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April 10, 2025

VIA-EMAIL

Town of East Lyme  
 Planning Commission  
 Town Hall  
 108 Pennsylvania Avenue  
 Niantic, CT 06357-1510

Received

JUN 05 2025

Town of East Lyme  
 Land Use

**FILE COPY**

**Attn.:** Mr. Richard Gordon, Chairman

**RE:** *ECOLOGICAL IMPACT ASSESSMENT*  
 Proposed 5-lot Re-subdivision, Nottingham Hills  
 237 Upper Pattagansett Road, East Lyme, CT

*CTDEEP Filing #:100011; Determination #: 202307091 ((Oct. 6, 2023)  
 Automated CTDEEP NDDDB report # 6946500445 (Jan. 22-2025)  
 REMA Job #25-2789-ELY23*

Dear Chairman Gordon and Commission Members:

At the request of the applicant, REMA ECOLOGICAL SERVICES, LLC (REMA) has prepared this *Ecological Impact Assessment* for the above-referenced residential development proposal, pursuant to Sections 4-14-2 and 4-14-3 of the Town of East Lyme Subdivision Regulations. REMA ecologists visited and characterized the site on March 6, 2025.

**1.0 INTRODUCTION**

A 5-lot residential development, following the Conservation Design Development (CDD) guidelines, with a common driveway, has been proposed on a 6.51-acre property on the north side of Upper Pattagansett Road. The site is at the center of East Lyme, at the base of the southeastern slope of Smith Hill. It is a re-subdivision of former Lot 32. The westernmost two lots will be 1.79 and 1.05 acres, respectively, while the other three will be will each be 0.92 acres in size. The balance of Lot 32, which encompasses 37.99 acres to the north of the



five proposed lots, was conveyed to the East Lyme Land Trust, Inc in 2020. This includes forested habitat on a southeasterly facing slope, and an upper young forest reverting from past logging (see Figure A, attached).

Three of the homes will connect to an 18-foot wide, privately owned common roadway. This roughly follows the alignment of an old unpaved farm road. Each home will have a well and a septic system. The two westernmost lots will connect to a paved driveway of an existing residential lot to the west of the subject site.

## **2.0 LANDSCAPE SETTING AND AQUATIC RESOURCES**

Upper Pattagansett Road is currently lined with a few dozen homes within about 1,000 feet of the site. The new subdivision will be an addition to an existing neighborhood, though the larger landscape consists largely of forest, wetlands, and open water. Powers Lake lies about 0.6 miles to the northwest of the site, and Pattagansett Lake is 0.6 miles to the southeast. A large, wooded swamp system is associated with the Pattagansett River, which connects the two lakes. The site is no closer than 250 feet from the northeastern lobe of this swamp, and about 600 feet from the southwestern lobe. Upper Pattagansett Road passes between the site and the southeastern swamp lobe.

## **3.0 GEOLOGY, SOILS AND HYDROLOGY**

The property is located in an area with acidic, metamorphic bedrock geology (Rodgers 1985). The site itself is underlain mostly by the Plainfield Formation (mica schist). Granitic gneiss in the Hope Valley Alaskite Formation underlies much of the surrounding area, including the adjacent hilltop. Soils over these bedrock formations are not sub-acidic with naturally elevated mineral levels, and so do not have an elevated likelihood of supporting rare upland plant species.

All soils on the site are derived from glacial till. At the base of the hillside and on the lower lower-slope, where homes will be built, soils are mapped as deep, coarse-loamy, very rocky fine sandy loams in the Canton and Charlton series (Mapping Unit 62D on the attached NRCS-USDA Soils map). These deep, well-drained soils are very suitable for septic systems, with moderate perc rates (4-6 inches per hour).

Soils in the adjacent, very steep, higher-elevation hillside forest (Mapping Unit 73E) include the shallow-to-bedrock Chatfield series. To the northwest, but well outside the disturbance



area is the well-drained Paxton/Montauk soil mapping unit, with a compact till subsoil (hardpan) (Mapping Unit 85B). These soil types have potential constraints for septic systems and are more erodible than Canton and Charlton, soils series complex, but are to remain forested

In Lots 32-2, 32-3, and 32-4, in the area where the homes are proposed, what had been a lower slope with a moderate grade, has been excavated and reshaped to create a large level “pad”, with a steep, cut rear slope averaging 12 to 14 feet high. Soils mapped as Charlton/Canton soils, would now be classified as disturbed “Udorthents,” though they are still suitable for septic systems. Soil textures are coarser than in an undisturbed soil pedon, because the finer topsoil and upper subsoil has been removed. Despite the expanse of bare soil, erosion is not an issue, because the area is flat with porous sandy soil. The large number of pillow-size boulders are noteworthy.

