



Connecticut
Resource Conservation
& Development

NATURAL RESOURCES INVENTORY

0 KATE DOWNING ROAD
PLAINFIELD, CONNECTICUT

OCTOBER 2023

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All site photos were taken by CT RC&D staff unless otherwise noted. Cover photo provided by the USGS TopoView website.



Acknowledgments

This report is the product of a request from the Town of Plainfield’s Director of Recreation, Mark Simmons, and Grant Writer/Economic Development Support staff person, Jordan Lumpkins, to the Connecticut Resource Conservation and Development Area, Inc.’s (CT RC&D) Environmental Review Team (ERT) Program. The CT RC&D Environmental Review Team Program provides technical assistance to Connecticut municipalities and land trusts to obtain baseline environmental data and suggest best management practices for properties of interest related to existing or future development or conservation. The ERT Program is funded in part by the Connecticut Department of Energy and Environmental Protection’s (CT DEEP) Passport to the Parks Program.

CT RC&D would like to acknowledge and express their appreciation for the important work of the following Environmental Review Team members. Their professionalism and expertise were critical to the analysis of the Town of Plainfield’s property located at 0 Kate Downing Road.

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Cordalie Benoit	Environmental Services Professional Treasurer, Connecticut Community Garden Association UCONN Extension Certified Master Gardener

The Team field review was conducted on Wednesday, May 17, 2023. Prior to the review day, each Environmental Review Team member receives a summary of the proposed concepts or projects anticipated for the property along with various information and geographic information maps. Some Team members made separate visits to the site following the initial ERT field review. Reports from ERT members were submitted to the CT RC&D Environmental Programs Manager for compilation and editing into this final report.

This report represents the Team’s findings. It is not meant to compete with private consultants by providing site plans or detailed solutions to development problems. The Team does not recommend what final action should be taken on the property. All final decisions rest with the Town of Plainfield. This report identifies the property’s existing resource base and evaluates its significance relating to potential development or conservation. Suggestions for consideration from the Team are action oriented toward long-term environmental quality and economic impacts.

CT RC&D hopes you will find this report of value and assistance in providing information to the Town of Plainfield about the currently undeveloped property at 0 Kate Downing Road.

If you require additional information, please contact:

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Introduction

On February 2, 2023, the Town of Plainfield completed an ERT application for a natural resources inventory of the Town's property at 0 Kate Downing Road in Plainfield, made up of two parcels. The two parcels are listed as 0 Kate Downing Road, Assessor's Map 10 Block 5 Lot 9, consisting of 3.97 acres and Map 10 Block 5 Lot 4 consisting of 157.7 acres. The two parcels are bordered by the Right of Way for Interstate 395 to the west, Kate Downing Road and residential properties to the north, private vacant land to the west including land owned by Pachaug Outdoor Club Inc., and privately owned vacant land to the south.

The Town of Plainfield is interested in making the property at 0 Kate Downing Road accessible to the public through a series of multi-use trails, and specifically wants to address access issues related to wetlands, completing a timber harvest, and creating park features such as parking, trails, and signage.

The specific issues the Town wanted to address in the ERT report include:

- Soils & Wetlands
- Herpetology
- Wildlife
- Water Quality/Watershed
- Forestry & Invasive Species
- Topography & Geology
- Archaeology & Historical Significance
- Traffic/Access
- Land Use Context/Zoning
- Economic Development
- Grant Funding Strategy
- Community Garden
- Trail Mapping
- Invasive Species

To date, the property has been surveyed by Eastern District Service Forester, Frank Cervo, in 2021, and a Forestry Management Plan for the property was created by Connwood Foresters, Inc. in 2022. The Town of Plainfield was successful in their application for a CT DEEP America the Beautiful Grant and a Community Foundation of Eastern CT Environmental Grant which provided funding for the Forestry Management Plan. The Town has also applied for a CT DEEP Recreational Trails Grant for the planning, design, and construction of the public park.

The primary goal of this ERT report is to bring additional resources to comment and expand on the baseline natural resources inventory and offer recommendations toward approach and conservation considerations.

Highlights of the Report

Watershed & Hydrology

Threats to cold water stream habitat include increased impervious cover leading to increase surface water runoff, removal of tree canopies that provide shade to the stream riparian area, as well as increasing summer temperatures and number of days > 90°F due to climate trends. Access to the more southern and drier parts of the property, at least one wetland crossing will be required. Any boardwalk construction will need to be designed to allow lateral migration of wetland species beneath it.

Topography & Geology

Hilltop elevations are in the 250-350 feet above sea level range. Valley bottoms are lower. The maximum elevation on the parcel is around 255 feet at the knoll on the east central portion of the parcel. The lowest elevation is about 158 feet along the Mill Brook at the southeastern corner of the parcel. Relief on the property is about 100 feet and over most of the property the topography is rather gentle. Glacial erratics and widely scattered outcrops of Quinebaug gneiss are the only rocks seen in the areas of gentle topography. The slopes along the eastern-most portions of the drop off into the valley of Mill Brook and are moderate to locally steep (Figure 1C). In the steep areas rock outcrops may be found. Those steeper slopes produce more scenic views of the forest, streams and, locally, a pond.

Surficial Geology & Soils

The dominant non-wetland soil unit on the subject property is the Charlton-Chatfield complex, 0 to 15 percent slopes (#73). These are well drained soils formed in loamy melt-out till. A USGS topographic map of the property shows a large wetland corridor that extends approximately parallel to Kate Downing Road, and which drains southeasterly towards the Mill Brook wetland system (Figure 1). Further to the west, towards the center of the property, a second wetland corridor originates in a valley between two hilltops and drains northwesterly into a large wetland system west of Interstate 395 (Figure 1). Additional wetlands, which drain into Mill Brook, are located at the easterly end of the large hill located in the central portion of the property. While invasive flora occur on the property, they do not represent a dominant species in any of the habitats that were investigated. The most common is Japanese barberry, which is scattered across the property in wetland and upland forest habitats, although no dense patches were encountered. Although Japanese barberry is not dominant on the property, this invasive species is capable of spreading rapidly once it gains a foothold. Invasive Japanese barberry shrubs should be removed and replaced with native shrubs such as highbush blueberry, sweet pepperbush and witch hazel.

Herpetological Assessment

Based on the quality of habitats surveyed, there is a reasonable likelihood that other listed species of amphibian and reptile occur within the property limits. Recreational trails can occur within the 400-ft amphibian life zone, but they should be restricted to hiking only. No mountain biking should be permitted.

Land Use, Zoning, & Transportation

The property to the west that was utilized for access during the Team site visit may not be permitted as an access point due to the powerline easement and federal highway right of way. Permitted uses within the RA-60 district need to be investigated further to determine if the proposed project is a specifically allowed use or would require a Special Permit. Prior to moving forward with development of the property for public use as a park that may include trails, parking areas and restrooms clarification regarding the permitting process should be confirmed. The proposed project does provide concurrence with the Town of Plainfield's Plan of Conservation and Development as well as the State of Connecticut's. Wetlands on the site limit the amount of land available for access, parking, and other amenities.

Opportunity for Community Gardens

The Town of Plainfield will need to consider access, parking, potable water, fencing, and soil testing at any site proposed for a community garden. It is recommended that any community garden program promotes pollinator habitat as well as educational activities and events. There are many examples of how community gardens can be established. The Town should consider if they want to run the community program through the Recreation Department or work with a nonprofit or community group to organize the program. A budget should be considered for the community garden program.

Watershed & Hydrology

Report by Jean Pillo

Watershed Conservation Project Manager

Eastern Connecticut Conservation District

Possible Entrance and Parking Needs

The property comprises two areas with frontage along Kate Downing Road. The Team reviewed only one of these areas on May 17, 2023. The Team accessed the property through an existing utility corridor adjacent to the northernmost corner of the parcel. The utility corridor parallels the western side of Interstate 395 (Figure 1).



Figure 1. The Team's point of entry to the site via a utility corridor west of Interstate 395. J. Pillo.

The second area of the parcel with frontage on Kate Downing Road is located between residential house lots with street addresses 83 and 97 Kate Downing Road. This potential access area was not inspected during the Team site visit.

The Town reported that the site will require a parking area to accommodate up to 20 vehicles, and a vehicle with a horse trailer or enough space for a school bus to park and/or turn around. One area was discussed as a proposed parking lot west of the Team's point of entry at the utility corridor. That location is wooded and would require tree removal and grading before a parking area could be installed.

Water Quality and Watershed Concerns

Concerns Related to the Development of this Parcel for a Multiuse Trail System

The property straddles a watershed divide where a portion of the land drains into an intermittent stream toward the Quinebaug River to the west. The land on the eastern side of the divide drains toward and partially abuts Mill Brook in the southeastern part of the property. Mill Brook is a first order stream that also drains toward the Quinebaug River after a confluence with Lathrop Brook. CT DEEP has assessed the water quality of Mill Brook and has determined it is able to support cold water aquatic species. The information contained on DEEP's map of cold-water habitat is based on measurements in the field collected by many dedicated biologists and volunteers over several years (Figure 2). Small increases in the average summer water temperature can change a stream from cold water habitat to cool water to warm water habitat, which would be unable to support cold water dependent species such as native brook trout and temperature sensitive macroinvertebrates. Threats to cold water stream habitat include increased impervious cover leading to increase surface water runoff, removal of tree canopies that provide shade to the stream riparian area, as well as increasing summer temperatures and number of days > 90°F due to climate trends.

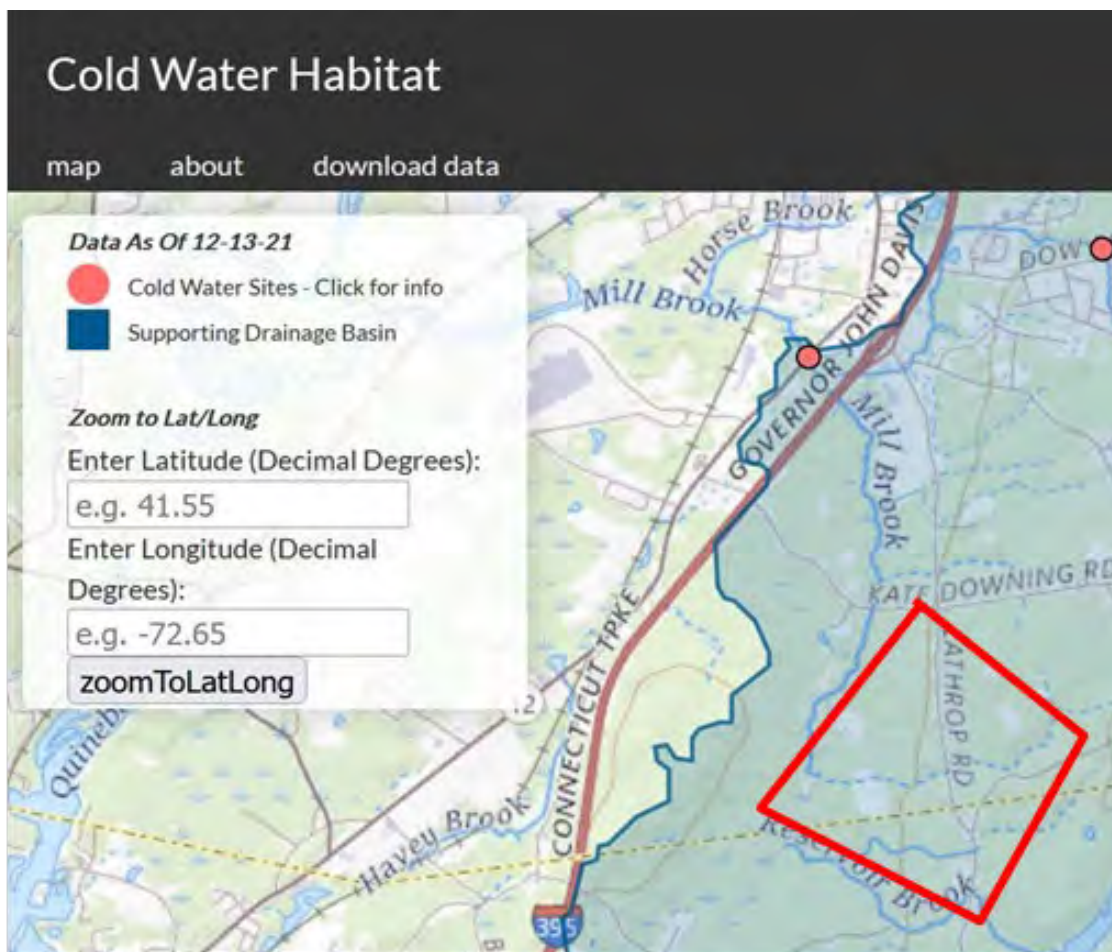


Figure 2. From <https://portal.ct.gov/DEEP/Water/Inland-Water-Monitoring/Cold-Water-Stream-Habitat-Map>

