

Mattatuck State Forest

Cave-Black Rock Block

Management Plan

Forest Health and Diversity



The Cave-Black Rock Block contains healthy and diverse ecosystems, including acidic rocky summit outcrops, red maple lowlands and oak-hickory forests, that provide highly functional, valuable, and resilient habitats for plants and animals.

Climate Change Mitigation



Climate change is an important global issue. Sustainable forest management of the Cave-Black Rock Block provides the opportunity to sequester and store carbon in vegetation and long-lived wood products.

Economic Benefits



The plan outlines timber harvesting activity on 347 acres. There is also a sugarbush which provides locally produced maple syrup. These sustainably harvested forest products provide jobs and raw materials for a locally sourced, forest-based, green economy. "Growing What We Need, Where We Live".

Forest Protection



This plan addresses threats such as exotic invasive plants, insects, and pathogens. It makes recommendations to mitigate these damaging agents. The plan recognizes that forests are dynamic and that weather events, insect or disease outbreaks, or other unforeseen conditions may require changes in the recommendations.

Wildlife Habitat



Two State Endangered wildlife species, two State Threatened wildlife species, and three wildlife Species of Special Concern are known to utilize the area in and around this forest Block. There are also five State-listed plant species that may be found here. Forest management practices will protect critical habitat features, including acidic rocky summit outcrops, required by these species. Forest management can also benefit some of these species.

Recreational/Health Benefits

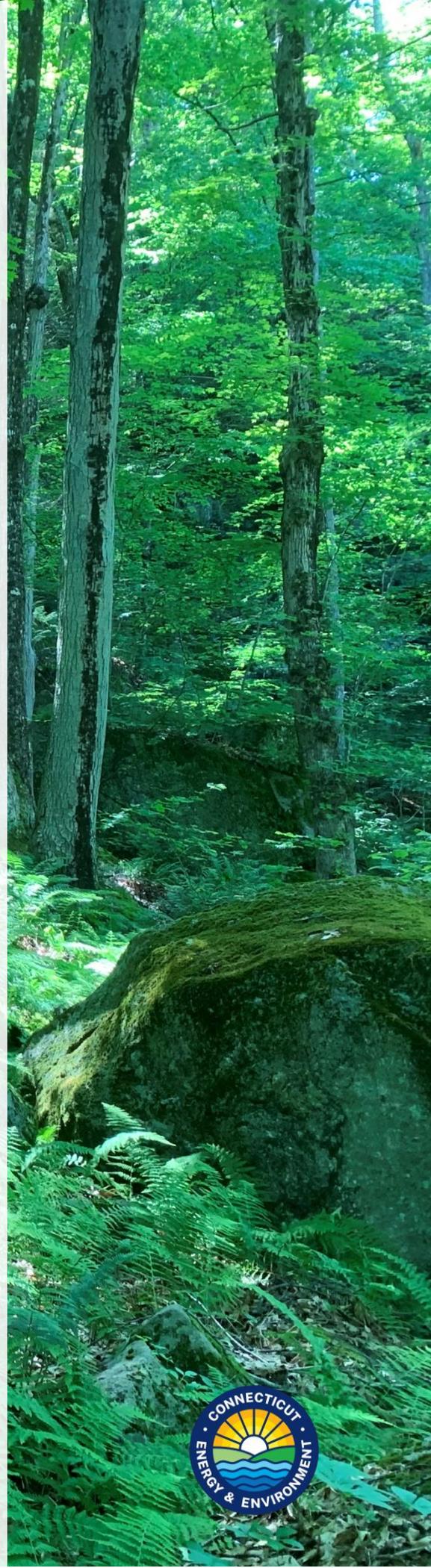


The Cave-Black Rock Block has 6 miles of the Connecticut Forest and Park Association Blue-Blazed Hiking Trail system, including the Jericho Trail and sections of the Mattatuck Trail. This Block is also open to hunting. Black Rock State Park borders this forest and provides additional recreational opportunities.

Environmental Protection



The plan recommends silvicultural treatments that will create a more diverse mix of tree species and age classes. The plan will increase the amount of young forest while also designating 4 stands, totaling 244 acres (18% of the total acreage), as Old Forestland Management Sites. Diverse forests are resilient forests.



STATE OF CONNECTICUT

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION



Bureau of Natural Resources

Division of Forestry

Mattatuck State Forest Cave-Black Rock Block FOREST MANAGEMENT PLAN 2025-2035 1,363 acres

Approvals:

12/09/2025

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Introduction

Connecticut is the 14th most forested state with approximately 60% forest cover. It is also the 4th most densely populated. These two factors create a unique and challenging environment to develop meaningful and effective resource management strategies to meet the needs of its citizens while protecting and enhancing its natural and ecological resources.

The [2020 Connecticut Forest Action Plan](#) was developed to address these needs with input from the DEEP, its partners, and various user groups. It serves as an implementation guide for broad statewide forest management strategies based on three national priorities:

1. Conserve and manage working forest landscapes for multiple values and uses;
2. Protect forests from threats;
3. Enhance public benefits from trees and forests.

The following objectives were considered in developing the management plan for the Cave-Black Rock Block of Mattatuck State Forest.

1. **Forest Ecosystem Health and Diversity** – Healthy and diverse forest ecosystems provide highly functional, valuable, and resilient habitats for plants and animals.
2. **Climate Change Mitigation through Sequestration and Storage** – Climate change is an important global issue. The sustainable management of the Cave-Black Rock Block provides the opportunity to sequester and store carbon in above and below ground vegetation and long-lived wood products. Forest management can also improve a forest’s adaptability under changing conditions.
3. **Economic Benefits** – Sustainably harvesting forest products from Connecticut’s State Forests provide local jobs and goods that are sold in the local economy. This plan outlines timber harvesting activity on 347 acres. State Forests also provide a model for private forest landowners to consider when managing their properties.
4. **Forest Protection** – Managing Connecticut’s State Forests allows threats, such as invasive plants, insects, and pathogens, and unauthorized use, to be addressed. Certain natural disturbances, such as wildfire and weather events, can lead to increased resiliency in forests if they regenerate to a diverse suite of native vegetation. However, some natural disturbances degrade forest conditions. Managing Connecticut’s State Forests in these cases can help promote resiliency on the landscape.
5. **Wildlife Habitat** – Many of Connecticut’s wildlife species use a wide variety of forested habitats. Forest management deliberately creates habitat diversity while protecting critical habitat for protected species.
6. **Recreational/Health Benefits** – Connecticut’s State Forests offer many recreational opportunities. The Cave-Black Rock Block is open to passive recreation and hunting.
7. **Increasing Resilience** – The plan will increase the amount of young forest habitat, while designating 244 acres (18% of the total acreage) as Old Forestland Management Sites, areas that will be left to the forces of nature. An additional 322 acres (24% of the total acreage) will be passively managed. Diverse forest systems are more resilient to disturbance and change.

DEEP welcomes questions and comments regarding the management of state forest lands and encourages public engagement in the management of state resources. The Division of Forestry may be contacted by email at deep.forestry@ct.gov or by phone at (860) 424-3630.

