

7.0 NATURAL RESOURCES

The Applicant is proposing a commercial baseball-centered recreation facility, Brewster Yards, on land totaling approximately 82 acres located on Pugsley Road and Fields Corner Road in the Town of Southeast, Putnam County, New York. This section provides a biological habitat assessment and overall description of the natural conditions found on the project site's 82 acres and assesses probable impacts to the terrestrial, avian, and aquatic wildlife habitats described and to the regional wildlife that could utilize the site as residents or transients.

Existing Conditions

7.1 Vegetation and Habitats

Seasonal field reconnaissance of existing project site conditions was conducted by Ecological Analysis (EA) staff biologists on November 26 and November 27, 2019; June 2, 2020; March 30 and September 21, 2021. Site visits were conducted to identify wildlife habitat, survey for individuals of wildlife species or indications of their presence, and record vegetation observed. A list of the 137 taxa of plant life observed on the property is included in Appendix F.

The project site features three habitat/ecosystem regional variants¹:

1. Uplands – Oak-hickory hardwood forest.
2. Wetlands – Palustrine red maple hardwood forest.
3. Stream corridors – Rocky headwater streams, watercourses.

Figure 7-1, located at the end of this section, illustrates the location and extent of the two existing onsite upland and wetland vegetation communities/habitats in relation to the other natural resources (wetlands, watercourses, and steep slopes) as well as the constrained lands within the outline of the proposed project improvements. Photographs of these specific habitat areas, and a figure indicating the location of each photograph, are presented in Appendix F. The mapped natural resources that extend to the property boundary continue beyond to unmapped areas across the site's boundary lines.

Intermittent (i.e., seasonal) streams were observed on the project site, originating at Wetland B and at the pond within Wetland D. These streams flow through rocky corridors into an offsite basin of New York State Department of Environmental Conservation (NYSDEC) Wetland LC-28 before traversing underneath New York State (NYS) Route 312 through a culvert, to form a tributary to the Middle Branch of the Croton River.

The property is fully undeveloped and covered by mixed hardwood forest at present. However, the presence of extensive lengths of pastoral period stone walls throughout the project site reflects the site's historic agricultural usage. The current forest cover of the project site includes the following areas: forested wetlands, young hardwood upland forests, and mature upland woodlands.

¹ Adapted from: Edinger, G. J., D. J. Evans, S. Gebauer, T. G. Howard, D. M. Hunt, and A. M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

The mature upland woodlands were identified in the southeastern portion of the site between the two basins of NYSDEC Wetland LC-28. Younger aged upland forested areas of the project site are dominated by species of oak trees in diversely wooded tracts of second growth woods that also include black cherry, sweet birch, white ash, American beech, and hickory.

Wetland forested areas appeared undisturbed by any prior land-clearing activity and present a closed tree canopy dominated by red maple, American elm, and green ash. During inspections, it was noted that many of the ash trees around the wetlands and in upland areas had larval exit holes of the emerald ash borer beetle (*Agrilus planipennis*), which is an invasive and rapidly lethal wood-boring insect spreading throughout ash tree populations of Northeastern states.

The northwestern portion of the site, dominated by sweet birch and younger aged specimens of other common sitewide trees, was observed as a re-forested area that was primarily open field or pasturage as recently as 30 years past. The understory in this portion of the site has developed into a thicket of mostly exotic, and invasive, shrubs and forbs. The most prevalent exotic and invasive shrubs observed on the project site included: multiflora rose, autumn olive, bush honeysuckle, and privet. Less commonly observed were mature, flowering, or fruiting specimens of winged euonymus. Some of the more commonly noted of the exotic, invasive forbs included: narrowleaf bittercress, Asiatic tearthumb (mile-a-minute vine), Oriental lady's thumb, garlic mustard, and Nepalese browntop (Japanese stilt grass).