As explained in the Connecticut Stormwater Quality Manual (Published September 20, 2023) in Chapter 5: Low Impact Development Site Planning and Design Strategies: https://portal.ct.gov/-/media/DEEP/water/water_quality_management/Guidance/SWM_Clean_Final.pdf



Preservation of vegetated buffers involves delineating and preserving naturally vegetated buffers and implementing measures to ensure that buffers and native vegetation are protected throughout planning, design, construction, and occupancy. General guidelines and standards for vegetated buffers include:

- o A minimum buffer width of 100 feet as measured from the edge of a resource (wetland, top bank elevation of a stream, etc.) is recommended to preserve most buffer functions. Larger buffer widths (up to 300 feet or more) may be necessary for critical resources such as public drinking water supplies or based on site characteristics such as slope, soils, land use, vegetation type, and other factors.*
- o The minimum recommended buffer width may not be achievable on existing developed sites. The greatest buffer width that is practical should be maintained and restored and should not be reduced to less than 25 feet or below local or state regulatory requirements.*
- o Other environmental features important to water quality preservation and enhancement should be included within the buffer, such as the 100-year floodplain and steep slopes.*
- o Vegetated buffers should be protected during construction. Buffer zones and limits of disturbance should be shown on every drawing within every set of construction plans including, but not limited to, clearing and grading plans and sediment control plans. Buffer limits should be staked out in the field prior to any construction activity. Limits of disturbance should be marked with orange construction fence barriers with accompanying signs.*



The portions of the property with road frontage on the northern portion of the property are separated from the more southern end of the property by a wetland system that includes a defined small stream channel. The fresh water forested and shrub wetland vegetation is predominantly skunk cabbage in the understory. To access the more southern and drier parts of the property, at least one wetland crossing will be required, for which a boardwalk system is under consideration. Any boardwalk construction will need to be designed to allow lateral migration of wetland species beneath it. It is also advisable to consider the impacts of wetland flooding to the boardwalk system which may cause it to be moved by the flow of water.

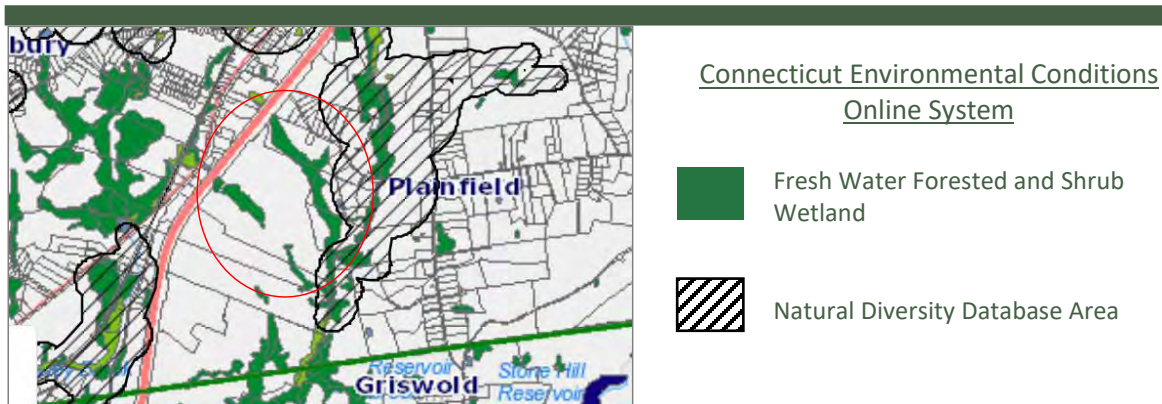


Figure 3. <https://maps.cteco.uconn.edu/>

The property includes what appeared to be a small spring-fed dug pond, a remnant from past farming activity. Herpetologists on site discussed vernal pools they were monitoring for amphibian and reptile species. Their findings are reported in the Herpetological Assessment section of this report. The Connecticut Environmental Conditions Online (CTECO) map indicates a Natural Diversity Database “polygon” associated with Mill Brook (Figure 3). Appropriate buffers to protect these sensitive areas should be included in the trail development plan.

While designing the interior multiuse trail network, trails should be designed to minimize impacts on water and habitat quality. Effort should be made to avoid perpendicular crossings of gradients that would promote soil erosion. Instead, utilize switchbacks on steep slopes that will result in smaller drainage runoff areas to dissipate stormwater volume and energy.

Additionally, in consideration of ADA compliance for trails (including slope recommendations, the Town of Plainfield might confer with Lyann Graff at The Last Green Valley.

Additional Resources

Wetland Trail Design and Construction (2007), Produced by USDA:

<https://www.fs.usda.gov/t-d/pubs/pdfpubs/pdf07232804/pdf07232804dpi300.pdf>

Common Questions: Constructing Wetlands Boardwalks and Trails produced by Jon Kusler, Association of State Wetland Managers, Inc. in Cooperation with the International Institute for Wetland Science and Public Policy: https://www.nawm.org/pdf/lib/2/boardwalk_6_26_06.pdf

Topography & Geology

Report by Randolph Steinen

Professor Emeritus of Geology, University of Connecticut

Connecticut Geological and Natural History Survey, CT DEEP

Topography

The Kate Downing Road parcel is located in the eastern part of the Eastern Connecticut Highlands about 6 miles west of the Connecticut/Rhode Island border. As such, hilltop elevations are in the 250-350 feet above sea level range. Valley bottoms are lower. The maximum elevation on the parcel is around 255 feet at the knoll on the east central portion of the parcel (Figure 1). The lowest elevation is about 158 feet along the Mill Brook at the southeastern corner of the parcel. Relief on the property is about 100 feet and over most of the property the topography is rather gentle. Glacial erratics and widely scattered outcrops of



Figure 1.

A. Topographic map showing the Kate Downing Road parcel. Parcel boundary approximate and northern boundary is not defined on this map. Mill Brook flows in the valley to the east of parcel. Note Lathrop Road along eastern margin of map; a major terrane boundary is located just west of Lathrop Road. Contour interval is 20 feet. Map from CTECO website.

B. Typical gentle slope terrain is present over much of the parcel. Note glacial erratic in distance. Erratic is about 4 feet long.



C. Glacial erratic in eastern part of parcel. Note steeper slope on left (east) side of photo. Team member to left of erratic is about 6 feet in height.

Quinebaug gneiss are the only rocks seen in the areas of gentle topography (Figure 1B). The slopes along the eastern-most portions of the drop off into the valley of Mill Brook and are moderate to locally steep (Figure 1C). In the steep areas rock outcrops may be found. Those steeper slopes produce more scenic views of the forest, streams and, locally, a pond.

Geology

A major geologic structure runs approximately north-south through far eastern Connecticut (Figure 2). The Kate Downing Road parcel is right in the middle of that structure. The structure is a terrane boundary and also a former plate tectonic boundary, marked by the Lake Char fault that is located approximately along Lathrop Road just east of the parcel (Figures 2B and C). To the east of the Lake Char fault, Avalon Terrane rocks underlie the surface soils.

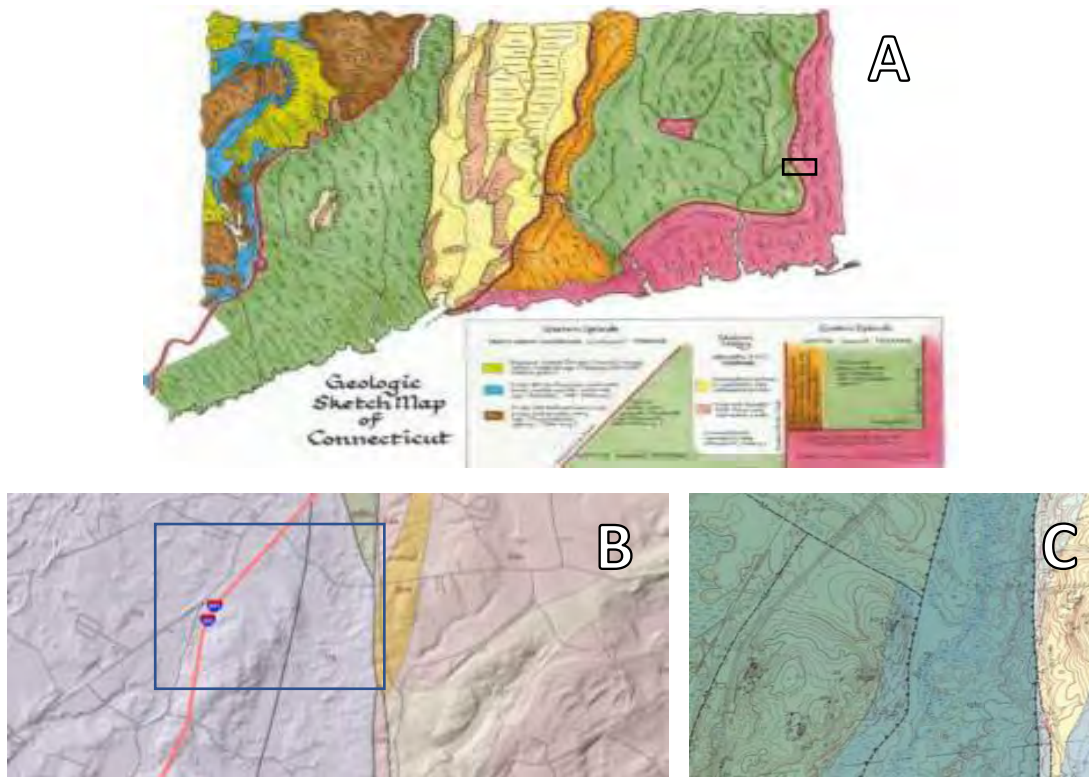


Figure 2. Geologic maps.

A. Map of the terranes of Connecticut by Michael Bell (1985). Mauve colored area along eastern side of Connecticut is Avalon terrane. Lake Char fault at the terrane boundary shown in red. Black box shows approximate location of Figures 2B and 5. Ancient eastern edge of Laurentian continental margin shown by blue, brown and greenish colors in western Connecticut.

B. Geologic map of area adjacent to Kate Downing Road showing Lake Char fault running north-south through the middle of the map. Areas underlain by different geologic formations of Avalon terrane shown in pinkish, brownish, and orangish gray and area underlain by Laurentian rocks shown in gray. Heavy dark lines are faults. Map from Rodgers, 1985. Box shows approximate outline of Figures 1 and 2C. Width of map about 5 miles.

C. Detailed geologic map of Kate Downing Road parcel (Dixon, 1965). Lake Char fault (indicated by dashed lines with teeth on west side) shown as a zone with cataclastic rock (shown on the map by blue-green color). Rocks of the Quinebaug formation that are sheared but not crushed are shown in grayish green. Lighter colors indicate area underlain by rocks of Avalon terrane. The map shows that cataclasites are poorly layered, but rocks of the Quinebaug Formation show distinct layering that dips (is tilted) toward the west.

The Avalon Terrane is part of the Gondwana tectonic plate that today approximates northwestern Africa. To the west of the Lake Char fault the rocks are part of a different terrane that originated north of Gondwana and approximately 300 million years ago accreted onto what would become North America (geologists refer to this ancient continent as Laurentia. Until that time, the eastern edge of Laurentia was in western Connecticut. See Figure 2A). Gondwana and Laurentia collided approximately 270 million years ago forming a super-continent referred to as Pangaea. When Pangaea broke up around 150-200 million years ago, part of Gondwana stayed attached to Laurentia and became the eastern seaboard of North America. The Avalon Terrane is part of the Gondwana tectonic plate that today approximates northwestern Africa. To the west of the Lake Char fault the rocks are part of a different terrane that originated north of Gondwana and approximately 300 million years ago accreted onto what would become North America (geologists refer to this ancient continent at Laurentia. Until that time, the eastern edge of Laurentia was in western Connecticut (See Figure 2A). Gondwana and Laurentia collided approximately 270 million years ago forming a super-continent referred to as Pangaea. When Pangaea broke up around 150-200 million years ago, part of Gondwana stayed attached to Laurentia and became the eastern seaboard of North America.

The rocks exposed along the eastern slopes of the Kate Downing Road parcel were formed in the fault zone along the suture of the different terranes. They consist of ground-up rock debris that became welded together forming what geologists refer to as cataclasite. Cataclasites are formed by the progressive fracturing of rock and mineral grains and frictional sliding within shear zones where huge rock masses move in different directions and/or speeds past each other. In this case, the Avalonian terrane plunged under the Laurentian terrane.