Within this disturbed area, in proposed Lot 32-3, a pocket of saturated soil (<50 square feet) was noted at the base of the cut slope, formed by the excavation and grading that has taken place. Due to seepage from the cut slope, especially after rain events, the adjacent sandy soil was saturated, and a portion of this small depression had a few inches of standing water. A few wetland plants were also noted. However, this man-made pocket is too small to delineate as a wetland, and is considered an inclusion to a disturbed upland soil mapping unit, in this case Udorthents (305). In all likelihood, this area will dry up by the end of the Spring season.

Starting at the southeastern boundary of the site, and extending downgradient and off-site, is a broad swath of sandy soils derived from material deposited by glacial meltwaters (glacial outwash soils). These pervious soils soak up precipitation and runoff, preventing flooding. Within the Pattagansett swamp itself, located to the southeast and downgradient of the site (see Figure A, attached), deep organic Timakwa and Natchaug soils (Mapping Unit #17) are underlain by sand.

#### **4.0 POTENTIAL IMPACTS TO AQUATIC RESOURCES**

Except in Lot 32-1 and Lot 32-2, the lower slope landscape position of the building area will eliminate risks from exposed soil on steep, hillside lots and roadways during construction. The common driveway runs parallel to hillside contours, which will lessen erosion risk during and post-construction, and also reduce the velocity of sheet runoff from the road post-construction.

The very broad, naturally vegetated upland buffers will prevent adverse impacts to water quality in the Pattagansett River, or Pattagansett Lake. Sheet runoff will infiltrate into the



porous sandy downgradient soils. It will be filtered and slowed down by the existing stone wall and some mature trees along the southern property line, to be preserved. Low-impact development (LID) practices, such as rain gardens, can be employed to receive and infiltrate roof runoff.

The septic leachate from five new septic systems will somewhat increase nutrient loading to groundwater, because typically about 40-50% nitrogen removal is expected from a correctly designed and maintained septic system. Fortunately, the broad buffers will provide much dilution and nutrient uptake by vegetation. Phosphorus, bacteria and toxicants will be filtered by the soil. Denitrification will take place in the saturated downgradient organic swamp (microbial conversion of soluble nitrate or ammonia into atmospheric nitrogen) further protecting the more vulnerable open water bodies from nutrient loading. This new, small subdivision does not pose a threat to downgradient wetland or aquatic resources, or their water quality.

## **5.0 VEGETATION**

Typical tree species of well-drained forest occupy the hillside, upgradient of the steep, short cut slope: oaks, black birch, hickories, sassafras, and some red maple. The same group of species occurs to a limited extent along the farm roadway and in the patch of woods between the excavated open area and the eastern field. Good regeneration is taking place in this moderate-age forest. A mix of size classes, includes occasional large-diameter trees and snags. Midstory and understory woody vegetation is well-developed along forest edges. Birches appeared to predominate along the entry road, with some invasive autumn olive and multiflora rose. However, the site visit took place at a poor time of year for a full list of woody vegetation, without collecting twigs for keying, using buds, bundle scars, lenticels etc.

Along the roadsides and in the undisturbed portions of the northeastern field (only partly on-site), ground cover consisted of cool season grasses and weedy forbs. A large patch of invasive mugwort in that eastern field is probably growing on formerly tilled or otherwise disturbed soil. Mugwort was not observed in the excavated “pad” in Lots 32-2, 32-3, and 32-4.

Vegetative cover was very low in early March 2025 within the excavated area, visible as a light signature on the summer aerial photos that were reviewed. The aforementioned small wet area by the rear cut slope supports two fast-growing, hydrophytic woody species: young willow saplings and silky dogwood. Elsewhere in the excavated area we observed annual foxtail grasses, and scattered tree seedlings and young saplings. Some were identified as black



birch and grey birch. An attractive, fragrant native dwarf shrub of sandy sites was growing adjacent to the wet pocket: sweet fern (*Comptonia peregrina*),

Because *annual* forbs and grasses comprise much of the vegetation in recently disturbed sandy areas, many more species would be noted during summer, but in the absence of nearby established “sand plain” community less common or rare plants are not expected to have colonized so soon. These three lots will need to be spread with thick topsoil in order to support healthy turf with little risk of excessive fertilizer application. Despite the expanse of bare soil, erosion shall not be an issue, because the area is flat with porous sandy soil. These lots could be well-suited to “xeriscaping.” The palette for this landscaping approach includes sweet fern (already present), several easy to-grow, tawny, native warm season grasses, colorful sand-plain wildflowers, and moss and lichen groundcover. The Native Plant Trust in Wayland, Massachusetts may be contacted for more information.