The bedrock knoll within the Ridgeline Protection Area (RPA) in the northeastern portion of the site is dominated by mature chestnut oak, American beech, pignut, and shagbark hickories over a sparse understory of their saplings, lowbush blueberry, and various *Rubus* spp. Mature shagbark hickories were present, but uncommonly observed. Rock polypody fern covers portions of the exposed bedrock in the RPA, and marginal woodfern are present within areas of rock talus at the base of bedrock exposures.

Many species of oaks and hickories, as well as beech and birch trees, are highly productive of high value food sources, in the form of mast forage, seeds, and various forms of insect life, including phytophagous, wood-boring, and inquiline species. These provide a wide diversity of food sources for both large and small species of wildlife and birds. The higher elevation portions of the property, that sustain forests dominated by these species, present high value wildlife habitat. In contrast, many of the invasive species of undergrowth that are dominant in the western and central portions of the site, have low to moderate value as wildlife habitat or food sources.

EA staff requested a jurisdictional determination of the possible effects to plant and animal species from NYSDEC, Region 3. Correspondence from NYSDEC noted no species are known to occur on or near the project site according to its records from the New York Natural Heritage Program's (NHP) database. Refer to Appendix B, Correspondence, for the NYSDEC letter dated September 1, 2021.

A query of the NYSDEC Environmental Resource Mapper (ERM) website did not identify any listed plant species or NYS "Species of Special Concern" on or near the property.²

² Sources: NYSDEC website: <https://gisservices.dec.ny.gov/gis/erm/>; Species of Concern: as defined in Section 182.2(i) of 6NYCRR Part 182, "Species of Special Concern" are any native species for which a welfare concern or risk of endangerment has been documented in NYS. The NYSDEC considers that while Species of Special Concern warrant "attention and consideration," information is insufficient to justify listing them with the protected status of either Endangered or Threatened.

A query of the NYSDEC EAF Mapper website similarly identified no other plant or animal species listed by the federal government or NYS as an endangered or threatened species, nor was the property noted to include any “Significant Natural Community.”³ The NYSDEC EAF Mapper inquiry additionally noted that the project site was not known to contain any unique geological features, significant natural communities, or rare plants. Refer to Appendix F for the NYSDEC EAF output.

Based on the searches conducted above, there would be no other protected plant species, or any protected native plant, unique or locally rare plant, or significant habitat area known or reasonably expected to exist on or in the immediate vicinity of the project site. Seasonal field reconnaissance of existing project site conditions was conducted by EA biologists on November 26 and 27, 2019; June 2, 2020; March 30 and September 21, 2021. During each of these onsite surveys, the plants observed were all regionally common species.

7.2 Wildlife

Regional mammalian wildlife species expected within the forested habitat existing across the project site are listed in Appendix F. Portions of the forest that have sparse undergrowth offer habitat for larger mammalian species, such as white tail deer and eastern coyote. The more disturbed portions of the site, where a dense undergrowth is present, would provide shelter and foraging for resident and migratory songbirds, smaller mammalian species, reptiles, and amphibians.

Bird species noted to be present within the vicinity of the site are documented in the records of the NYSDEC Breeding Bird Atlas (BBA).⁴ This atlas was referenced to generate a list of birds observed by others during the two 5-year survey periods of 1980-1985 and 2000-2005. The surveys were conducted in nine-square mile “blocks.” The project site is located within the eastern portion of “Atlas Block 6058B”. Refer to Appendix F for the NYSDEC BBA. Throughout the 10 years of breeding bird observations within this Atlas Block, a total of 94 species of birds were recorded.

Of the 94 species of birds recorded from 1980-2005, none are species that are afforded either NYS or federal protection as endangered or threatened species. Two species, listed by NYS as Species of Special Concern, are the whip-poor-will (*Caprimulgus vociferus*) observed in 1981 but not later, and Cooper’s hawk (*Accipiter cooperii*) noted on one date in 2004.

Of the remaining 92 bird species on this BBA generated list, nine are game species (wood duck, mallard, black duck, ruffed grouse, Canada goose, American crow, wild turkey, ring-necked pheasant, and American woodcock), and three are unprotected, exotic species (rock pigeon, house sparrow, and European starling). All other 80 species of birds on this list are afforded protection status as songbirds.

