Salsify	Tragopogon porrifolius	--
Skunk Cabbage	Symplocarpus foetidus	OBL
Solomon's Seal	Polygonatum biflorum	FACU
Speedwell, Common	Veronica officinalis	FACU
Spotted Knapweed	Centaurea maculosa	UPL
Starflower, Northern	Lysimachia borealis	FAC
Stitchwort, Lesser	Stellaria graminea	UPL
Strawberry, Wild	Fragaria virginiana	FACU
Sweetflag	Acorus calamus	OBL
Vervain, Blue	Verbena hastata	FACW
Violet, Common Blue	Viola papilionacea	FAC
Virginia Bluebells	Mertensia virginica	FACW
Willow Herb	Epilobium spp.	----
Winter Cress, Bitter - INVASIVE	Barberea vulgaris	FAC
Wintergreen, Spotted/Striped	Chimaphila maculata	NI
Yarrow	Achillea millefolium	FACU

SHRUBS AND VINES IDENTIFIED ON SITE

Azalea, Swamp	Rhodenron viscosum	OBL
Barberry, Japanese - INVASIVE	Berberis thunbergii	FACU
Bittersweet, Asiatic	Celastrus orbiculata	FAC
Black Raspberry	Rubus occidentalis	FAC
Blackberry	Rubus allegheniensis	FACU
Blueberry, Highbush	Vaccinium corymbosum	FACW
Blueberry, Lowbush (Late)	Vaccinium angustifolium	FACU
Briar, Green (Common)	Smilax rotundifolia	FAC
Buckthorn, Common - INVASIVE	Rhamnus cathartica	UPL

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR STATUS
SHRUBS AND VINES IDENTIFIED ON SITE (continued)		
Buttonbush	Cephalanthus occidentalis	OBL
Dogwood, Red-Osier (Red Stem Dogwood)	Cornus stolonifera	FACW
Euonymus, Winged - INVASIVE	Euonymus alatus	UPL
Hardhack/Steeplebush	Spiraea tomentosa	FACW
Honeysuckle, Japanese	Lonicera japonica	FAC
Honeysuckle, Tartarian	Lonicera tatarica	FACU
Lilac (Common)	Syringa vulgaris	UPLnarc
Myrtle (Periwinkle) - INVASIVE	Vinca minor	UPL
Nannyberry (Sweet Viburnum)	Viburnum lentago	FAC
Olive, Autumn	Elaeagnus umbellata	UPL
Poison Ivy	Toxicodendron radicans	FAC
Privet - INVASIVE	Ligustrum vulgare	FACU
Raspberry, Black	Rubus occidentalis	FAC
Rose, Multiflora - INVASIVE	Rosa multiflora	FACU
Rose, Swamp	Rosa palustris	OBL
Viburnum, Arrowwood	Viburnum dentatum	FAC
Viburnum, Blackhaw	Viburnum prunifolium	FACU
Viburnum, Maple Leaf	Viburnum acerifolium	UPL
Virginia Creeper	Parthenocissus quinquefolia	FACU
Willow, Pussy	Salix discolor	FACW
Witch-Hazel	Hamamelis virginiana	FAC
TREES IDENTIFIED ON SITE		
Alder, Speckled	Alnus rugosa	FACW
Apple/Crabapple	Malus spp.	UPL
Ash, Green (Red Ash)	Fraxinus pennsylvanica	FACW
Ash, White	Fraxinus americana	FACU
Birch, Black (Sweet or Cherry)	Betula lenta	FACU
Birch, Gray	Betula populifolia	FAC
Birch, Paper (White or Canoe)	Betula papyrifera	FACU
Birch, River (Red Birch)	Betula nigra	FACW
Cedar, Northern White (Arborvitae)	Thuja occidentalis	FACW
Cedar, Eastern Red	Juniperus virginiana	FACU
Cherry, Black	Prunus serotina	FACU
Cherry, Choke	Prunus virginiana	FACU
Cottonwood	Populus deltoides	FAC
Dogwood, Flowering	Cornus florida	FACU
Elm, American	Ulmus americana	FACW
Hawthorn	Crataegus spp.	----

COMMON NAME	BOTANICAL/SCIENTIFIC NAME	INDICATOR STATUS
TREES IDENTIFIED ON SITE (continued)		
Hemlock (Eastern/Canadian)	Tsuga canadensis	FACU
Hickory, Pignut	Carya glabra	FACU
Hickory, Shagbark	Carya ovata	FACU
Locust, Black	Robinia pseudoacacia	FACU
Ironwood/Musclewood/Blue Beech/Hornbeam	Carpinus caroliniana	FAC
Maple, Japanese Red Maple	Acer palmatum	UPL
Maple, Red Maple (Swamp Maple)	Acer rubrum	FAC
Maple, Sugar Maple	Acer saccharum	FACU
Oak, Black	Quercus velutina	UPL
Oak, Chestnut	Quercus montana (prinus)	UPL
Oak, Pin	Quercus palustris	FACW
Oak, Red	Quercus rubra (borealis)	FACU
Oak, White	Quercus alba	FACU
Pine, Red	Pinus resinosa	FACU
Pine, White	Pinus strobus	FACU
Sassafras	Sassafras albidum	FACU
Serviceberry, Canada/Shadbush	Amelanchier canadensis	FAC
Spruce	Picea spp.	----
Spruce, Norway	Picea abies	FACU
Sycamore	Platanus occidentalis	FACW
Willow, Pussy	Salix discolor	FACW
Willow, Weeping	Salix babylonica L.	FACW
FUNGI and LICHENS		
Bracket Fungus	(Polypore group)	NI
False Puffball	Enteridium lycoperdon	--
Shield Lichen, Green	Flavoparmelia caperata	NI

---end of list---

Indicator Status is Regional for the Northeast U.S.

