● Soil & Wetland Studies
● Ecology ● Application Reviews
● Listed Species Surveys ● GPS
● Environmental Planning & Management
● Ecological Restoration & Habitat Mitigation
● Expert Testimony ● Permitting

August 22, 2025

VIA E-MAIL

Dr. Michael Klemens, Chairman – P&Z Commission
Planning and Zoning Commission Members
Ms. Conroy
Town of Salisbury
PO Box 548, 27 Main Street
Salisbury, CT 06068

RE: APPLICATION REVIEW
Wake Robin Inn Redevelopment
104 & 106 Sharon Road & 53 Wells Hill Road, Salisbury, CT

REMA Job No.: 24-2744-SLS4

Dear Chairman Klemens:

At your request, REMA ECOLOGICAL SERVICES, LLC (REMA), is submitting this *review* of a Special Permit application before the Salisbury Planning & Zoning Commission (PZC) for the above-referenced proposal, which is for the redevelopment of the Wake Robin Inn site. Our review included secondary-source data, such as archival aerial photographs, and GIS-sourced data and mapping, including for soils, topography, geology, and natural resources. We also reviewed the Plan for Conservation and Development (POCD), and the 2009 Natural Resource Inventory for the Town.

The recently submitted plans produced by SLR, dated April 29, 2025, and revised through July 28, 2025, as well as the SLR Drainage Report, dated April 29, 2025, and revised through July 28, 2025, were also reviewed. Finally, we reviewed pertinent sections of the Town's Zoning Regulations, with an effective date of May 20, 2024.

It is our professional opinion, as will be further elucidated below, that the redevelopment plan as proposed there is a high likelihood of adverse impacts to sensitive natural resources both on-site and also off-site. We also find that important data and analysis is lacking from the submitted materials. For instance, the applicant has yet to submit for review any

communication by CT DEEP's Natural Diversity Database that shows concurrence with the SLR field survey methods and results and with the proposed mitigation plan for the relocation of CT-listed plant species. Moreover, communications with the US Fish and Wildlife Service Ecological Field Office, regarding the Northern Long Eared bat, are similarly lacking.

We should note that we have reviewed the permit approval conditions by the Town of Salisbury Inland Wetlands and Watercourses Commission (IWWC), which we understand has had a permit modification approved. There are at least two conditions in the IWWC permit that in our professional opinion should have been satisfied before the current submittal to the PZC. These are as follows:

- The provision of permeability test data for each of the proposed basins. The applicant should have designed the stormwater basins in areas that would achieve the prescribed permeability rates. Providing the data after the basins have been sited and designed is not appropriate, and could result either in substantial re-designs, or worse, in water quality impacts to sensitive on-site and off-site resources.

- The submission of a "detailed Invasive Plant Management Plan (IPMP)." Per the IWWC permit, this would not only include the wetlands but also the uplands within the upland review area (URA). Given the sensitivity of some of the upland habitats at the subject site, including CT-listed species that are found there, an IPMP should have been submitted for review.

The following summarize our findings to date:

1. The currently submitted and revised plans were compared with the plans that were submitted in December 2024 as part of a previous application for redevelopment. The extent of tree clearing has been reduced, but only by roughly 0.72 acres (see Figure A, attached). Therefore, the taking of maturing wooded habitat remains excessive, and the reduction of clearing is *minimal* in comparison to the overall scope of the redevelopment project.

2. The drainage report also reveals that there has not been a commensurate reduction of impervious surfaces in the submitted plans, compared with the 2024 plans that were reviewed. Total impervious surfaces actually increase from 2.85 acres to 2.98 acres, resulting also in an increase in the peak rates of runoff with the 2025 plans, since the

stormwater facilities (e.g., water quality basins, detention basins) have not been increased in size.

