



March 29, 2023

EMAIL (elizabeth@reedhilderbrand.com)

Ms. Elizabeth Randall
Reed Hilderbrand LLC
Landscape Architecture
130 Bishop Allen Drive
Cambridge, MA 02139

**Re: Natural Resources Inventory
Former Cape Cod Sea Camps Properties
Pond Parcel - 500 W. H. Besse Cartway (Map 84, Lot 45)
Brewster, Massachusetts**

[LEC File #: ReedHLLC\22-321.01]

Dear Ms. Randall:

As requested, LEC Environmental Consultants, Inc., (LEC) has prepared this Natural Resources Inventory (NRI) Report for the 66± acre former Cape Cod Sea Camp Property affording frontage on Long Pond in Brewster (the “Pond Parcel”). LEC conducted site evaluations on November 21, 2023 and November 22, 2022, and delineated/GPS survey-located Wetland Resource Area boundaries on January 11, 2023 and January 12, 2023. This NRI Report documents existing site conditions, habitat cover types, topography, hydrology, and soil characteristics to ascertain potential wildlife species utilization, complementing direct wildlife observations, in addition to providing a wetland regulatory assessment. Representative drone and on-the-ground photographs are included within **Attachment J**.

Existing Conditions

The 66± acre Property affords frontage along Long Pond Road to the northeast and Long Pond to the west/southwest (**Attachment A and B**). The Property maintains slightly over 1,000 linear feet of frontage along the northeasterly shoreline of the 700+ acre Long Pond, Cape Cod’s largest freshwater Pond. Former camp facilities (described below) are located along the Pond’s shoreline with abutting Bordering Vegetated Wetlands (BVW), including an abandoned cranberry bog that appears to have been in operation up until the 1960s. Excluding roads and paths, remaining portions of the Property are primarily undeveloped and occupied by Forested Upland.

The 42-acre ± town-owned Brewster Long Pond Woodlands Property abuts to the north. The Brewster Long Pond Woodlands is contiguous with an 18-19-acre± Conservation Restriction Area on an adjacent private property to the north. Moderately dense residential neighborhoods exist further to the north and south, respectively; however, a few undeveloped parcels abut directly to the south (cumulatively 18.5± acres). Scattered residential development is present along Long Pond within the immediate vicinity of the

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road
Suite 1
Plymouth, MA 02360
508.746.9491

380 Lowell Street
Suite 101
Wakefield, MA 01880
781.245.2500

100 Grove Street
Suite 302
Worcester, MA 01605
508.753.3077

P.O. Box 590
Rindge, NH 03461
603.899.6726

680 Warren Avenue
Suite 3
East Providence, RI 02914
401.685.3109

PLYMOUTH, MA

WAKEFIELD, MA

WORCESTER, MA

RINDGE, NH

EAST PROVIDENCE, RI



Property. Additional conservation lands (Conservation Restricted and/or Land Trust-owned) existing along Long Pond are depicted on the *Open Space Map (Attachment C)*.

A gravel road extends off Long Pond Road, continuing in a southwesterly direction through the Property towards Long Pond. W.H. Besse Cartway, an unimproved dirt road, extends onto the Property from the north and merges with the gravel road approximately 550± feet east of Long Pond. The gravel road/W.H. Besse Cartway provides access to single-family waterfront residential properties. A portion of the gravel road/W.H. Besse Cartway immediately abuts the on-site BVW (150± linear feet). Two gated gravel/grassed driveways provide access to the former camp facilities at the end of W.H. Besse Cartway. A looped, grassed driveway, now blocked by boulders, is also present immediately northeast of the BVW (abandoned cranberry bog).

The former camp facilities are divided into two areas along the Pond's shoreline. Four cabins and an adjacent lawn area are present within the westernmost portion of the Property. A beach area, four structures, and adjacent lawn area are located further to the east, separated by BVW. As evident by historic aerial imagery, the structures appear to have been present since the late 1960s or early 1970s, following the purchase of the Property by Camp Wono, Inc. (Cape Cod Sea Camps). As such, the structures are generally supported by concrete cinder blocks. Seasonal floating dock structures are also stored on the ground, surrounding the structures.

Soils and Topography

According to the NRCS Web Soil Survey (**Attachment D**), the upland portions of the Property are mapped as Carver coarse sands that are excessively drained formed in glaciofluvial deposits of coarse and very coarse sands. The Carver soil series are not identified as Prime Farmland Soils by MassGIS. The former cranberry bog (BVW) is identified as Freetown coarse sand that are very poorly drained and typically associated with kettles, bogs, or depressions.

The easterly/northeasterly portion of the site is relatively flat with a few scattered upland depressions. Within the central portion of the site, topography begins to descend towards the Pond with continued undulation and scattered depressions. One of the depressions along the south-central portion of the site qualifies as an Isolated Vegetated Wetland (see below). A topographic ridge is present immediately south of the on-site BVW (abandoned bog) along the southerly Property line. The gravel road/W.H. Besse Cartway is located at the toe of the slope to the topographic ridge, before descending further downgradient to the wetland. The Pond's shoreline represents the lowest topographic point on the Property.

Habitat Cover Types

As mentioned above, the majority of the Property is occupied by Forested Upland with Bordering Vegetated Wetlands (BVW) extending off Long Pond. A small Isolated Vegetated Wetland (IVW) is also present on-site.

Forested Upland

The Forested Upland is a typical Cape Cod oak-pine upland forest consisting of a partially open canopy dominated by white oak (*Quercus alba*), black oak (*Quercus velutina*), and pitch pine (*Pinus rigida*) trees



and scattered eastern white pine (*Pinus strobus*), American beech (*Fagus grandifolia*), American holly (*Ilex opaca*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), and eastern red cedar (*Juniperus virginiana*). The understory contains saplings from the canopy layer; a shrub layer dominated by black huckleberry (*Gaylussacia baccata*) with sporadic bayberry (*Myrica pensylvanica*), highbush blueberry (*Vaccinium corymbosum*), and nannyberry (*Viburnum lentago*), arrowwood (*Viburnum dentatum*) shrubs. Common greenbrier (*Smilax rotundifolia*), cat brier (*Smilax glauca*), teaberry (*Gaultheria procumbens*), Pennsylvania sedge (*Carex pensylvanica*), lowbush blueberry (*Vaccinium angustifolium*), bracken fern (*Pteridium aquilinum*), hay scented fern (*Dennstaedtia punctilobula*), wild sarsaparilla (*Aralia nudicaulis*), poison ivy (*Toxicodendron radicans*), and seedlings from the canopy and shrub layer occupy portions of the groundcover. The Forested Upland qualifies as a Pitch Pine-Oak Forests/Woodland (PPOF) per MA NHESP's *Classification of Natural Communities of Massachusetts*.

Forested Upland habitat conditions are relatively consistent across the Property with mature trees varying in height, generally averaging 30-60± feet tall.

Snags of varying sizes are also located across the site. The forest floor maintains a well-developed leaf litter/organic layer due to the deciduous vegetation. Decomposing woody material are distributed throughout the forest floor.

No significant concentrations of invasive species were documented on-site, aside from some minimal Asiatic bittersweet (*Celastrus orbiculata*) along the site's frontage along Long Pond Road.

Wetlands

The site contains Bordering Vegetated Wetlands (BVW) in association with Long Pond and an Isolated Vegetated Wetland (IVW). LEC demarcated the wetland boundaries on January 11, 2023, in accordance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131 ss. 40) and its implementing *Regulations* (310 C.M.R. 10.00), and Town of Brewster *Wetlands Protection Bylaw* (Chapter 172) and *Wetlands Regulations* (1.01 -5.01). The wetland boundaries were based on the observations of the existing plant communities, using the "fifty percent criteria" to determine dominance of wetland/upland vegetation, the interpretation of soil characteristics, and other indicators of hydrology, in accordance with the following: *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act* (March 1995), prepared by MassDEP; *Field Indicators for Identifying Hydric Soils in New England-Version 4, June 2018* and *A Field Companion to Field Indicators for Identifying Hydric Soils in New England Version 4, dated May 2017*; *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region* (January 2012); and local *Bylaw/Regulations*.

Wetland flags A1-A10 and B1-B83 (BVW), and C1-C4 (IVW) are depicted on *Wetland Map (Attachment E)*. The wetland flags were GPS-located by LEC utilizing a Trimble Handheld GEO XH-7000 Global Positioning System (GPS) unit with a post-processing accuracy ranging from 1-100 cm. The GPS data is intended for planning purposes only. Should a project proceed forward with permitting, a professional land surveyor or registered engineer will need to survey-locate the flags and plot them on a stamped survey plan.



Wetland Resource Area boundaries are subject to regulatory review and approval by the Brewster Conservation Commission and/or MassDEP. Wetland Resource Area boundaries can be confirmed via filing an Abbreviated Notice of Resource Area Delineation (ANRAD) Application with the Conservation Commission and MassDEP.

Bordering Vegetated Wetlands

Flag numbers A1-10 represent a band of forested wetland (BVW) extending south/southeast off Long Pond, northeast of the beach area. The BVW contains red maple trees and scattered upland trees with sweet pepperbush (*Clethra alnifolia*), highbush blueberry, swamp azalea (*Rhododendron viscosum*), bayberry, and common greenbrier within the understory. A walking path extends through this section of BVW.

BVW flags B1-B83 extend off Long Pond around the beach area, across a portion of the lawn area, and include the abandoned cranberry bog. Three out of the four westerly cabins are located within the demarcated B-series BVW that also includes a portion of the westerly lawn area. Lawn areas within the demarcated BVW contain hydric soils and herbaceous wetland vegetation, such as soft rush (*Juncus effusus*), sedges (*Carex* sp.), and sphagnum moss (*Sphagnum* sp.), with high groundwater conditions. The A and B-series BVW are separated by a berm, presumably associated with the past cranberry operations.