#### Invasive Plant Species and Recommended Control Measures

Substantial mugwort (*Artemisia vulgaris*) was noted at the edge of the field, that comprises some of Lot 32-5 at the eastern end of the site, and just beyond it to the north. Since mugwort is readily spread by rhizome fragments during construction, REMA is providing herein some guidance should it become a problem. Due to the open habit and disturbed nature of the lower portion of the site, the risk of mugwort proliferation is at least *moderate*.

Initial recommendations include mowing the patch and then excavating the topsoil containing the rhizome mat. The topsoil can be stockpiled at an out of the way location and covered with a thick dark tarp (solarization) for several years before reuse. It would also be very helpful to secure permission to control all the mugwort in the northern field, within the East Lyme Land Trust property. At a minimum, if mowed each year in late August or September, mugwort will not be an ongoing seed source, if clippings are raked up and removed before a hard frost. Disposal must be rigorous; use heavy gauge, tightly closed plastic bags or burn, with a burn permit), windborne desirable seeds of native forbs like asters and goldenrods will seed into bare spots.

The central excavated area is an ideal seed-bed for drought-tolerant invasive plants such as autumn olive and mugwort, as it also could be for low-care, drought-tolerant native plants, which are often quite interesting or lovely. As mentioned above, the Native Land Trust in Wayland, Massachusetts can be contacted for more information on xeriscaping. Prompt permitting and temporary soil stabilization will minimize invasive colonization. Because most



of the existing vegetation has already been cleared, the invasives that presumably had been present will no longer be seed sources.

Occasional oriental bittersweet, multiflora rose, invasive honeysuckle, and autumn olive were observed along the southern farm road. On a dry day, with eye and skin protection (e.g. gloves and long sleeves) it is legal, easy, effective, and safe for homeowners (property owners) without a pesticide applicator's permit, to treat low-density woody invasives, including these four species, but **only** with certain herbicides, available over the counter.

REMA recommends using products with only one active ingredient: water-soluble **triclopyr-amine**. Use the cut and paint method to treat freshly cut woody surfaces (within 10 minutes) with 8.8% triclopyr herbicide, preferably in July, or in August through mid-October, when sap is flowing mostly downward into the roots. Or spot spray the leaves of very small plants with more dilute (4%) triclopyr herbicide, with a low volume sprayer, minimizing drips on the soil. Triclopyr breaks down in soil within a few months, but disrupts the composition of soil because soil organisms vary in their vulnerability to this chemical. Some pathogenic fungi are naturally resistant to triclopyr. Try to avoid wetting any non-target plants and make sure beforehand that you can identify the target species (or ask someone who is a better botanist than you are to mark target species with colored flagging). Triclopyr kills all dicot plants, including net-veined, narrow-leaved forbs, but does not kill monocots (e.g. grasses, sedges, and lily-type plants with parallel veins in the leaves).

Control of the Asiatic bittersweet is a high priority, from a safety and cost-management standpoint as vine-covered trees and saplings are vulnerable to windthrow. Simply cutting the woody vine results in multiple fast-growing sprouts from a broad root. Red and yellow bittersweet fruits are widely dispersed by songbirds.

Multiflora rose and autumn olive invasive shrubs do have some redeeming features. Simply cutting them back as needed can keep them from forming dense thickets that exclude other native species. Multiflora rose supports many small generalist caterpillars and other foliage insects, that songbirds feed to their young. The thick, thorny bushes make excellent nest sites and provide cover for other wildlife, including the state-listed rare New England cottontails. The flowers are in bloom only for a short time, but are rich in nectar and pollen, and the rose hips, though small, are a valuable late winter food source for wildlife.

Autumn olive is a good early spring pollinator plant, and yields abundant fruit for wildlife. Flavor varies and may be delicious to the human palette. As with all legumes, a symbiotic bacterium enables it to fertilize infertile soil, by fixing atmospheric nitrogen. If a cluster of



olive shrubs is left in place for fifteen years, and then removed when aged and gangly, they will prepare the soil to support other plant species with higher nutrient needs - including bottomland hardwoods, human crops or nut trees.

## **6.0 POTENTIAL AUDITORY, VISUAL, AND TOXICANT IMPACTS - TRAFFIC, CONSTRUCTION, AND NIGHT-TIME LIGHTING**

A large, existing well-treed lot borders the west side of the of the entry road. Tree foliage will help shield the new development, and associated backyard wildlife, from the traffic noise, fumes, and the glare of headlights and streetlights along Upper Pattagansett Road.

Woody plantings along the north side of the common driveway would be somewhat helpful, but vehicular traffic will be very low, post-construction. During construction, when it would make a real difference, planted trees will be too small to provide meaningful protection from auditory and visual disturbance, and additional filtration of air pollutants. Construction of this common driveway will have an unavoidable, but not unduly severe, short-term adverse impact to lepidopteran and nocturnal beetle populations and to the birds and tree frogs that feed on them.