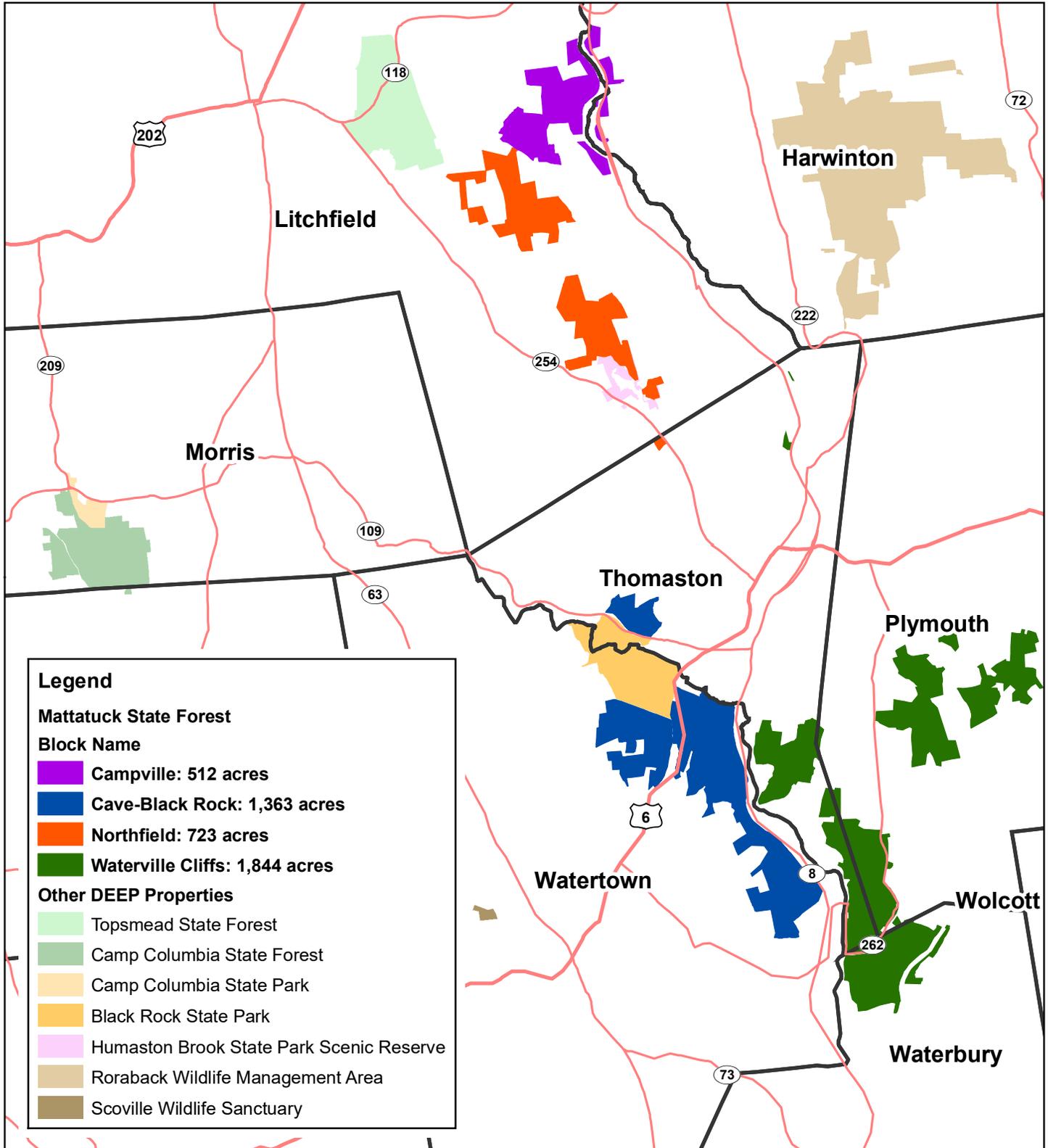


A. Location Map Mattatuck State Forest

Location and Division of Forest Blocks
4,442 Acres



July 2023
Map prepared by: J. Humphreys



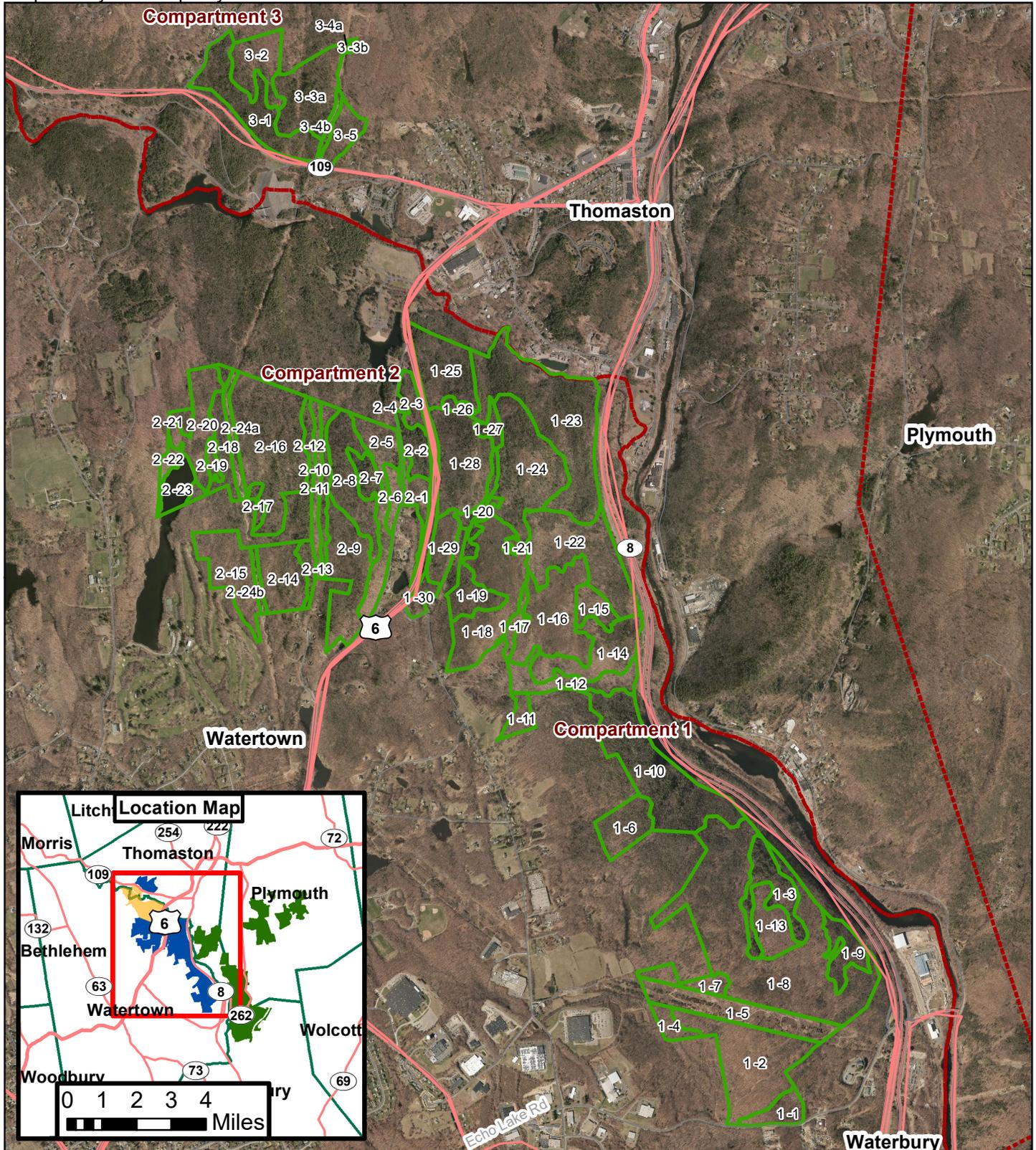


B. Forest Stand Reference Map Cave Block Mattatuck State Forest

Watertown and Thomaston, Connecticut
1,363 acres



April 2024
Prepared by: J. Humphreys



C. Executive Summary

Mattatuck State Forest is approximately 4,442 acres. It is divided into four management Blocks (Northfield, Campville, Cave-Black Rock, and Waterville Cliffs) and spreads across six towns in Litchfield and New Haven counties, including Harwinton, Litchfield, Plymouth, Thomaston, Waterbury, and Watertown.

The Cave-Black Rock Block of Mattatuck State Forest is 1,363 acres. One thousand two hundred fifty-two (1,252) acres are located along Watertown's eastern border and one hundred eleven (111) acres are in Thomaston. The Block is separated into three compartments. Compartment 1 is 881 acres, Compartment 2 is 371 acres, and Compartment 3 is 111 acres. Acquisition of land that is now part of the Cave-Black Rock Block began in 1926.

For maintenance and recreation purposes, Mattatuck State Forest is in the Topsmead Unit of the DEEP Parks Division.

- 1) There have been no timber harvests in the Cave-Black Rock Block for over 35 years. The most recent harvests were salvage operations in red pine plantations and fire-damaged stands in the 1970s and 1980s. Poor access, steep slopes, and wetlands restrict management potential.
- 2) Of the 1,363 acres in this Block, 735 acres (54%) are accessible to silvicultural management. Over the next 10 years, 223 acres will be regenerated with irregular shelterwood harvests, 94 acres will be managed with a selection harvest, and 30 acres will undergo timber stand improvement.
- 3) To improve access, approximately 1.53 miles of existing gravel forest road will be improved, and approximately 0.4 miles of road will be constructed.

D. History

a. Reason for acquisition and funding sources

In December of 1925, Harley F. Roberts, the Latin Master of the Taft School in Watertown, appeared before the Commission on Forests and Wildlife to inform them that a group of conservationists in his community was interested in acquiring and protecting land. He inquired about the policy of the State on receiving land as a gift and was met with favorable feedback from the Commission. He originally became interested in the possibility of acquiring a forested area in the Naugatuck Valley after attending a dedication event in Peoples State Forest in 1924. By 1926, the community group had incorporated the Black Rock Association with Roberts as the president. The Black Rock Association raised funds to purchase land and organized land donations that would eventually be deeded to the State. The State Forester at the time, Austin F. Hawes, recommended the State spend an amount of money in the area that would match the funds raised by the Black Rock Association. At this time, Alain White, a wealthy conservationist from the area, offered to give one dollar for each acre purchased in this agreement.

In early 1927, a report to the directors and donors of Black Rock Forest Inc. showed 2,453.2 acres had been acquired. Of this, 778.56 had been donated and 1,674.64 had been bought, including 464.5 acres purchased by the State. Over 428 acres were set aside to be developed as a park and are now part of Black Rock State Park. The gifts from the Black Rock Association, Inc., were the beginnings of the Cave-Black Rock Block of Mattatuck State Forest (although it was known as Naugatuck State Forest until 1928). At the time, Hawes wrote that this area was one of the most picturesque parts of the Naugatuck Valley and acquiring the property helped protect this feature, demonstrated by the relocation of two powerlines that had been surveyed in the area. Another reason for its purchase was to establish a source of local timber.

The most recent acquisitions were in 1990 and 1999.

b. Development of resource before and after acquisition

The region of Connecticut where Mattatuck State Forest is located was known as “Mattatuckokë” by indigenous people. “Mattatuckokë” can be translated as “the place without trees” or “the badly wooded land”, possibly due to the expansive treeless meadows that were part of the valley or the rocky soils. Before it was incorporated, Waterbury was called Mattatuck by early settlers. The territory of many native tribes overlapped in this area, including the Potatuck, Mohican, and Wappinger.

Watertown was founded in 1684, and Thomaston separated from Plymouth to become its own town in 1875. In areas where topography allowed, trees were clearcut and farms were established. Several stone walls, long-unused farm roads, and foundations can be found across this Block. Areas not suitable for farming may have been used as woodlots. In the late 19th century, as industry in the Naugatuck Valley grew, there was an increasing demand for wood. For example, Plume & Atwood Manufacturing Company was a large brass company based in Waterbury that supplied brass for the Seth Thomas clock factory in Thomaston. Large amounts of charcoal were required to create brass. The charcoal was produced in the forests in and around the Naugatuck Valley. Brass companies purchased land and cleared forests that had previously not been farmed or had regrown after farms were abandoned. The trees regenerated from cut stumps and could be harvested at regular intervals. Evidence of charcoal mounds where wood was burned in large piles can be found throughout the Cave-Black Rock Block. In the first quarter of the 20th century, the brass industry replaced charcoal with oil and coal and no longer required large tracts of forested land. At the same time, the State Park and Forest Commission began acquiring lands.

The remains of a granite quarry operation, owned by Plymouth Granite Company, referenced in land records and historical maps for the forest, may have been destroyed with the construction of Route 8. There are also remains of a sawmill on Purgatory Brook in Stand 2-1.

In June 1930, a plaque was set in a large boulder near Bidwell Hill Road. The trees around it were dedicated as the Roberts Memorial Grove in memory of Harley F. Roberts. In 2023, a short trail leading to the plaque was established. The plaque reads: *To Harley Fish Roberts of the Taft School, Watertown, 1861-1930, whose vision and zeal made possible this Mattatuck State Forest and adjoining Black Rock State Park Dedicated June 7, 1930.*



Figure 1. Harley F. Roberts Memorial plaque in the Roberts Memorial Grove.

Forest management activities began soon after acquisition. The State Forester reported that in 1928-1929 the brass industry had purchased 1,110 cords of fuelwood from the forest. There were hundreds of acres that received silvicultural treatments from the 1920s to the 1930s, but much of this was low-quality fuelwood and posts due to the poor vegetative condition when the area was acquired (after much cutting and burning over). Aerial images taken in 1934 (UCONN Map and Geographic Information Center) show that this Block was mostly young forest or old field regrowing after this intensive cutting (Figure 2.).

From 1933 until 1937, Camp Roberts (named after Harley F. Roberts) was a Civilian Conservation Corps (CCC) camp based at Black Rock State Park. It was home to hundreds of young men who worked in Mattatuck State Forest. Their management stabilized slopes and proved effective in stopping erosion caused by unregulated recreation and tree removal. In the 1930s, conifers were planted, mostly by the CCC.

From 1939 to 1970s, there was little work done in this forest because of World War II, low demand, limited staffing, and poor access.

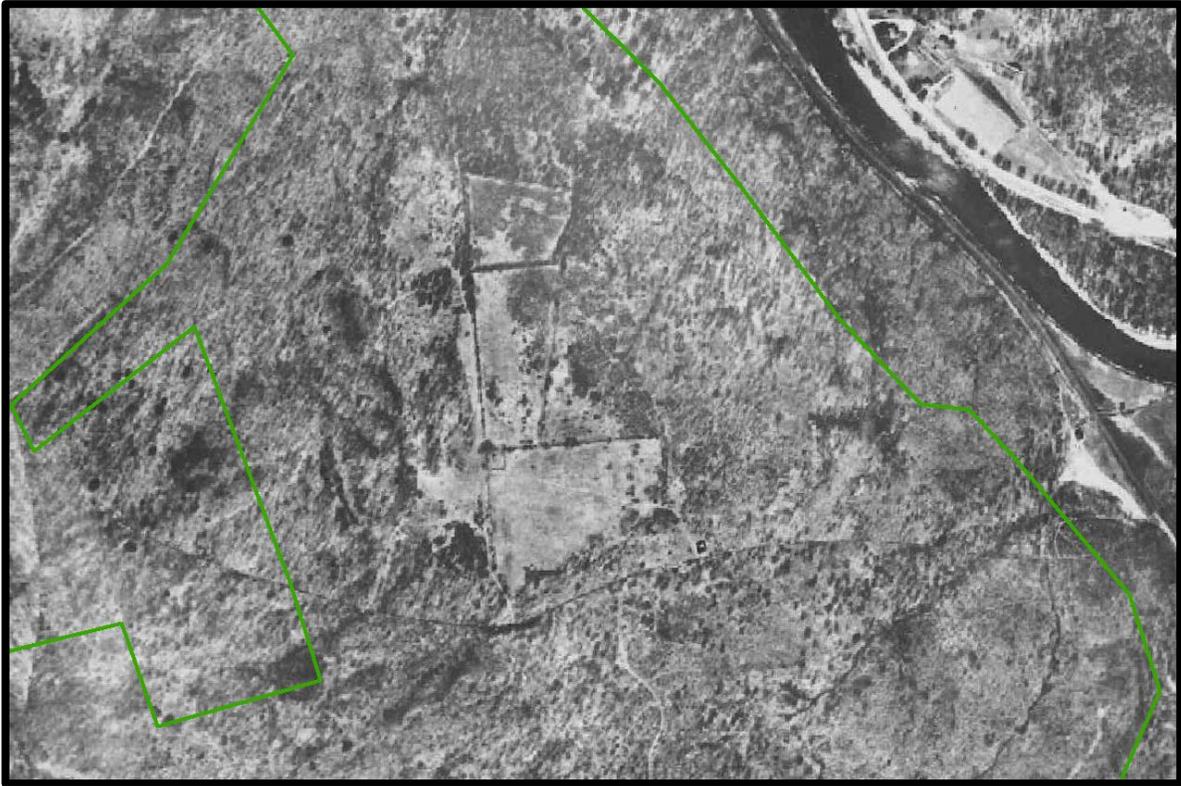


Figure 2. 1934 Connecticut Aerial Photography of the Cave-Black Rock Block Compartment 1. This area shows how Stand 1-13 was still open field surrounded by young forest in 1934. Route 8 was not yet built on the eastern forest boundary. (<https://magic.lib.uconn.edu/>)

In 1973, a forest thinning was carried out along Bacon Farm Road.

Red pine scale was first found in Connecticut in 1946, although it had been present for several years prior. In 1979, the threat of red pine scale led to the salvage of a 12-acre red pine plantation on Bacon Farm Road. A large fire in 1986 resulted in almost 100% mortality of 300 acres in the northern part of Compartment 1. Eighty-four (84) acres were salvaged from 1987 to 1988.