The rocks that crop out on the eastern slopes of the parcel are dense gray and dark gray rocks that appear granulated (Figure 3). The mineral composition of these rocks requires microscopic examination, and this report relies on Dixon's 1965 description. The cataclasites consist of interlayered fine- to very fine-grained biotite, +/- hornblende, epidote, quartz, and plagioclase granulite (Figure 3A, B.) and lighter gray biotite, epidote, microcline and plagioclase blastomylonite (Figure 3C).

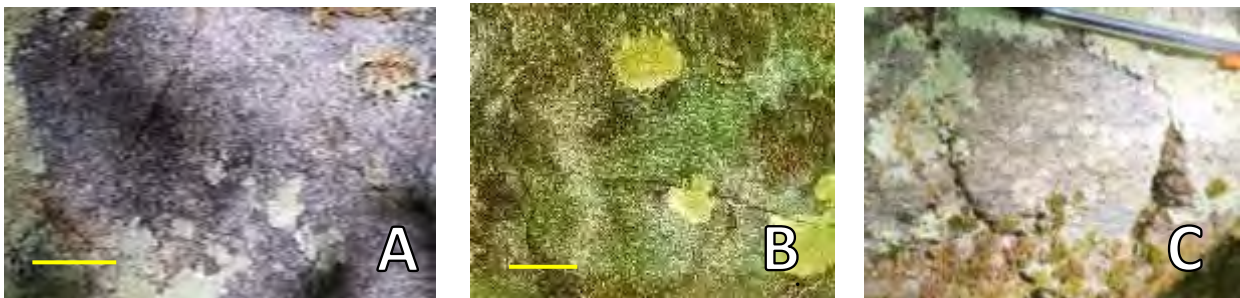


Figure 3. A & B. Fine-grained dark gray cataclasite. Light mineral grains in A. are quartz, those in B. are plagioclase. C. blastomylonite. Larger grains are composed of microcline and are deformed into augen (almond shaped).

Few outcrops are found on the gentle slopes of the western part of the parcel. Those rocks are part of the Quinebaug formation. They consist of well-layered light- to dark-gray, and even greenish-gray, gneisses that are medium- to fine-grained (Figure 4). Shear zones consisting mainly of biotite (Figure 4A) are prominent in most outcrops. It is these rocks that Dixon suggests were crushed and transformed into cataclasite in the fault zone.

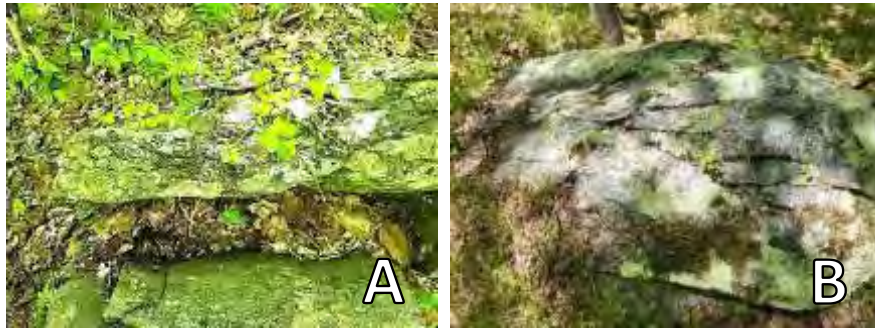


Figure 4. A. Biotite- plagioclase gneiss lenses separated by biotite rich shear zones. Poison ivy leaves at top of outcrop are about 1 inch for scale.

B. Gneiss with large quartz-filled fracture on lower left. Outcrop is about 3.5 feet long.

The more recent (approximately 20,000 years ago) geologic history involved the great ice sheets, glaciers, that covered Connecticut. The ice was more than a mile thick over Plainfield at the height of the last Ice-Age. The ice didn't just sit there, it flowed, moving toward the south-southeast in this part of the world. As the ice flowed it eroded the underlying bedrock and carried the erosional debris along with it. The glacier extended as far south as Long Island before it began melting. As the ice melted, glacial soils were deposited on the hillsides and sand and gravel were deposited (from meltwater streams and rivers) in the valleys. The melting occurred in pulses related to global climatic variations. During warmer pulses the front (southern end) of the glacier melted away leaving distinctive deposits. During the colder pulses, the southern end stood in one place for a number of years, leaving a different set of distinctive deposits, most easily interpreted by the meltwater stream deposits in valley bottoms. Glacial geologists thus can map the retreat of the glacier (Figure 5). The ice melted in the Plainfield area about 16,500 years ago.

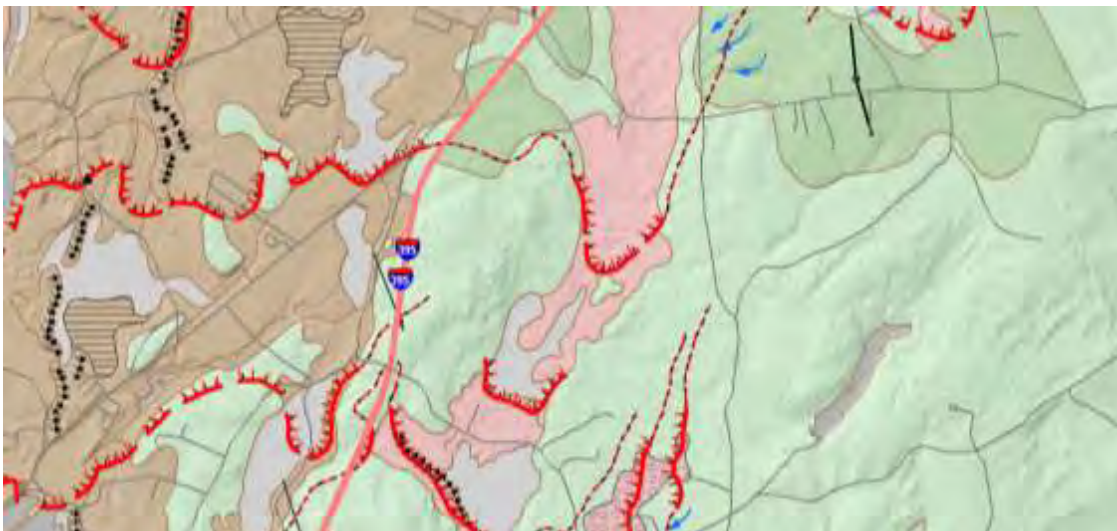


Figure 5. Map of glacial deposits in the Kate Downing Road parcel area. Red lines indicate successive locations of the ice front as it melted back. Light grayish-green and darker grayish green areas covered by glacial till; pink, brown, and bluish-gray colors indicate area covered by sand and gravel deposited by different meltwater stream systems. Map from Stone and others, 2005.

References

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Surficial Geology & Soils

Report by Ed Pawlak

Certified Professional Wetland Scientist and Registered Soil Scientist

Connecticut Ecosystems, LLC.

Introduction

Connecticut Ecosystems, LLC. inspected the subject property on two occasions in 2023: May 7 and August 24 in order to characterize the wetlands and watercourses contained therein, assess their functional values, and develop management recommendations for them.

Landscape Context

The subject property is part of a much larger wooded landscape block bordered by Interstate 395 to the west, Kate Downing Road to the north, Lathrop Road to the east and Roode Road to the south (Figure 1). This landscape block, approximately 850 acres in size, is mostly wooded, although there is an area of cleared land and field near Mill Brook. This large unfragmented landscape block is critical for many wildlife species that require such intact habitats, such as the wood frog, scarlet tanager, and wood turtle.

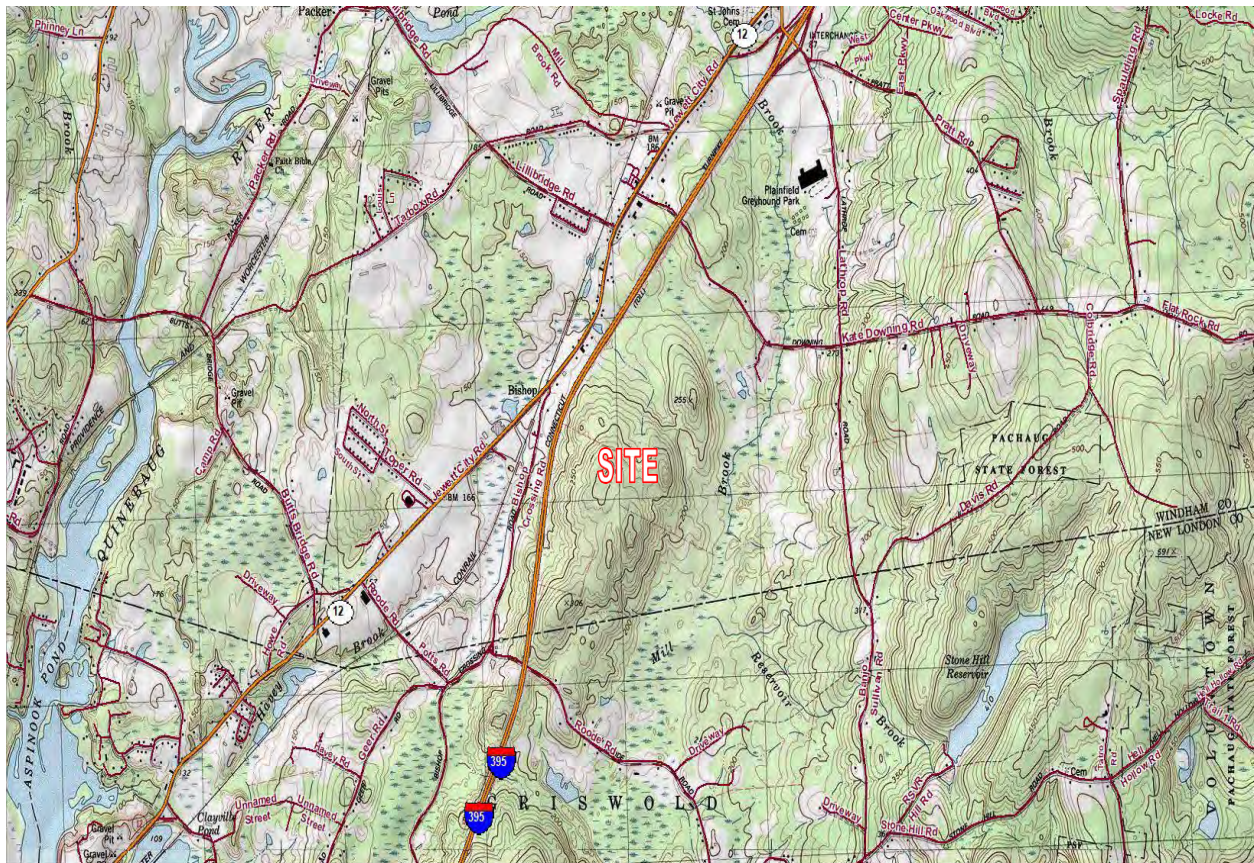


Figure 1. Topographic Map of Kate Downing Road

Soils

The characteristics of the soils on the property were investigated in various locations with a soils auger.

The NRCS Soils Map (Appendix 1) shows three wetland soil map units on the subject property:

- Ridgebury, Leicester and Whitman soils, 0-8 percent slopes (#3) - These somewhat poorly, poorly and very poorly drained soils formed in lodgement till. They are typically characterized by a compact hardpan at a depth of about two feet. The USDA Soils Map shows that this soil complex is the dominant wetland soil type found on the property (Appendix 1). The presence of a very poorly drained surface organic horizon, approximately 12 inches deep, was confirmed in the interior portions of one of the wetlands with a soil auger. This horizon was underlain by a heavily mottled gray horizon consisting of very fine sand.
- Pootatuck fine sandy loam (#102) - These moderately well drained loamy soils formed in alluvial sediments. They are nearly level soils on floodplains subject to frequent to occasional flooding. On the subject property they are associated with the Mill Brook wetland system.
- Rippowam fine sandy loam (#103) - This series consists of very deep, poorly drained loamy soils formed in alluvial sediments. They are nearly level soils on flood plains subject to frequent flooding. They occur on the property in association with the Mill Brook wetland system.

The dominant non-wetland soil unit on the subject property is the Charlton-Chatfield complex, 0 to 15 percent slopes (#73). These are well drained soils formed in loamy melt-out till.

Wetland Characterization

A USGS topographic map of the property shows a large wetland corridor that extends approximately parallel to Kate Downing Road, and which drains southeasterly towards the Mill Brook wetland system (Figure 1). Further to the west, towards the center of the property, a second wetland corridor originates in a valley between two hilltops and drains northwesterly into a large wetland system west of Interstate 395 (Figure 1). Additional wetlands, which drain into Mill Brook, are located at the easterly end of the large hill located in the central portion of the property.