3. The submitted plans and supporting documentation do not closely follow the 2024 Connecticut Stormwater Quality Manual ("the Manual"), which is the most recent State-wide guidance for the protection of water quality. While computations for the water quality volume (WQV) and water quality flow (WQF) are provided, compliance with *Standard 1 – Runoff Volume Control and Pollutant Reduction*, and *Standard 2 – Stormwater Runoff Volume Control Quantity Control* are not discussed, and no calculations are provided. Moreover, compliance with the *minimum average annual pollutant load reductions* is not demonstrated. These are: 90% Total Suspended Solids (TSS); 60% Total Phosphorus (TP); 40% Total Nitrogen (TN).

   While the argument would perhaps be made by the applicant that this is not a requirement if it can be shown that the WQV would be infiltrated to the ground, which is contested in our view, in this case with the site being within the watershed of a sensitive water resource (Wononskopomuc Lake) it is of great importance. For instance, the *2023 Water Quality Monitoring Report* for the lake, cites phosphorus (both particulate and soluble forms) as the primary limiting nutrient, with nitrogen not far behind. Additional inputs of these nutrients to the lake affects primary productivity, including of algae and cyanobacteria, and can lead to water quality degradation.

4. The plans show that the bottoms of the water quality and detention basins will be lined with river stone, and not vegetated. This practice, is typically only seen as an option for *bioretention basins*, not for the type of stormwater basins proposed at this site. The lack of vegetation drastically reduces pollutant renovation potential, since a variety of important biological processes would not take place, including plant uptake and sequestration, denitrification/nitrification, microbial biodegradation and transformation (in the plant root zones). These processes are important in treating phosphorus, especially the dissolved form, and nitrogen species which are highly soluble and cannot be readily taken out of stormwater by infiltration to the ground alone.

5. Drawdown computations for the volume of stormwater to be infiltrated are provided but permeability testing per the 2024 Manual could not be found in the submitted documents. This was also noted in our review of the Town of Salisbury IWWC

permit. Therefore, the infiltration capabilities of the soils associated with three detention/water quality basins cannot be substantiated, and the water quality renovation effectiveness of the proposed practices are in question.

6. In our review of the 2024 application, REMA had submitted comments regarding the then revised plans, dated December 10, 2024, which we cite here by reference. In that review letter we noted several issues with Detention Basin 210, as well as with other components of the stormwater management practices. Based on our current review we note that there have not been any changes to address these issues, which still remain.

   For instance, water quality basin 140 shows an infiltration rate of 0.46 inches/hour, which is exceedingly low and according to the Drainage Report, it would take 31.53 hours for a full drawdown. The required WQV to be infiltrated is 968 cubic feet, but the storage capacity of the basin is only 526.8 cubic feet. If there were back to back storms on consecutive days, not at all an unusual occurrence in the region, this basin would overflow, without providing sufficient renovation of runoff, which would discharge to a wetland resource just a few feet downgradient and pollute it over time.

   Achieving *superior*, not just good, water quality renovation is of paramount importance given that the site is within the watershed to Wononskopomuc Lake, as well within an Aquifer Protection Area (APA). Our initial review of the plans and drainage report lead us to conclude that the proposed development is reasonably likely to have the effect of unreasonably polluting surface and groundwater quality, both on-site and also off-site.

   We note that according to Section 801.6 (*Preservation of Water Quality and Quantity*) of the Salisbury Zoning Regulations states:

   > "The proposed use and the site *shall be designed to minimize any risk of surface-water or groundwater pollution*, soil erosion and sedimentation, and water diversion." (Emphasis added.)

   Similar language is also found in Section 802.1.c.

7. In Section 800.3.g (*Site Plan Application Requirements*) of the Salisbury Zoning Regulations, and last bullet, we read:

> "Location of any threatened or endangered species or species of special concern as defined and provided by the Connecticut Department of Energy and Environmental Protection (DEEP) including locations from the State DEEP Natural Diversity Data Base."