Construction of Route 8 in the 1960s cut off access from the Cave-Black Rock Block to the Naugatuck River and decreased accessibility for management to portions of this Block. In 1962, DEEP transferred 105.77 acres along the Naugatuck River to DOT.

There was a history of habitat management in the Cave Block, including planting food species and establishing openings, but there are no active wildlife management activities.

c. Changes since the last plan was prepared

The last management plan for Mattatuck State Forest, including the Cave-Black Rock Block, was completed in 1988. Since the large fire salvage in 1988, there have been no timber sales.

Cordwood has been cut along Bacon Farm Road and in Stand 2-6. Two sugarbushes were created in Stands 2-1 and 2-6. No other significant management activities have taken place.

Since 1988, a 3.5-acre parcel was purchased by the State on Thomaston Road. In 2000, a boundary line agreement with a neighbor resulted in a 4.7-acre transfer to the neighbor.

Property boundaries have been maintained.

Eversource has widened the powerline rights-of-way, improved access roads to the rights-of way, and installed a new gate at the parking area on Echo Lake Road.

E. Assessment of Resources and Infrastructure

a. Acres

The Cave-Black Rock Block is divided into 3 compartments based on access and relative location. Each compartment is further divided into stands, or individual management units of similar composition or site quality, to aid in management-making decisions.

Table 1. Acres of land in the Cave-Black Rock Block by land cover type.

Land Cover	Acres
Forest stand	1295
Right-of-way	49
Waterbody	11
Forested Swamp	7
Developed	1
Total	1363

b. Access

a. Management Access

One of the most difficult aspects of managing this Block is the limited access. Old roads that once provided access are in poor condition and need to be improved. There are several ways to access the Block on foot from town roads. Approximately 176 acres of operable forested land are inaccessible due to topography.

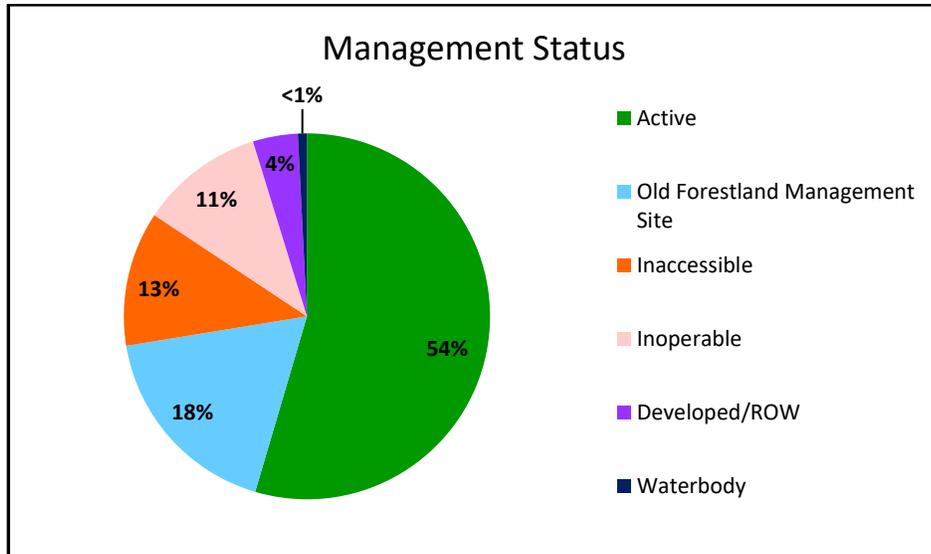


Figure 3. Management status of the Cave-Black Rock Block by percent of total acreage.

- 1) Echo Lake Road- There is a parking area where Bacon Farm Road intersects Echo Lake Road. Bacon Farm Road is a gated gravel forest road. It continues for 1.2 miles into the southern part of Compartment 1. CFPA's Jericho Trail ends at the parking area.
- 2) Park Road- There is a gated dirt forest road that leads into the northern part of Compartment 1. It was used to access a sale in 1988. Another access road (called Jericho Road on historical maps) leads between two houses to a parking area and a gated forest access road. The access road is part of CFPA's Jericho Trail. Both gated roads need to be improved before they can be used for management access.
- 3) Route 6/Thomaston Rd- There is limited pull-off parking at 2 locations on Route 6. CFPA's Mattatuck Trail crosses at one of these parking areas. The Branch Brook Trail starts at a gated access road on private property. It provides walking access to the Block. An old roadbed (Gravestone Road) crosses Route 6. An old driveway in Stand 1-25 could provide access to the Block on the east side of Route 6.
- 4) Bidwell Hill Rd- Clark Road is a gated forest road that leads into Compartment 2 from Bidwell Hill Road. It needs to be improved before it can be used for management access. CPFA's Mattatuck Trail crosses Bidwell Hill Road. There is pull-off parking on the road near the trail crossing, along Purgatory Brook, and in the sugarbush.
- 5) Black Rock Road- The town of Watertown owns land on Black Rock Road that abuts State land. There is limited roadside pull-off parking and walking access.
- 6) Route 109/Branch Road- Eversource has a gated gravel road used to access one structure off Route 109. There is a large pull-off farther west from which Compartment 3 can be accessed on foot.
- 7) Old Northfield Road- There is limited roadside pull-off parking. Compartment 3 can be accessed on foot.
- 8) Route 8/James H. Darcey Memorial Highway- Compartment 1 has 2.5 miles of road frontage on this State highway. There is no access from the highway.

b. Public Access

This Block has no interior forest roads open to public vehicles.

c. Road Maintenance/Construction

Approximately 4,500 feet of Bacon Farm Road, 2,300 feet of Clark Rd, and 1,300 feet of the access road from Park Road will be improved. An approximately 2,100-foot access road will be built from Black Rock Road, in collaboration with the Town of Watertown, to access Stand 2-20.

Jericho Road, the access road off Park Road, will eventually need to be improved to access other active stands, but this work will not take place during this ten-year management period.

d. Rights-of-Way

Eversource has transmission line rights-of-way covering approximately 35 acres in Compartment 1 (Stand 1-5), 11 acres in Compartment 2 (Stands 2-24a and 2-24b) and 4 acres in Compartment 3 (Stands 3-4a and 3-4b).

The City of Waterbury has a water main that runs along Branch Brook, on the northern edge of Compartment 1.

e. Boundaries

There are 19.9 miles of boundary line, including 6.9 miles of roadside boundaries. The boundary line was refreshed between 2020 and 2023 and will be maintained again within 10 years.

The boundary line shared by Mattatuck State Forest and Black Rock State Park (0.66 miles) was not marked.

f. Encroachments

There were no significant encroachments when this plan was written.

g. Acquisition Goals

Parcels that abut the forest block should be considered for acquisition if they improve access to inaccessible areas and protect additional forest land or unique features. Most desirable parcels are privately owned.

A landlocked parcel abuts Compartment 2. Acquiring this parcel would provide access to inaccessible stands and improve the State's ability to mark the boundary line.

F. Special Use Areas

a. Lakes and ponds

Merriman Pond (also known as Lockwood Pond) is a 35-acre man-made waterbody in Watertown. The northern 11 acres are in the Cave-Black Rock Block (Stand 2-23). It is open to fishing and boating. There is a Town boat launch at the southern end of the lake.

b. Rivers and streams

Branch Brook flows eastward from Wigwam Reservoir, which is part of the municipal water supply for Waterbury. The brook is stocked by the DEEP Fisheries Division in Black Rock State Park and is the northern boundary of Compartment 1.

Other streams include Jericho Brook, Purgatory Brook (which flows into Black Rock Pond), and a tributary of Turkey Brook. These streams are in the Naugatuck River watershed.

DEEP's Fisheries Division has documented a strong native brook trout population in Jericho Brook. It was used by the Inland Fisheries Division as a source for transplanting brook trout to restore populations in other streams.

There are other unnamed intermittent streams in this Block.



Figure 4. Jericho Brook flows south between Stands 1-10 and 1-12.

c. Cultural sites

There are stone foundations in Stands 1-15, 1-23, 1-30, and 3-1. Old stone walls and abandoned farm roads, indicating past agricultural use, are found throughout the Block.

There is an old sawmill site on Purgatory Brook in Stand 2-1.

There are many charcoal mounds, dating from the late 1800s to early 1900s when the land was used for charcoal production by brass companies, throughout the Block.

The Rock House on the Mattatuck Trail was not likely a site used by the Leatherman, but there is a rock feature nearby that he may have sheltered in. From 1883 to 1889, the Leatherman walked a regular loop through Connecticut and New York, stopping in the same locations and becoming a folk legend over the years. (See J. Recreation.)

There are records of an old grave site located in Compartment 1, although the exact location is unknown. According to reports from members of the Watertown Historical Society, a man named Joseph Scott was killed by a small group of indigenous people and buried under a pile of stones where his body was found in 1708. Scott's grave is referenced as a boundary marker in the State's deed for the property. The gravesite was reportedly rediscovered in the 1930s and again in 2012.

d. Recreation and scenic sites – trails and signs

The Connecticut Forest and Park Association maintains 6 miles of trails in this Block. There are also forest roads open to recreation. (See J. Recreation)

The entire Block is open to hunting.

e. Critical Habitat

Critical habitat refers to specific geographic areas which contain features essential to the conservation of an endangered or threatened species and may require special management and protection. DEEP Critical Habitat GIS data shows Acidic Rocky Summit Outcrop (Scrub Oak and Grassy Glade/Bald Subtypes) in the Block. (See I. Wildlife Habitat).

f. Natural Areas

There are no legislatively-designated Natural Area Preserves in this Block.

g. Old Forestland Management Sites

The Old Forestland Management Site land classification was created to set aside a portion of land to allow for the natural processes of forest stand development to occur without the influences of active forest management. This designation withdraws forestland from timber utilization for the span of the management plan. There are three stands, totaling 244 acres or 18% of the total Block acreage, that will be classified as Old Forestland Management Sites. These sites were chosen for their unique characteristics and location on the landscape.

An additional 322 acres (24%) will be passively managed under this management plan due to inoperability or inaccessibility.



Figure 5. Stand 1-22 is a sugar maple/beech/yellow birch forest type and was designated as an Old Forestland Management Site. It contains unique rock features and part of CFPA’s Mattatuck Trail.



Figure 6. Stand 1-23 is an eastern white pine/eastern hemlock forest type and was designated as an Old Forestland Management Site. It contains a small stream, unique rock features, and part of CFPA’s Mattatuck Trail.

h. Research Areas

There are no designated research areas. In the past, multiple state- or district-wide research permits have included Mattatuck State Forest.

i. Miscellaneous

According to [Connecticut's Notable Trees](#) list, the second largest eastern white pine in Connecticut can be found along the Mattatuck Trail, near Bidwell Hill Road, in Stand 2-2.

Stands 2-1 and 2-6 are sugar maple stands managed as sugarbushes. Maple trees are tapped, and sap is collected for maple syrup production under Forest Products Harvest Permits.

There are accessible areas that could be available for homeowner firewood permits if there is interest.

G. Forest Ecosystem Health and Diversity

a. Landscape Context

In 2015, Watertown was approximately 50.5% forested, 18.1% agricultural field, 16.7% developed, and 9.6% turf and grass. Thomaston was 60.7% forested, 22.1% developed, 8.2% turf and grass, and 2.8% agricultural field (CLEAR). Since 1985, Watertown and Thomaston have collectively lost 977 acres of forestland, while developed areas and turf and grass cover have increased in both towns (CLEAR). In addition to the Cave-Black Rock Block, DEEP-owned forest land in Watertown and Thomaston includes other blocks of Mattatuck State Forest, Black Rock State Park, Scoville Wildlife Sanctuary, and Naugatuck River Water Access.

The city of Waterbury owns a small parcel to the north of Compartment 1, along Branch Brook, which has a water main. The town of Watertown owns 248.6 acres to the west of Compartment 2; this parcel contains the Crestbrook Park Golf Course, a boat launch on Merriman Lake, and forest land. The Thomaston Fish and Game Club owns almost 97 acres that border Compartment 3 to the north. Eversource owns a 9.4 -acre parcel along their right-of-way east of Compartment 1 and a 5.5-acre parcel along their right-of-way north of Compartment 3. Parcels of protected open space owned by the US Army Corps of Engineers border Black Rock State Park along Route 109, around Black Rock Lake. Other neighboring properties are privately-owned residential, commercial, farmland, or forestland.

Eversource has transmission line rights-of-way through Compartments 1, 2 and 3, totaling 49 acres. These areas are periodically managed by cutting woody vegetation, mowing, and treating invasive species mechanically and chemically.