The B-series BVW is primarily occupied by red maple and tupelo (*Nyssa sylvatica*) trees with a variable understory of sweet pepperbush, highbush blueberry, and swamp azalea. Dense entanglements of common greenbrier are prevalent. Interior portions of the abandoned cranberry bog contain cranberry (*Vaccinium macrocarpon*), sphagnum moss, tussock sedge (*Carex stricta*), wool grass (*Scirpus cyperinus*), leatherleaf (*Chamaedaphne calyculata*), and miscellaneous hydrophylic grasses and sedges, in addition to the above. Moderate to significant erosion/sedimentation was observed along the section of the BVW abutting (downgradient of) the gravel road/W.H. Besse Cartway.

Remnant ditches associated within the abandoned bog are present within the interior of the BVW. The remnant ditches do not appear to experience surficial flow, but do collect standing water, presumably during the spring hydroperiod and/or following significant storm events. Based on water marks on vegetation, remnant ditches and interior portions of the BVW southeast of the beach area and closer to the gravel road/W.H. Besse Cartway may hold up to 6-18 inches of standing water (6-12 inches on average). As such, Vernal Pool habitat may be present within the interior of the BVW. Vernal Pools are temporary bodies of freshwater that provide important habitat for many vertebrate and invertebrate species, some of which are entirely dependent on Vernal Pool habitat conditions for their survival.

Mature trees and shrub vegetation overhang the shoreline to Long Pond. Miscellaneous herbaceous vegetation is present along the shoreline, becoming more abundant proximate to the sandy beach area. Due to the timing of LEC's site evaluation, a full inventory of herbaceous shoreline vegetation was not feasible; however, sedges, rushes, and goldenrods (*Solidago* sp.) were observed.

Isolated Vegetated Wetlands

The IVW located within south-central portion of the Property is confined to a distinct topographic



depression/hollow that appears to be deeper than other upland depressions/hollows. While no signs of standing water or saturation at the surface were observed, LEC did document hydric soils and high groundwater conditions within the bottom of the depression (soil profile). Furthermore, the depression contains wetland vegetation comprised of red maple, highbush blueberry, and witch hazel (*Hamamelis virginiana*). Consequently, the IVW qualifies as a protectable Vegetated Wetland under the Brewster *Wetlands Protection Bylaw & Regulations*. The IVW is not protectable under the WPA.

FEMA Mapping

According to the July 16, 2014 FEMA Flood Insurance Rate Map (FIRM) for Barnstable County (*Map Number 25001C0606J*), the westerly/southwesterly portion of the Property is located within a Flood Zone A, *Special Flood Hazard Areas (SFHAs) Subject to Inundation by the 1% Annual Chance Flood* (No Base Flood Elevations determined). Flood Zone A extends across the low-lying portions of the Property containing the westerly cabins, lawn areas, beach area, BVW, and immediately abutting areas.

Remaining portions of the Property are located within Zone X, *Areas determined to be outside the 0.2% annual chance floodplain (Attachment F)*.

Natural Heritage and Endangered Species Program Designation

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021) published by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), the Property is not located within a *Priority Habitat of Rare Species* and *Estimated Habitat of Rare Species (Attachment G)*. The majority of Long Pond is located within a Priority Habitat (PH 618); however, the northerly “cove” is excluded. It is unclear why the northerly “cove” is not located within PH 618 as habitat conditions are similar in nature, in comparison to the other portions of Long Pond. PH 618 is mapped for state-listed rare plants, including Plymouth Gentian (*Sabatia kennedyan*) and possible state-listed rare dragonflies/damselflies.

No Certified Vernal Pools or Potential Vernal Pools as mapped by MassGIS are located within the immediate vicinity of the Property.

BioMap

MassWildlife and The Nature Conservancy, with support from the Executive Office of Energy and Environmental Affairs, released the newly updated BioMap tool in November 2022, to guide strategic protection and stewardship of lands and waters that are the most important for conserving biological diversity in Massachusetts. BioMap conservation targets are organized into two main elements, Core Habitat and Critical Natural Landscape (CNL). Core Habitat *identifies key areas that are critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems across the Commonwealth*. Critical Natural Landscape *identifies larger natural landscape blocks that are minimally impacted by development, as well as buffers to core habitats and coastal areas, both of which enhance connectivity and resilience*.

According to *BioMap* MassGIS data layers, areas along the shoreline to Long Pond are located within a mapped “Core Habitat” and “Critical Natural Landscape” (**Attachment H**). The Core Habitat and



Critical Natural Landscape components are “Aquatic Core Buffer” and “Aquatic Habitat Buffer” that represent important freshwater habitats and adjoining habitat areas, migratory corridors, etc., for a myriad of species of plants, fishes, amphibians, birds, mammals, and insects, and Species of Greatest Conservation Need. The habitat buffer supports the functionality and provides significant habitat for species that move between freshwater waterbodies, wetlands, and upland habitats.

Area of Critical Environmental Concern

The project site does not lie within an Area of Critical Environmental Concern (ACEC).

Wildlife

The Property, including the wetlands and Forested Upland, provides important food, shelter, breeding, migratory, and overwintering habitat for wide variety of wildlife species.

The following reviews wildlife species that are likely to utilize the Property based on existing habitat conditions, complementing LEC’s direct wildlife observations; however, it is important to note that LEC’s site evaluations were limited in nature and not conducted during the active season for most species.

Mammals

Mammals likely to utilize the Property, or portions thereof, include but are not limited to white-tailed deer (*Odocoileus virginianus*), eastern coyote (*Canis latrans*), red fox (*Vulpes vulpes*), fisher (*Martes pennanti*), raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), eastern cottontail (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), deer mice (*Peromyscus* sp.), meadow voles (*Microtus* sp.), and/or common mole (*Scalopus aquaticus*), along with semi-aquatic muskrat (*Ondatra zibethicus*), mink (*Neovison vison*), and river otter (*Lontra canadensis*).

The Property may provide summer habitat for various bats. Eight (8) bats have been documented within the Cape Cod National Seashore (CCNS) that contains similar habitats to those on-site. The most common bat documented within the CCNS is the big brown bat (*Eptesicus fuscus*). The Property could provide habitat for the state and federally listed Northern Long-Eared Bat (NLEB, *Myotis septentrionalis*), currently listed as “Endangered” under the *Massachusetts Endangered Species Act* (MESA) and “Threatened” under the federal *Endangered Species Act* (ESA). NLEB is listed statewide by the US Fish and Wildlife Service (USFWS) and subject to a Final 4(d) rule under the ESA, effective February 16, 2016. Projects that result in tree removal activities shall comply with the 4(d) rule under the ESA, which states the following:

“Incidental take resulting from tree removal is prohibited if: 1) Occurs within 0.25 mile radius of known northern long-eared bat hibernacula or 2) cuts or destroys known occupied maternity roost trees, or any other trees within a 150-foot radius from the known maternity tree during the pup season (June 1 through July 31).”

According to the online database maintained by MA NHESP, current as of January 2021, (<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html>), the Property is not located within 0.25 miles of a known

hibernacula or 150 linear feet of a known maternity roost tree. The closest known maternity roost tree has been documented in Eastham, approximately 6¾ miles away. No NLEB hibernacula have been documented on Cape Cod per NHESP's database.

USFWS has reclassified the NLEB as "Endangered," now effective March 31, 2023, nullifying the current 4(d) Rule. USFWS are in the process of providing guidance and additional review/consultation may be necessary if forested conversion (tree clearing) is proposed in the future.

Birds

The Property may provide habitat for various year-round, migrant, and breeding avian species, including but not limited to wild turkey (*Meleagris gallopavo*), eastern towhee (*Pipilo erythrophthalmus*), black-capped chickadee (*Poecile atricapillus*), chipping sparrow (*Spizella passerina*), song sparrow (*Melospiza melodia*), red-bellied woodpecker (*Melanerpes carolinus*), house wren (*Troglodytes aedon*), common yellowthroat (*Geothlypis trichas*), eastern wood-pewee (*Contopus virens*), great crested flycatcher (*Myiarchus crinitus*), northern cardinal (*Cardinalis cardinalis*), tree swallow (*Tachycineta bicolor*), mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), Baltimore oriole (*Icterus galbula*), scarlet tanager (*Piranga olivacea*), downy woodpecker (*Picoides pubescens*), brown creeper (*Certhia americana*), white-breasted nuthatch (*Sitta carolinensis*), American crow (*Corvus brachyrhynchos*), Canada goose (*Branta canadensis*), red-tailed hawk (*Buteo jamaicensis*), great-horned owl (*Bubo virginianus*), and/or eastern screech owl (*Megascops asio*).

Long Pond provides habitat for a multitude of waterfowl, including migrant/wintering waterfowl. Bald eagles (*Haliaeetus leucocephalus*) have also been more recently identified on Long Pond. Long Pond has been identified as a Cornell University eBird Hotspot with over ninety-eight (98) species identified (**Attachment I**).

The Property is located within the "Brewster Ponds and Woodlands" Important Bird Area (IBA), as identified by MassAudubon. The Brewster Ponds and Woodlands IBA includes the 2,900-acre Punkhorn Parklands Conservation Area and 1,955-acre Nickerson State Park and specifically, the following ponds: Long Pond, Upper Mill Pond (253 acres), Hinckley's Pond (171 acres), Seymour Pond (181 acres), and Cliff Pond (193 acres) along with adjoining woodlands. According to MassAudubon, *point count surveys indicate significant breeding populations of five, regional, high conservation priority species, and the presence of the Northern Parula, a state threatened species. Waterfowl surveys indicate that the ponds within the area host large numbers of migrant/wintering waterfowl.*

Reptiles/Amphibians

The Property may provide habitat for the following snakes: eastern garter snake (*Thamnophis sirtalis*), milk snake (*Lampropeltis triangulum*), northern black racer (*Coluber constrictor*), and northern water snake (*Nerodia sipedon*) within Long Pond; amphibians: eastern red-backed salamander (*Plethodon cinereus*), and American toad (*Anaxyrus americanus*); and turtles, painted turtles (*Chrysemys picta*) and snapping turtles (*Chelydra serpentina*), primarily associated with Long Pond and the BVW.