Also, Section 100.2.b reads as follows:

> "Conserving and protecting natural resources such as ridgelines, farmland, wetlands, watercourses, and other sensitive natural resources and areas"

Although described as a "redevelopment," most of the site is currently naturally vegetated under existing conditions, with a high proportion of mature and maturing trees, as shown in the Bartlett Tree inventory. This is consistent with the many large trees in the Bartlett inventory: of the 800 trees tallied, 146 have a dbh (diameter at breast height) of 18 inches or more; fifteen have a dbh of thirty inches or more. Review of aerial photos record shows 4.1 acres of forest in the northerly portion, and a contiguous 5.1-acre block of old-growth forest in the southerly portion of the site, that has remained intact at least since 1934, per the archival aerial for that year.

Old growth forests support elevated plant diversity, especially of herbs. If soils are calcium-enriched, as here, a suite of special, less common "rich site" wildflowers and ferns are widespread, not limited to a narrow slope-base zone of rich soil, where groundwater has picked up additional minerals as it flows downslope. Though this was *not* noted in the resubmission, the applicant is proposing to relocate a population of a rare sedge, *Carex oligocarpa*, that grows in shaded, rocky, sub-acidic habitats (e.g. with soil derived from limestone or traprock). This population will be impacted but it is to be relocated. However, the SLR botanical survey is more than a year out of date and should have been updated. Very often REMA has found new populations of "listed" species during a subsequent survey even a year or two later.

A second special, sensitive habitat is expected along the western edge of the site, which is the rocky crest of a steep slope overlooking Lake Wononskopomuc; it is in effect a ridgeline, and is expected to support sensitive vegetation characteristic of rocky, high elevation habitats. This area is shown on the soils map as the 95E

mapping unit, a complex of shallow, calcium-rich Farmington loams and rock outcrops.

There is nothing in the record showing that the SLR survey for "listed" species has been reviewed by CT DEEP's Natural Diversity Database staff, and they agree with the survey methods and results and with the mitigation strategies (i.e., plant relocation).

Another federally and State listed species recorded from the vicinity of the site by CT DEEP is the Northern long-eared bat (*Myotis septentrionalis*), which has seen severe declines in the past few years due to white nose syndrome (WNS). During summer it roosts in cavities of both live and dead trees under loose bark, like those found in the old growth forest, on mature sugar maples, shagbark hickory, and also on dead trees, only rarely in structures. It over winters in caves, which do occur nearby in the marble district. The tree study categorized trees by condition, to prepare for extensive culling of dead or ailing trees. However, not only this rare bat, but many other wildlife species and overwintering insects depend on the cavities that develop in dead trees or branches.

We note that one of the primary tree species utilized by this species for maternity roosts is sugar maple, which is abundant at this site, based on the Bartlett tree survey. The applicant has not provided any evidence that there has been consultation with the US Fish and Wildlife Service Ecological Field Office, and neither has an acoustic survey been conducted to show the presence or absence of this species, as well as other "listed" Chiroptera, such as little brown bat (*Myotis lucifagus*) or tri-colored bat (*Perimyotis subflavus*).

8. The large increase in the numbers of cars entering and leaving the site each week is of concern not only from the standpoint of traffic but also its impact on air quality and human health. Links between air pollution and multiple human diseases have been well documented – various cancers and health disease as well as respiratory illnesses.

   Furthermore, the existing well-documented capacity for cleansing of air pollution by trees will be diminished by extensive tree removal. Trees not only take up gaseous pollutants, via their leaf pores, and incorporate them into biomass; foliage and twigs also intercept a high proportion of airborne particulates. The GC3 final

report emphasized the many benefits of forest trees, aside from carbon uptake e.g. health local climate cooling, and flood prevention.

The application includes a report by Bartlett Tree Services that assesses the condition of the existing trees on the site, and includes a map of their locations and appropriate measures to minimize damage if trees are in proximity to construction activities. Per the report 415 trees were rated as healthy. However, nowhere does the application provide the numbers of healthy trees that will be eliminated as a result of the proposed activities. The reviewer must compare the development footprint with the tree map to estimate tree losses. This was done for a few areas: The new western parking lot (~ 43 spaces) will eliminate 20 healthy trees; the pool area will eliminate 30; 14 will be lost on the hillside west of the existing hotel.