According to UCONN's Core Forest Mapping [CT 2015 Forest Fragmentation - Overview](#), areas of this Block are part of small (<250-acre), medium (250 to 500-acre), and large (>500-acre) Core Forest. Eversource transmission rights-of-way fragment the Core Forest in this Block. Core forests are forests that are not fragmented by non-forest land uses, such as developed areas, agricultural fields, non-forested wetlands, and turf and grass. Core forests are more than 300 feet away from non-forested areas. Core forests are often managed to promote species and age diversity to increase resilience.

b. Current Vegetative Condition

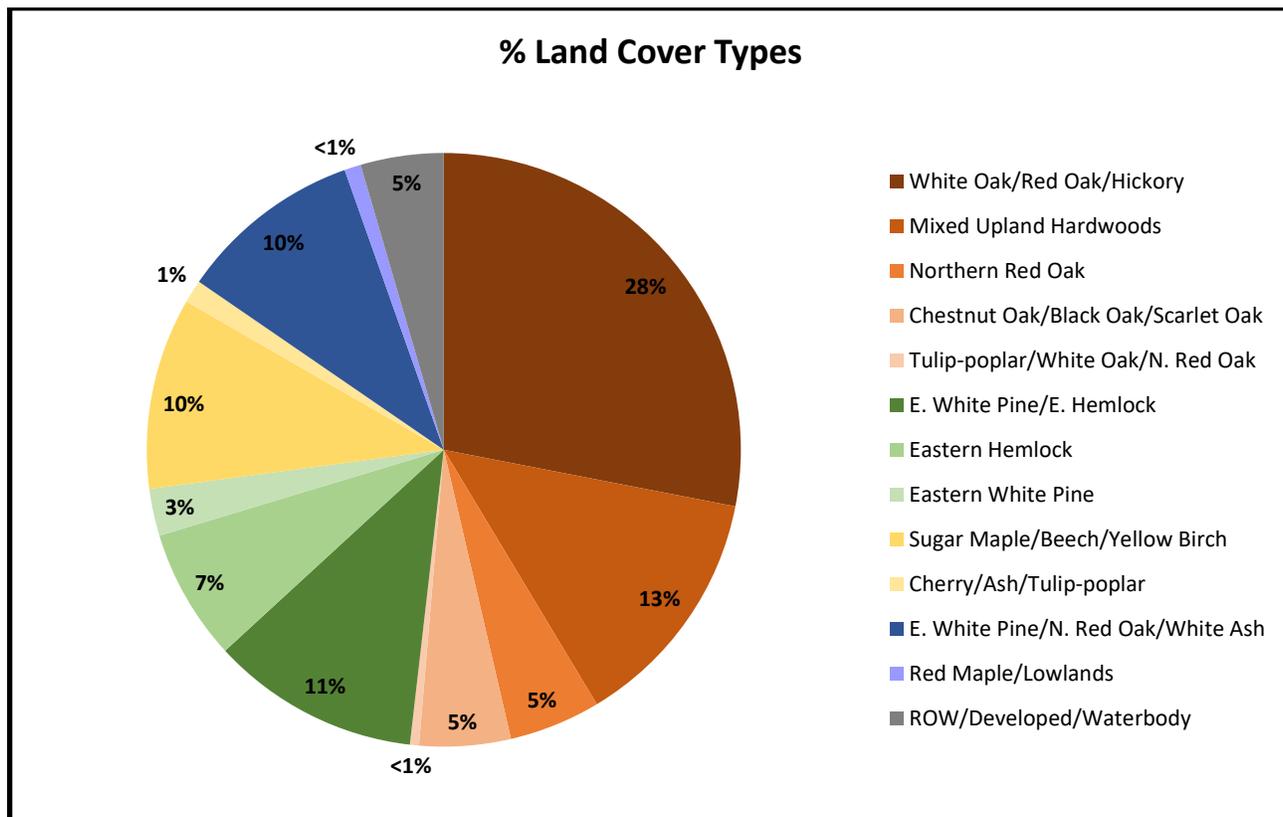


Figure 7. Land cover types by percentage of the Cave-Black Rock Block.

c. Forest size classes by forest type

Table 2. Acres of forest land by size class and forest type in the Cave-Black Rock Block. This table excludes acres classified as right-of way, developed land, or waterbody.

Forest Cover Types By Cover Group	Size Class				Total Acres	% Total
	Pole	Sap-Pole-Saw	Saw-Pole	Saw		
Oak-Hickory Group						
White Oak/Red Oak/Hickory	-	43	-	339	382	29%
Mixed Upland Hardwoods	14	-	-	167	182	14%
Northern Red Oak	-	-	-	68	68	5%
Chestnut Oak/Black Oak/Scarlet Oak	-	-	51	16	68	5%
Tulip-poplar/White Oak/N. Red Oak	-	-	-	7	7	<1%
White-Red-Jack Pine Group						
E. White Pine/E. Hemlock	-	-	-	155	155	12%
Eastern Hemlock	-	-	-	98	98	8%
Eastern White Pine	-	-	-	35	35	3%
Maple-Beech-Birch Group						
Sugar Maple/Beech/Yellow Birch	-	-	7	135	142	11%
Cherry/Ash/Tulip-poplar	17	-	-	-	17	1%
Oak-Pine Group						
E. White Pine/N. Red Oak/White Ash	-	-	-	136	136	10%
Elm-Ash-Cottonwood Group						
Red Maple/Lowlands	-	-	12	-	12	<1%
Total Acres	31	43	70	1156	1301	
% Total	2%	3%	5%	89%		

Oak-Hickory Group

The Oak-Hickory group makes up 706 acres (55%) of the forested acres. The dominant species are red oak, white oak, black oak, scarlet oak, chestnut oak, shagbark hickory, pignut hickory, black birch, and red maple. Within this group there are multiple sub-groups, referred to as forest types. Forest types in the Oak-Hickory group are Northern Red Oak, White Oak/Red Oak/Hickory, Chestnut Oak/Black Oak/Scarlet Oak, Mixed Upland Hardwood, and Tulip-poplar/White Oak/Northern Red Oak. Almost 92% of the group is mature or approaching maturity; 648 acres are in the Sawtimber or Saw/Pole size class. Three hundred six (306) acres to be managed during this 10-year plan are in the Oak-Hickory group.

White-Red-Jack Pine Group

The White-Red-Jack Pine group comprises 287 acres (22%) of the forested acres. Within this group there are multiple sub-groups, referred to as forest types. These types include Eastern White Pine/Eastern Hemlock, Eastern White Pine, and Eastern Hemlock. All stands in this group are mature or approaching maturity and are in the Sawtimber size class. A 24-acre eastern white pine stand will be managed during this 10-year plan.

Maple-Beech-Birch Group

The Maple-Beech-Birch Group comprises 159 acres (12%) of the forested acres. Multiple stands, including one sugarbush, are classified as Sugar Maple/ Beech/ Yellow Birch forest type. These stands are on fertile, moist sites and are predominantly sugar maple. A 17-acre Cherry/Ash/Tulip-poplar stand (Stand 1-13) is pole timber that regrew after a red pine salvage. It will undergo Timber Stand Improvement cutting during this 10-year plan.

Oak-Pine Group

The Oak-Pine group covers 136 acres (10%) of the forested acres. In this Block, White pine/Northern Red Oak/White Ash is the only forest type in this group. This type is found on fertile, well-drained soils. All stands in this group are mature or approaching maturity and are in the Sawtimber size class.

Elm-Ash-Cottonwood Group

Red Maple/ lowlands make up 12 acres (<1%) of the forested acres. These areas have wet, saturated, or poorly drained soil and grow tree species such as American elm, white ash, and red maple. Because these areas have poorly drained soils, no activity will take place in this forest type.

d. Forest type and size class on areas to be managed

Table 3. Forest cover type and size class in areas to be managed.

Forest Cover Type	Size Class	2025-2035 Prescription for Active Stands				Total
		Irregular Shelterwood	Selection Harvest	TSI	No Scheduled Activity	
Cherry/Ash/Tulip-Poplar	Pole	-	-	17	-	17
Chestnut Oak/Black Oak/Scarlet Oak	Saw-Pole	-	-	-	51	51
Eastern Hemlock	Saw	-	-	-	31	31
Eastern White Pine	Saw	24	-	-	11	35
E. White Pine/E. Hemlock	Saw	-	-	-	31	31
E. White pine/N. red oak/White Ash	Saw	-	-	-	84	84
Mixed Upland Hardwoods	Pole	-	-	13	-	13
	Saw	-	37	-	76	113
Sugar Maple/Beech/Yellow Birch	Saw	-	-	-	55	55
White Oak/Red Oak/Hickory	Sap-Pole-Saw	-	-	-	43	43
	Saw	199	57	-	6	262
Total		223	94	30	388	735

e. Forest health

a. Understory concerns

The dense canopy in mature forest stands in this Block is limiting regeneration of tree species. Mountain laurel dominates the understory in some stands.

Deer populations exceeding 15-20 per square mile affect regeneration by limiting the composition and quantity of tree seedlings after disturbances to the overstory. There is not an estimate for the number of deer per square mile in Watertown or Thomaston, but deer browse can be expected and could impact regeneration.

b. Invasive exotic plants

Non-native invasive plants are present, primarily in wetland areas, old fields, and along roads and trails. These include Asian bittersweet (*Celastrus orbiculatus*), Japanese barberry (*Berberis thunbergii*), Japanese knotweed (*Reynoutria japonica*), winged euonymus (*Euonymus alatus*), multiflora rose (*Rosa multiflora*), Japanese stiltgrass (*Microstegium vimineum*), Chinese privet (*Ligustrum sinense*), autumn olive (*Elaeagnus umbellata*), and mugwort (*Artemisia vulgaris*), among others.

Before harvesting activities occur, invasive species will be located, identified, and controlled with mechanical and/or chemical treatments. For chemical treatment, the State laws regarding herbicide application and manufacturer label instructions will be followed during application (Connecticut General Statutes Chapter 441). Invasive exotic plants can limit tree regeneration, displace native species, or impact existing trees and other vegetation by girdling or smothering them.

c. Insect and disease concerns

Emerald ash borer (*Agrilus planipennis*) was discovered in Watertown in 2013 and in Thomaston in 2014. This Block does not have a significant white ash component, but all mature ash trees are declining or dead.

Spongy moths (*Lymantria dispar dispar*) impacted the oak forest in the past and populations have been observed defoliating nearby forests in Litchfield in 2023. If the spongy moth population increases in the future, the forest could be severely impacted because of the large oak component.

Hemlock elongate scale (*Fiorinia externa*) and hemlock woolly adelgid (*Adelges tsugae*) are present in the Block but are not causing significant mortality. Eastern hemlock is found in multiple stands, including Old Forestland Management Sites.

Beech leaf disease (BLD), associated with the nematode *Litylenchus crenatae mccannii*, was identified in areas around this Block in 2020 and is affecting beech trees across Mattatuck State Forest. BLD can lead to beech decline and death. Its impact and spread will be monitored.

Other forest pests may cause damage over limited areas at various times, but they are not usually a threat to forest health. Exotic diseases include beech bark disease, a complex of a scale insect and *Nectria* fungi, which can damage and kill American beech trees, and chestnut blight (*Cryphonectria parasitica*). *Nectria* canker is a fungal pathogen that affects many species. In this Block, it primarily infects birch species, resulting in large cankers on the tree and overall declining health.

d. Weather-related damage

Weather events, including strong winds, ice storms, heavy rain or snow, and drought, can impact individual trees or stands. Drought is occurring more frequently, and drought-stressed trees are more likely to succumb to a secondary pest or pathogen.

e. Disturbance Regimes (Fire)

Historical fire regimes from charcoal production resulted in the current oak-dominated forest. Fires are no longer common in this area.

Forests with a diverse mix of species and age classes will be more resilient to future insects, fungi, pathogens, weather events, and a changing climate. Management will also include invasive plant control to reduce competition with desired species.

H. Silvicultural Strategies and Climate Change Mitigation

a. Forest Carbon Science

a. Carbon Sequestration and Storage

Carbon sequestration is the process of removing carbon from the atmosphere (in the form of carbon dioxide)

during photosynthesis to make sugar. Trees use sugar to grow and make cellulose and lignin, the building blocks of wood. Wood is found in the trunks, branches, and roots of trees. Wood is stored carbon. In the northeastern United States, carbon sequestration typically peaks when forests are young to intermediate in age (30-70 years old), but they continue to sequester carbon through their entire life.

Carbon storage is the amount of carbon retained in the forest. Carbon is found in live tissue above and below the ground, dead wood, leaves and needles, and soil organic matter. In the northeastern United States, storage levels increase with forest age and typically peak when forests are old (about 200 years).