While the Property is not located within a NHESP-mapped Priority/Estimated Habitat, suitable habitat conditions are present for the state-listed Eastern Box Turtle (*Terrapene carolina*).

Should interior portions of the BVW (abandoned cranberry bog) function as Vernal Pool habitat, the wetland may provide breeding habitat for wood frogs (*Lithobates sylvaticus*), spotted salamanders (*Ambystoma maculatum*), and/or spring peepers (*Pseudacris crucifer*).

Fish

The following fish species were found during MassWildlife surveys: Alewife (sea-run), Smallmouth Bass, Largemouth Bass, Yellow Perch, White Perch, Pumpkinseed, Tessellated Darter, Banded Killifish, Brown Bullhead, White Sucker and American eel.

Long Pond is associated with the Herring River watershed that provides essential habitat for anadromous fish, including the alewife and blueback herring, which migrate from salt to freshwater to spawn, and catadromous fish like American eel that spawn in salt water and live in freshwater.

Wetland Regulatory Implications

Wetland Resource Areas on or immediately adjacent to the Property include Bordering Vegetated Wetlands, (Isolated) Vegetated Wetlands, Bordering Land Subject to Flooding (BLSF), Bank, Land Under Water (LUW), and Bank of or Land under Ponds that Underlie Anadromous/Catadromous ("Fish Run"). These Wetland Resource Areas are protected under the *Massachusetts Wetlands Protection Act* (WPA, M.G.L. c. 131 ss. 40) and its implementing *Regulations* (310 C.M.R. 10.00), and/or Town of Brewster *Wetlands Protection Bylaw* (Chapter 172) and *Wetlands Regulations* (1.01 -5.01). The WPA Regulations and local *Bylaw Regulations* maintain performance standards for work proposed within Resource Areas or the 100-foot jurisdictional Buffer Zone.

The on-site or immediately adjacent Wetland Resource Areas are likely to be significant to the following interests/values protected under the WPA Regulations or *Bylaw Regulations*: public and private water supply, groundwater supply and quality, water quality, flood control, storm damage prevention, erosion and sedimentation control, prevention of pollution, wildlife or wildlife habitat, fisheries, aesthetics, and historic values.

The following reviews the Wetland Resource Areas and WPA/*Bylaw* performance standards in greater detail:

Bordering Vegetated Wetlands (BVW)

BVW is defined in 310 CMR 10.55(2) as *freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants.*

BVW is also afforded protection under Section 3.02-Vegetated Wetlands of the *Bylaw Regulations*.

The BVW, demarcated by flags A1-A10 and B1-B83, is described above.



The WPA Regulations have specific performance standards for work within BVW. Section 3.02 of the *Bylaw Regulations* states that *no activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of a vegetated wetland, or of land within 50 feet of a vegetated wetland, shall be permitted by the Conservation Commission, except for activity which is allowed under a variance from these regulations granted pursuant to Section 5.01... Any activity which is allowed under a variance granted pursuant to Section 5.01 of these regulations upon or within 50 feet of a vegetated wetland shall not impair in any way the vegetated wetland's ability to perform any of the functions set forth in Section 3.02 (1).*

(Isolated) Vegetated Wetlands

According to Section 3.02 of the *Bylaw Regulations*, *Vegetated Wetlands are freshwater wetlands. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. They are areas where the topography is low and flat, and where the soils are annually saturated. The ground and surface water regime and the vegetational community which occur in each type of freshwater wetland...*

The IVW, demarcated by flags C1-C4, is described above.

As reviewed above, the *Bylaw Regulations* states that *no activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of a vegetated wetland, or of land within 50 feet of a vegetated wetland, shall be permitted by the Conservation Commission, except for activity which is allowed under a variance from these regulations granted pursuant to Section 5.01... Any activity which is allowed under a variance granted pursuant to Section 5.01 of these regulations upon or within 50 feet of a vegetated wetland shall not impair in any way the vegetated wetland's ability to perform any of the functions set forth in Section 3.02 (1).*

Bordering Land Subject to Flooding (BLSF)

Bordering Land Subject to Flooding (BLSF) under 310 CMR 10.57 and Section 3.04 of the *Bylaw Regulations* is defined as *an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and waterbodies; where a bordering vegetated wetland occurs, it extends from said wetland.*

According to the July 16, 2014 FEMA Flood Insurance Rate Map (FIRM) for Barnstable County (*Map Number 25001C0606J*), the westerly/southwesterly portion of the Property is located within a Flood Zone A, *Special Flood Hazard Areas (SFHAs) Subject to Inundation by the 1% Annual Chance Flood*. Flood Zone A is BLSF and extends across the low-lying portions of the Property containing the westerly cabins, lawn areas, beach area, BVW, and immediately abutting areas; however, no Base Flood Elevations have been determined. The WPA Regulations and *Bylaw Regulations* review in-depth engineering calculations to determine the BLSF elevation, including evaluation of rainfall data, topography, etc.

The WPA Regulations stipulate performance standards for work within BLSF to ensure that appropriate compensatory storage is provided for all flood storage volume that will be lost as the result of a proposed project and wildlife habitat is adequately protected. In addition to performance standards to ensure no adverse effects, Section 3.04 *Bylaw Regulations* also states that *no activity, other than the maintenance of*



an already existing structure, which will result in the building within or upon, removing, filling, or altering of land subject to flooding shall be permitted by the Conservation Commission, except for activity which is allowed under a variance from these regulations granted pursuant to Section 5.01.

Bank

Bank is defined at 310 CMR 10.54 and Section 3.01 of the *Bylaw Regulations* as *the portion of the land surface which normally abuts and confines a water body*. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, or stone. The upper boundary of a Bank is the first observable break in the slope of the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level.

LEC did not demarcate the entire boundary of Bank along the shoreline to Long Pond, but did GPS-locate the Mean High Water (MHW)/Bank boundary across the sandy beach area where BVW is not present. Remaining portions of the Bank occur downgradient of the demarcated BVW and are defined by a distinct break in topography with overhanging vegetation, as described above.

The WPA Regulations and *Bylaw Regulations* have specific performance standards for proposed work on a Bank. Section 3.01 of the *Bylaw Regulations* also states that *no activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of a bank, on land within 50 feet of any bank, shall be permitted by the Conservation Commission, except for activity which is allowed under a variance from these regulations granted pursuant to Section 5.01*. Furthermore, the *Bylaw Regulations* require that any proposed work within the 100-foot Buffer Zone shall not impair the functions and values of the Bank, including: *1. the physical stability of the Bank; 2. the water carrying capacity of the existing channel within the Bank; 3. ground water and surface water quality; 4. the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries.*

Land Under Water (LUW)

The WPA Regulations at 310 CMR 10.56 and *Bylaw Regulations* at Section 3.03 similarly define Land under Water Bodies and Waterways as *the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.*

Land Under Water (LUW) is present below the mean annual low water of Long Pond.

The WPA Regulations have specific performance standards for work within LUW. The *Bylaw Regulations* stipulate that *no activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of land under a waterbody shall be permitted by the Conservation Commission, except for activity which is allowed under a variance from these regulation granted pursuant to Section 5.01*. The *Bylaw Regulations* also require that any proposed work within LUW shall not impair the functions and values of the Resource Area, including 1) *The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks; 2. Ground and surface quality; and 3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries.*



Land Under Ponds That Underlie Anadromous/Catadromous ("Fish Run")

The WPA Regulations (310 CMR 10.35) and *Bylaw Regulations* (Section 2.09) similar define Anadromous/Catadromous Fish Runs as areas within estuaries, ponds, streams, creeks, rivers, lakes or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous fish and which is identified by the Division of Marine Fisheries or has been mapped on the Coastal Atlas of the Coastal Zone Management Program. Such fish runs shall include those areas which have historically served as fish runs and are either being restored or are planned to be restored at the time the Notice of Intent or Application for Permit is filed.

The WPA Regulations and *Bylaw Regulations* maintain specific performance standards for work within LUW or Bank associated with a Fish Run to avoid adverse impacts. Section 2.09 of the *Bylaw Regulations* also states that *no activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of the bank of a fish run, land under a fish run, or land within 50 feet of the bank of a fish run shall be permitted by the Conservation Commission, except for activity which is allowed under a variance granted pursuant to Section 5.01.*

Grandfathering/Exemption

The Massachusetts *Wetlands Protection Act* was enacted in 1972 and the Town of Brewster *Wetlands Protection Bylaw* (Chapter 172) was adopted on December 10, 1984. The existing on-site structures and associated uses may pre-date both the WPA and *Bylaw*. However, both statutes do not provide explicit grandfathering or exemptions for pre-existing structures/uses. As reviewed above, the *Bylaw* does provide provisions for “*maintenance of an already existing structure.*”

Consultation and review with the Brewster Conservation Commission and/or MassDEP would be required should any existing structures require maintenance, improvement, or any new work is proposed. Analysis of regulatory performance standards may be necessary depending on the nature of the activity.

Variance (Bylaw)

As reviewed under Part V of the *Bylaw Regulations*, the Conservation Commission may, in its discretion, grant variances of performance standards, provided that mitigating measures are proposed that contribute to the protection of resource values (interests); no reasonable alternative exists, and the proposed project will have no adverse impact.