Please feel free to contact us if you have any questions.

Respectfully submitted,

REMA ECOLOGICAL SERVICES, LLC

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

Attachment: Figure A; CT NDDB Site Assessment (Automated)

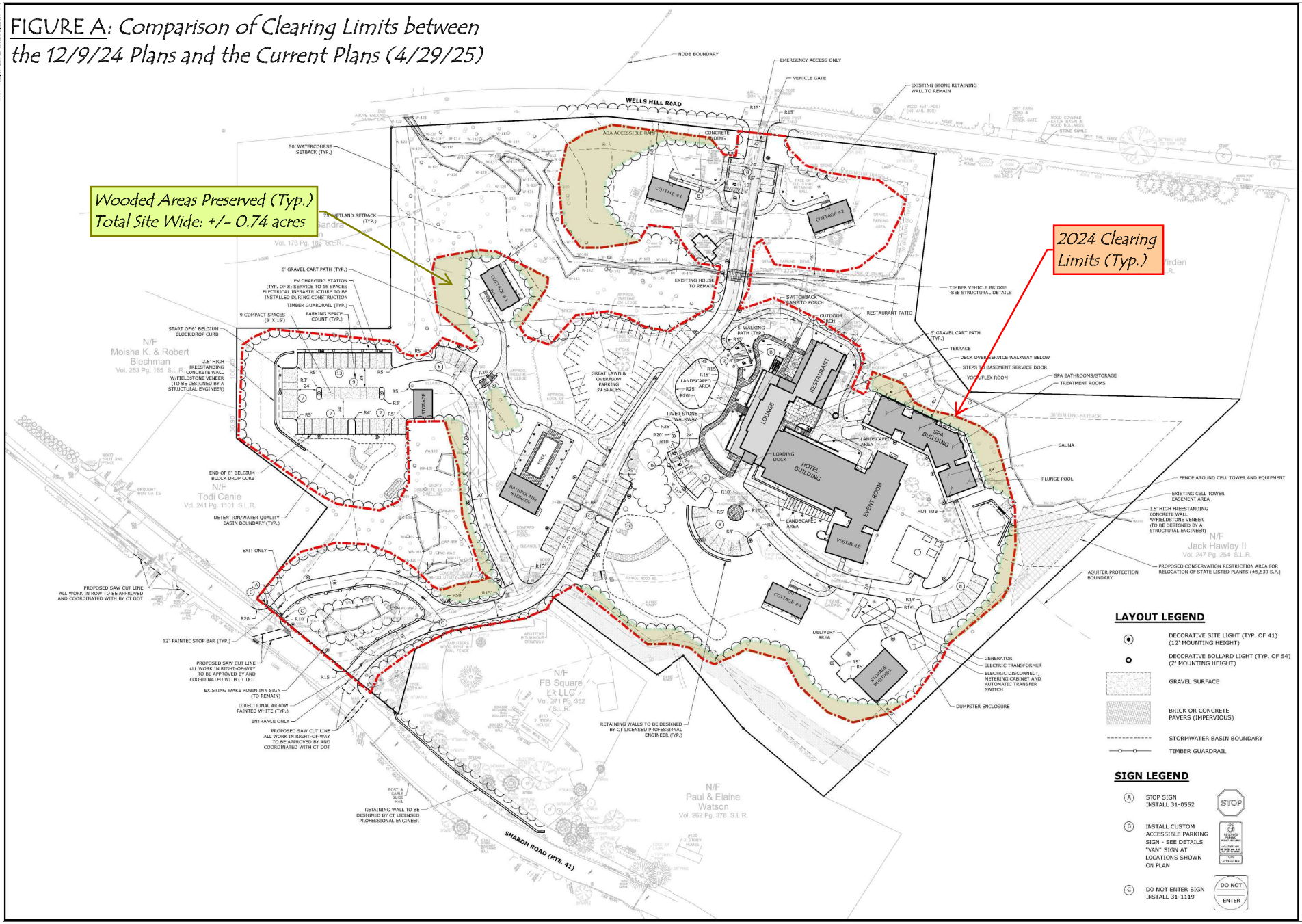
Citations:

[1]1. Nowak, David J.; Hirabayashi, Satoshi; Bodine, Allison; Greenfield, Eric. 2014. Tree and forest effects on air quality and human health in the United States. Environmental Pollution. 193: 119-129.