As forests get older, their overall growth slows as the trees compete for sunlight, water, and nutrients in the soil. As trees die, carbon is released back into the atmosphere. In an older forest, the overall amount of stored carbon, while still increasing, eventually levels off.

Older forests have higher carbon storage and lower sequestration than younger forests. But older forests are generally more susceptible to damage from hurricanes, drought, insects, and diseases. Older forests with late successional characteristics such as complex stand structure, accumulation of dead, woody material, and many large, old trees can provide biodiversity benefits.

Younger forests have lower carbon storage and higher sequestration. They grow faster and provide biodiversity benefits in that many wildlife species of greatest conservation need in Connecticut require early successional or young forests to survive. The populations of birds, such as blue-winged warblers, chestnut-sided warblers, towhees, whip-poor-wills, and woodcocks, are declining because of a lack of young forest habitat in Connecticut. New England Cottontail, our only native rabbit, also requires thickets of young forest to survive.

Passively managed forests, while important for many reasons, may be less resilient to disturbances. Carbon emissions from unmanaged forests can be greater than from managed forests if the unmanaged forests are experiencing high rates of mortality, such as after tropical storms, infestations of spongy moth, emerald ash borer, hemlock woolly adelgid, and beech leaf disease.

Forest management, including timber harvesting, is consistent with the goals of promoting long-term carbon sequestration and storage. Younger, faster growing stands sequester carbon at a higher rate, while older stands store more carbon. Managing for complex forest structure, such as maintaining stocking of large trees while also providing growing space for younger trees, can promote higher rates of stand-level carbon sequestration and storage. In addition, the durable wood products resulting from the harvests in this plan will store carbon for a long time.

Carbon “leakage” is the shift of carbon emissions from one place to another. When the wood we use in Connecticut is not grown and harvested here, it must come from someplace else, with greater environmental impacts. This is “the illusion of preservation”. Growing and harvesting wood is also more environmentally friendly than the alternatives of concrete or steel, which are fossil fuel intensive.

b. Carbon Storage Estimates

Removal of live trees during management will reduce stored carbon in the forest. Some of the carbon will continue to be stored in durable wood products. Carbon sequestration will gradually increase as new trees grow and trees retained in managed areas will sequester carbon at a faster rate when competition for resources is reduced. Areas of the Block that are not managed will continue to slowly sequester and store

carbon.

See [Connecticut's 2020 Forest Action Plan](#) for more information about forest carbon in Connecticut.

b. Forest Resilience

Forest resilience is the capacity of a forest to withstand, and recover from, climatic events, trends, and disruptions. Disturbances can include forest fires, severe weather, insect infestations, disease outbreaks, invasive plants and animals, and insufficient regeneration because of deer.

Resilient forests are diverse forests, made up of many species of trees, of many ages, across the landscape, not just on each acre or in individual stands. Having a variety of forest conditions over time and space can provide the largest range of benefits, including resilience and carbon sequestration and storage.

a. Salvage Guidelines

Forest insect infestations and disease outbreaks can lead to widespread mortality. For example, if an outbreak of spongy moth occurs, this could result in salvaging dead or dying oaks. Salvaging dead and dying trees removes a source of fuel for potential forest fires. Salvaging dying trees can store carbon in durable wood products, leaving less material to decay and release carbon dioxide into the atmosphere. Salvaging also captures economic value that would otherwise be lost.

It is also important to realize that dead trees have value for wildlife habitat and can keep moisture in the soil after they fall. If there was to be a salvage, many dead trees would be retained.

b. Encouraging Mature Forest Growth

A forest with a variety of stands of different age and size classes will be resilient. In the Cave-Black Rock Block, most of the forest is considered mature, without much variety in species or age classes. Approximately 566 acres will remain or become mature forest due to inoperability, inaccessibility, or designation as an Old Forestland Management Site.

c. Expectations: Next 100 years in Succession

Future forest conditions can be projected with modeling and by observing what trees are growing in the understory. Red oak is a major component of at least 52% of the forested area in the Cave-Black Rock Block based on cover type but will be less common in the future forest. Oak dominates this landscape because of the land use history. Frequent fires and harvests for charcoal production favored oak regeneration. Trees such as black birch and red maple regenerate more easily, grow more quickly, may not receive as much deer browse impact, and will likely outcompete oak in the future in many unmanaged stands. Heavy cuts, such as the irregular shelterwoods planned for Stands 1-3, 1-8, 2-8, and 2-20, provide better conditions for oak regeneration.

d. Management System Guidelines

A balance of management strategies will be applied to this Block.

- 44% of the forested acreage will be passively managed.
- 56% of the forested acreage will be managed eventually.
- 27% of the forested acreage will be managed during this management plan.

Even-aged Regeneration– 223 acres
Even-aged Timber Stand Improvement– 30 acres
Uneven-aged Selection Harvests– 94 acres

A 100-year rotation will be applied to all stands managed on an even-aged regeneration basis. Stands managed for TSI will be reassessed during the next management period. Stands to be managed on an even-aged basis are Oak-Hickory, Maple-Beech-Birch, and White-Red-Jack Pine (Eastern White Pine).

A 20-year cutting cycle will be applied to all stands managed on an uneven-aged basis. Stands to be managed on an uneven-aged basis are Oak-Hickory.

e. Sustainability

The silvicultural work plan in this document will guide forest management in the Cave-Black Rock Block for the next 10 years. The work plan is based on stand accessibility and stand-level observation and inventory analysis.

The Block has 735 acres that have the potential to be actively managed.

From 2025 to 2035, of the 420 acres to be managed on an even-aged basis, 253 acres are scheduled for treatment. There will be fewer acres scheduled for even-aged management in future management plans.

From 2025 to 2035, of the 315 acres to be managed on an uneven-aged basis, 94 acres are scheduled for treatment. There will be more acreage scheduled for uneven-aged management in future management plans.

The Cave-Black Rock Block is 85% mature sawtimber forest; of the acres to be managed, 83% are sawtimber. Only 2% of the forest is poletimber and 8% contains mixed size classes. Management occurring during this plan will begin to achieve the long-term goal of a diverse, resilient forest with 50% sawtimber, 25% pole timber, and 25% seedlings/saplings by converting about 16% of the mature saw timber stands (or 30% of the acres to be actively managed) to a seedling/sapling size class by regenerating 223 acres.

f. Silvicultural Practice and Treatments

Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests to provide the benefits that society values on a sustainable basis. These include wood, clean air, clean water, and wildlife habitat. Active forest management is accomplished by applying site-specific silvicultural treatments at the stand-level. Every commercial forest product harvest occurring on State land has a corresponding silvicultural prescription written by a certified forester and designed to achieve a broader goal regarding the growth or reproduction of the forest.

Irregular shelterwood silviculture is the regeneration method that will be used in Stands 1-3, 1-8, 2-8 and 2-20. This treatment is intended to regenerate new age-classes of forest while maintaining high levels of horizontal and vertical structural diversity. In an oak-dominated stand, this method should encourage oak regeneration.

Timber Stand Improvement is prescribed in Stands 1-13 and 1-29. Both stands regenerated after clear-cut harvests and are pole stands. Black birch is beginning to outcompete oak, cherry, and other more desirable

species. The best trees will be retained for future development and a new age class may grow in the understory.

Selection harvests are prescribed in Stands 1-2 and 2-9. Over time the stands will be managed to be multi-aged instead of even aged. Creating multi-aged stands will contribute to the forest's overall climate resilience, bolster carbon storage and increase the interception of raindrops before they reach the forest floor.

Harvests in Stands 1-2 and 1-8 will include 200-foot-wide patch cuts where possible along the existing powerline right-of-way to create a soft edge to the existing early successional habitat and benefit wildlife, such as prairie warbler, eastern towhee, American woodcock, and New England Cottontail.

A variety of stands of different ages and size classes across the landscape will be more resilient in responding to disturbances such as invasive insects, diseases, and severe weather events.

g. Adaptive Forest Management

The Division of Forestry understands that forest management occurs as part of a dynamic landscape. The Division of Forestry reserves the right to reasonably change our management approach as environmental change and resource needs warrant. Some of these changes may be associated with biological factors such as insects and diseases. Increased unauthorized motorized recreation which erodes trails and roads may require action unforeseen during the composition of this plan. Additionally, environmental conditions such as hurricanes or record-breaking precipitation may affect resource condition and work requirements. The Division of Forestry and our colleagues in Parks, Wildlife, Fisheries, and District Operations, evaluate circumstances and use an adaptive management philosophy and additionally reserve the right to address unforeseen circumstances should they arise during the tenure of this forest management plan.

I. Wildlife Habitat

a. Current Habitat Diversity

The Cave-Black Rock Block provides significant unfragmented sawtimber-sized forest for interior forest dwelling wildlife. Stands of eastern hemlock and eastern white pine are valuable evergreen habitat components. With the decline of eastern hemlock due to the invasive hemlock woolly adelgid and hemlock elongate scale, these provide diversity to a mostly deciduous forest.

b. Critical Habitat

Several Natural Diversity Database (NDDB) areas are in or near the Cave-Black Rock Block (Figure 8.). A review was conducted by the Wildlife Division's NDDB program to identify critical biological resources in the area covered by this plan. A determination was received on March 1, 2024. This assessment identified seven State-listed animal species and five State-listed plant species (RCSA Sec. 26-306) that may be found in the Block. Management recommendations were provided for each species regarding forest management activities.

Of the listed animal species, there are one State and Federally Endangered mammal, one State Endangered reptile, one State Threatened reptile, one State Threatened amphibian, and three reptile species of Special Concern.

The listed plant species include one State Endangered species and four State Species of Special Concern. The NDDB review states that no state listed plants are known to occur in the Block but have been documented nearby in similar forest types to those found in the Block.

Acidic Rocky Summit Outcrop (Scrub Oak and Grassy Glade/Bald Subtypes) was identified as a Critical Habitat (CT Critical Habitats 2006) in the Block. Scrub oak woodlands are found on dry sand, gravel, or bedrock sites. Common species on these sites can include pitch pine, bear oak, and lowbush blueberry. Grassy glades and balds are found on dry, exposed summits, ledges, and outcrops, with low vegetation, including shrubs, grasses, and herbs. Glades and balds are impacted by recreational use and less sunlight reaching the forest floor because of natural succession. Acidic Rocky Summit Outcrop habitat provides potential habitat for multiple state listed plants and animals.

New England Cottontail (NEC) is Connecticut's only native cottontail and has declined more than 85% throughout its range in the Northeast. It is associated with young forest habitats and dense understory conditions. It is a Species of Greatest Conservation Need (SGCN) in Connecticut and regionally due in part to habitat loss and forest maturation. The Wildlife Division created Focus Areas that encompass extant NEC populations to better direct conservation efforts such as habitat creation and enhancement. The Cave-Black Rock Block is on the edge of the Goshen Uplands Restoration Focus Area, delineated based on historic NEC occurrences and suitable habitat conditions. This Focus Area contains an estimated 5,951 acres of suitable young forest and shrubland habitat, but little suitable habitat occurs in this Block and NEC have not been documented here (however, sampling effort has been minimal). The nearest known occupied NEC patch is over 3 miles away, and dispersal movements more than that are rarely observed in this species. Silvicultural treatments that create suitable habitat may sustain existing populations that have yet to be documented or help facilitate dispersal of nearby populations.

American woodcock, another SGCN, is an important migratory game bird that has experienced population declines throughout the northeast due in part to habitat loss and forest maturation. It is associated with young forest and other early successional habitats. The Wildlife Division created Focus Areas to help direct conservation efforts such as habitat creation and enhancement where existing environmental conditions are suitable. Compartment 1 is partially within a Woodcock Focus Area, so silvicultural activities here, such as patch cuts along existing powerline rights-of-way, could improve woodcock habitat.

DEEP Divisions of Forestry and Wildlife will follow recommendations provided by NDDB when planning management activities. Each harvest operation will obtain a site-specific NDDB review during the planning process. The management strategies to protect the listed mammal species are evolving, and DEEP Wildlife Division biologists and DEEP online resources will be consulted for updates.

There are wetlands in the Cave-Black Rock Block. Stands 2-17 and 2-19 are red maple lowland swamps with wetland soils. Stands 1-4, 1-11, 1-20, and 2-22 are inoperable because they are located along streams and are periodically wet or contain wetland soils. Stands 1-19, 1-22, 1-23, and 2-16 contain small areas with wetland soils and Stand 1-24 contains a small wet area. These stands are not scheduled for any active work in the next ten years. There are several vernal pools scattered throughout this Block, including in stands scheduled for active work in the next ten years. A minimum 50-foot undisturbed buffer will be maintained around vernal pools and wetlands, unless they are located within 50 feet of established forest access roads. In that case, operations will be closely monitored for adherence to Best Management Practice compliance and disturbance will be minimized. Within 50-100 feet of identified vernal pools and wetlands, a limited-cut buffer will be maintained.