Chapter 91 Waterways Regulations

Long Pond qualifies as a “Great Pond” in Massachusetts as it is greater than 10 acres in size, and is therefore subject to the Massachusetts General Law Chapter 91 and *Waterways Regulations* (310 CMR 9.00). A Waterways License (Application No. W96-6820 / Interim Approval No. 11181) was issued by MassDEP on January 4, 2006, for Camp Wono, Inc.’s seasonal swimming dock system. The Interim Approval is valid for 30 years; however, the license states that the Interim Approval expires one year from the date of a property transfer. Coordination with MassDEP may be necessary to review renewal or new licensing for in-water dock structures. Please note that dock changes may also trigger new MassDEP review under Chapter 91.



Recommendations

LEC offers the following short-term ecological recommendations based on current site conditions:

- Remediation measures are necessary in order to address the moderate to significant erosion/sedimentation along sections of the gravel road/W.H. Besse Cartway into the adjacent (downgradient) BVW. This may involve minor recontouring of the gravel roadway, installation of stormwater management areas (i.e., rain gardens, swales, etc.) to collect runoff, slope stabilization, etc. Additional analysis is warranted on what measures can be implemented.
- A Vernal Pool Assessment(s) within the BVW (abandoned cranberry bog) in spring (March-April) may provide useful baseline information.
- File an Abbreviated Notice of Resource Area Delineation (ANRAD) Application with the Brewster Conservation Commission and MA DEP to confirm Wetland Resource Area boundaries.

Summary

The Pond Parcel provides important wildlife habitat and contains valuable Wetland Resource Areas. The Property abuts existing conservation land to the north and provides a greater block of contiguous, protected habitat connecting the larger tracts of Forested Upland to Long Pond. As recognized by the latest BioMap and other resource mapping, the Property abuts a significant freshwater habitat and contains adjoining habitat areas that provide connectivity and migratory corridors to benefit a wide variety of wildlife species.

LEC offers short-term ecological recommendations to better protect the BVW (abandoned cranberry bog) and confirm Wetland Resource Area boundaries.

Any proposed site improvements and/or maintenance may require wetland regulatory review, depending on the nature the activity.

LEC is pleased to submit this Natural Resources Inventory Report. If you have any questions or require additional information, please do not hesitate to contact LEC at bmadden@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Brian T. Madden

Senior Wildlife/Wetland Scientist

Attachments

Attachment A

USGS Topographic Map



MASS GIS
 USGS Topographic Map acquired from
 the Office of Geographic Information
 (MassGIS) website.
 1:25,000 USGS Topographic Maps - April 2001

0 450 900 1,800
 Feet

LEC
 LEC Environmental Consultants, Inc.
 Plymouth, MA
 508.746.9491
 www.lecenvironmental.com

USGS Topographic Map
 Long Pond Road, Pond Parcel
 Brewster, Massachusetts

N

 January 23, 2023

Attachment B

Aerial Orthophoto Map



2021 Aerial Orthophoto acquired from the Office of Geographic Information (MassGIS) website.

0 450 900 1,800 Feet



LEC Environmental Consultants, Inc.

Plymouth, MA
508.746.9491
www.lecenvironmental.com

Aerial Orthophoto Map

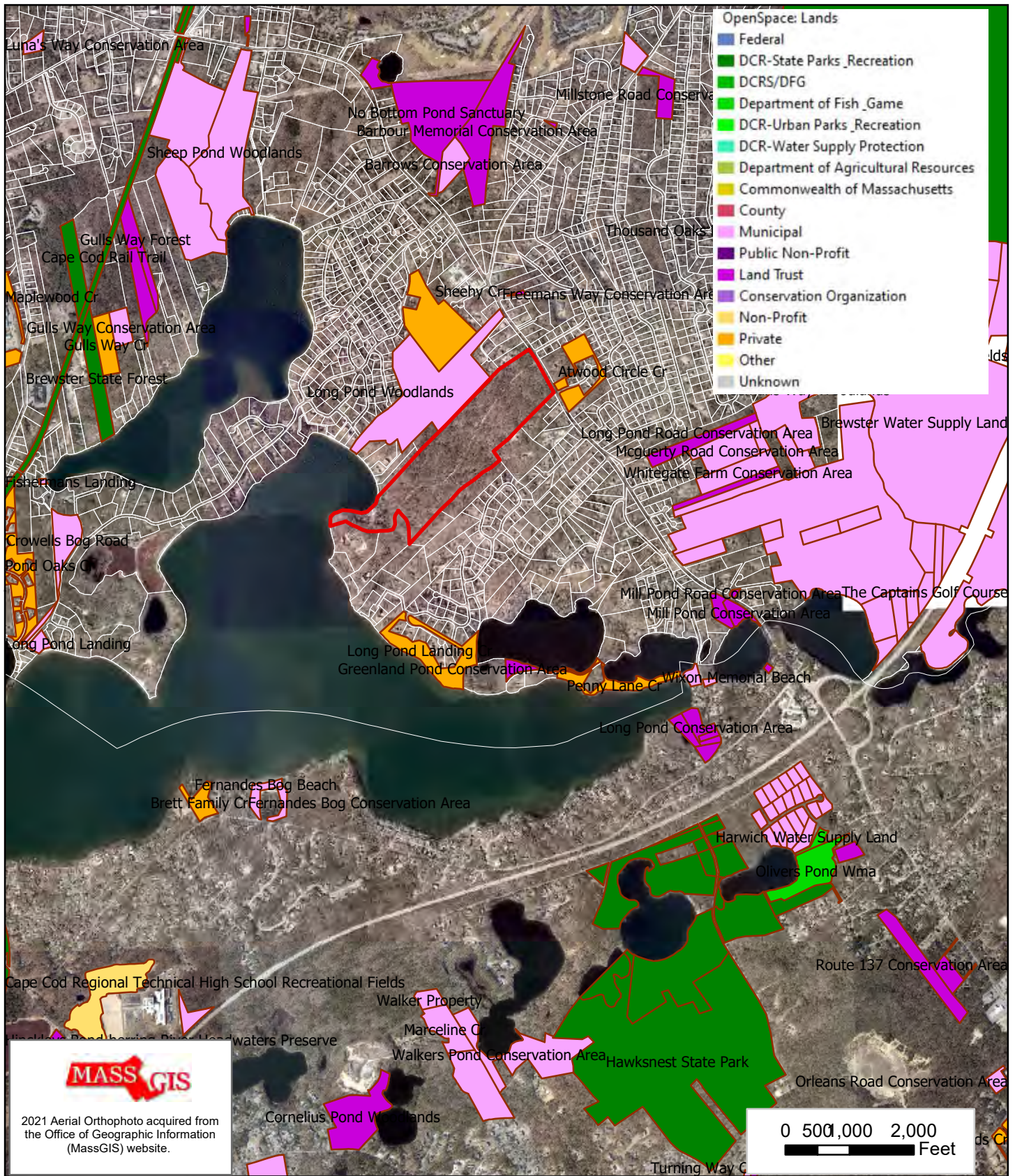
Long Pond Road, Pond Parcel
Brewster, Massachusetts



January 23, 2023

Attachment C

Open Space Map



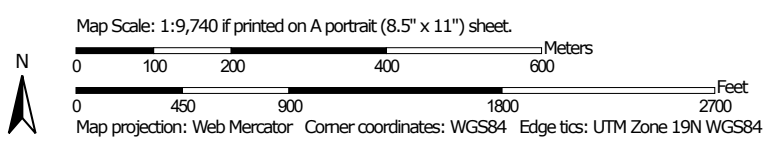
Attachment D

NRCS Web Soil Survey Map

Soil Map—Barnstable County, Massachusetts
(NRCS)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Barnstable County, Massachusetts

Survey Area Data: Version 19, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 5, 2020—Sep 7, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Water	20.5	4.8%
55A	Freetown coarse sand, 0 to 3 percent slopes, sanded surface	3.4	0.8%
252A	Carver coarse sand, 0 to 3 percent slopes	173.1	40.4%
252B	Carver coarse sand, 3 to 8 percent slopes	121.7	28.4%
252C	Carver coarse sand, 8 to 15 percent slopes	36.9	8.6%
252D	Carver coarse sand, 15 to 35 percent slopes	70.5	16.4%
600	Pits, sand and gravel	2.6	0.6%
Totals for Area of Interest		428.7	100.0%

Attachment E

Wetlands Map

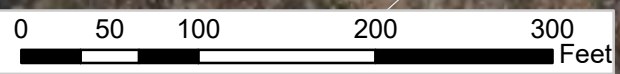
Legend

- Road Centerline
- Property Line
- ▭ Structure
- Treeline
- Beach
- MHW
- IVW Boundary
- BVW Boundary
- BVW/IVW Flag Locations
- ▭ Parcel Boundaries



Wetland Resource Area boundaries delineated by LEC on January 11, 2023.

Wetland flags and site features located by LEC on January 12, 2023 utilizing a Trimble Geo XH with accuracy ranges between 1-100 cm.