The National Wetlands Inventory (NWI) Map shows the approximate locations of these wetlands, as interpreted from aerial photography by the U.S. Fish and Wildlife Service (Figure 2). Below is an explanation of the symbology found on this map:

- PFO1E: Palustrine, forested, broad-leaved deciduous, seasonally flooded/saturated.
- PFO1A: Palustrine, forested, broad-leaved deciduous, temporarily flooded
- PSS4: Palustrine, scrub-shrub, needle-leaved evergreen
- PEM1E: Palustrine, emergent, persistent, seasonally flooded/saturated.
- PABHh: Palustrine, aquatic bed, permanently flooded, diked/impounded

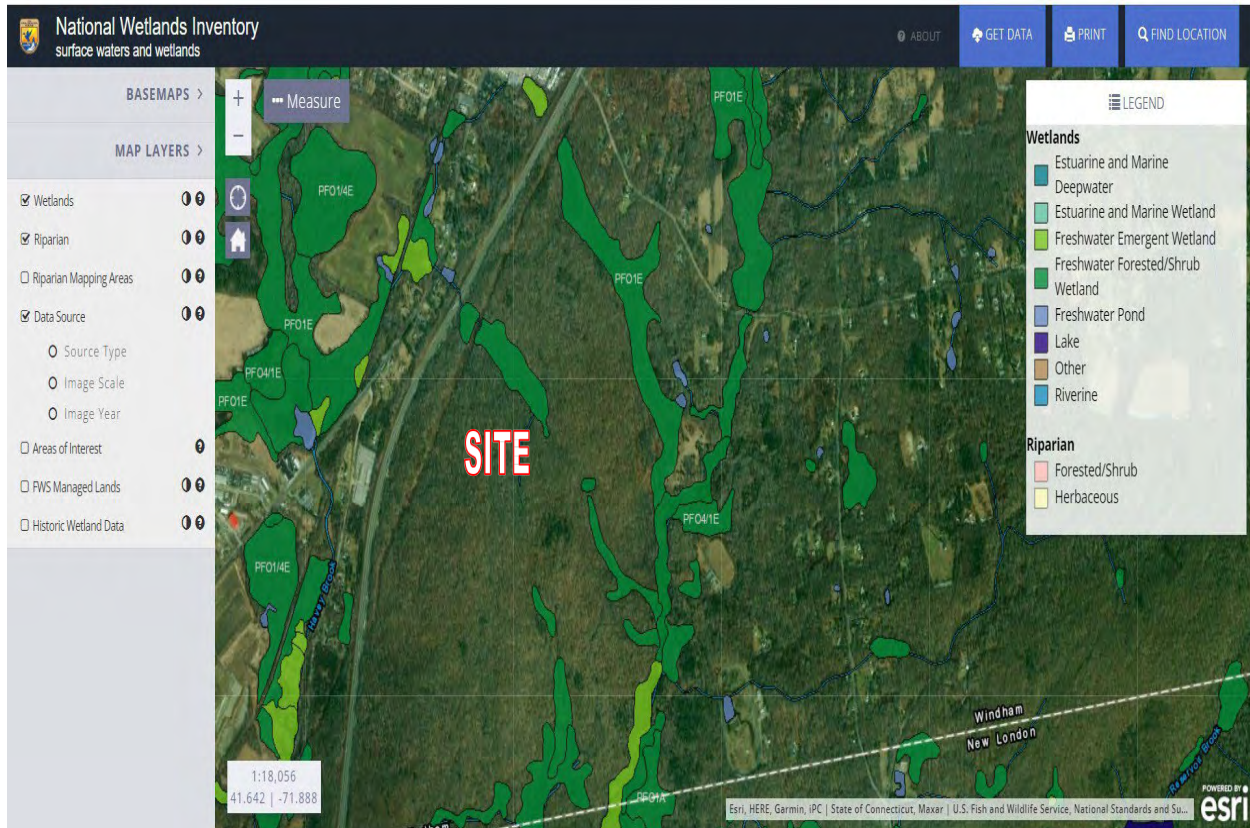


Figure 2. National Wetlands Inventory Map of Kate Downing Road

The dominant wetland type on the property (PFO1E) is known colloquially as a “deciduous wooded swamp”. These swamps occur as broad, very densely vegetated (Photo 1) corridors that span the property, trending in a southeast direction. The microtopography in the swamps is very strongly expressed due to widespread seasonal flooding in the early portion of the growing season. Many trees and shrubs are found growing on raised hummocks. The topography of the swamp is nearly level. The dominant vegetation in the swamps is red maple, sweet pepperbush, spicebush, cinnamon fern and skunk cabbage. There are very few invasive plants growing in the swamps.

Each of the large, wooded wetland corridors on the property is associated with a “headwaters stream” (Photo 2). These watercourses are characterized by very shallow meandering channels, and both contained very low flows of cool, clear water on August 24, 2023. Emergent vegetation growing along the channels includes halberd-leaved tearthumb and cardinal flower. Active groundwater discharges in the swamps adjacent to the watercourse channels contribute to the baseflow of the streams (Photo 4).

Several seasonally flooded basin depressions were observed within the wooded swamps. These are likely vernal pools and are discussed elsewhere in this report. The wetlands on the property associated with Mill Brook were not inspected due to the difficulty in determining their exact location, and to avoid trespassing off the property.



Photos. Photo 1. Extremely dense vegetation in deciduous wooded swamp. Photo 2. Headwaters stream channel in center of deciduous wooded swamp. 0 Kate Downing Road Plainfield, CT 8/24/23. E. Pawlak.

Wetland Ecological Services

The wetlands on the subject property provide a variety of ecological services:

- **Groundwater Discharge and Recharge** - Active wetland groundwater discharges support the baseflow of the headwaters streams that flow through the wooded swamps. These groundwater discharges also modulate the water temperature of these resources, which is critical to the aquatic organisms that live there. Groundwater recharge likely occurs in the wetlands during the drier summer months, when the groundwater table is lower and does not preclude infiltration.
- **Floodflow Alteration** - The broad, very gently sloping, densely vegetated wetlands detain and slowly release a significant amount of stormwater, protecting downstream structures and resources.
- **Pollutant Removal** - The gentle slopes and dense vegetation that characterize the wooded wetland corridors remove a variety of solid and dissolved pollutants from stormwater runoff.
- **Production Export** - Biomass generated by the dense vegetation in the wetlands decomposes and is seasonally exported into the Mill Brook wetland system to the southeast, and the unnamed wetland system northwest of Interstate 395 (Figure 1), supporting the biota in these watercourses and in downstream aquatic systems.

- Wildlife Habitat - The Herpetological Assessment section of this report enumerates the many amphibians and reptiles that utilize the habitats on the property. Of note, from a wetlands perspective, are the headwaters streams, which are capable of supporting a variety of stream salamanders, and the vernal pools, which provide critical breeding habitat for a suite of declining amphibians. The large deciduous wooded swamps on the property provide critical breeding habitat for a diverse suite of songbirds.
- Finfish Habitat - As noted above, a small portion of Mill Brook is located on the property. The CT DEEP Fish Community Data map shows only one species, banded sunfish, was collected in a 2009 sample of Mill Brook near the subject property. However, it is possible that additional finfish species would be identified with further sampling.
- Recreation - The recreation potential of the wetlands on the property are limited by the difficulty of accessing these wetlands due to very dense vegetation and seasonally inundated and waterlogged soils. This potential could be enhanced by the installation of boardwalk crossings, discussed below.
- Educational/Scientific Value - The above comments with respect to Recreation apply to this function as well.

Complementary Upland Habitat

Non-wetland, second growth mixed deciduous forests are abundant on the property (Photo 3). Dominant species include white oak, red oak, hickories, lowbush blueberry, and hayscented fern. These forests provide critical complementary habitat adjacent to the wetland corridors on the property.



Invasive Flora

While invasive flora occur on the property, they do not represent a dominant species in any of the habitats that were investigated. The most common is Japanese barberry, which is scattered across the property in wetland and upland forest habitats, although no dense patches were encountered.

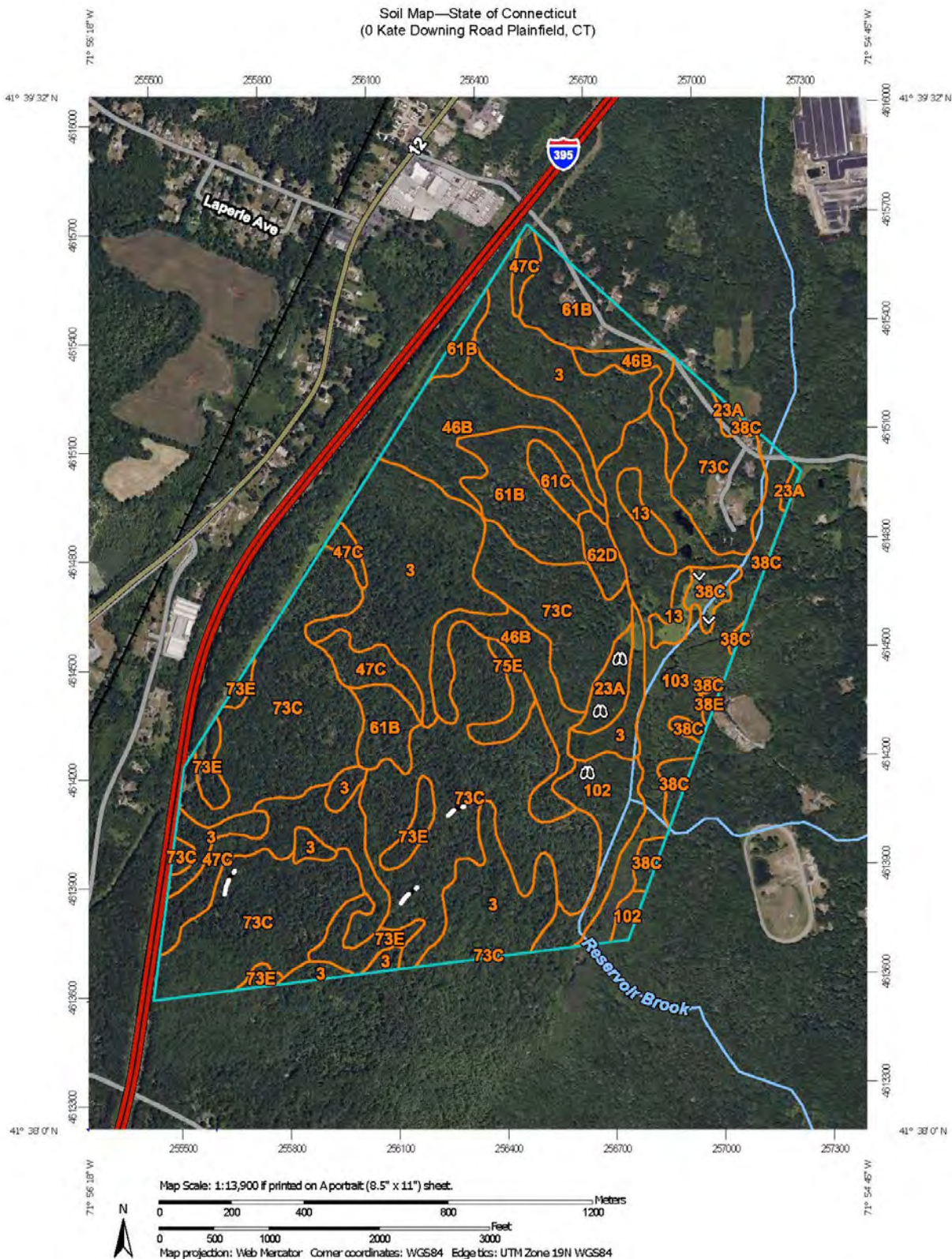
Management Recommendations

The large, broad wooded wetland corridors that span the property present a challenge for the creation of a walking trail system on the property. If a trail system is contemplated, crossings of the wetland corridors should be located at their narrowest points, and a raised boardwalk is highly recommended over the placement of fill for trail creation.

Although Japanese barberry is not dominant on the property, this invasive species is capable of spreading rapidly once it gains a foothold. Invasive Japanese barberry shrubs should be removed and replaced with native shrubs such as highbush blueberry, sweet pepperbush and witch hazel.