The proposed Conservation Design Development (CDD) plan will leave much of the forested hill intact as a contiguous forest tract. Lot 32-1 is closest to Upper Pattagansett Road, and adjoins an existing residential lot. There is some “core” forest on the hilltop, suitable for nesting by area-sensitive neotropical migratory birds, and 38 acres will be protected as open space in perpetuity.

Site layout, lighting and window design, and homeowner practices all influence the extent to which a new residential community will worsen the ongoing steady, steep declines in bird and insect populations. The lower slope landscape position of this proposed development creates an elevation difference between the new homes and sensitive receptors: forest insects and disturbance-sensitive wildlife. This sharp drop in elevation somewhat reduces the magnitude of adverse ecological impacts from the noise of mowers and leaf blowers, and from exterior lighting on homes and along driveways, and late-night interior lighting. Runoff and groundwater from lawns that may be treated with toxic, highly mobile insecticides (e.g. neonics) will not flow up the steep cut slope into the forested hillside. For additional guidelines on how to reduce adverse impacts from artificial night-lighting, collisions with windows, and loud engine noise, homeowners can visit <https://www.audubon.org/news/simple-solutions-prevent-collisions> and many other websites. Some helpful practices are common sense: use



rakes instead of leaf blowers and do not try to eliminate all broadleaf “weeds”, which support many insects.

However, a few measures can be provided by the developer of these lots. The letter from the CT DEEP NDDDB (Natural Diversity Database) Section encouraged designing homes with features that would minimize adverse effects on wildlife. These include shields on outdoor lighting fixture prevent light from spilling upward or sideways, motion-sensitive security lighting, and timers to limit doorway lighting to the evening hours when they are needed. Windows can be designed to be visible to songbirds, to prevent fatal collisions, for example with panes or framed sections, coatings to create unidirectional transparency, or decals - rather than large, unbroken sheets of glass. Many of these suggestions are also energy saving measures and considerate to human neighbors.

## **7.0 POTENTIAL FOR RARE SPECIES**

The applicant was informed by CTDEEP staff that rare species that have been documented in the site vicinity and entered into the Natural Diversity Database (NDDDB). The original NDDDB Determination (10-6-2023) was prepared by Shannon Kearney and included the Federally and State-Endangered northern long-eared bat, the State Special Concern whip-poor-will (*Caprimulgus vociferus*), and the State-Endangered Red-headed woodpecker (*Melanerpes erythrocephalus*). The autogenerated NDDDB list, dated January 22, 2025, obtained by REMA also included whip-poor-will and long-eared bat, but lacked red headed woodpecker and had three additional wetland plants: State-endangered Carolina red root (*Lachnanthes caroliniana*), a bog plant; state-endangered field milkwort (*Polygala cruciata*), which grows in wet meadows, boggy areas, and swamps; and state-threatened all beaksedge (*Rhynchospora macrostachya*) found on wet sand and peat. These three plant species are clearly obligate wetland species that could not occur at this site. The NDDDB plant records presumably originated in suitable wetland habitat found within the off-site organic swamp. This site lacks suitable wetland habitat.

When considering the potential for impacts to these rare species on this 6.51-acre site, one needs to keep in mind that 38 acres of comparable habitat is being permanently preserved by the transfer in 2020 of mostly forested open space to the East Lyme Land Trust, which was part of the original property.



### **Northern Long-eared bat (*Myotis septentrionalis*)**

Northern long-eared bat may occur on this site; populations of this species have declined over 90% due to white nose syndrome, and it is *endangered*, at the state and federal level. Northern long-eared bat roosts in summer under loose bark such as shagbark hickory and mature sugar maples or in cavities in large-diameter trees. The diverse upland hardwood forest at this site includes trees with loose, shaggy bark, and also includes some large trees. This species depends on flying insect prey, so lighting design features and non-toxic yard care practices that foster moth populations are important for conservation not only of this very rare bat, if present, but all bats – and whip-poor-wills.

To prevent any chance of harm to *Myotis septentrionalis* during the breeding season, Shannon Kearney of the CTDEEP Wildlife Division recommended that the developer, to the extent possible, avoid tree clearing between April 15<sup>th</sup> and September 30<sup>th</sup>, in her letter dated 10-6-23.

### **Whip-poor-will (*Caprimulgus vociferus*)**

Whip-poorwills are nocturnal/crepuscular insectivorous birds that need open forest structure (open midstory layer) for aerial foraging under poorly lit conditions. Nearby early-successional habitat for foraging is another habitat component required by whip-poorwill. The ongoing decline of whip-poor-will in the northeastern US is related to (1) the diminished insect food supply, and (2) diminished suitable habitat, due to suburbanization, modern large-scale agriculture, and increases in the density of young, open forests as they mature.