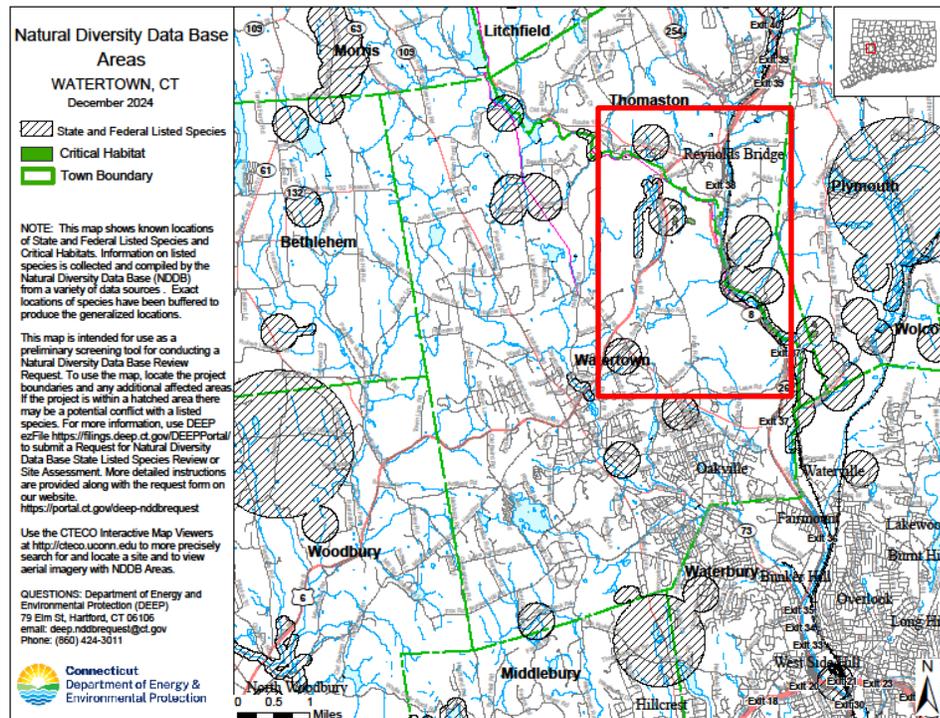


Figure 8. Natural Diversity Database map of Watertown from December 2024, with the location of the Cave-Black Rock Block indicated in red.

c. Habitat in Forestry Operations

Habitat loss is the greatest threat to biological diversity in the region. The Cave-Black Rock Block provides a stable and protected forested area in an urbanizing part of Connecticut. Wildlife diversity can be enhanced through forest management. Research has shown that manipulating forest size-classes promotes wildlife diversity. Most native species will benefit from invasive plant control as well.

There is one known State and Federally Endangered mammal that has been documented nearby and may occur within the Block. To benefit this species, tree cutting within its range will be carefully planned and regulated to maintain critical habitat features that provide quality roosting and foraging conditions and reduce impacts. The management strategies to protect these species are evolving but include time-of-year cutting restrictions, a gradual introduction of harvesting equipment to new sites during this species' active season, and retention of potential habitat trees, including snags and trees with cavities or shaggy bark.

The State Endangered reptile may forage within this Block. Management strategies for this species include time-of-year cutting restrictions. If work occurs during the reptile's active period, site-specific NDDB recommendations will be followed, including work crew education and sweeps of the work area every morning.

Preferred habitat for the State Threatened reptile and amphibian include steep, rocky areas and watercourses where forestry practices will not take place. Buffering streams and springs in the Block will protect the habitat of multiple aquatic species. Protecting habitats adjacent to outcrops and talus areas will protect species that use these unique habitats.

The reptiles of State Special Concern may utilize various habitat types in this Block. One species utilizes well-drained sandy and gravelly soils along the edges of second growth deciduous forest. Work conducted on roads should take care not to harm basking or foraging individuals and should take special care to move individuals of this species outside the work area and only work in within the roadway where possible.

To minimize potential impact to State listed plant species and Critical Habitat, forest operation plans and forest road projects will be submitted to NDDDB for review so specific guidance for each site can be used in the planning process.

The Cave-Black Rock Block is located within NEC and American woodcock Focus Areas. While these are focal species for young forest habitat creation, over 50 SGCN rely on young forest or shrubland habitat. Creating patches of young forest habitat with forest management will benefit these species.

d. Actions needed for Increased Diversity and Critical Habitat

The irregular shelterwoods planned in Stands 1-3, 1-8, 2-8, and 2-20 will increase sunlight and enhance vertical stratification of the forest. The added sunlight will most likely create denser ground, shrub, and mid-canopy vegetation. Berry-producing plants should increase output of blossoms for many years after a harvest. Forest practices such as this have been documented to benefit summer, fall, and winter food resources. Selection harvests planned in Stands 1-2 and 2-9 will also increase sunlight to the forest floor where groups of trees are removed and improve vertical stratification. Retaining healthy trees, specifically those that produce hard mast, will benefit harvestable wildlife, especially deer, wild turkeys, and squirrels. Managing these stands for invasive plants as needed will benefit wildlife habitat.

Linear patch cuts along the existing powerline corridor in Stands 1-2 and 1-8 will create a soft edge to the existing early successional habitat under the powerline and increase the amount of thicket cover. This will increase ideal habitat for species such as prairie warbler, eastern towhee, American woodcock, and cottontails.

Log landings provide a temporary opening that enhances wildlife habitat for many species, including wild turkeys, American woodcock, cottontail rabbits and beneficial insects (pollinators). Log landings can be seeded with a native herbaceous seed mix to supplement natural regeneration.

e. Hunting and Trapping

The Cave-Black Rock Block is open to all forms of regulated hunting including small game, waterfowl, turkey, and deer. There are no lottery restrictions for shotgun deer hunting in the Block. Regulated trapping is permitted with a State Lands trapping certificate.

f. Fisheries Habitat and BMP's

Streams within the Block are open to fishing. Branch Brook is stocked by the DEEP Fisheries Division at Black Rock State Park. Merriman Pond is open to fishing and boating. It was surveyed by the Connecticut Agricultural Experiment Station in 2015 and contains invasive aquatic plants. (See Lakes and Ponds).

In the early 2000s, DEEP's Fisheries Division documented a strong population of native brook trout in Jericho Brook ([CT DEEP Fisheries Data](#)). No forest management activities are planned near Jericho Brook in the next

ten years.

The DEEP Fisheries Division Riparian Corridor Protection policy recommends a vegetated buffer of at least 100 feet around perennial watercourses and 50 feet around intermittent watercourses (<https://portal.ct.gov/-/media/DEEP/fishing/restoration/RiparianPolicypdf.pdf>). This buffer will be maintained wherever possible along watercourses where management takes place.

J. Recreation

a. Trails (see O. Forest Maps, Map E)

CFPA maintains 6 miles of the Blazed Trail system in this block. Just over 2 miles of the 42-mile Mattatuck Trail and the entire 3.3-mile Jericho Trail and its access trail are the primary trails in this Block. They are marked with blue blazes. The Branch Brook Trail is a side trail marked with blue/yellow blazes that covers 0.4 miles in this Block. Crane's Lookout and the Rock House (called Leatherman's Cave on CFPA maps) are features on the Blue Trail in Stand 1-21.

The "Leatherman's Cave" feature on the Mattatuck Trail is a unique overhang that is sometimes called the Rock House, but it is probably not the cave used by the Leatherman. The Leatherman traveled through New York and Connecticut on a known loop from 1883 to 1889, although he had been seen throughout the region starting in 1856. There is another cave nearby that is more likely the true Leatherman's Cave. It is near an old roadbed where the Leatherman could have easily accessed it and is noted in DEEP maps from the 1930s.

A 0.1-mile trail was installed in 2023 to access the Harley F. Roberts Memorial Plaque from Bidwell Hill Road.

Forest roads within this Block are also open to recreational use.

Opportunities for passive wildlife-based recreation such as birding, wildlife photography, and wildlife viewing are available year-round throughout the property.

b. Exclusion Areas

Areas near sensitive sites or unique natural communities, forest stands where management may occur, and areas identified as Old Forestland Management Sites, are not ideal locations for future recreational development. All requests for recreational development will be assessed carefully based on DEEP's Trail Policy.

c. Unauthorized / Illegal Activity

Informal and unauthorized trails are used to illegally access unauthorized camping sites and fire rings in this Block. ATVs and other motorized vehicles are used on- and off-road. Extensive erosion has occurred on Blue Trails and woods roads because of ATVs and dirt bikes. Unauthorized mountain bike trails have been found in the Block. These activities disturb wildlife habitat, hydrology, and lead to public and fire safety concerns.

Dumping of industrial and household waste occurs regularly at the parking area on Echo Lake Road and along Bidwell Hill Road.

d. Sustainable Recreation - DEEP Policy/Procedure #310

DEEP Trail Policy #310 Multiple Trail Use Policy for DEEP Properties describes the process necessary to authorize a new trail on DEEP State Land. It describes how trail location decisions may be affected by the land designation on which trails are proposed. Proposed trails must demonstrate that the existing trail network cannot accommodate the stated need. If a proposed trail is deemed to be necessary, the trail will be mapped, an internal DEEP field review will be conducted, and the 'Trail Design and Use Form' will be submitted. If a consensus decision is not reached during field review regarding a trail proposed for a State Forest, the final decision will be made by the Director of Forestry and the Director of Parks.

Sustainable trail density guidelines available for the region will be referenced when reviewing new trail proposals to limit trail density to a low to moderate level within the Block. There are currently 8.7 miles of approved hiking trails and gated roads in this Block (this does not include Eversource roads on the powerline rights-of-way or unmaintained old forest roads). This is considered low density for the acreage of this Block.

K. Economic Benefits

According to the report "Forest Products Industries' Economic Contributions: Connecticut" from 2020, Connecticut's Forest Products Industry directly supported 7,730 jobs and had a direct output of \$2.42 billion in 2017. This industry's direct labor income and output was greater than those of commercial fishing, hunting, and trapping; mining, oil and gas production; and plant crop and animal farming in Connecticut combined. Indirectly, Connecticut's forest products industry supported over 16,000 jobs and had an output of \$3.96 billion.

Approximately 7.6% of Connecticut's 2015-2018 average wood harvest of 27.5 million board feet of sawtimber and veneer, originated from State Land. Forest products from the harvests recommended in this Plan will provide the raw materials for a bio-based economy using renewable resources. Non-timber forest products, such as firewood and maple syrup, also contribute to the local economy.

L. Public Involvement

DEEP's Forest Management Plans are sent to local land managers and stakeholders for review and comment. The Town of Watertown Conservation Commission/Inland Wetland Agency and Town Council, the Town of Thomaston Inland Wetlands and Watercourses Commission and First Selectman, Watertown Land Trust, the Northwest Connecticut Land Conservancy, the Connecticut Land Conservation Council, Connecticut Forest and Park Association, the Housatonic Valley Association, and the State Historic Preservation Office were invited to review and comment on this management plan in 2025. Supportive comments were received from three of these local stakeholders.

This plan was posted on the CT DEEP's Public Notice website, [Public Notices \(ct.gov\)](#), and distributed via DEEP's Public Notice eAlert system. Questions and comments were received from two entities. The questions were addressed, and input was considered in the final document.

The approved plan will be on DEEP's webpage, [Forest Management on State Lands \(ct.gov\)](#).

Additionally, the DEEP Forestry Division engages in public outreach before all timber harvesting in State Forests. A Forest Operation Plan, detailing the work that will occur in forest stands scheduled for harvest in the Forest Management Plan, will be created before timber harvests take place. Outreach information will be sent to the town where the work is planned, local land managers and stakeholders (including local and state

representatives), and neighbors within 500 feet of the harvest. Timber harvest information will also be posted in a public location at the site.

M. Management Goals

1. Forest Ecosystem Health and Diversity

Forest management strategies will be used to improve individual tree health and promote regeneration, creating a more multi-aged and climate resilient forest. Non-native invasive plants will be controlled with mechanical and/or chemical methods as needed to ensure that native species can grow. A combination of even- and uneven-aged management techniques will be used, and hardwood and softwood stands will be promoted.

2. Climate Change Mitigation through Sequestration and Storage

Carbon sequestration and storage will be optimized by promoting forest health and balancing higher sequestration rates with multi-aged, complex forest structure featuring high carbon storage. Appropriate forest management will help support the survival of plant and animal species as they move in response to climate change.