APPENDIX 1. SOILS MAPS

Soil Map—State of Connecticut
(0 Kate Downing Road Plainfield, CT)







































Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

9/20/2023
Page 1 of 3

Soil Map—State of Connecticut
(0 Kate Downing Road Plainfield, CT)

MAP LEGEND

Area of Interest (AOI)		 Spoil Area	
 Area of Interest (AOI)		 Stony Spot	
Soils		 Very Stony Spot	
 Soil Map Unit Polygons		 Wet Spot	
 Soil Map Unit Lines		 Other	
 Soil Map Unit Points		 Special Line Features	
Special Point Features		Water Features	
 Blowout		 Streams and Canals	
 Borrow Pit		Transportation	
 Clay Spot		 Rails	
 Closed Depression		 Interstate Highways	
 Gravel Pit		 US Routes	
 Gravelly Spot		 Major Roads	
 Landfill		 Local Roads	
 Lava Flow		Background	
 Marsh or swamp		 Aerial Photography	
 Mine or Quarry			
 Miscellaneous Water			
 Perennial Water			
 Rock Outcrop			
 Saline Spot			
 Sandy Spot			
 Severely Eroded Spot			
 Sinkhole			
 Slide or Slip			
 Sodic Spot			

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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
Survey Area Data: Version 22, Sep 12, 2022

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
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	104.5	19.1%
13	Walpole sandy loam, 0 to 3 percent slopes	6.8	1.2%
23A	Sudbury sandy loam, 0 to 5 percent slopes	7.3	1.3%
38C	Hinckley loamy sand, 3 to 15 percent slopes	10.6	1.9%
38E	Hinckley loamy sand, 15 to 45 percent slopes	0.7	0.1%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	48.3	8.8%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	31.2	5.7%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	46.0	8.4%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	4.2	0.8%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	4.5	0.8%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	193.1	35.2%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	15.4	2.8%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	4.7	0.9%
102	Pootatuck fine sandy loam	17.4	3.2%
103	Rippowam fine sandy loam	53.2	9.7%
Totals for Area of Interest		547.9	100.0%



Herpetological Assessment

Report by Dennis P. Quinn

Owner/Herpetologist

Quinn Ecological, LLC.

Herpetological Surveys and Conservation Plan to Prevent Impacts to the State Listed Amphibian and Reptile Species

NDDB Preliminary Assessment No.202207338

September 2023

Survey Efforts:

Prior to the Team site visit, visual, call, cover object, and non-baited minnow trapping surveys were conducted on March 28th and March 29th, 2023. Pools were visually surveyed for active salamanders and frogs, larvae, egg masses, and spermatophores. Cover-object surveys were conducted within 100 meter of wetland edges. Logs, bark, and rocks were all flipped during cover object surveys. A total of 58 non-baited minnow traps were set within 9 cryptic vernal pools within the greater wetland complex. Traps were set during the daytime of March 28th and checked the following morning. Although the wetlands were extensive, most wetland areas were too shallow and not suitable to set minnow traps. Traps were deployed in the deeper pockets of water within 9 cryptic vernal pools. Trap locations and representative cryptic vernal pool photos of trapping locations can be seen in Figures 1 and 2. On April 24th, 2023, visual, call, cover object, and dip-net surveys were conducted. Areas surveyed included wetlands, forests, a power-line right-of-way, and associated habitat edges. Surveys were conducted between 9 am and 3 pm, totaling 6 survey hours (12 man-hours).

Survey Results:

During both minnow trapping and visual encounter survey efforts a total of fifteen amphibian and reptile species were observed (Tables 1, 2 and Figures 3 and 4). This included three vernal pool obligate amphibians (spotted salamander, marbled salamander and wood frog) and one species of turtle listed as special concern in Connecticut (spotted turtle). It is important to understand that this survey effort was a rapid assessment, and based on the quality of habitats surveyed, there is a reasonable likelihood that other listed species of amphibian and reptile occur within the property limits (Table 3). The conservation recommendations in this report take into account vernal pool obligate species and both observed listed species and those which may occur within the subject property. No habitat suitable for the eastern spadefoot was observed during our survey efforts.

Conservation Recommendations:

Vernal Pool Obligate Species (Spotted, Marbled, Blue-spotted Salamander and Wood Frog):

1. No timber harvest or recreational trails should be located within wetlands or within 100 feet of wetland edges. The 100-ft vernal pool protection zone surrounding wetland areas is critical for adult amphibians staging to breed and newly metamorphosed salamanders and frogs for foraging and cover.
2. Selective timber harvest can occur within the 400-ft amphibian life zone, but ideally harvest should only occur during the winter months when the ground is frozen. If freezing conditions do not occur and harvest needs to occur during active months, harvest should only occur during the hottest and driest months of the year.
3. When conducting forestry activities within the 400-ft amphibian life zone, no more than a total of 50% canopy cover should be removed and no cleared areas should be greater than 1 acre in total size.
4. Care should be taken to leave intact the understory vegetation, logs, brush, and leaf litter cover to the greatest extent possible during forestry operations. Once forestry operations are completed, restoration of logging roads to pre-use conditions is recommended. Do not cover logging roads in wood chips, but rather restore them with leaf litter, brush, and logs to afford amphibians protective cover and foraging opportunities.
5. If wood chips from clearing activities are not removed from the site, no more than 2 inches of chips should be spread in any given area. It is optimal to remove wood chips rather than spreading them which will cover suitable leaf litter cover and foraging grounds for amphibians.
6. Recreational trails can occur within the 400-ft amphibian life zone. These trails should be restricted to hiking only, no mountain biking should be permitted.
7. After harvesting and along recreation trails, yearly inspections and removal of invasive plant species should occur to ensure encroachment and/or establishment does not occur. This is especially important with species such as, Japanese barberry and garlic mustard, both invasive plants known to cause declines in woodland salamander diversity and abundance.

See Figure 5 for recommended wetland protection zones to reduce impacts to vernal pool obligate species.

Wood Turtles:

The core distribution of the wood turtle in Connecticut falls within the eastern and western uplands, where sustainable populations are associated with high quality rivers and streams and their associated riparian and upland habitats. Scattered populations of wood turtles occur at lower elevations along the coast and within the central Connecticut River valley. However, many of these sites have been significantly compromised by habitat loss and fragmentation in these urbanized regions of the state. These “urban populations” are often represented by observations of only a handful of older turtles with little evidence of juvenile recruitment.

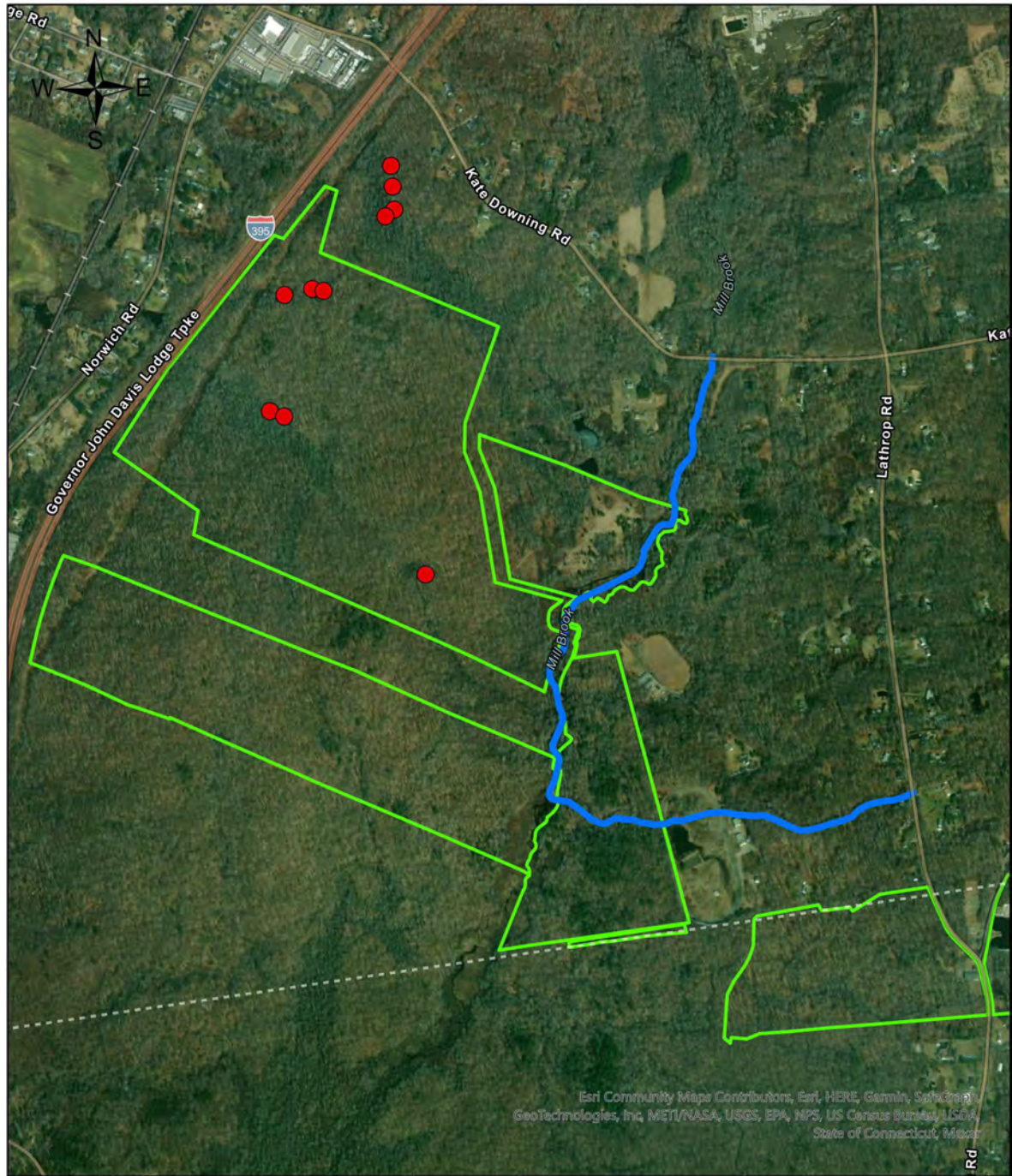
Due to their connection to riparian systems, coupled with the vulnerability of these systems to direct and indirect impacts at a watershed scale, a “watershed-based approach” to mapping and conservation is warranted. Mapping of Scale Level Hydrography Lines were chosen to help guide conservation and management decisions focusing on “management zones” as recommended by the Northeast Wood Turtle Working Group in Status and Conservation of the Wood Turtle in the Northeastern United States (Jones and Willey 2015). Within mapped areas, conservation and management decisions can be guided at a more local level by focusing on “management zones”. These include – (Zone 1): Riverine (instream); (Zone 2): 300 feet from the edges of the river primarily encompassing the floodplain habitat; and (Zone 3): 1,000 extending beyond the boundary of Zone 2 primarily encompassing upland habitats (Figure 6).

1. No timber harvest or recreational trails should be located within Zone 1: Riverine (instream) or Zone 2: 300 feet from the edge of Mill Brook. The 300-ft terrestrial Zone 2 Conservation Area is critical riparian habitat for wood turtles during the spring, summer and fall months.
2. Selective timber harvest and recreational trails can occur within the Zone 3: 1,000 feet extending beyond the boundary of Zone 2. These activities should occur during the inactive months when wood turtles are hibernating in Mill Brook (November through March). If timber harvest occurs within the active season, species sweeps should be conducted to ensure no wood turtles are harmed during forestry activities.

Box Turtle and Spotted Turtles:

Spotted turtles and box turtles will be partially protected by following the conservation recommendations for the vernal pool obligate species and wood turtles. In addition, the following are recommended:

1. If timber harvest occurs within the active season, species sweeps for spotted and box turtles should be conducted to ensure no turtles are harmed during forestry activities.
2. If harvest occurs during the eastern box turtles’ inactive season, areas should be further studied to identify potential hibernacula areas, so box turtles are not impacted during hibernation.



Minnow Trap Locations

Figure 1. Non-baited minnow trap locations in cryptic pools located within the greater wetland complex.