MASS GIS

2021 Aerial Orthophoto acquired from the Office of Geographic Information (MassGIS) website.

LEC
LEC Environmental Consultants, Inc.
Plymouth, MA
508.746.9491
www.lecenvironmental.com

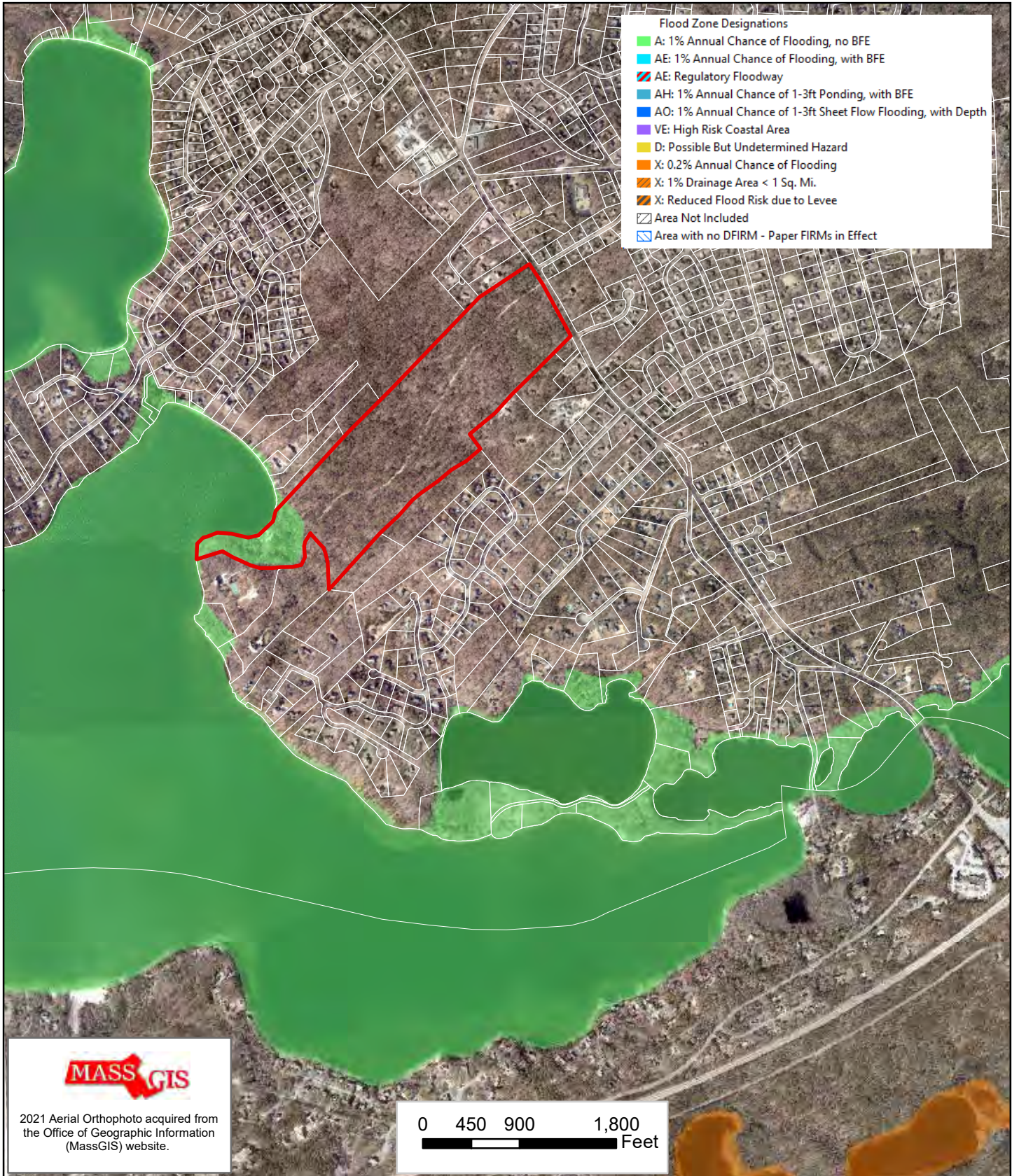
Wetlands Map

Long Pond Road Parcel, Brewster, Massachusetts

N
↑
January 18, 2023

Attachment F

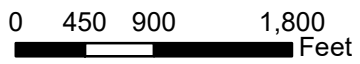
FEMA Flood Insurance Rate Map



- Flood Zone Designations**
- A: 1% Annual Chance of Flooding, no BFE
 - AE: 1% Annual Chance of Flooding, with BFE
 - AE: Regulatory Floodway
 - AH: 1% Annual Chance of 1-3ft Ponding, with BFE
 - AO: 1% Annual Chance of 1-3ft Sheet Flow Flooding, with Depth
 - VE: High Risk Coastal Area
 - D: Possible But Undetermined Hazard
 - X: 0.2% Annual Chance of Flooding
 - X: 1% Drainage Area < 1 Sq. Mi.
 - X: Reduced Flood Risk due to Levee
 - Area Not Included
 - Area with no DFIRM - Paper FIRMs in Effect



2021 Aerial Orthophoto acquired from the Office of Geographic Information (MassGIS) website.



LEC Environmental Consultants, Inc.
 Plymouth, MA
 508.746.9491
 www.lecenvironmental.com

FEMA Flood Insurance Rate Map

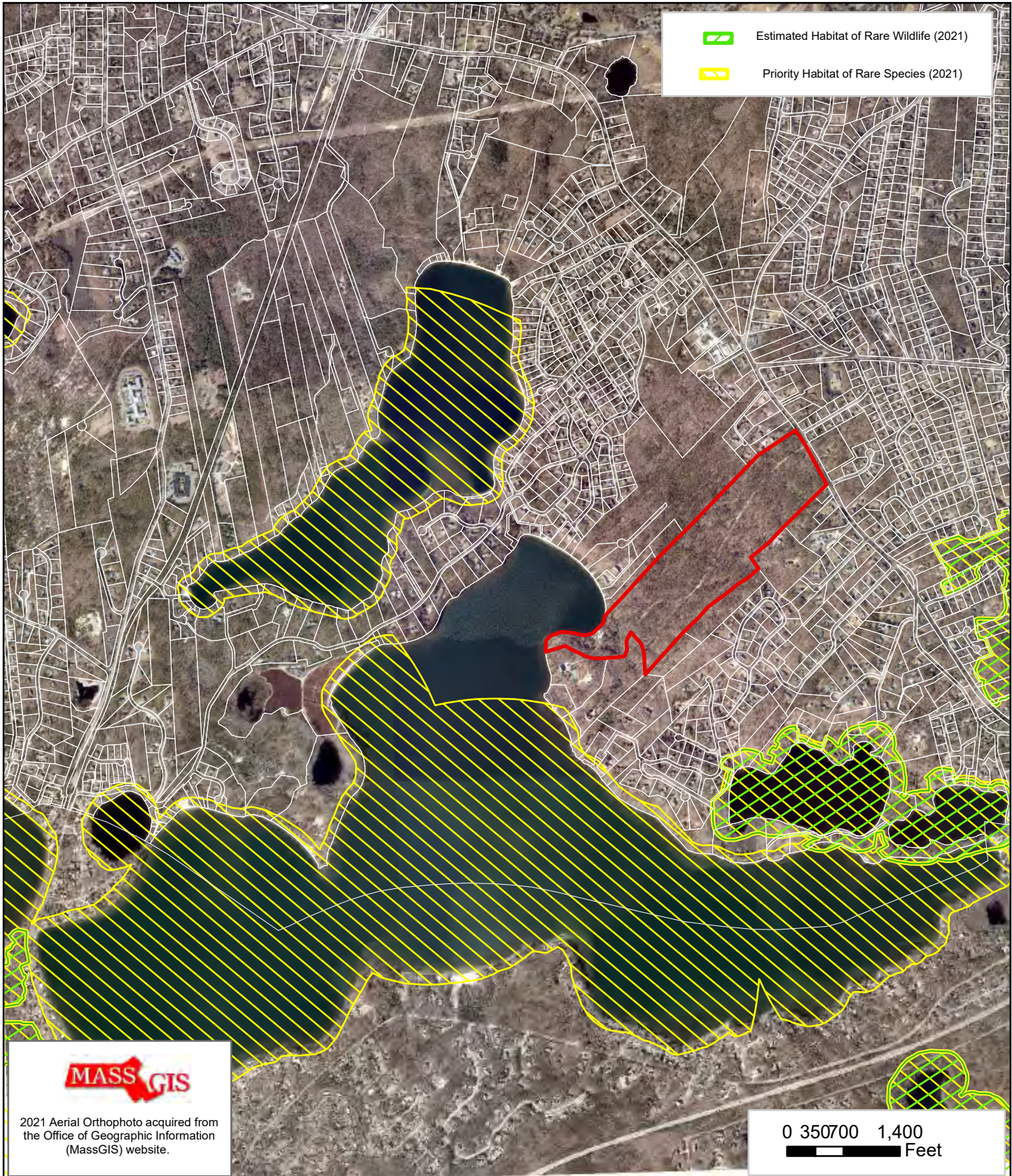
Long Pond Road, Pond Parcel
 Brewster, Massachusetts





January 23, 2023

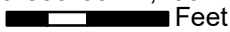
Attachment G

NHESP Map




 Estimated Habitat of Rare Wildlife (2021)
 Priority Habitat of Rare Species (2021)