The several sections of streams have populations of northern two-lined salamanders, and larval populations of caddis flies, mayflies, and stoneflies. Around the watercourses, streams, and the three small ponds on site, spring peepers, wood frogs, green frogs, bullfrogs, red-spotted newts, and eastern red-backed salamanders were noted. Each of the three ponds was observed to have populations of bullfrog tadpoles, indicating that these ponds are likely to be year-round

³ NYSDEC website: <https://gisservices.dec.ny.gov/eafmapper/>

⁴ New York State Breeding Bird Atlas. Accessed December 9, 2021. <http://www.dec.ny.gov/animals/7312.html>

waterbodies and not to be functioning as vernal pools. The ponds were observed to be flooded during each of EA's visits to the site.

EA staff requested a jurisdictional determination of the possible effects to plant and animal species from NYSDEC, Region 3. Correspondence from NYSDEC noted one state- and federally listed species, the threatened northern long-eared bat, which might occur on or near the project site according to its records from the NHP database. Refer to Appendix B, Correspondence, for the NYSDEC letter dated September 1, 2021.

The query of the ERM website did not identify any other NYS "Species of Special Concern," or any unlisted wildlife species on or near the property.

A query of the NYSDEC EAF Mapper website similarly identified no other animal species listed by the federal government or NYS as an endangered or threatened species. Refer to Appendix F for the NYSDEC EAF output.

Based on the searches conducted above, there would be no other protected animal species, unique or locally rare animal known or reasonably expected to exist on or in the immediate vicinity of the project site. Seasonal field reconnaissance of existing project site conditions was conducted by EA staff biologists on November 26 and 27, 2019; June 2, 2020; March 30 and September 21, 2021. During each of these onsite surveys, the wildlife observed were all regionally common species.

While the northern long-eared bat is federally protected, the United States Fish and Wildlife Service (USFWS) has designated no areas of critical habitat anywhere within the distribution range of this species for preventing the "taking" of this bat. However, there are known to be populations of this species with winter roosts (hibernacula) in both Putnam County and adjacent counties. The nearest known winter hibernaculum for northern long-eared bats is located approximately four miles southwest of the project site.⁵ The project site presents potential summer roosting, brooding, and foraging habitat for all regional species of bats.

7.3 Future Without the Project

Unless otherwise developed, the entirety of the two existing parcels which include the project site and land proposed to remain Town owned, comprising 153.8± acres in total, would remain in their wooded condition, and the streams, watercourses, and wetlands would remain undisturbed by proposed project improvements. A Future without the Project, however, would result in an increase throughout the site of many of the observed invasive plant species.

7.4 Potential Impacts

The proposed action would result in a reduction of habitat available on site for wildlife species that may inhabit or utilize the site, however, there are no NYS Species of Special Concern or otherwise protected animal species other than the northern long-eared bat which is listed as threatened. Loss of habitat may result in a population reduction of wildlife species by the alteration of behavior such as nesting, breeding, foraging, or over-wintering activities.

Of the entire 153.8± acres of the two parcels, 82.2± acres would be subdivided and acquired from the Town for the proposed project. The balance of the land (71.6± acres -- 26.8 acres of parcel

⁵ <https://fws.gov/media/nleb-winter-hibernacula-locations>

10 and 44.8 acres of parcel 11) would remain as Town owned open space lands in their natural state. These open space lands would include the areas of the two basins of NYSDEC Wetland LC-28, the upland rises between these two basins, and the RPA located in the northeastern portion of the site.

The project plans depict additional land, approximately 33 acres, to remain in their forested state within the project boundaries. The Project would directly disturb approximately 49 acres of trees from upland areas, by conversion to sports fields, ancillary facilities, connecting open landscaped grounds, roads, and parking areas. This number includes the removal of 4.6 acres of upland woodlands that are within Town of Southeast Wetland Buffer/Controlled Area. Trees at the perimeter of the site would remain undisturbed, especially in protected buffer areas surrounding wetlands and watercourses.