Location: 41.65426, -71.92414



Location: 41.65291, -71.92397



Location: 41.64867, -71.92718



Location: 41.64567, -71.92335

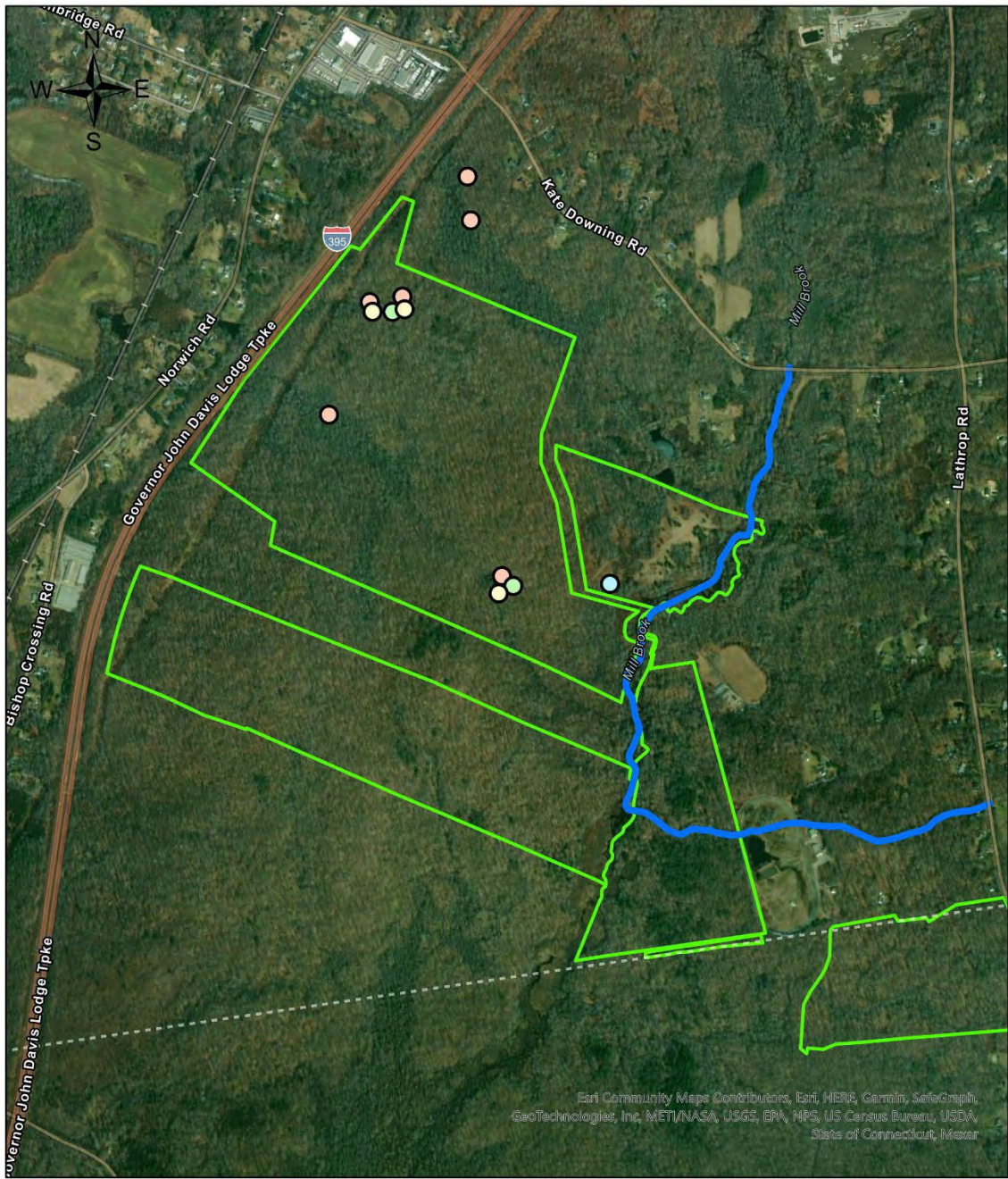


Location: 41.65151, -71.92643



Location: 41.65155, -71.92628

Figure 2. Representative Cryptic Vernal Pools Photos. D. Quinn.



0 0.13 0.25 0.5 Miles

Survey Results

- Species
- Marbled Salamander
 - Spotted Salamander
 - Wood Frog
 - Spotted Turtle
 - Protected Open Space
 - Mill Brook

Figure 3. Vernal pool obligate species documented during non-baited minnow trapping surveys.



Spotted turtle observed actively moving through field.

41.64547, -71.92022

Female – Adult

SLC 102 mm

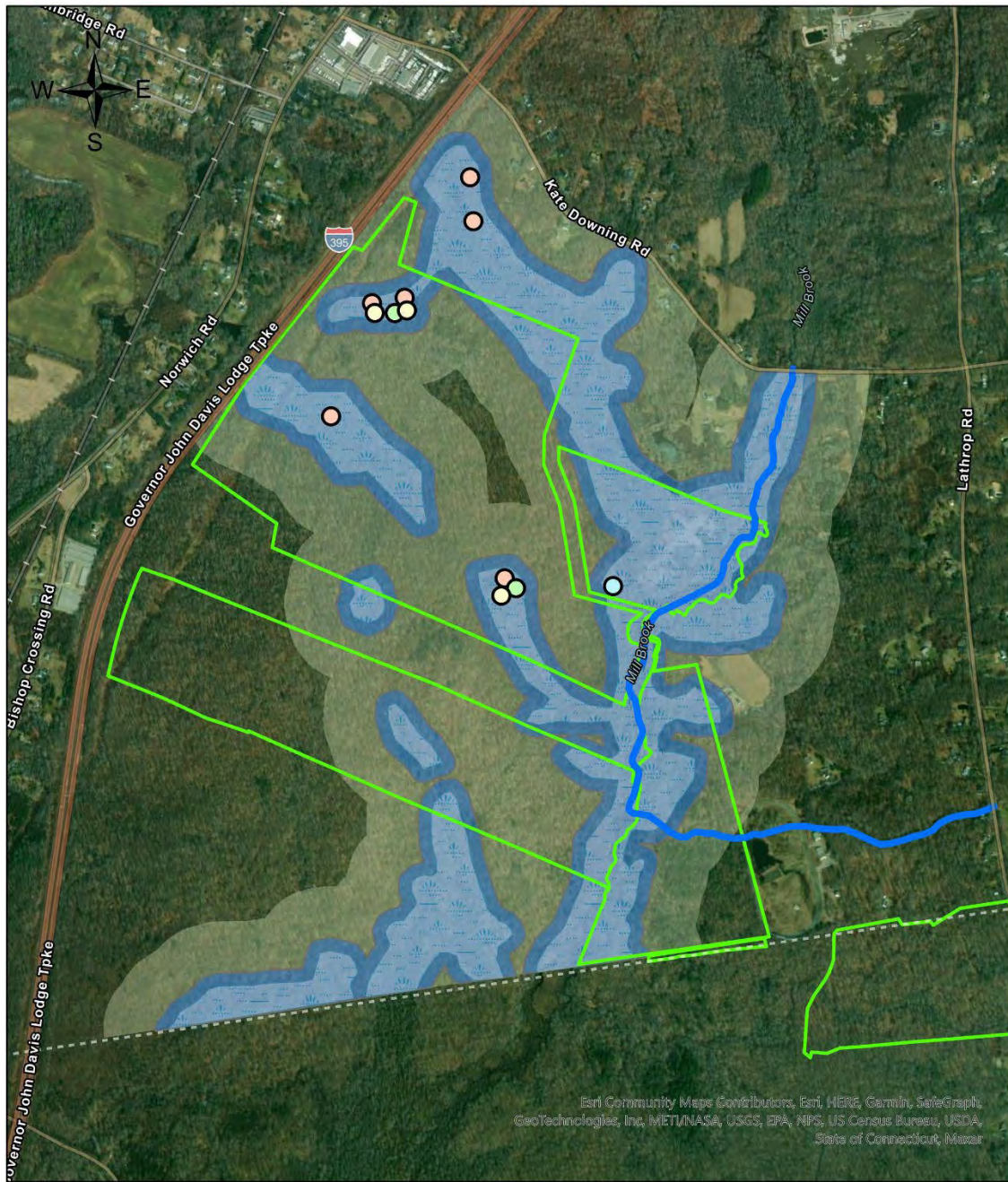
SLP 96 mm

179.6 g mass

Marked L-1

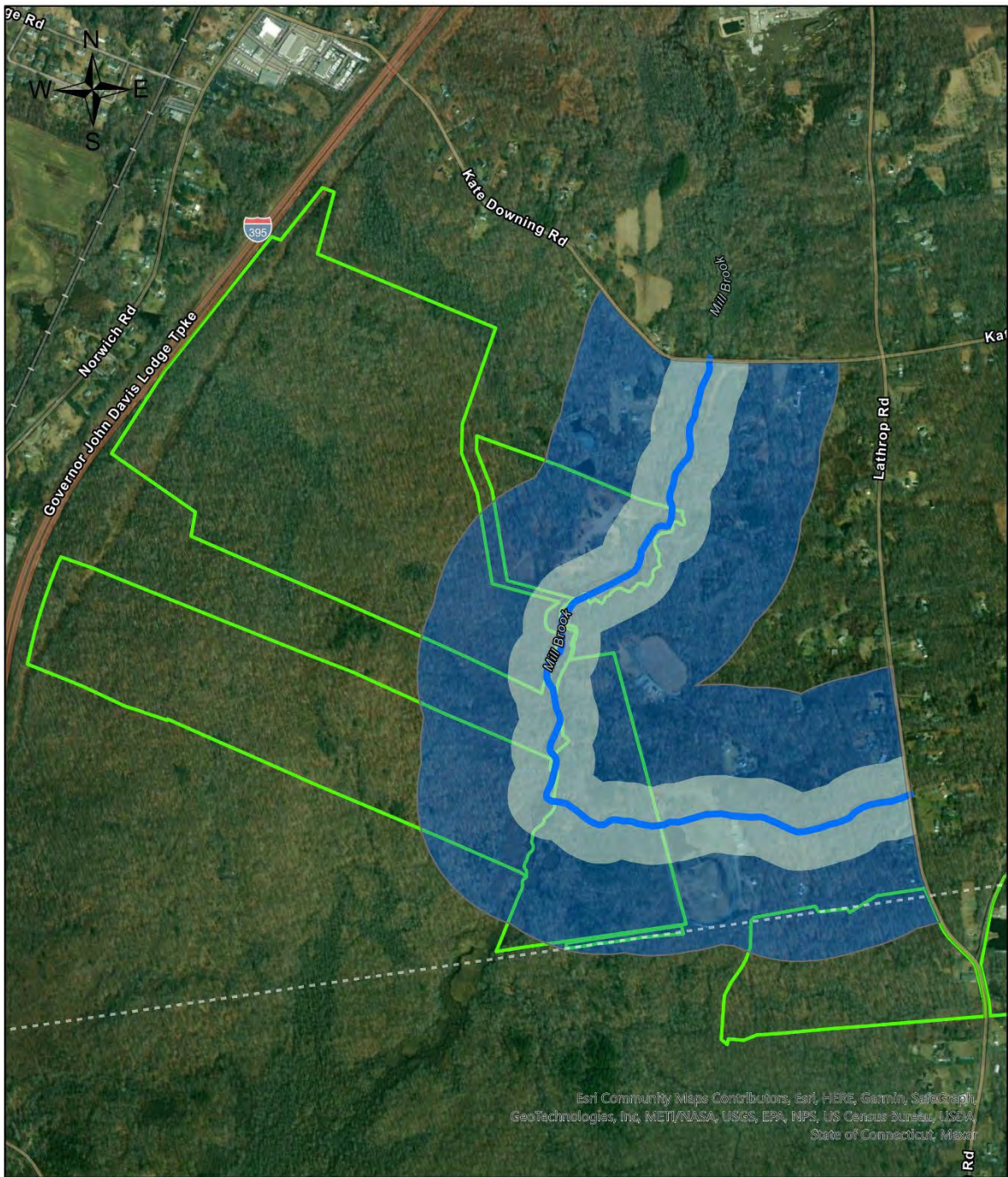
Shell damage to right side of plastron (healed), 25% worn, 12+ annuli.

Figure 4. Adult spotted during observed during field surveys.



Amphibian & Reptile Protection Zones

Figure 5. Wetland protection zones, to reduce impacts to vernal pool obligate species.



Wood Turtle Conservation Zones

Figure 6. Recommended wood turtle conservation zones.

Table 1. Non-baited Minnow Trap Survey Efforts and Results

ID	Date	Trap Sites	No. of Traps	Cover Objects	Latitude	Longitude	Spotted Salamander	Marbled	Wood Frog	
1	3/28/2023	1	4	34	41.65148	-71.92625	0	0	0	
2	3/28/2023	2	8	33	41.6515	-71.92608	1 Adult, 1 Egg Mass, Spermatozoa	Larvae	10 Egg Masses	
3	3/28/2023	3	17	45	41.6455	-71.92327	2 Egg Mass and Spermatozoa	Larvae	15 Egg Masses	
4	3/28/2023	4	6	27	41.65143	-71.92692	Spermatozoa	0	2 Egg Masses	
5	3/28/2023	5	6	44	41.64896	-71.92763	5 Egg Masses	0	0	
6	3/28/2023	6	3	34	41.64894	-71.92743	0	0	0	
7	3/28/2023	7	6	11	41.6537	-71.9241	0	0	0	
8	3/28/2023	8	2	9	41.65321	-71.92406	2 Egg Masses	0	0	
9	3/28/2023	9	2	13	41.65307	-71.92431	0	0	0	
10	3/28/2023	10	4	18	41.65414	-71.92414	5 Egg Masses and Spermatozoa	0	0	
TOTALS			58	268						

Table 2. Species observed during survey efforts.