 2021 Aerial Orthophoto acquired from the Office of Geographic Information (MassGIS) website.

0 350 700 1,400
 Feet

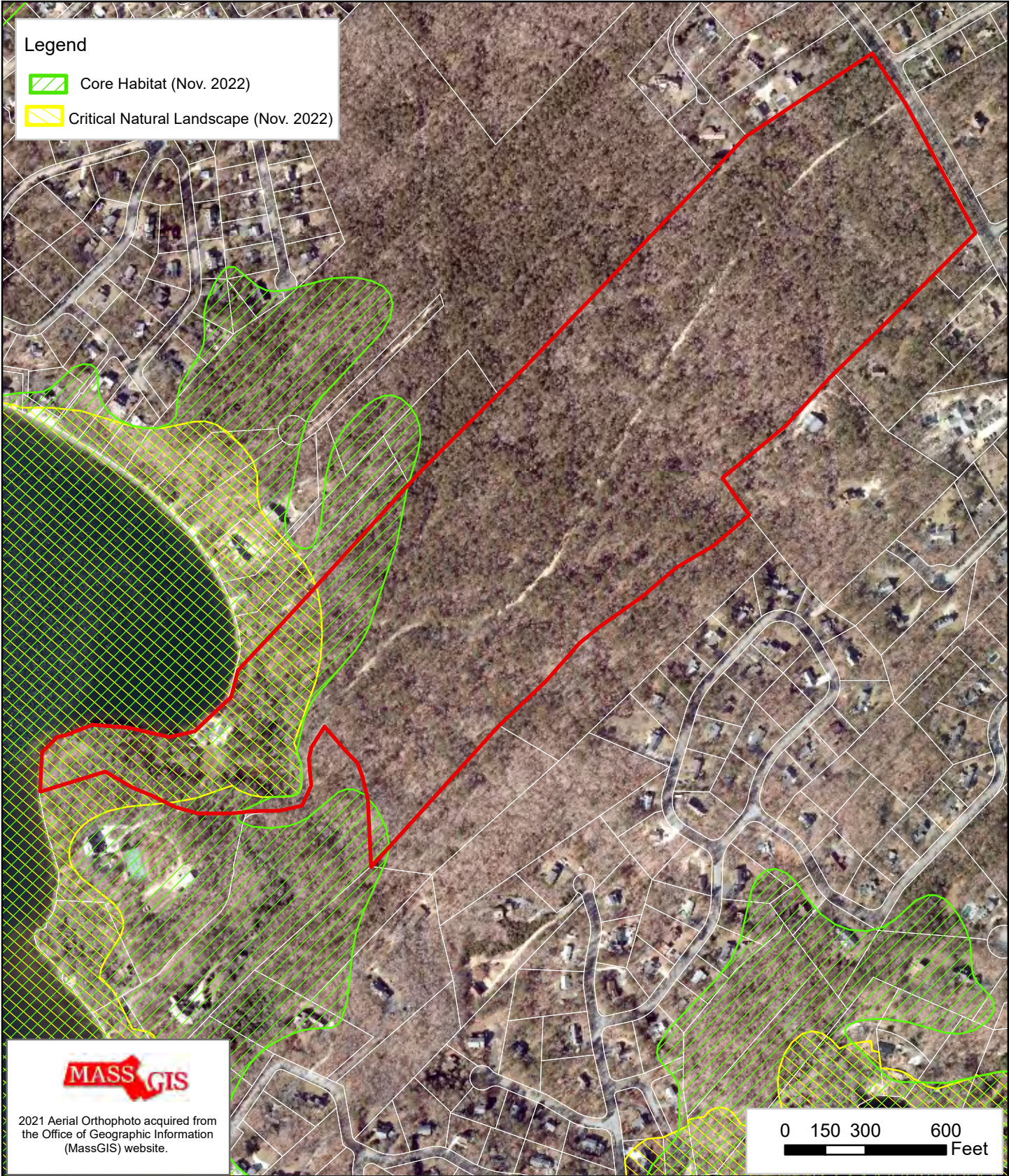

 LEC Environmental Consultants, Inc.
 Plymouth, MA
 508.746.9491
www.lecenvironmental.com

NHESP Map
 Long Pond Road, Pond Parcel
 Brewster, Massachusetts




 January 23, 2023

Attachment H

BioMap



Legend

-  Core Habitat (Nov. 2022)
-  Critical Natural Landscape (Nov. 2022)



2021 Aerial Orthophoto acquired from the Office of Geographic Information (MassGIS) website.

0 150 300 600
Feet



LEC Environmental Consultants, Inc.

Plymouth, MA
508.746.9491
www.lecenvironmental.com

BioMap

Long Pond Road, Pond Parcel
Brewster, Massachusetts




January 23, 2023

Attachment I

Long Pond eBird Hotspots

 [Change location](#) ▾


 [Year-round, All years](#) ▾

Long Pond, Harwich

[Barnstable County \(/region/US-MA-001?yr=all&m=\)](/region/US-MA-001?yr=all&m=),

[Massachusetts \(/region/US-MA?yr=all&m=\)](/region/US-MA?yr=all&m=),

[US \(/region/US?yr=all&m=\)](/region/US?yr=all&m=).

 [Map\(/hotspots?hs=L5278254&yr=all&m=\)](/hotspots?hs=L5278254&yr=all&m=).

 [Directions\(https://www.google.com/maps/search/?api=1&query=41.719851,-70.086099\)](https://www.google.com/maps/search/?api=1&query=41.719851,-70.086099).

▸ [Hotspot navigation](#)

[**Overview \(/hotspot/L5278254?yr=all&m=\)**](/hotspot/L5278254?yr=all&m=)

[**Illustrated Checklist \(/hotspot/L5278254/media?yr=all&m=\)**](/hotspot/L5278254/media?yr=all&m=)

VIEW MY...

[My eBird \(/myebird/L5278254\)](/myebird/L5278254),

[Life List \(/lifelist/L5278254\)](/lifelist/L5278254),

[Target Species \(/targets?r1=L5278254&bmo=1&emo=12\)](/targets?r1=L5278254&bmo=1&emo=12),

[Checklists \(/mychecklists/L5278254\)](/mychecklists/L5278254).

EXPLORE...

[Hotspot Map \(/hotspots?hs=L5278254&yr=all&m=\)](/hotspots?hs=L5278254&yr=all&m=),

[Bar Charts \(/barchart?r=L5278254&yr=all&m=\)](/barchart?r=L5278254&yr=all&m=),

[Media \(https://ebird.org/media/catalog?regionCode=L5278254\)](https://ebird.org/media/catalog?regionCode=L5278254),

[Printable Checklist \(/printableList?regionCode=L5278254&yr=all&m=\)](/printableList?regionCode=L5278254&yr=all&m=).

 **98**

[Species observed](#)

[\(/hotspot/L5278254?yr=all&m=\)](/hotspot/L5278254?yr=all&m=)

 **278**

[Complete checklists](#)

[\(/hotspot/L5278254/activity?yr=all&m=\)](/hotspot/L5278254/activity?yr=all&m=)

Sightings

Updated 9 sec ago

[Last seen \(/hotspot/L5278254?yr=all&m=&rank=mrec\)](/hotspot/L5278254?yr=all&m=&rank=mrec)

[First seen \(/hotspot/L5278254?yr=all&m=&rank=lrec\)](/hotspot/L5278254?yr=all&m=&rank=lrec)

[High counts \(/hotspot/L5278254?yr=all&m=&rank=hc\)](/hotspot/L5278254?yr=all&m=&rank=hc)

Show all details Sort by ▾

[SPECIES NAME \(/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=TAXON_ORDER&HS_O=ASC\)](/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=TAXON_ORDER&HS_O=ASC)



[COUNT \(/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=COUNT&HS_O=ASC\)](/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=COUNT&HS_O=ASC)

[DATE \(/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=DATE&HS_O=ASC\)](/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=DATE&HS_O=ASC)



[OBSERVER \(/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=OBSERVER&HS_O=ASC\)](/HOTSPOT/L5278254?YR=ALL&M=&RANK=MREC&HS_SORTBY=OBSERVER&HS_O=ASC)

▼ OBSERVER

1. **[Common Goldeneye\(/species/comgol/L5278254\)](/species/comgol/L5278254)**

18  [11 Jan 2023 \(/checklist/S125931941\)](/checklist/S125931941)  Al Curtis

2. **[Barrow's Goldeneye\(/species/bargol/L5278254\)](/species/bargol/L5278254)**

1  [11 Jan 2023 \(/checklist/S125931941\)](/checklist/S125931941)  Al Curtis

3. **[Mallard\(/species/mallar3/L5278254\)](/species/mallar3/L5278254)**

2  [10 Jan 2023 \(/checklist/S125840875\)](/checklist/S125840875)  Robert McKetchnie

4. **[Common Merganser\(/species/commer/L5278254\)](/species/commer/L5278254)**

8  [10 Jan 2023 \(/checklist/S125840875\)](/checklist/S125840875)  Robert McKetchnie

5. **[Herring Gull\(/species/hergul/L5278254\)](/species/hergul/L5278254)**

1  [10 Jan 2023 \(/checklist/S125840875\)](/checklist/S125840875)  Robert McKetchnie

6. **[Great Black-backed Gull\(/species/gbbgul/L5278254\)](/species/gbbgul/L5278254)**

1  [10 Jan 2023 \(/checklist/S125840875\)](/checklist/S125840875)  Robert McKetchnie

7. **[Red-throated Loon\(/species/retloo/L5278254\)](/species/retloo/L5278254)**



























1  [10 Jan 2023 \(/checklist/S125840875\)](/checklist/S125840875)  Robert McKetchnie



























8. **[Canada Goose\(/species/cangoo/L5278254\)](/species/cangoo/L5278254)**



























5  [3 Dec 2022 \(/checklist/S123376319\)](/checklist/S123376319)  Frances Clapp

9. **[Greater Scaup\(/species/gresca/L5278254\)](/species/gresca/L5278254)**

35  [3 Dec 2022 \(/checklist/S123376319\)](/checklist/S123376319)  Frances Clapp

10. **[Ring-billed Gull\(/species/ribgul/L5278254\)](/species/ribgul/L5278254)**
5  [3 Dec 2022 \(/checklist/S123376319\)](/checklist/S123376319)  Frances Clapp
11. **[Bald Eagle\(/species/baleag/L5278254\)](/species/baleag/L5278254)**
1  [3 Dec 2022 \(/checklist/S123376319\)](/checklist/S123376319)  Frances Clapp
12. **[American Crow\(/species/amecro/L5278254\)](/species/amecro/L5278254)**
5  [3 Dec 2022 \(/checklist/S123376319\)](/checklist/S123376319)  Frances Clapp
13. **[Bufflehead\(/species/buffle/L5278254\)](/species/buffle/L5278254)**
14  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
14. **[Red-bellied Woodpecker\(/species/rebwoo/L5278254\)](/species/rebwoo/L5278254)**
1  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
15. **[Hairy Woodpecker\(/species/haiwoo/L5278254\)](/species/haiwoo/L5278254)**
1  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
16. **[Blue Jay\(/species/blujay/L5278254\)](/species/blujay/L5278254)**
1  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
17. **[Golden-crowned Kinglet\(/species/gockin/L5278254\)](/species/gockin/L5278254)**
1  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
18. **[Eastern Bluebird\(/species/easblu/L5278254\)](/species/easblu/L5278254)**
1  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
19. **[Song Sparrow\(/species/sonspa/L5278254\)](/species/sonspa/L5278254)**
3  [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)  Jeff Bryant
20. **[Semipalmated Sandpiper\(/species/semsan/L5278254\)](/species/semsan/L5278254)**
2  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
21. **[Laughing Gull\(/species/laugul/L5278254\)](/species/laugul/L5278254)**
2  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
22. **[Double-crested Cormorant\(/species/doccor/L5278254\)](/species/doccor/L5278254)**
6  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.