As regionally supported by the USFWS, all felling of trees would be conducted from November 1 through March 31. Avoiding the felling of trees from April through October serves to protect bats during the months when they are not in their winter hibernacula in caves and might be roosting in trees. This period of closure to all site logging activity also protects any northern long-eared bat, and other bat species, that may be seasonally present during the summer pupping season (June 1 to July 31), if any potential maternal roosting trees are in fact ever in use in the site's woods.

Best practices will be used during the harvesting of trees from the property in order to cause minimal disturbance of the soil in areas to be cleared and to provide protections for adjacent trees that are to be preserved as features within the landscaping of the final site design. Standard practices would include the harvesting of useful timber and the on-site chipping of unsaleable trees and limb trimmings for reuse as erosion control mulch in the project both during and after construction. Protection of all remaining standing trees will be accomplished according to standard guidelines of the NYSDEC. These steps will include construction perimeter fence protection, marking of individual trees that are designated to be preserved, the erection of temporary barrier fencing along the root protection zone of these trees to avoid construction impacts, and the creation of permanent tree wells around these trees that are in areas where the grade needs to be altered.

All healthy trees shall be preserved wherever feasible as required by §123-34 of the Town Code. Hazardous or diseased trees shall be removed and all diseased and dead limbs pruned within 150 feet of all proposed buildings. Large healthy trees to remain that are located at the perimeter of the limit of disturbance shall be clearly marked for preservation in the field, and on a tree and forest preservation plan, as well as on relevant site construction drawings in the site development plan set. Such trees and their root systems shall be protected prior to construction by wood framing or construction fence installed around each tree so identified to be protected during construction and a continuous perimeter fence shall be erected at the edge of disturbance to be maintained throughout the course of the construction process. Bulk material, equipment, or vehicles shall not be stockpiled or parked within 10 feet of the trunk of any tree, nor within the drip line of any tree individually identified on the tree preservation plan. If any protected tree is inadvertently damaged, it shall be repaired under the direction of a certified arborist.

An Erosion and Sediment Control Plan will be developed designating the location of all temporary soil stockpiles, locating them outside of the critical root zone of all trees to be preserved. The final Erosion and Sediment Control Plan will be developed during the detailed site plan review process.