CAUDATA – SALAMANDERS	
<i>Ambystoma</i> <i>Ambystoma opacum</i>	MOLE SALAMANDERS Marbled Salamander
<i>Hemidactylum</i> <i>Hemidactylum scutatum</i>	FOUR-TOED SALAMANDERS Four-toed Salamander
<i>Notophthalmus</i> <i>Notophthalmus viridescens viridescens</i>	EASTERN NEWTS Red-spotted Newt
<i>Plethodon</i> <i>Plethodon cinereus</i>	WOODLAND SALAMANDERS Eastern Red-backed Salamander
ANURA – FROGS	
<i>Bufo (= Anaxyrus)</i> <i>Bufo americanus</i>	NORTH AMERICAN TOADS American Toad
<i>Hyla</i> <i>Hyla versicolor</i>	HOLARCTIC TREEFROGS Gray Treefrog
<i>Rana (= Lithobates)</i> <i>Rana clamitans</i> <i>Rana palustris</i> <i>Rana sylvatica</i>	AMERICAN WATER FROGS Green Frog Pickerel Frog Wood Frog
<i>Pseudacris</i> <i>Pseudacris crucifer</i>	CHORUS FROGS Spring Peeper

TESTUDINES – TURTLES

Clemmys
Clemmys guttata

SPOTTED TURTLES
Spotted Turtle

SQUAMATA – LIZARDS AND SNAKES

Coluber
Coluber constrictor constrictor

NORTH AMERICAN RACERS
Northern Black Racer

Diadophis
Diadophis punctatus edwardsii

RING-NECKED SNAKES
Northern Ring-necked Snake

Nerodia
Nerodia sipedon sipedon

NORTH AMERICAN WATERSNAKES
Northern Watersnake

Thamnophis
Thamnophis sirtalis sirtalis

NORTH AMERICAN GARTERSNAKES
Eastern Gartersnake

Table 3. Listed Species which may occur within the subject property but were not observed during survey efforts.

CAUDATA – SALAMANDERS

Ambystoma
Ambystoma laterale

MOLE SALAMANDERS
Blue-spotted Salamander

TESTUDINES – TURTLES

Glyptemys
Glyptemys insculpta

SCULPTED TURTLES
Wood Turtle

Terrapene
Terrapene carolina carolina

AMERICAN BOX TURTLES
Eastern Box Turtle

SQUAMATA – LIZARDS AND SNAKES

Heterodon
Heterodon platirhinos

AMERICAN HOG-NOSED SNAKES
Eastern Hog-nosed Snake

Opheodrys
Opheodrys vernalis

GREENSNAKES
Smooth Greensnake

Thamnophis
Thamnophis saurita saurita

NORTH AMERICAN GARTERSNAKES
Ribbonsnake

Land Use, Zoning, & Transportation

Report by Jim Larkin

Director of Regional Planning

Northeast Connecticut Council of Governments

The Northeast CT Council of Governments (NECCOG) Jim Larkin, Director of Regional Planning participated in the site walk conducted by the Town of Plainfield’s Director of Recreation, Mark Simmons, and Grant Writer/Economic Development Support staff person, Jordan Lumpkins, along with other ERT members. The following provides a snapshot of Land Use, Zoning and Transportation concerns and comments regarding the site. This report is not intended to be a comprehensive study of the issues, but useful as the town moves forward with the property.

The two properties visited were listed as 0 Kate Downing Road, Assessor’s Map 10 Block 5 Lot 9, consisting of 3.97 acres and Map 10 Block 5 Lot 4 consisting of 157.7 acres. The two lots are bordered by the Right of Way for Interstate 395 to the west, Kate Downing Road and residential properties to the north, private vacant land to the west including land owned by Pachaug Outdoor Club Inc. and privately owned vacant land to the south.

Lot 9 includes 305 feet of frontage on Kate Downing Road and Lot 4 has an additional 44 feet of frontage located 670 feet east of the western boundary line of lot 9. There is currently no access to the property along either frontage. The property to the west that was utilized for access during the site visit would probably not be permitted as an access point due to the powerline easement and federal highway right of way.

Land Use and Zoning

The Town of Plainfield adopted zoning in 1972 and currently both lots fall within the Residential Agricultural Zone requiring a minimum lot size of 60,000 square feet. (RA-60) The additional dimensional requirements are shown in Table 1.

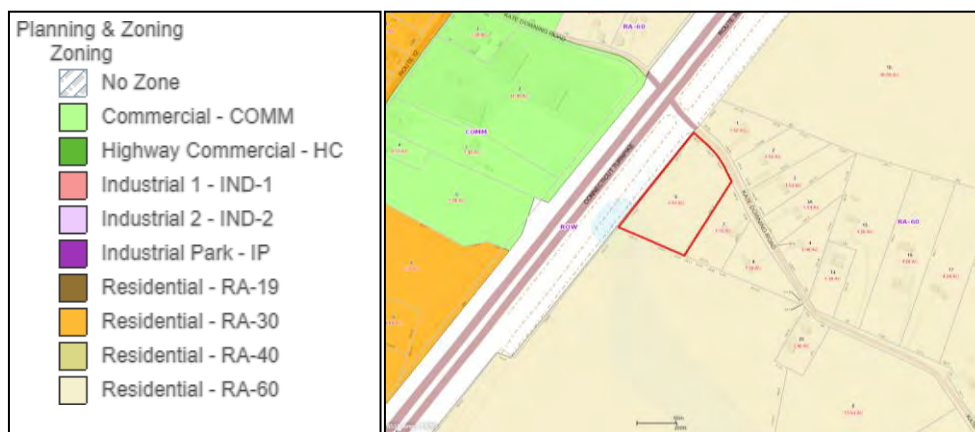


Figure 1. Parcel outline. Plainfield GIS Site maintained by Tighe & Bond.

Table 1. Bulk Table (Modified 12/05) (CZ-2005-05)

The following table of bulk requirements shall be applicable to all lots and uses situated in RA Districts.	RA-60	RA-40	RA-30	RA-19
Minimum Lot Area (sq ft)	60,000	40,000	30,000	19,000
Minimum Lot Frontage	150 FT	125 FT	125 FT	100 FT
Minimum Front Yard Depth	50 FT	40 FT	40 FT	25 FT
Minimum Side Yard Width	40 FT	30 FT	30 FT	15 FT
Minimum Rear Yard Depth	40 FT	30 FT	30 FT	20 FT
Maximum Height	30 FT	30 FT	30 FT	30 FT

The permitted uses within the RA-60 district are described in Section 7.2 of the zoning regulations and specifically states that “uses not enumerated herein shall be deemed prohibited in residential districts unless specifically permitted elsewhere in these regulations.” Whether this includes the uses proposed for the properties is uncertain but may need to be investigated further with town staff and/or the Planning and Zoning commission.

Uses specifically allowed include.

- *Single family detached dwellings; not more than one dwelling per lot.*
- *Agricultural operations and proceedings incidental thereto.*
- *The keeping and breeding of animals*
- *Seasonal stands for the display and sale of agricultural products grown on the premises*
- *Golf courses.*
- *Churches and places of worship.*
- *Schools, public or private.*
- *Cemeteries, hospitals.*
- *Mobile homes according to the terms of Section 7.12 of these regulations.*
- *Accessory uses customarily incidental to any of the above permitted uses including home occupations.*

Additional uses that may be allowed within the district under certain circumstances or with additional protections provided by Special Permits are:

- *Municipal buildings*
- *Elderly housing*
- *Accessory Dwelling Unit (ADU). One (1) ADU per lot*
- *Group Day Care Home, public sewer required*
- *Child Day Care Center, public sewer required*
- *Dog Kennels for more than six (6) dogs*
- *Recreational Campgrounds*
- *Earth Excavation*
- *Special Purpose Landfill Facility*
- *Bed and Breakfast – Special Functions Facility*
- *Indoor Equestrian Riding Arenas*
- *Commercial Agricultural Buildings*
- *Agri-tourism*
- *Breeder Kennel Class II*

Lot 9 was previously approved by the Planning and Zoning Commission for a single-family dwelling as shown on town clerk map 864. The filed survey includes a wetlands delineation performed by Environmental Planning and Soil Science, LLC. showing a significant portion of the parcel to the rear as wetlands as well as the 100 foot upland review area. This may not be a big concern when developing a trail system but would limit the amount of land available for access, parking, and other amenities. The total number of spaces that can be developed may be limited, especially if the Town is considering equestrian use that would require trailer parking.

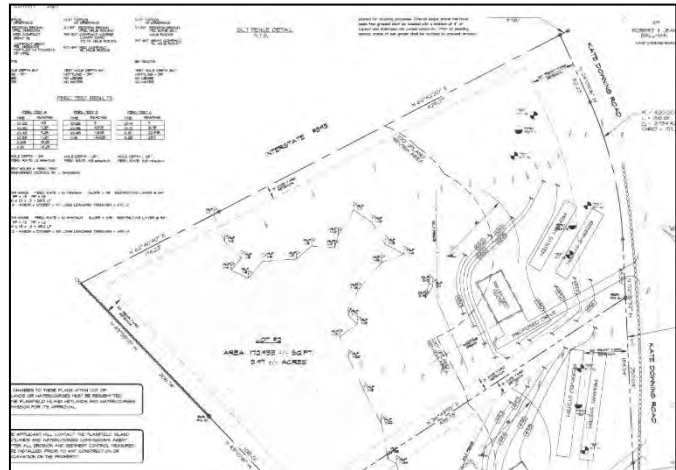


Figure 2. Subdivision Approval Map TC 864

The Inland Wetlands and Water Courses regulations as well as section 7.21.2 of the zoning regulations require permits and approvals for work conducted within 100 feet of a wetland or watercourse.

7.21.2 No building, structure, on-site sewage disposal system, grading, excavations or dumping of fill or other material shall be allowed within 100 feet of any wetland shown of the Official Wetlands Map of the Town unless a permit for such activity has been issued by the Plainfield Inland Wetlands and Watercourses Commission.

Section 12.21 of the Plainfield zoning regulations appear to allow municipal uses that may not be normally permitted within a zone through the Special Permit process which includes a public hearing.

12.21 Municipal Uses of Land

Buildings and facilities (exempting utilities and facilities in public right of ways) of the Town of Plainfield and its precincts which are not otherwise permitted in a particular zone, may be permitted in that zone by Special Permit, subject to the following standards:

- a. Bulk requirements of the applicable district shall apply.*
- b. Adequate parking shall be provided.*
- c. Adequate ingress and egress shall be provided to public streets.*
- d. Any municipal building designed or used for housing shall abide by all regulations found elsewhere in these regulations.*

- e. *Any proposed building shall be so designed to be in harmony with other buildings in the immediate area and otherwise compatible with the surroundings.*
- f. *Complete visual screens shall be provided adjacent to where such use adjoins or is across the street from a residential district.*

Prior to moving forward with development of the property for public use as a park that may include trails, parking areas and restrooms clarification regarding the permitting process through planning and zoning should be confirmed.

The Town of Plainfield’s Plan of Conservation and Development (adopted in 2018) does provide concurrence with the acquisition and development of the parcels for passive recreation as described within the goals and objectives of the POCD.

- *Acquire large, forested parcels or encourage landowners of large, forested parcels to manage them for timber, fuel wood and recreation. There should be a commitment Town wide for long term forest management.*
- *Provide sites for both active and passive recreation in cooperation with private organizations.*
- *Develop a multipurpose trail system and coordinate it with regional multipurpose trail plan.*
- *Develop public river access, including views, trails, fishing and canoeing.*

During the site walk on May 17, 2023, the Team was not able to make it to the portion of the property that abuts Mill Brook although town staff did convey that this may be a point of interest on the property.