At this site, suitable open forest was not observed along the woods edge, but it may occur somewhat further upslope within the hillside forest or just off site, adjacent to the western field. Prior to grading, the currently barren central area at the base of the hill was occupied by well-vegetated field habitat, which still occurs offsite, in the far western field with thickets of birch seedlings as well as tall forbs and mugwort. This site may support whip-poor-will, not for breeding but for foraging, or may recently have supported this species. As it does still breed in the larger vicinity, whip-poor-wills could return, especially if meadow and scrub shrub cover types become established on some of the house lots and insect-friendly practices are adopted.

The new neighborhood would also become more attractive to whip-poor-will if understory shrubs were cleared along a portion of the perimeter of hillside forest, for example, by removal of invasive multiflora rose and Autumn olive. Minimization/careful design of night-time exterior lighting is recommended, because it attracts large numbers of night-flying moths and



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beetles. Aside from reducing insect density, exterior lighting depletes adjacent forested habitat of insect prey needed by other songbirds, and bats, e.g. the moths' larval (caterpillar) stages.

#### Integration of Timing Constraints

Whip-poor-wills are resident in Connecticut between mid-spring and early August. This is consistent with CTDEEP recommendations for conserving possible long-eared bats. The optimal window for clearing and grubbing is **August 15<sup>th</sup> to November 15<sup>th</sup>**.

#### Red-headed woodpecker (*Melanerpes erythrocephalus*)

This very rare, state-*endangered* bird nests in dead trees or dead limbs of living trees and prefers forest edges or very open, savannah-like forests such as those in very wet wooded swamps. No dead trees were observed along the forest edge, but large dead limbs could have been missed. The wooded, low density Pattagansett swamp has very suitable habitat; the northeastern lobe is just 250 feet from this site, such that a sighting there would generate an NDDDB hit. The 1994 Breeding Bird Atlas (Lous Bevier) has a dot for red-headed woodpecker (*Melanerpes erythrocephalus*) in the overall regional block for this location, which may explain the NDDDB hit.

REMA checked eBird.org records for the past 10 years from birding "hot spots" within 3 miles of the subject site. Red-headed woodpeckers have not been observed, so it is likely that the NDDDB record is decades old. The observation of this species would have been certainly recorded under the "alert" section of the eBird community.

Except for a brief resurgence during the American chestnut blight, when suitable dead nesting trees became abundant, this species has been declining for two centuries, for many reasons. Because it eats fruit in addition to boring for grubs and foraging for insects under loose bark, it was commonly shot in prior centuries. Some are poisoned by creosote in utility poles used for nesting.

As with the whip-poor-will, a key reason for the decline of red-headed woodpeckers is that natural succession eliminates suitable open habitat, as savannas become contiguous forests. Another key reason is that red-bellied woodpecker (*Melanerpes carolina*), a much more common species, competes with red-headed woodpeckers for suitable snags to nest in. Unlike the red-bellied woodpecker, the red-headed woodpecker does not visit bird feeders and feed on sunflower seeds and suet. The subsidized, red-bellied woodpeckers have become



increasingly abundant, and their range has expanded northward into New England, from a former northern limit in Pennsylvania. Efforts to sort out the causes of decline are hampered because older accounts often used the name red-headed woodpecker for the confusingly named red-bellied woodpecker. It is unlikely, given the very low density of this species, that loss of a nest tree on this site would have a significant adverse impact on this species, given the very large, high quality wooded habitat in the Pattagansett swamp.

## **8.0 CONCLUSION**

In our professional opinion, the re-subdivision and residential development proposal has succeeded in minimizing direct and indirect ecological impacts to existing on-site habitats. The extent of adverse impacts from these five new homes will depend largely on behaviors of homeowners that affect insect densities, but these cannot be regulated at the municipal level, but only through ongoing education via multiple media sources. We have included some recommendations from CTDEEP, in their letter to the applicant, to further reduce impacts to local fauna and potential for impacts to rare species, if present. In particular, these are recommendations with regard to timing of construction activities to help protect endangered and threatened fauna, although the likelihood of their presence at the subject is very low. However, the CTDEEP letter makes it clear these recommendations are not binding under the CT Endangered Species Act. This project involves less than five acres of soil disturbance, and has not received government funding, which would bring the proposal under a much higher lever scrutiny with regards to CT-listed species.

Please feel free to contact our office with any questions on the above.

Respectfully submitted,

**REMA ECOLOGICAL SERVICES, LLC**

A handwritten signature in black ink that reads "George T. Logan".