7.5 Mitigation Measures

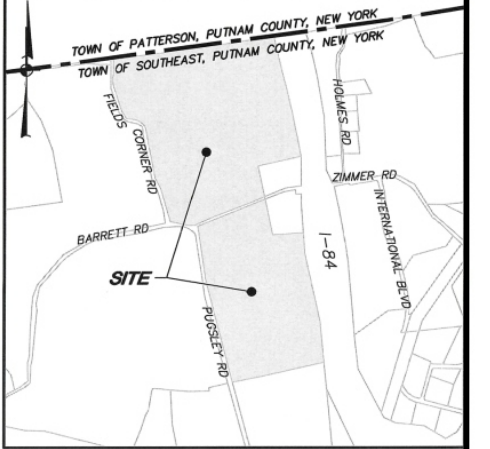
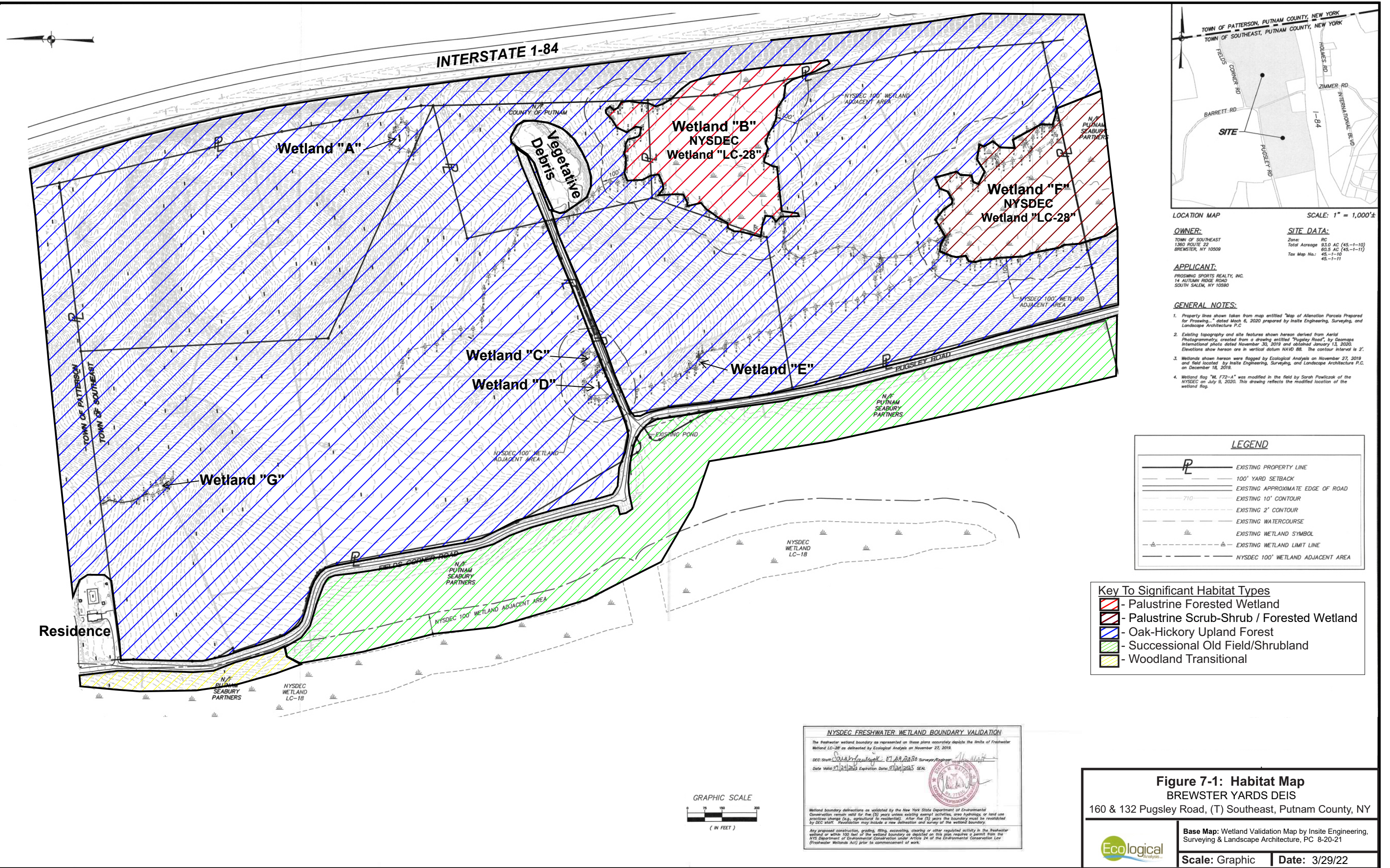
The avoidance of direct, adverse activities is the primary process by which planners mitigate potential environmental impacts. For this project, the preservation of nearly half (71.7± acres) of the existing parcels as Town parkland, in combination with approximately 33 acres of the project site that would remain undisturbed by project improvements, would leave 105± acres (approximately 68%) of the site in its existing undeveloped condition. All ridgeline trees within the RPA would remain, as would the trees in the steep sloped areas surrounding this RPA.

To protect the on-site wetlands, small ponds, and the streams and watercourses that cross the property, these hydrologic features were excluded from direct impact of construction activities. Indirect impacts from construction activities in these hydrologic features would be mitigated by the application of Best Management Practices (BMPs) for erosion and sedimentation control during the construction phases of the project, and by implementation of a post-construction stormwater management plan that includes detention and infiltration systems.

As suggested by the NYSDEC NHP, to avoid any potential direct impacts to bats that may be present on site during the summer roosting season, tree removal would not occur during this period, from April through October of any year.