23. **Belted Kingfisher(/species/belkin1/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
24. **Downy Woodpecker(/species/dowwoo/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
25. **Northern Flicker(/species/norfli/L5278254)**
2  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
26. **Eastern Kingbird(/species/easkin/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
27. **Common Raven(/species/comrav/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
28. **Black-capped Chickadee(/species/bkcchi/L5278254)**
6  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
29. **Tufted Titmouse(/species/tuftit/L5278254)**
3  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
30. **White-breasted Nuthatch(/species/whbnut/L5278254)**
2  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
31. **Carolina Wren(/species/carwre/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
32. **Gray Catbird(/species/grycat/L5278254)**
4  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
33. **American Robin(/species/amerob/L5278254)**
5  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
34. **American Goldfinch(/species/amegfi/L5278254)**
2  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
35. **Eastern Towhee(/species/eastow/L5278254)**
4  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.

36. **[Pine Warbler\(/species/pinwar/L5278254\)](/species/pinwar/L5278254)**
1  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
37. **[Northern Cardinal\(/species/norcar/L5278254\)](/species/norcar/L5278254)**
3  [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)  Dave C.
38. **[Bonaparte's Gull\(/species/bongul/L5278254\)](/species/bongul/L5278254)**
2  [14 Jul 2022 \(/checklist/S115104762\)](/checklist/S115104762)  Al Curtis
39. **[Great Blue Heron\(/species/grbher3/L5278254\)](/species/grbher3/L5278254)**
1  [14 Jul 2022 \(/checklist/S115104762\)](/checklist/S115104762)  Al Curtis
40. **[Black-crowned Night-Heron\(/species/bcnher/L5278254\)](/species/bcnher/L5278254)**
2  [14 Jul 2022 \(/checklist/S115104762\)](/checklist/S115104762)  Al Curtis
41. **[Osprey\(/species/osprey/L5278254\)](/species/osprey/L5278254)**
1  [7 Jun 2022 \(/checklist/S112410675\)](/checklist/S112410675)  David Zmoda
42. **[Common Loon\(/species/comloo/L5278254\)](/species/comloo/L5278254)**
2  [18 Mar 2022 \(/checklist/S105131801\)](/checklist/S105131801)  Jeff Bryant
43. **[Cooper's Hawk\(/species/coohaw/L5278254\)](/species/coohaw/L5278254)**
2  [18 Mar 2022 \(/checklist/S105131801\)](/checklist/S105131801)  Jeff Bryant
44. **[Red-tailed Hawk\(/species/rethaw/L5278254\)](/species/rethaw/L5278254)**
1  [18 Mar 2022 \(/checklist/S105131801\)](/checklist/S105131801)  Jeff Bryant
45. **[Lesser Scaup\(/species/lessca/L5278254\)](/species/lessca/L5278254)**
1  [19 Feb 2022 \(/checklist/S103082188\)](/checklist/S103082188)  Dorian Anderson
46. **[Hooded Merganser\(/species/hoomer/L5278254\)](/species/hoomer/L5278254)**
1  [19 Feb 2022 \(/checklist/S103082188\)](/checklist/S103082188)  Dorian Anderson
47. **[Red-breasted Merganser\(/species/rebmer/L5278254\)](/species/rebmer/L5278254)**
1  [11 Feb 2022 \(/checklist/S102486028\)](/checklist/S102486028)  John Young
48. **[Tufted Duck\(/species/tufduc/L5278254\)](/species/tufduc/L5278254)**
1  [10 Feb 2022 \(/checklist/S102385382\)](/checklist/S102385382)  Marilyn Tillinghast

49. **[Pied-billed Grebe\(/species/pibgre/L5278254\)](/species/pibgre/L5278254)**

1


 [10 Feb 2022 \(/checklist/S102385382\)](/checklist/S102385382)

 Marilyn Tillinghast

50. **[Red-breasted Nuthatch\(/species/rebnut/L5278254\)](/species/rebnut/L5278254)**

2

 [7 Feb 2022 \(/checklist/S102222277\)](/checklist/S102222277)

 Peter Fang/ Gloria Smith

51. **[Yellow-rumped Warbler\(/species/yerwar/L5278254\)](/species/yerwar/L5278254)**

1

 [6 Feb 2022 \(/checklist/S102153127\)](/checklist/S102153127)

 Christine Bates

52. **[Ruddy Duck\(/species/rudduc/L5278254\)](/species/rudduc/L5278254)**

1

 [6 Feb 2022 \(/checklist/S102137462\)](/checklist/S102137462)

 Carol Molander

53. **[Hermit Thrush\(/species/herthr/L5278254\)](/species/herthr/L5278254)**

1


 [6 Feb 2022 \(/checklist/S102137462\)](/checklist/S102137462)

 Carol Molander

54. **[American Black Duck\(/species/ambduc/L5278254\)](/species/ambduc/L5278254)**

4


 [31 Jan 2022 \(/checklist/S101816342\)](/checklist/S101816342)

 ryan doherty

55. **[Ring-necked Duck\(/species/rinduc/L5278254\)](/species/rinduc/L5278254)**

15

 [31 Jan 2022 \(/checklist/S101816342\)](/checklist/S101816342)

 ryan doherty

56. **[Long-tailed Duck\(/species/lotduc/L5278254\)](/species/lotduc/L5278254)**

1

 [31 Jan 2022 \(/checklist/S101771664\)](/checklist/S101771664)

 Scott Wieman

57. **[Dovekie\(/species/doveki/L5278254\)](/species/doveki/L5278254)**

1

 [30 Jan 2022 \(/checklist/S101727935\)](/checklist/S101727935)

 Jon Skinner



58. **[Brown Creeper\(/species/brncre/L5278254\)](/species/brncre/L5278254)**

1

 [30 Jan 2022 \(/checklist/S101727935\)](/checklist/S101727935)

 Jon Skinner



59. **[Mute Swan\(/species/mutswa/L5278254\)](/species/mutswa/L5278254)**

2

 [13 Jan 2022 \(/checklist/S100682982\)](/checklist/S100682982)

 Jeff Bryant



60. **[European Starling\(/species/eursta/L5278254\)](/species/eursta/L5278254)**

1

 [8 Jan 2022 \(/checklist/S100528904\)](/checklist/S100528904)

 Mark Faherty


































61. **[House Finch\(/species/houfin/L5278254\)](/species/houfin/L5278254)**

2

 [8 Jan 2022 \(/checklist/S100528904\)](/checklist/S100528904)

 Mark Faherty



62. **[American Coot\(/species/y00475/L5278254\)](/species/y00475/L5278254)**
5  [17 Nov 2021 \(/checklist/S102759394\)](/checklist/S102759394)  Paul Greenspan
63. **[Great Crested Flycatcher\(/species/grcfly/L5278254\)](/species/grcfly/L5278254)**
1  [9 Jun 2021 \(/checklist/S89888922\)](/checklist/S89888922)  Al Curtis
64. **[Chipping Sparrow\(/species/chispa/L5278254\)](/species/chispa/L5278254)**
1  [9 Jun 2021 \(/checklist/S89888922\)](/checklist/S89888922)  Al Curtis
65. **[Baltimore Oriole\(/species/balori/L5278254\)](/species/balori/L5278254)**
1  [9 Jun 2021 \(/checklist/S89888922\)](/checklist/S89888922)  Al Curtis
66. **[Red-winged Blackbird\(/species/rewbla/L5278254\)](/species/rewbla/L5278254)**
5  [9 Jun 2021 \(/checklist/S89888922\)](/checklist/S89888922)  Al Curtis
67. **[Common Grackle\(/species/comgra/L5278254\)](/species/comgra/L5278254)**
5  [9 Jun 2021 \(/checklist/S89888922\)](/checklist/S89888922)  Al Curtis
68. **[Wood Duck\(/species/wooduc/L5278254\)](/species/wooduc/L5278254)**  
2  [17 Feb 2021 \(/checklist/S81821790\)](/checklist/S81821790)  Karen Dec
69. **[Great Horned Owl\(/species/grhowl/L5278254\)](/species/grhowl/L5278254)**
1  [11 Feb 2021 \(/checklist/S80834806\)](/checklist/S80834806)  Nathan Oliver
70. **[Mourning Dove\(/species/moudov/L5278254\)](/species/moudov/L5278254)**
5  [2 Feb 2021 \(/checklist/S80324361\)](/checklist/S80324361)  Warren Mumford
71. **[Red Crossbill\(/species/redcro/L5278254\)](/species/redcro/L5278254)** 
10  [2 Feb 2021 \(/checklist/S83531914\)](/checklist/S83531914)  Peter Trimble
72. **[American Wigeon\(/species/amewig/L5278254\)](/species/amewig/L5278254)**  
1  [31 Jan 2021 \(/checklist/S80208063\)](/checklist/S80208063)  David Clapp
73. **[White-winged Scoter\(/species/whwsco2/L5278254\)](/species/whwsco2/L5278254)**
11  [31 Jan 2021 \(/checklist/S80208063\)](/checklist/S80208063)  David Clapp
74. **[Northern Pintail\(/species/norpin/L5278254\)](/species/norpin/L5278254)**
5  [31 Jan 2021 \(/checklist/S80180488\)](/checklist/S80180488)  Bradford Bower