3. Economic Benefits

Planned harvests on 347 acres will contribute to Connecticut's wood products economy. Harvesting other forest products, such as firewood and sap for maple syrup, provides goods that are sold in the locally.

4. Forest Protection

Managing Connecticut's State Forests allows threats, such as wildfire, weather events, invasive plants, insects, and pathogens, and unauthorized use, to be addressed. Damaging insects and diseases will be monitored. Establishing access to inaccessible areas of the forest will improve DEEP's ability to protect the forest and respond to emergencies. Infrastructure updates will be completed through collaborations with Parks and District Operations Divisions.

5. Wildlife Habitat

Increasing the amount of young forest habitat while maintaining large areas of undisturbed forest will create a diversity of habitats. Specific habitat requirements for State Endangered or Threatened Species and Species of Special Concern will be incorporated into forestry operations.

6. Increasing Resilience

Young forest habitat will be created where possible with selection harvests and irregular shelterwoods. The 244 acres (18% of the total Block acreage) designated as Old Forestland Management Sites will be left to the forces of nature. Diverse forest systems are more resilient to disturbance and change.

N. Work Plans

Table 4. Work plans for the Cave-Black Rock.

Target Date	Scheduled Activity	Forest Stand	Area
2026	Bacon Farm Road Improvements	-	2,000 feet
	Selection Harvest <i>with Patch Cut</i>	1-2	57 acres
2028	Bacon Farm Road improvements	-	2,500 feet
	Irregular Shelterwood	1-3	24 acres
	Irregular Shelterwood <i>with Patch Cut</i>	1-8	144 acres
	Timber Stand Improvement	1-13	17 acres
2029	Park Road access improvements	-	1,300 feet
	Timber Stand Improvement	1-29	13 acres
2030	Clark Road improvements	-	2,300 feet
	Irregular Shelterwood	2-8	31 acres
	Selection Harvest	2-9	37 acres
2033	Black Rock Road access road building	-	2,100 feet
	Irregular Shelterwood	2-20	24 acres
2030-2033	Boundary Maintenance	-	19.9 miles
Evaluate conditions after activities are complete.			

- **Forest Product Permits**
 Stands 2-1 and 2-6 will continue to be tapped for maple syrup production under a forest products permit. Forest product permits for firewood will be administered as requests come in based on availability.
- **Invasive Treatments**
 Invasive plants will be treated mechanically and/or chemically in areas scheduled for management activities. In this Block, there is not dense invasive plant cover in areas scheduled for management, except for an old roadside landing area in Stand 1-13.
- **Road Work**
 Bacon Farm Road will be improved for approximately 4,500 feet in 2 phases to access Stands 1-2, 1-3, 1-8, and 1-13. Clark Road will be improved for approximately 2,300 feet to access Stands 2-8 and 2-9. The gated road off Park Road will be improved, if needed, for approximately 1,300 feet to access Stand 1-29.

 A new access road off Black Rock Road will be constructed, in collaboration with the Town of Watertown, to access Stand 2-20. This road will be approximately 2,100 feet.

 Road improvement and construction will include grading, drainage installation, and addition of gravel. These projects will be completed in collaboration with DEEP’s Parks and District Operations Divisions.
- **Other Infrastructure Improvements**
 A gate will be installed at the beginning of the new access road on Black Rock Road to prevent unauthorized access. This will be part of the new access road building project.

There are 19.9 miles of boundary line, including 6.9 miles of roadside boundaries, that will be remarked by 2033. Property boundary surveys will be conducted as needed.

- **Forest Pest and Pathogen Monitoring**
Areas where BLD is present will be monitored for tree mortality.
Stands with a large oak component will be monitored during observed spongy moth outbreaks in surrounding towns.
- **Hazardous Trees**
Reported hazard trees will be addressed in collaboration with the DEEP Parks Unit Supervisor based on DEEP hazard tree policies.

O. Forest Map Set



Map A - Topographic

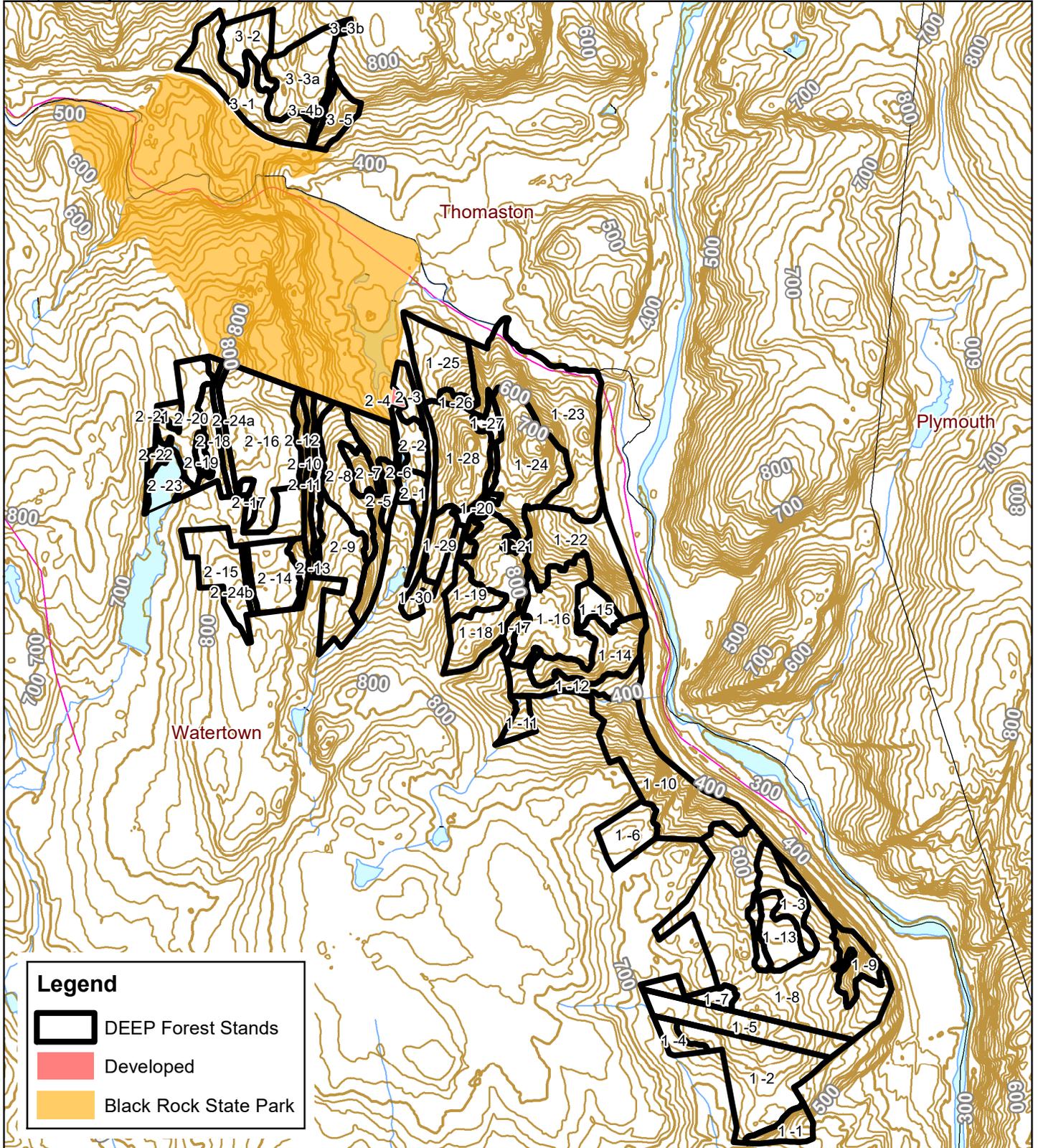
Mattatuck State Forest: Cave-Black Rock Block

Watertown and Thomaston, Connecticut
1,363 acres



July 2023

Prepared by: J. Humphreys



Coordinate System: NAD 1983 State Plane Connecticut FIPS 0600 Feet

Projection: Lambert Conformal Conic

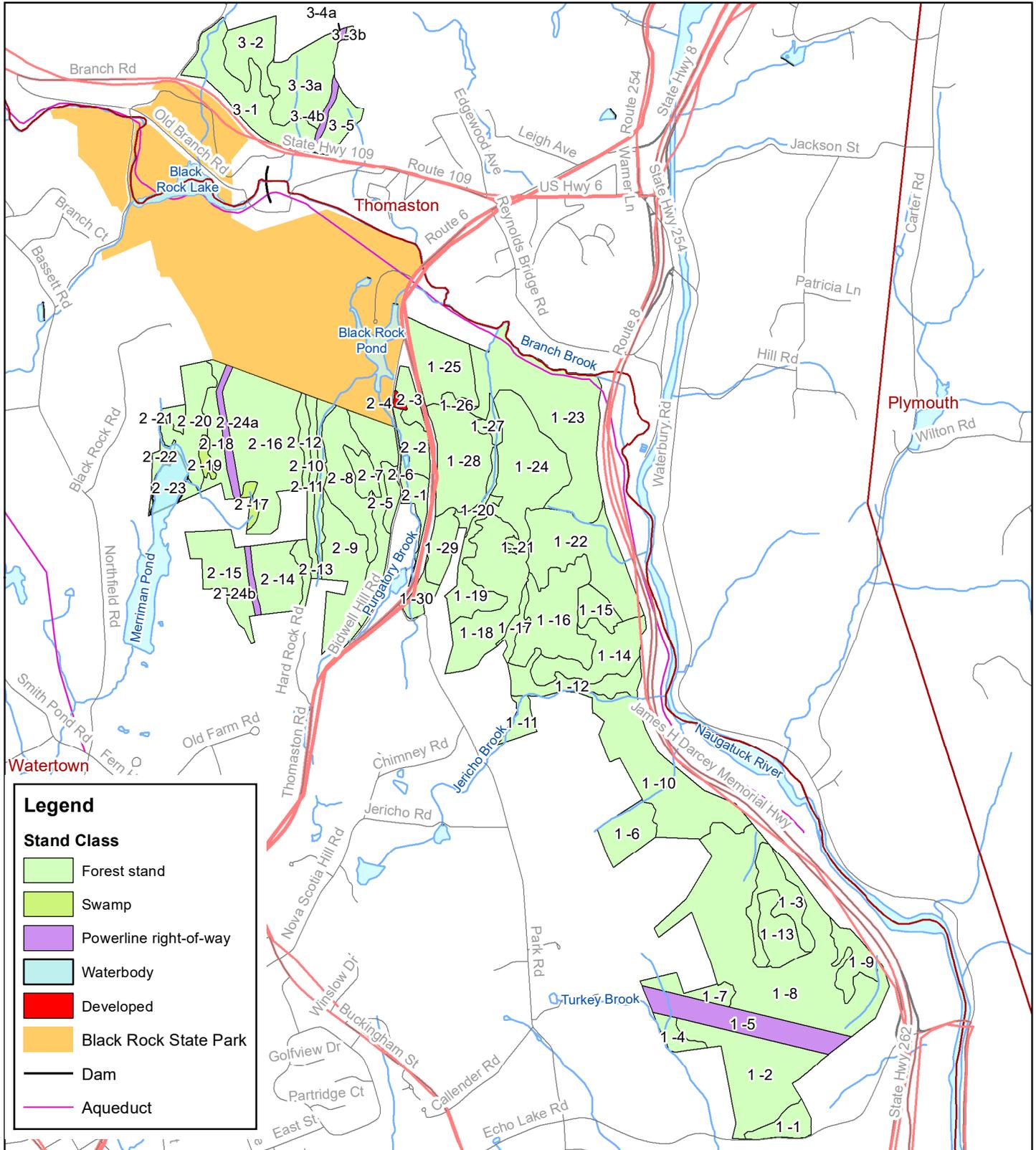


Map B - Base Mattatuck State Forest: Cave- Black Rock Block

Watertown and Thomaston, Connecticut
1,363 acres



April 2024
Prepared by: J. Humphreys



Legend

Stand Class

- Forest stand
- Swamp
- Powerline right-of-way
- Waterbody
- Developed
- Black Rock State Park
- Dam
- Aqueduct