2. Liuhua Shi, Antonella Zanobetti, Itai Kloog, Brent A. Coull, Petros Koutrakis, Steven J. Melly, Joel D. Schwartz. **Low-Concentration PM2.5 and Mortality: Estimating Acute and Chronic Effects in a Population-Based Study**. *Environmental Health Perspectives*, 2015; DOI: 10.1289/ehp.1409111

3. Efficient Removal of Ultrafine Particles from Diesel Exhaust by Selected Tree Species: Implications for Roadside Planting for Improving the Quality of Urban Air. **Environ. Sci. Technol. 2019, 53, 12, 6906–6916.** Published May 16, 2019 Copyright © 2019 American Chemical Society

FIGURE A: *Comparison of Clearing Limits between the 12/9/24 Plans and the Current Plans (4/29/25)*



SLR
59 READY DRIVE
GLASTONBURY, CT 06033
203.271.1773
SLRCONSULTING.COM

DESCRIPTION | DATE | BY

SITE PLAN - LAYOUT

WAKE ROBIN INN REDEVELOPMENT
104 & 106 SHARON ROAD & 53 WELLS HILL ROAD
SALISBURY, CONNECTICUT

MA	SM	MA
DESIGNED	DRAWN	CHECKED

SCALE: 1"=50'
DATE: APRIL 29, 2025
PROJECT NO.: 22100.00001
SHEET NO.: 04 OF 23
SHEET NAME: LA

Generated by eNDDB on:
8/14/2025

George Logan
Towns: Salisbury
Automated Site Assessment: 2135760787

Subject: Redevelopment Project

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 (NDDB) 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) 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 NDDB and some of which have not been identified, or fully mapped or field verified. You may contact NDDB 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