75. **[Surf Scoter\(/species/sursco/L5278254\)](/species/sursco/L5278254)**

1

 [30 Jan 2021 \(/checklist/S80133182\)](/checklist/S80133182)

 David Clapp

76. **[Magnolia Warbler\(/species/magwar/L5278254\)](/species/magwar/L5278254)**

1

 [16 May 2020 \(/checklist/S69147759\)](/checklist/S69147759)

 Warren Mumford

77. **[Ovenbird\(/species/ovenbi1/L5278254\)](/species/ovenbi1/L5278254)**

1

 [2 May 2020 \(/checklist/S68268524\)](/checklist/S68268524)

 Patrick Johnson

78. **[Yellow Warbler\(/species/yelwar/L5278254\)](/species/yelwar/L5278254)**

1

 [2 May 2020 \(/checklist/S68268524\)](/checklist/S68268524)

 Patrick Johnson

79. **[Great Cormorant\(/species/grecor/L5278254\)](/species/grecor/L5278254)**

1


 [21 Feb 2020 \(/checklist/S64834008\)](/checklist/S64834008)

 Jamie Glydon

80. **[Pine Siskin\(/species/pinsis/L5278254\)](/species/pinsis/L5278254)**

1


 [27 Jan 2020 \(/checklist/S63864145\)](/checklist/S63864145)

 Pablo de la Nava

81. **[White-throated Sparrow\(/species/whtspa/L5278254\)](/species/whtspa/L5278254)**

1

 [26 Jan 2020 \(/checklist/S63828793\)](/checklist/S63828793)

 Glenn d'Entremont

82. **[Cedar Waxwing\(/species/cedwax/L5278254\)](/species/cedwax/L5278254)**

6


 [26 Jan 2020 \(/checklist/S63794636\)](/checklist/S63794636)

 Elizabeth Hill-Gest

83. **[Redhead\(/species/redhea/L5278254\)](/species/redhea/L5278254)**

2

 [25 Jan 2020 \(/checklist/S63768762\)](/checklist/S63768762)

 Benjamin Griffith

84. **[Green-winged Teal\(/species/gnwtea/L5278254\)](/species/gnwtea/L5278254)**

1


 [18 Jan 2020 \(/checklist/S63520758\)](/checklist/S63520758)

 Daniel Errichetti

85. **[Turkey Vulture\(/species/turvul/L5278254\)](/species/turvul/L5278254)**

2


 [11 Jan 2020 \(/checklist/S63286439\)](/checklist/S63286439)

 Eric Zawatski

86. **[Red-necked Grebe\(/species/rengre/L5278254\)](/species/rengre/L5278254)**

1

 [12 Feb 2019 \(/checklist/S52620435\)](/checklist/S52620435)

 Anonymous eBirder

87. **[Brown-headed Cowbird\(/species/bnhcow/L5278254\)](/species/bnhcow/L5278254)**

1

 [28 Jan 2019 \(/checklist/S52127742\)](/checklist/S52127742)

 Jackson Frost

88. **Peregrine Falcon(/species/perfal/L5278254)**

1

 [26 Jan 2019 \(/checklist/S52090527\)](/checklist/S52090527)

 Mary Lou Heintz

89. **Horned Grebe(/species/horgre/L5278254)**

1

 [19 Jan 2019 \(/checklist/S51828485\)](/checklist/S51828485)

 Susan Finnegan

90. **Black Scoter(/species/blksco2/L5278254)**

11

 [19 Jan 2019 \(/checklist/S51862137\)](/checklist/S51862137)

 Philip Kyle

91. **Eastern Phoebe(/species/easpho/L5278254)**

1

 [29 Nov 2018 \(/checklist/S50299478\)](/checklist/S50299478)

 David Clapp

92. **Chimney Swift(/species/chiswi/L5278254)**

1

 [1 Jul 2018 \(/checklist/S46914968\)](/checklist/S46914968)

 Philip Kyle

93. **Barn Swallow(/species/barswa/L5278254)**

1


 [1 Jul 2018 \(/checklist/S46914968\)](/checklist/S46914968)

 Philip Kyle

94. **Spotted Sandpiper(/species/sposan/L5278254)**

1

 [3 Jul 2017 \(/checklist/S37954692\)](/checklist/S37954692)

 Ali Hogue

95. **Canvasback(/species/canvas/L5278254)**

1

 [21 Jan 2017 \(/checklist/S33872924\)](/checklist/S33872924)

 Glenn d'Entremont

96. **Snow Goose(/species/snogoo/L5278254)**

1

 [19 Jan 2017 \(/checklist/S33788087\)](/checklist/S33788087)

 Mark Faherty

97. **Greater White-fronted Goose(/species/gwfgoo/L5278254)**

1

 [19 Jan 2017 \(/checklist/S33787450\)](/checklist/S33787450)

 Mark Faherty

98. **House Sparrow(/species/houspa/L5278254)**

1

 [19 Jan 2017 \(/checklist/S33787450\)](/checklist/S33787450)

 Mark Faherty

HYBRIDS

Mallard x American Black Duck (hybrid)

1

 [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)

 Dave C.

Tufted Duck x scaup sp. (hybrid)

1


 [2 Feb 2021 \(/checklist/S83531914\)](/checklist/S83531914)

 Peter Trimble

ADDITIONAL TAXA

Greater/Lesser Scaup


4

 [19 Nov 2022 \(/checklist/S122672562\)](/checklist/S122672562)

 Jeff Bryant

new world warbler sp.

1

 [21 Sep 2022 \(/checklist/S119150424\)](/checklist/S119150424)

 Dave C.

gull sp.

2

 [7 Jun 2022 \(/checklist/S112410675\)](/checklist/S112410675)

 David Zmoda

duck sp.

20


 [6 Feb 2022 \(/checklist/S102133832\)](/checklist/S102133832)

 Carol Molander

Mallard/American Black Duck

1

 [31 Jan 2022 \(/checklist/S101790772\)](/checklist/S101790772)

 Mary Jo Foti

Aythya sp.

1

 [25 Jan 2022 \(/checklist/S101433211\)](/checklist/S101433211)

 Peter Crosson

Show all sightings

Top media UPLOADED IN LAST 30 DAYS

No media submitted

[Latest media \(https://ebird.org/media/catalog?regionCode=L5278254\)](https://ebird.org/media/catalog?regionCode=L5278254)

Recent visits

OBSERVER	DATE	SPECIES
Al Curtis	11 Jan 2023 (/checklist/S125931941)	2
Robert McKetchnie	10 Jan 2023 (/checklist/S125840875)	5
Frances Clapp	3 Dec 2022 (/checklist/S123376319)	8
David Clapp	3 Dec 2022 (/checklist/S123382367)	8
Brian Flanagan	19 Nov 2022 (/checklist/S122677625)	10
Jeff Bryant	19 Nov 2022 (/checklist/S122672562)	10
Mary Jo Foti	19 Nov 2022 (/checklist/S122678109)	10
Cape Cod Bird Club	19 Nov 2022 (/checklist/S122752434)	10
Peter Fang/ Gloria Smith	19 Nov 2022 (/checklist/S122682302)	10
Dave C.	21 Sep 2022 (/checklist/S119150424)	25

Checklists submitted within the last hour are not shown.

[More recent visits \(/hotspot/L5278254/activity?yr=all&m=\)](/hotspot/L5278254/activity?yr=all&m=)

Top eBirders

Updated 9 sec ago

[Species \(/hotspot/L5278254?yr=all&m=&sortBy=spp\)](/hotspot/L5278254?yr=all&m=&sortBy=spp)

[Checklists \(/hotspot/L5278254?yr=all&m=&sortBy=cl\)](/hotspot/L5278254?yr=all&m=&sortBy=cl)

1	Glenn d'Entremont	42
2	Peter Trimble	40
3	Philip Kyle	39
3	Ernie LeBlanc	39
5	Dan Furbish	38
6	Mark Faherty	37
7	David Clapp	36
8	Warren Mumford	32
9	Al Curtis	29
9	Mary Jo Foti	29

Attachment J

Photographs



Photo 1: Gravel Road entrance off Long Pond Road (11/21/22).



Photo 2: Gravel Road through site and Forested Upland (11/21/22).



Photo 3: Former turnout off gravel road, adjacent to BVW (11/21/22).



Photo 4: Access to beach area (11/21/22).



Photos 5 & 6: Beach area and associated structures (11/21/22).





Photo 7: Structures abutting beach area (11/21/22).



Photo 8: BVW / abandoned cranberry bog (11/21/22).



Photos 9 & 10: Four cabins within westernmost portion of site, adjacent to Long Pond (11/21/22 and 1/11/23).





Photos 11 & 12: Gravel roadway abutting BVW with moderate to significant erosion/sedimentation (11/21/22).





Photos 13 & 14: Beach area along Long Pond.





Photo 15: Westerly four cabins and abutting lawn area (11/22/22).



Photo 16: Site's frontage along Long Pond (11/22/22).