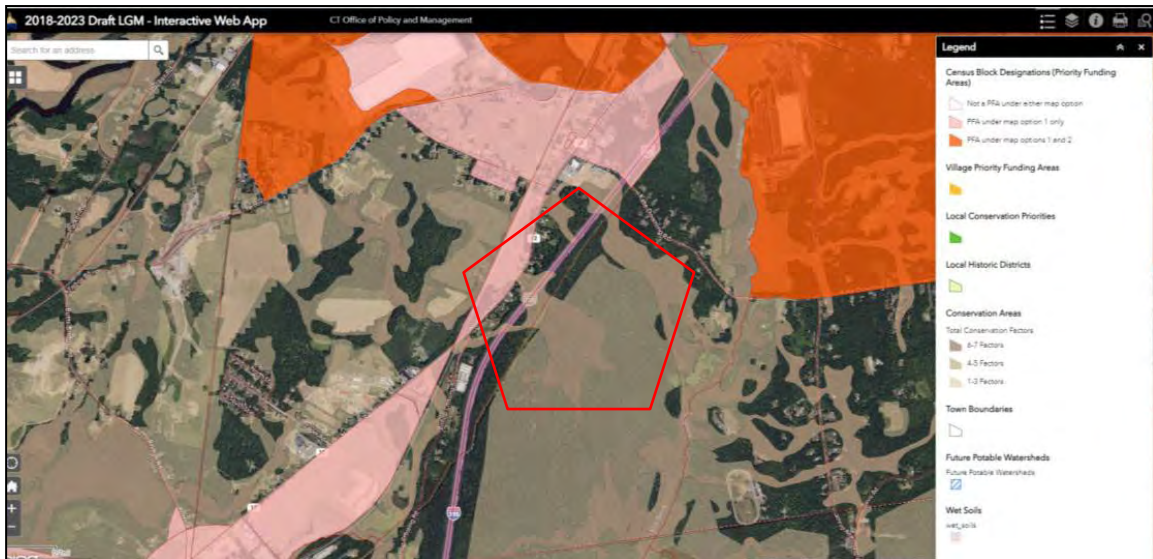


Figure 3. 2018-2023 DRAFT LGM Interactive Map

The 2018 Connecticut State Plan of Conservation and Development and Locational Guide Map also agrees with the proposed development of the site for recreational use and/or conservation area. The State POCD places this area within conservation because of two factors, wetland soils and core forest. Any development of the site should be completed with the protection of those two resources in mind. Additionally, the State POCD recommends:

Limit improvements to permanently protected open space areas to those that are consistent with the long-term preservation of the natural resource and open space values of the site.

Transportation Issues

Access to the site would be from Kate Downing Road within Lot 9 or the narrow frontage further east. Kate Downing Road is classified as a local rural road running east from Norwich Road (RT 12) under Interstate 395 to the intersection with Lathrop Road and continuing to the intersection of Spaulding Road where it meets Flat Rock Road. The posted speed limit is 30 mph according to CT DOT. The road currently serves as access to single family residences within the southeastern portion of Plainfield. Traffic count data is not available through CT DOT but may be useful in determining public access points.

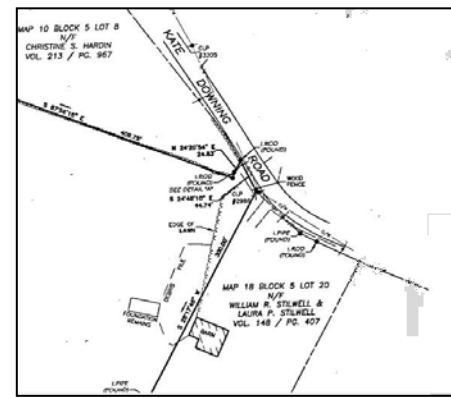


Figure 4. Location of 44 feet of frontage. Town Clerk Map.

The Connecticut Crash Data repository shows that there were six accidents along Kate Downing Road since 2015 two of which were in 2021 and between the intersection of Lathrop Road and the subject properties. One resulted in injuries and the other only property damage.

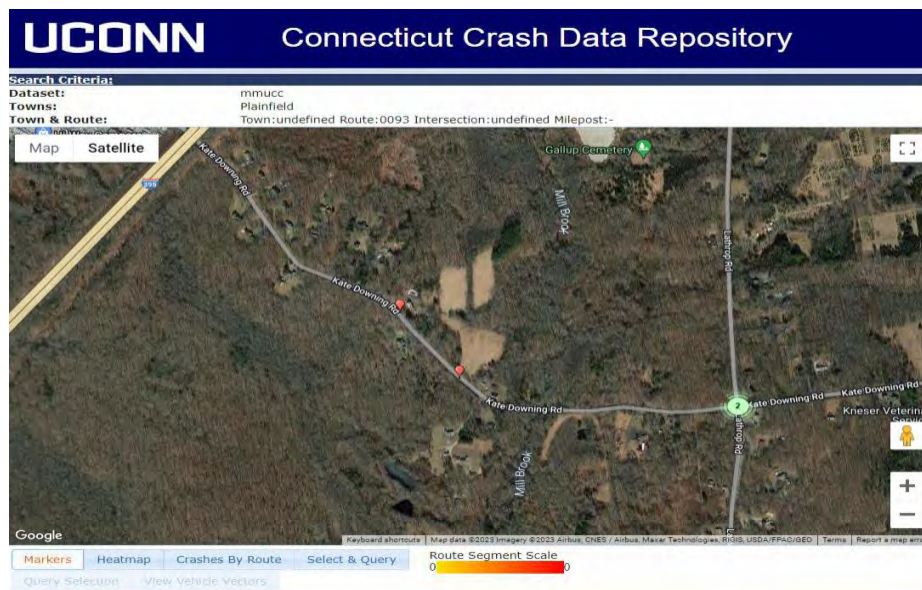


Figure 4. Connecticut Crash Data Repository: <https://www.ctcrash.uconn.edu/mapViewer.action?crashids&queryid=166732>

The town of Plainfield's ordinance related to road access requires 200 feet of sight distance for new access to town owned roadways.

Driveways shall be located to obtain adequate sight distances. The clearing of brush, trees and other vegetation to obtain adequate sight line exiting the driveway will be the responsibility of the property owner. A minimum 200 foot sight line each direction will be required on roadways of 30 mph posted speed. At the discretion of the Selectman's designated agent, the applicant may be required to provide a sight line demonstration.

It is not clear if the ordinance would apply to a municipal use but generally the construction of any access point should at least meet these requirements. The narrower frontage to the east of Lot 9 may not have adequate sight line due to road geometry when driving west.



Figure 5. Google Street View from 44-foot frontage section looking west.

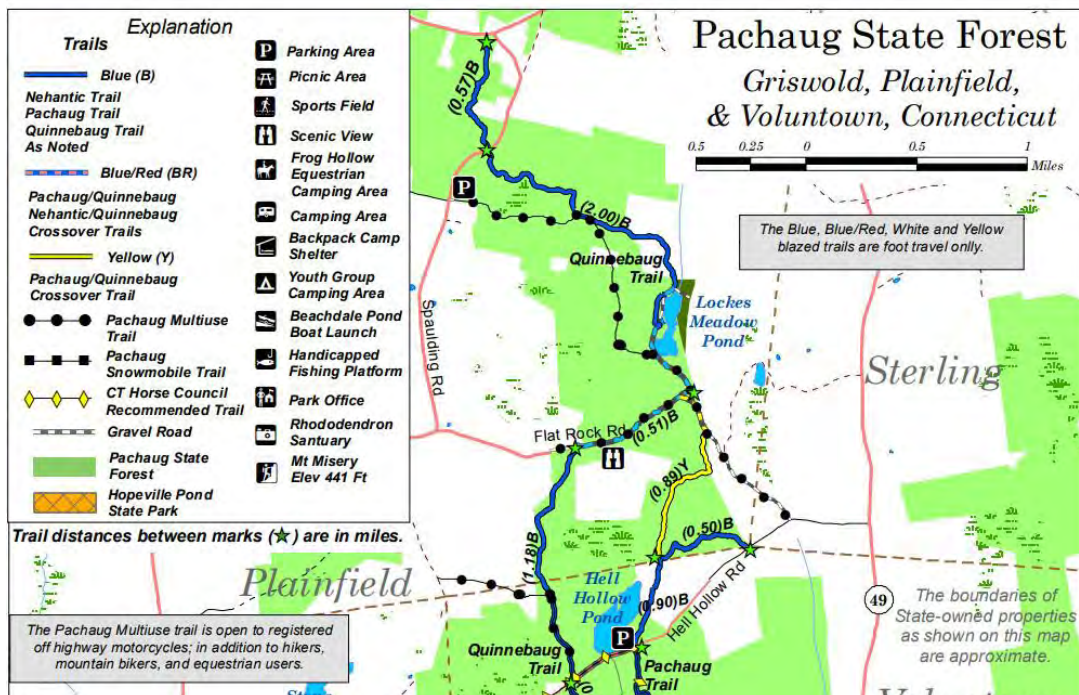


Figure 6. <https://portal.ct.gov/-/media/DEEP/stateparks/maps/PachaugMountMiseryTrailMap.pdf>

The subject property is approximately 2.5 miles from trail access points for the Chapman Area of Pachaug State Forest on Flat Rock Road and Spaulding Road. There does not appear to be any other recreational trail connections within the southern section of town in the vicinity of the subject properties. The vacant land to the south, although privately owned, may provide future opportunities for expansion of any trail system that is developed.

Opportunity for Community Gardens

Report by Cordalie Benoit

Environmental Services Professional

Treasurer, Connecticut Community Garden Association

UCONN Extension Certified Master Gardener

Siting Considerations

- The site should be sunny and nearly level.
- It should be accessible to parking. It has been determined that the average community gardener visits their plot once a week, more often during the planting season and harvest time. An active garden should have events which bring gardeners together at the site, so the size of the garden should be dependent on the available parking. Additionally, any paths should be wide enough for a wheelbarrow to pass easily and there should be a large enough gate to allow a small truck to enter the garden.
- The site should have potable water. This can be a well or city water. Well water can be transported mechanically, by solar power, or electrically.
- If a fence is installed, it should be able to thwart deer, rabbits, and woodchucks.
- Soil at the site should be tested. If after testing it is found that the on-site soil is not suitable for crops, soil can be brought in. Compost from shredded leaves makes wonderful gardening soil. Leaves contain all of the macro and micro nutrients needed by plants.

Organizing a Community Garden Program

There are many ways to organize a community garden. One way is to have the program run by the Recreation Department as part of a town's recreation programs. The Community Garden in Eisenhower Park in Milford, CT is an example of this.

https://milfordct.myrec.com/info/activities/program_details.aspx?ProgramID=29839

There are also examples of nonprofits which run a community garden program on land leased from a town. The Branford community garden is an example of this.

<https://branfordctgardens.org/>

Community gardeners should be charged for their participation. The charge can be on a sliding scale depending on considerations such as if the gardener is a WIC recipient. The fees should be based on the community garden program's budget considerations. Some community gardens charge as much as \$40.00 per year per gardener to participate. There are several seed businesses in Connecticut that will donate "old" seeds. Most "old" seeds are still viable, although this is less likely with lettuce.

Community garden programs can be organized where there are individual plots where gardeners grow whatever they want in their allocated space. Even in these gardens, there are

often strawberry beds, herb beds, and berry bushes which are tended in common and harvested by all the gardeners. These plots can be raised beds with discrete sides or mounds which are differentiated from the paths by their height. Other community garden programs are organized so that all crops are tended by all the gardeners and the harvest is shared based on volunteer time contributions.

Many gardens donate excess harvest to food banks or needy neighbors. See <https://ampleharvest.org/>. There is a program sponsored by the Garden Writers Association of the American Public Gardens Association called “Plant a Row for the Hungry.” See <https://gardencomm.org/StartPARCampaign>. It should be noted that in Connecticut, soup kitchens are run in qualified community kitchens and cannot accept donations of perishable food, but food banks can.

There are USDA resources available for community gardens. See <https://www.farmers.gov/your-business/urban-growers>

Plainfield’s ERT request suggested that the 0 Kate Downing Road parcel will be used to provide educational opportunities. To this end, it would be a good idea to implement a program within the garden to grow pollinator plants from seed. These can be used on Pollinator Pathways within the Town. The following website explains the program and establishes a guide to get a town started. See: <https://www.pollinator-pathway.org/start-a-pathway>. You might find a fellow town which already has a Pollinator Pathways program, and you can inquire how they got started and where they are with the program now, by going to this website: <https://www.pollinator-pathway.org/towns-1/connecticut>

The seedlings produced in the educational program can be used in the community garden and/or sold to the community for use in their gardens. UConn Certified Master Gardeners can help identify which pollinator plants are easily grown from seed. Well pollinated vegetables are larger and offer a more ample harvest which is another reason for a pollinator initiative. Families, including children, could learn how to grow plants from seed and the importance of pollution for food production.

Check with your local Conservation District for additional resources:

Eastern Connecticut Conservation District
238 West Town Street
Norwich, CT 06360
(860) 319-8806

CONNECTICUT RESOURCE CONSERVATION & DEVELOPMENT

1066 Saybrook Road, PO BOX 70
Haddam, Connecticut 06438
860-345-3977

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Thank you!

- CT RC&D ERT Program Staff