George T. Logan, MS, PWS, CSE  
Professional Wetland Scientist  
Registered Soil Scientist, Certified Senior Ecologist

A handwritten signature in black ink that reads "Sigrun N. Gadwa".

Sigrun N. Gadwa, MS, PWS  
Ecologist, Registered Soil Scientist  
Professional Wetland Scientist

Attachments: Figure A; CT NDDB Query Automated Report (1/22/25); Web Soil Survey

FIGURE A: RE-SUBDIVISION OF LOT 32  
237 Upper Pattagansett Road, East Lyme, CT



4/10/2025, 9:30:13 AM

This map is intended for general planning, management, education, and research purposes only. Data shown on this map may not be complete or current. The data shown may have been compiled at different times and at different map scales, which may not match the scale at which the data is shown on this map.



Generated by eNDDDB on:  
1/22/2025

George Logan  
Towns: East Lyme  
Automated Site Assessment: 694650445

Subject: 5-Lot Resubdivision

This is an automated site assessment and not a Natural Diversity Data Base determination. The information provided represents a snapshot that can be used for general planning purposes. **This letter cannot be used to fulfill Endangered Species Act compliance requirements.** Please see information below as well as our [FAQs](#) describing the appropriate use and limitations of the automated Site Assessment tool.

Current data maintained by the Natural Diversity Data Base (NDDDB) and housed in the DEEP ezFile portal, indicates that populations of the following State Endangered, Threatened, or Special Concern species (RCA Sec. 26-306) have been documented within or in close proximity to the area delineated. **Please see the attached table for detailed species information.**

#### HOW SITE ASSESSMENT SPECIES LISTS ARE COMPILED

Site assessment species lists include all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, landowners, private conservation groups and the scientific community. New and updated information is incorporated into the Data Base and accessed through the ezFile portal as it becomes available. The species list provided is not necessarily the result of comprehensive or site-specific field investigations.

#### WHAT PURPOSE DOES THIS SITE ASSESSMENT SERVE?

A site assessment is intended to provide a snapshot of the species that may be in the vicinity of your drawn area. It may be useful in project planning or to gain an understanding of the potential for listed species to utilize the site. The list is computer generated; it was not prepared or reviewed by program staff. Biologist review of your location may result in the addition of species not provided by the automated site assessment.

#### I'VE REVIEWED MY SITE ASSESSMENT. WHAT DO I DO NEXT?

If you are undertaking an activity that requires a state permit, utilizes state funding, or involves state agency action, you must demonstrate compliance with the CT Endangered Species Act. This is done through the full Natural Diversity Data Base review process. Please return to the DEEP's ezFile Portal and select [Natural Diversity Data Base Review](#) to begin this review process. Keep in mind that these detailed reviews may include additional species not identified in the automated site assessment. Program staff consider factors such as habitat characteristics, species life history and other

information to determine appropriate species of concern.

### SURVEY WORK MAY BE NECESSARY

Suitable and potentially occupied habitat may extend beyond mapped NDDB areas and unmapped areas may represent potential habitat that has not been adequately surveyed for all taxa. If you are undertaking activities that involve significant ground disturbance, converting natural lands to development, or otherwise fragmenting or disturbing large areas, we recommend conducting comprehensive biological surveys and a full site habitat characterization for areas that have not been assessed through prior biological inventories. Survey work may be required as part of the NDDB review process; completing some or all of this work up front will allow the process to proceed more efficiently.

This survey and habitat characterization should be comprehensive and not strictly limited to species included in the site assessment. Field surveys should be performed by a qualified taxonomic expert with the appropriate scientific collecting permits. Surveys should be conducted at seasonally appropriate times.

A report summarizing the results of such surveys should include:

1. Survey date(s) and duration.
2. Site descriptions and photographs.
3. List of component vascular plant and animal species within the survey area (including scientific binomials).
4. Data regarding population numbers and/or area occupied by State-listed species.
5. Detailed maps of the area surveyed including the survey route and locations of State listed species.
6. Recommendations for management and protection of State-listed species with reference to project activities.
7. Statement/résumé indicating the taxonomic expert's qualifications.

Site survey reports should be sent to the CT DEEP-NDDB Program ([deep.nddbrequest@ct.gov](mailto:deep.nddbrequest@ct.gov)) for further review by program biologists.

### SENSITIVE SPECIES

Please note that, for purposes of automated site assessments, certain sensitive species are not identified beyond their taxa. Additional information will be provided for those projects that will be conducting survey work in preparation for permitting ground disturbing activities or for other activities that might necessitate survey work. For these projects, please submit a [Natural Diversity Data Base Review Request](#) and we will provide information to your taxonomic expert.