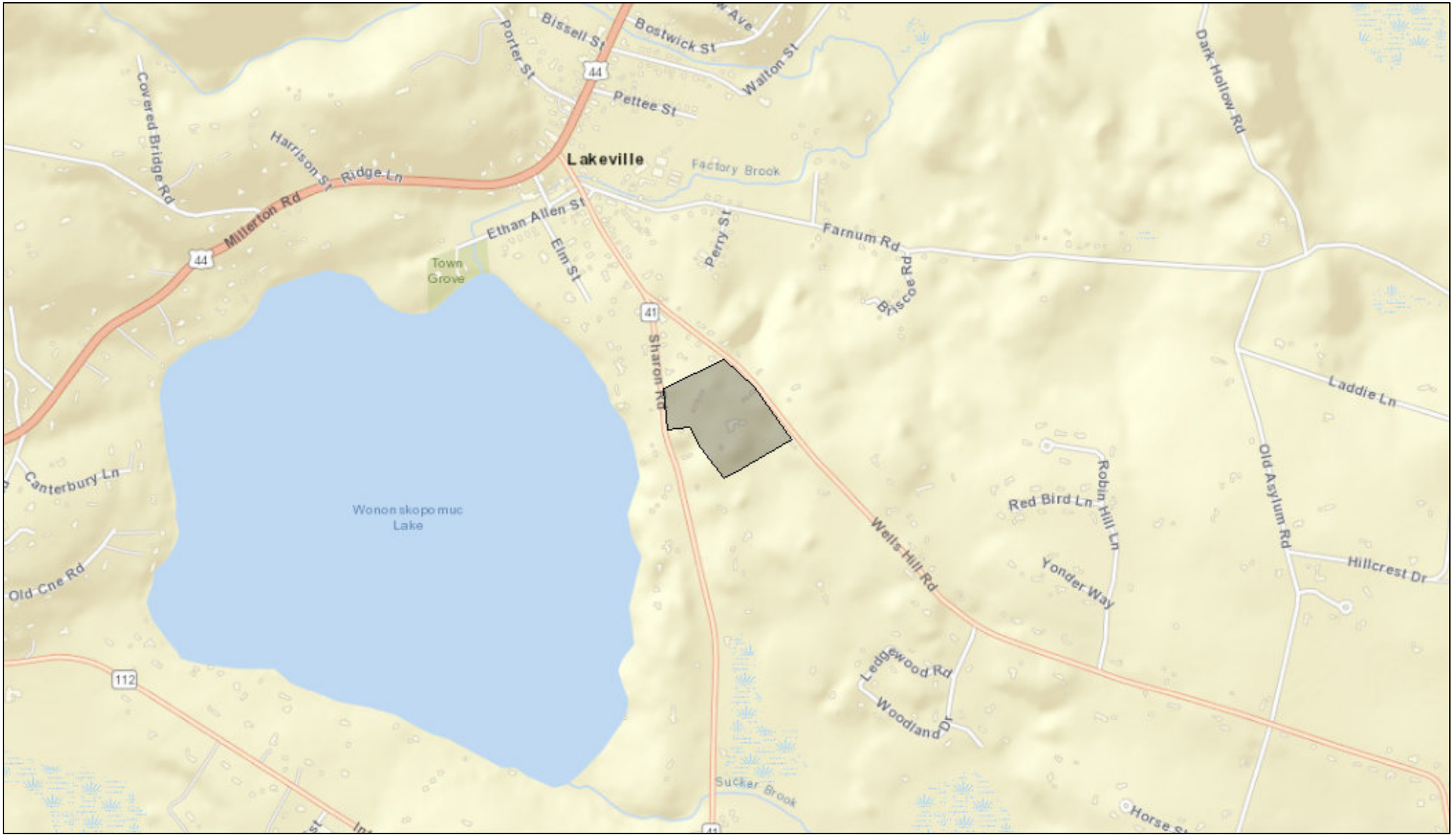
Please include a snapshot of the map, your last name, and the subject area town when you e-mail or write. Thank you for consulting the Natural Diversity Data Base.

Common Name	Northern long-eared bat
Scientific Name	*Myotis septentrionalis*
Listing Status[1]	FE
Taxa	mammal
General Ecology	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 (Myotis septentrionalis), 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 as well as guidance on the latest management recommendations including development projects, wind energy development, sustainable forest management, and other tools and FAQs, please visit:

	https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis
Common Name	Smooth cliff-brake
Scientific Name	*Pellaea glabella*
Listing Status[1]	E
Taxa	plant
General Ecology	Habitat: damp or shaded calcareous rocky slopes (G). Blooming time: Jun, Jul, Sep
Common Name	Wallrue spleenwort
Scientific Name	*Asplenium ruta-muraria*
Listing Status[1]	T
Taxa	plant
General Ecology	Habitat: sheltered cliffs,seams & crevices of limestone outcrops (D&C). Blooming time: Jul
Common Name	Eastern few-fruit sedge
Scientific Name	*Carex oligocarpa*
Listing Status[1]	SC
Taxa	plant
General Ecology	Habitat: shaded rock ledges,hillsides,rich woods. On marble and traprock. Mature fruits: Jun
Common Name	Handsome sedge
Scientific Name	*Carex formosa*
Listing Status[1]	SC
Taxa	plant
General Ecology	Habitat: calcareous meadows,woods,thickets & open swamps (D&C). Calcareous spring fens. Not uncommonly in forest trails. Mature fruits: late-May-Jun

[1]E = State Endangered, T = State Threatened, SC = State Special Concern, FE = Federally Endangered, FT = Federally Threatened, NA = Not applicable.

Redevelopment Project Map



August 14, 2025

1:19,195

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

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