APPENDIX D SITE WILDLIFE SPECIES OBSERVED

APPENDIX D
SITE WILDLIFE SPECIES OBSERVED
CLEAR PROPERTY, 515 WOODSTOCK ROAD, MILLBROOK, NY

29 APRIL – 24 MAY 2024

This list includes wildlife species that were observed or detected by sign, sound, photography, or acoustic recordings over the course of the survey, or were reported by the property owner.

BIRDS

Great Blue Heron
Canada Goose
Wood Duck
Mallard
Turkey Vulture
Osprey
Red-tailed Hawk
Merlin
Ring-necked Pheasant
Wild Turkey
Killdeer
Solitary Sandpiper
Spotted Sandpiper
Mourning Dove
Yellow-billed Cuckoo
Barred Owl
Red-bellied Woodpecker
Yellow-bellied Sapsucker
Downy Woodpecker
Hairy Woodpecker
Northern Flicker
Pileated Woodpecker
Eastern Wood-Pewee
Great Crested Flycatcher
Tree Swallow
Barn Swallow
Blue Jay
American Crow
Common Raven
Black-capped Chickadee
Tufted Titmouse
White-breasted Nuthatch
Carolina Wren
House Wren
Veery
Hermit Thrush
Wood Thrush
American Robin
Eastern Phoebe
Gray Catbird
Red-eyed Vireo
Warbling Vireo
Yellow-throated Vireo
Blue-winged Warbler
Black and White Warbler
Yellow Warbler
Chestnut-sided Warbler
Black-throated Blue Warbler
Prairie Warbler
American Redstart
Ovenbird
Common Yellowthroat
Northern Cardinal
Eastern Towhee
Chipping Sparrow
Swamp Sparrow
Song Sparrow
White-throated Sparrow
House Sparrow
Dark-eyed Junco
Rose-Breasted Grosbeak
Red-winged Blackbird
Common Grackle
Northern/Baltimore Oriole
American Goldfinch

MAMMALS

Coyote
Bobcat
Black Bear
Raccoon
White-tailed Deer
Eastern Chipmunk
Gray Squirrel
Red Squirrel
Muskrat
Meadow Vole
Eastern Cottontail
Big Brown Bat
Little Brown Bat
Hoary Bat
Silver-haired Bat
Eastern Red Bat

REPTILES

Common Snapping Turtle
Eastern Painted Turtle
Eastern Garter Snake
Northern Water Snake
Northern Brown Snake
Eastern Ribbon Snake
Black Rat Snake

AMPHIBIANS

American Toad
Green Frog
Gray Tree Frog
Pickerel Frog
Wood Frog
Eastern Newt
Spotted Salamander (egg masses)
Jefferson Salamander* (egg mass)

INSECTS

Pearl Crescent
Tiger Swallowtail
Red Admiral
Mourning Cloak
Cabbage White
Spring Azure
Spongy Moth
Whirligig Beetle
Darning Needle
Green Darner
Bumble Bee
Southern Pine Bark Beetle (sign)

---end of list---

*Special Concern Species

APPENDIX E WILDLIFE PHOTOS

Photograph: 1	Black Bear (*Ursus americanus*).

Photograph: 2	Raccoon (*Procyon lotor*)

Photograph: 3	Bobcat (*Lynx rufus*)

Photograph: 4	Eastern Coyote (*Canis latrans*)

Photograph: 5	White-tailed Deer (*Odocoileus virginianus*)

Photograph: 6	Eastern Cottontail (*Sylvilagus floridanus*)

Photograph: 7	Green Frog (*Lithobates clamitans*)

Photograph: 8	Pickerel Frog (*Lithobates palustris*)

Photograph: 9	Wood Frog (*Rana sylvatica*)

Photograph: 10	Jefferson Salamander (Ambystoma jeffersonianum) egg mass in a vernal pool.

Photograph: 11	Eastern Newt (red eft life stage) (Notophthalmus viridescens)

Photograph: 12	Northern Water Snake (*Nerodia sipedon*)

Photograph: 13	Eastern Ribbon Snake (*Thamnophis saurita saurita*)

Photograph: 14	Close-up of Eastern Ribbon Snake showing white spot in front of eye.

Photograph: 15	Spongy moth (*Lymantria dispar*) caterpillar tent, containing tent caterpillar life stage.

Photograph: 16	Spongy Moth (*Lymantria dispar*) egg masses on a Red Oak (*Quercus rubra*).

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