### ADDITIONAL RESOURCES

The following resources may be helpful when planning survey work

- [State Listed plant species and Natural Communities documented within each CT town](#)
- [Thirteen of Connecticut's Most Imperiled Ecosystems \(1998\)](#) - Metzler and Wagner
- [The Vegetation of Connecticut](#) - Metzler and Barrett
- [Nature's Network](#) identifies opportunities for conserving and connecting intact habitats and ecosystems and supporting imperiled species.
- [Connecticut's Critical Habitat](#) map. The Critical Habitat map project contains a subset of

known important natural community types and sites in CT. Refer to [Resource Guide](#) for a complete description and limitations of this product.

Additional sites of Critical Habitats and important natural communities exist, some of which are documented by NDDDB and some of which have not been identified, or fully mapped or field verified. You may [contact NDDDB](#) prior to conducting field reviews for more comprehensive information.

This letter is computer generated from our existing records and carries no signature. If however, any clarification/error is noted, or, if you have further questions, please contact the following:

CT DEEP Bureau of Natural Resources  
Wildlife Division  
Natural Diversity Data Base  
79 Elm Street  
Hartford, CT 06106-5127  
(860) 424-3011  
[deep.nddbrequest@ct.gov](mailto:deep.nddbrequest@ct.gov)

Please include a snapshot of the map, your last name, and the subject area town when you e-mail or write. Thank you for consulting the Natural Diversity Data Base.

<b>Common Name</b>	Whip-poor-will
<b>Scientific Name</b>	<i>Caprimulgus vociferus</i>
<b>Listing Status<sup>1</sup></b>	SC
<b>Taxa</b>	bird
<b>General Ecology</b>	The whip-poor-will is a bird that nests in forest habitat with an open understory, often adjacent to areas of shrubby or herbaceous habitat. They are ground-nesting birds that breed between April 20- July 30. They consume aerial invertebrates, especially Lepidoptera and Coleoptera.
<b>Common Name</b>	Northern long-eared bat
<b>Scientific Name</b>	<i>Myotis septentrionalis</i>
<b>Listing Status<sup>1</sup></b>	FE
<b>Taxa</b>	mammal
<b>General Ecology</b>	The Northern long-eared bat is one of the species most impacted by White Nose Syndrome. Populations in Connecticut have declined by over 90%, and it has been Federally listed as Endangered. During the summer northern long-eared bats roost singly or in maternal colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns

	and sheds. Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. The presence of northern long-eared bat ( <i>Myotis septentrionalis</i> ), a federally endangered and state endangered species, may require consultation with the US Fish and Wildlife Service Ecological Field Office in order to be in compliance with the Federal Endangered Species Act if the proposed project requires federal permits or uses federal funds. For more information on federal requirements visit: <a href="http://www.fws.gov/midwest/endangered/mammals/nleb/">http://www.fws.gov/midwest/endangered/mammals/nleb/</a>
<b>Common Name</b>	Carolina redroot
<b>Scientific Name</b>	<i>Lachnanthes caroliniana</i>
<b>Listing Status<sup>1</sup></b>	E
<b>Taxa</b>	plant
<b>General Ecology</b>	Habitat: open bogs, boggy meadows, swamps & sandy shores of ponds. Blooming time: Aug, Sep
<b>Common Name</b>	Field milkwort
<b>Scientific Name</b>	<i>Polygala cruciata</i>
<b>Listing Status<sup>1</sup></b>	E
<b>Taxa</b>	plant
<b>General Ecology</b>	Habitat: Borders of salt marshes, boggy areas, wet meadows, swamps (CT herbarium labels). Damp or wet soil, marshes, pine-barrens, etc. chiefly but not wholly on coastal plain (G & C 1991). Blooms Jul, Aug, Sep.
<b>Common Name</b>	Tall beaksedge
<b>Scientific Name</b>	<i>Rhynchospora macrostachya</i>
<b>Listing Status<sup>1</sup></b>	T
<b>Taxa</b>	plant
<b>General Ecology</b>	Habitat: wet sand & peat (G). Mature fruits: late Jul, Aug, Sep, Oct

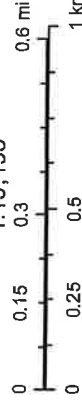
<sup>1</sup>E = State Endangered, T = State Threatened, SC = State Special Concern, FE = Federally Endangered, FT = Federally Threatened, NA = Not applicable.