A landscape plan will be developed to provide a transitional landscape from the edge of the proposed project into the bordering areas of mature forest. The proposed landscaping will create a gradual transition from areas of brushy, short field habitat into the neighboring areas of tall forest trees. The landscaping plan for this project would prioritize use of appropriate plants selected from the list of native tree, shrub, and perennials that has been developed by the Town Planning Board.⁶ Some of these plantings of native vegetation would provide shelter and food sources for some of the mammalian and avian wildlife species present on site. The final landscape plans will be developed during the detailed site plan review process. In our professional opinion, no further mitigation measures are warranted.

⁶ "Native Tree, Shrub and Perennial Recommendations", Planning Board / Architectural Review Board 2020. <http://www.townofsoutheast-ny.com/DocumentCenter/View/4126/NATIVE-PLANT-LIST-2020>



LOCATION MAP SCALE: 1" = 1,000'±

OWNER:
TOWN OF SOUTHEAST
1360 ROUTE 22
BREWSTER, NY 10509

SITE DATA:
Zone: RC
Total Acreage: 93.0 AC (45-1-10)
60.5 AC (45-1-11)
Tax Map No.: 45-1-11

APPLICANT:
PROSWIM SPORTS REALTY, INC.
14 AUTUMN RIDGE ROAD
SOUTH SALEM, NY 10589

- GENERAL NOTES:**
- Property lines shown taken from map entitled "Map of Alienation Parcels Prepared for Proswim..." dated March 6, 2020 prepared by Insite Engineering, Surveying, and Landscape Architecture P.C.
 - Existing topography and site features shown hereon derived from Aerial Photogrammetry, created from a drawing entitled "Pugsley Road", by Geomaps International photo dated November 30, 2019 and obtained January 13, 2020. Elevations show hereon are in vertical datum NAVD 88. The contour interval is 2'.
 - Wetlands shown hereon were flagged by Ecological Analysis on November 27, 2019, and field located by Insite Engineering, Surveying, and Landscape Architecture P.C. on December 18, 2019.
 - Wetland flag "M, F73-A" was modified in the field by Sarah Pawlczak of the NYSDEC on July 9, 2020. This drawing reflects the modified location of the wetland flag.

LEGEND

	EXISTING PROPERTY LINE
	100' YARD SETBACK
	EXISTING APPROXIMATE EDGE OF ROAD
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING WATERCOURSE
	EXISTING WETLAND SYMBOL
	EXISTING WETLAND LIMIT LINE
	NYSDEC 100' WETLAND ADJACENT AREA

Key To Significant Habitat Types

	Palustrine Forested Wetland
	Palustrine Scrub-Shrub / Forested Wetland
	Oak-Hickory Upland Forest
	Successional Old Field/Shrubland
	Woodland Transitional

NYSDEC FRESHWATER WETLAND BOUNDARY VALIDATION

The freshwater wetland boundary as represented on these plans accurately depicts the limits of Freshwater Wetland LC-28 as delineated by Ecological Analysis on November 27, 2019.

DEC Staff: *Sarah Pawlczak* 01/29/2020 Surveyor/Engineer
Date Valid: 01/29/2023 Expiration Date: 01/29/2025 SEAL

Wetland boundary delineations as validated by the New York State Department of Environmental Conservation remain valid for five (5) years unless existing exempt activities, uses, hydrology, or land use provisions change (e.g., agricultural to residential). After the (5) years the boundary must be revalidated by DEC staff. Revalidation may include a new delineation and survey of the wetland boundary.

Any proposed construction, grading, filling, excavating, clearing or other regulated activity in the freshwater wetland or within 100 feet of the wetland boundary as depicted on this plan requires a permit from the NYS Department of Environmental Conservation under Article 24 of the Environmental Conservation Law (Freshwater Wetlands Act) prior to commencement of work.

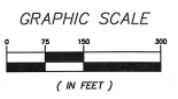


Figure 7-1: Habitat Map
BREWSTER YARDS DEIS
160 & 132 Pugsley Road, (T) Southeast, Putnam County, NY

Base Map: Wetland Validation Map by Insite Engineering, Surveying & Landscape Architecture, PC 8-20-21

Scale: Graphic **Date:** 3/29/22