# 5-Lot Resubdivision Map



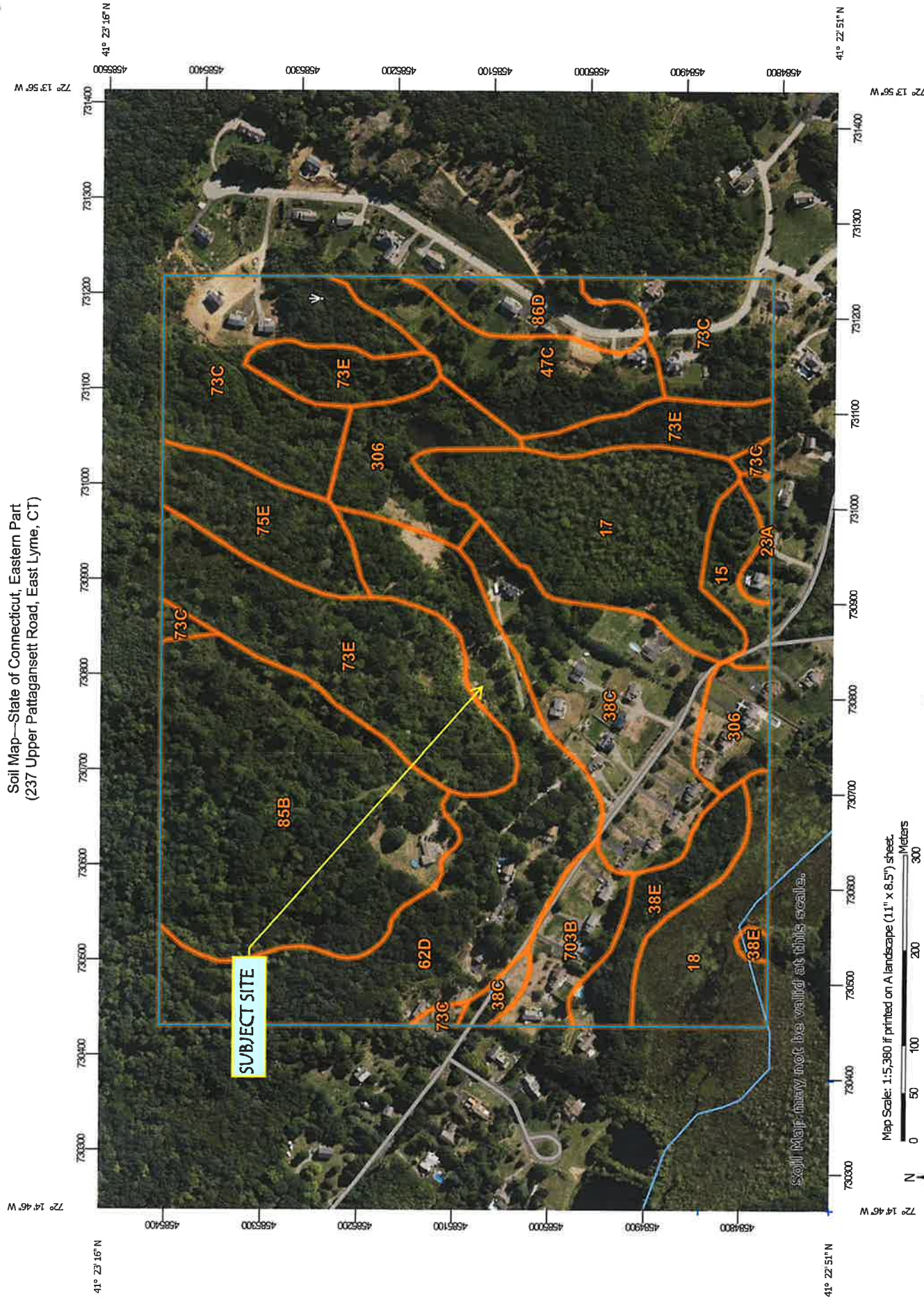
January 22, 2025

1:19,195



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, OpenStreetMap contributors, and the GIS User Community

Soil Map—State of Connecticut, Eastern Part  
(237 Upper Pattagansett Road, East Lyme, CT)



## 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 1:12,000.

**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: State of Connecticut, Eastern Part  
Survey Area Data: Version 2, Aug 30, 2024

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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
15	Scarboro muck, 0 to 3 percent slopes	1.9	1.5%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	10.8	8.8%
18	Catden and Freetown soils, 0 to 2 percent slopes	5.1	4.2%
23A	Sudbury sandy loam, 0 to 5 percent slopes	0.7	0.6%
38C	Hinckley loamy sand, 3 to 15 percent slopes	11.5	9.3%
38E	Hinckley loamy sand, 15 to 45 percent slopes	3.6	2.9%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	5.8	4.7%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	17.7	14.3%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	14.4	11.6%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	15.6	12.6%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	4.5	3.6%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	19.4	15.6%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	3.0	2.4%
306	Udorthents-Urban land complex	6.6	5.4%
703B	Haven silt loam, 3 to 8 percent slopes	3.2	2.6%
<b>Totals for Area of Interest</b>		<b>123.9</b>	<b>100.0%</b>