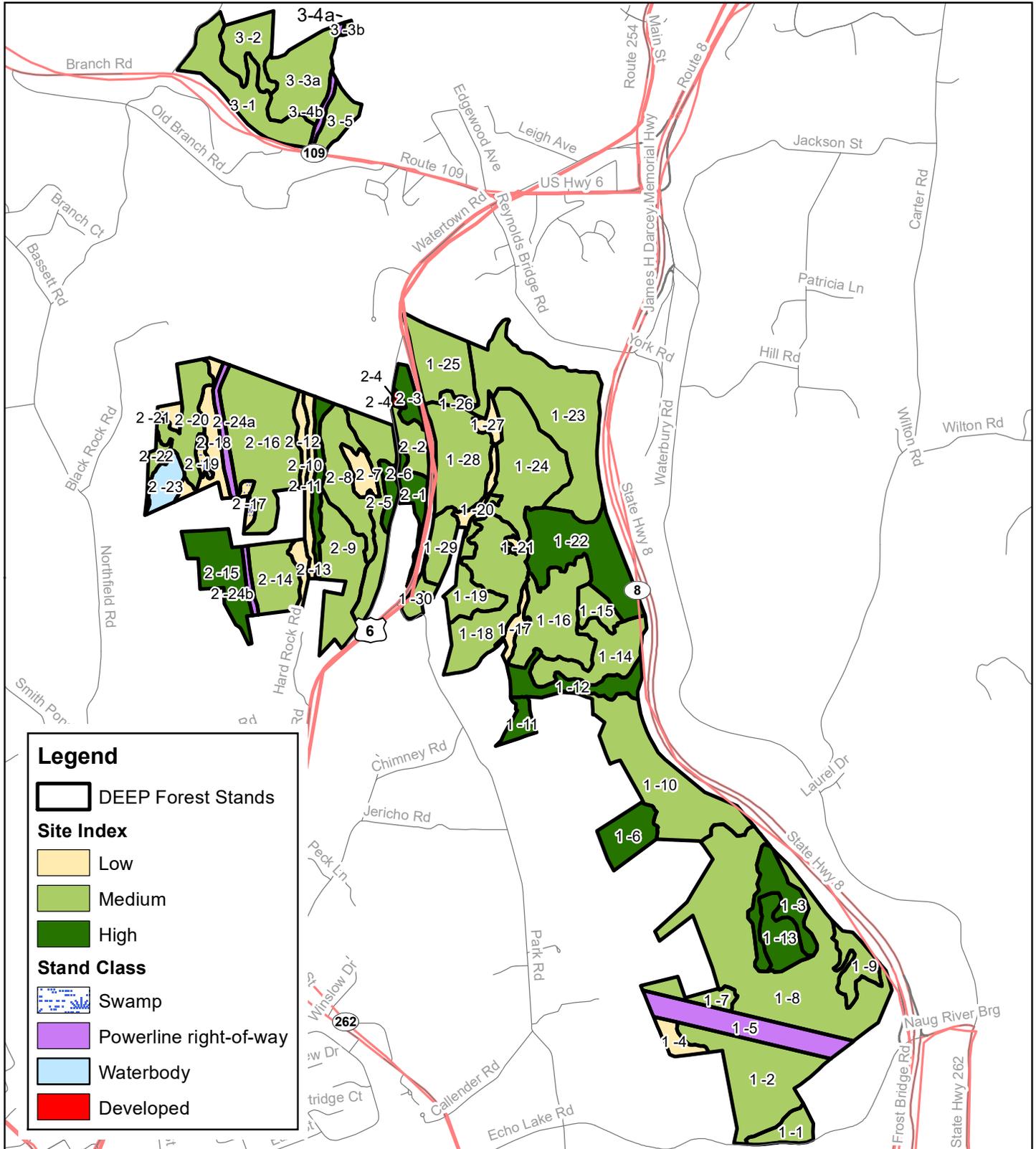


Map C - Site Quality Mattatuck State Forest: Cave-Black Rock Block

Watertown and Thomaston, CT
1,363 acres



April 2024
Prepared by: J. Humphreys



Legend

- DEEP Forest Stands
- Site Index**
- Low
- Medium
- High
- Stand Class**
- Swamp
- Powerline right-of-way
- Waterbody
- Developed



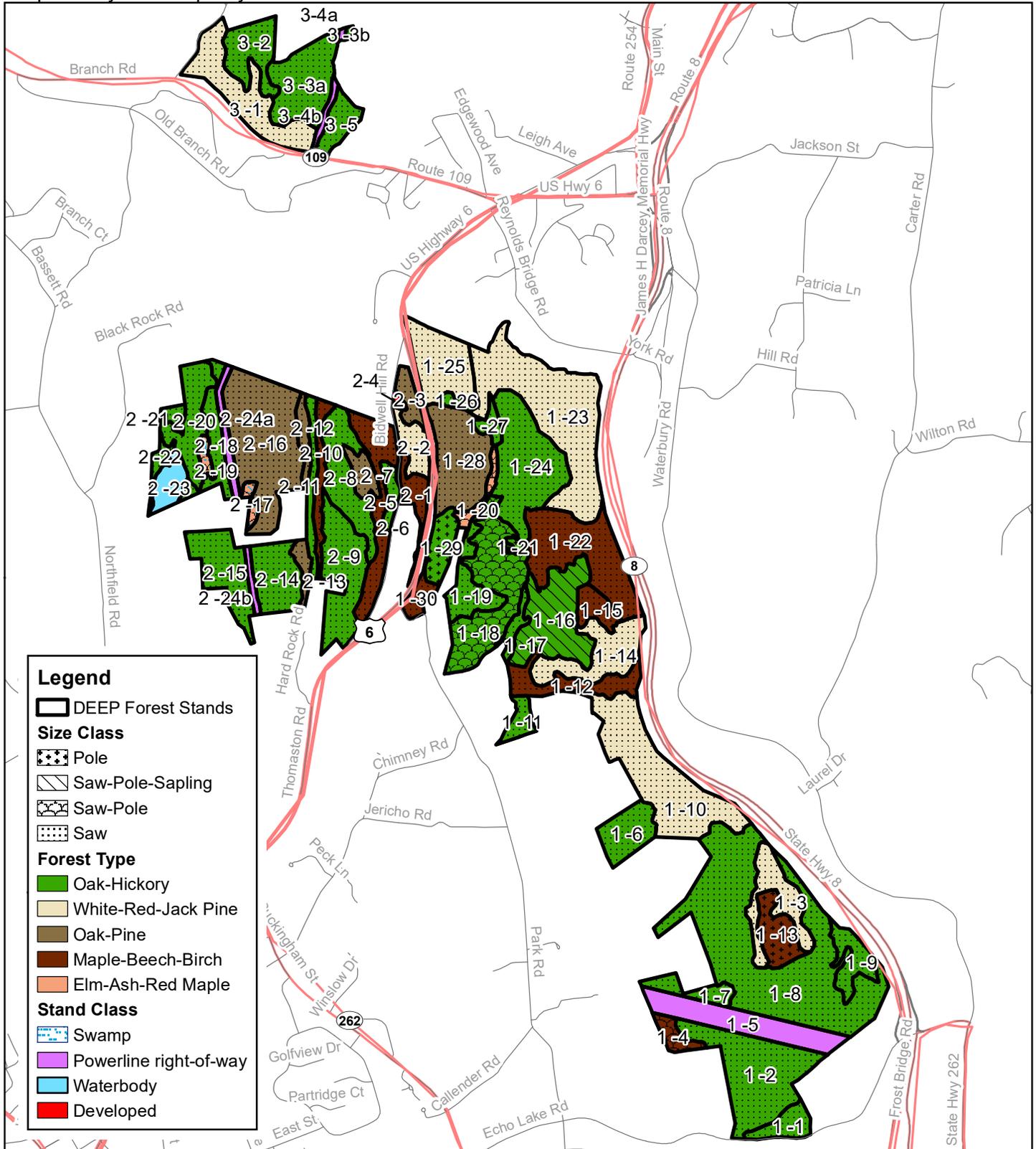
Map D - Forest Type & Size Class Mattatuck State Forest: Cave-Black Rock Block

Watertown and Thomaston, CT
1,363 acres



April 2024

Prepared by: J. Humphreys



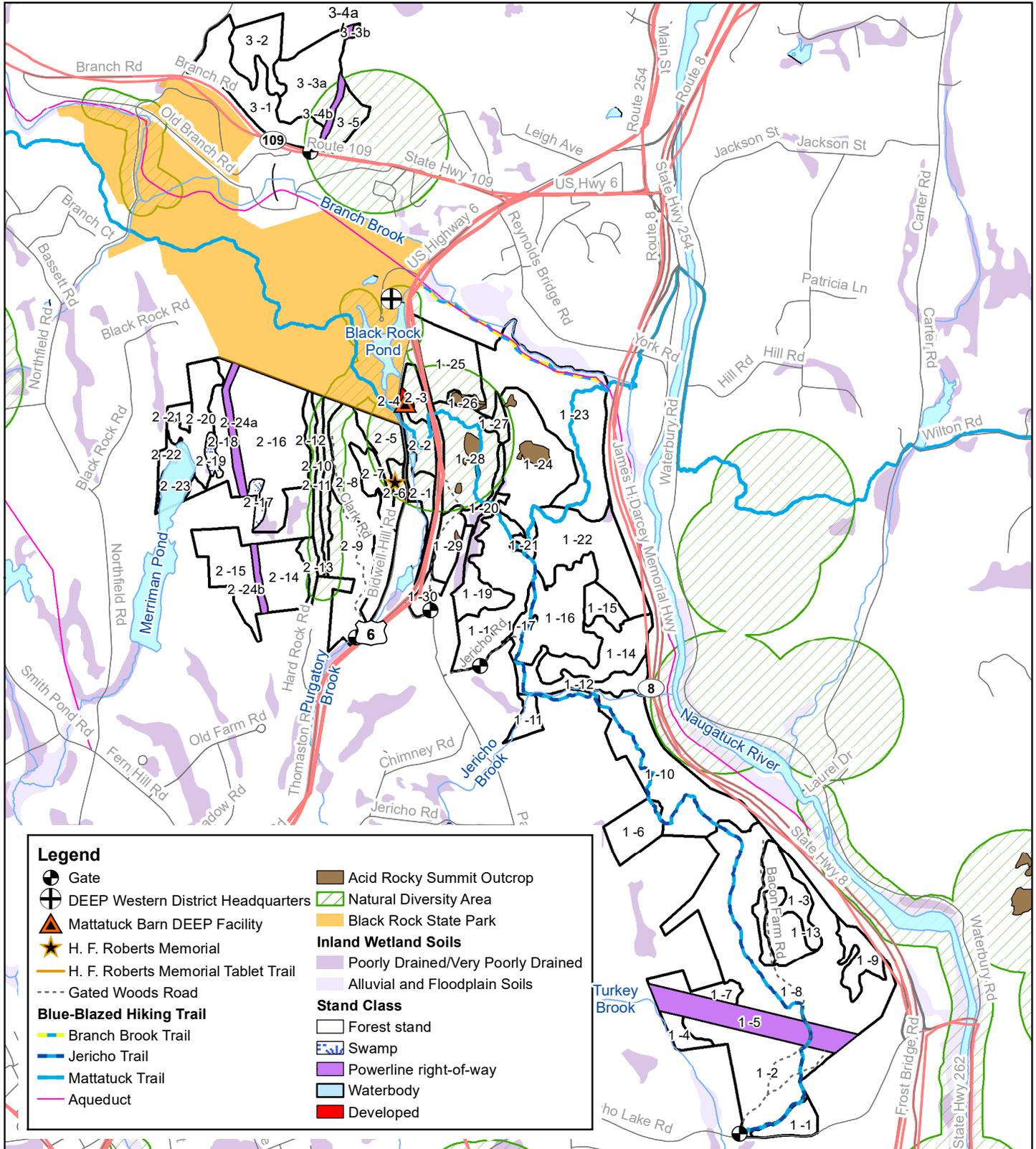


Map E - Special Features Mattatuck State Forest: Cave-Black Rock Block

Watertown and Thomaston, CT
1,363 acres



April 2024
Prepared by: J. Humphreys



Legend

Gate	Acid Rocky Summit Outcrop
DEEP Western District Headquarters	Natural Diversity Area
Mattatuck Barn DEEP Facility	Black Rock State Park
H. F. Roberts Memorial	Inland Wetland Soils
H. F. Roberts Memorial Tablet Trail	Poorly Drained/Very Poorly Drained
Gated Woods Road	Alluvial and Floodplain Soils
Blue-Blazed Hiking Trail	Stand Class
Branch Brook Trail	Forest stand
Jericho Trail	Swamp
Mattatuck Trail	Powerline right-of-way
Aqueduct	Waterbody
	Developed

Coordinate System: NAD 1983 State Plane Connecticut FIPS 0600 Feet

Projection: Lambert Conformal Conic

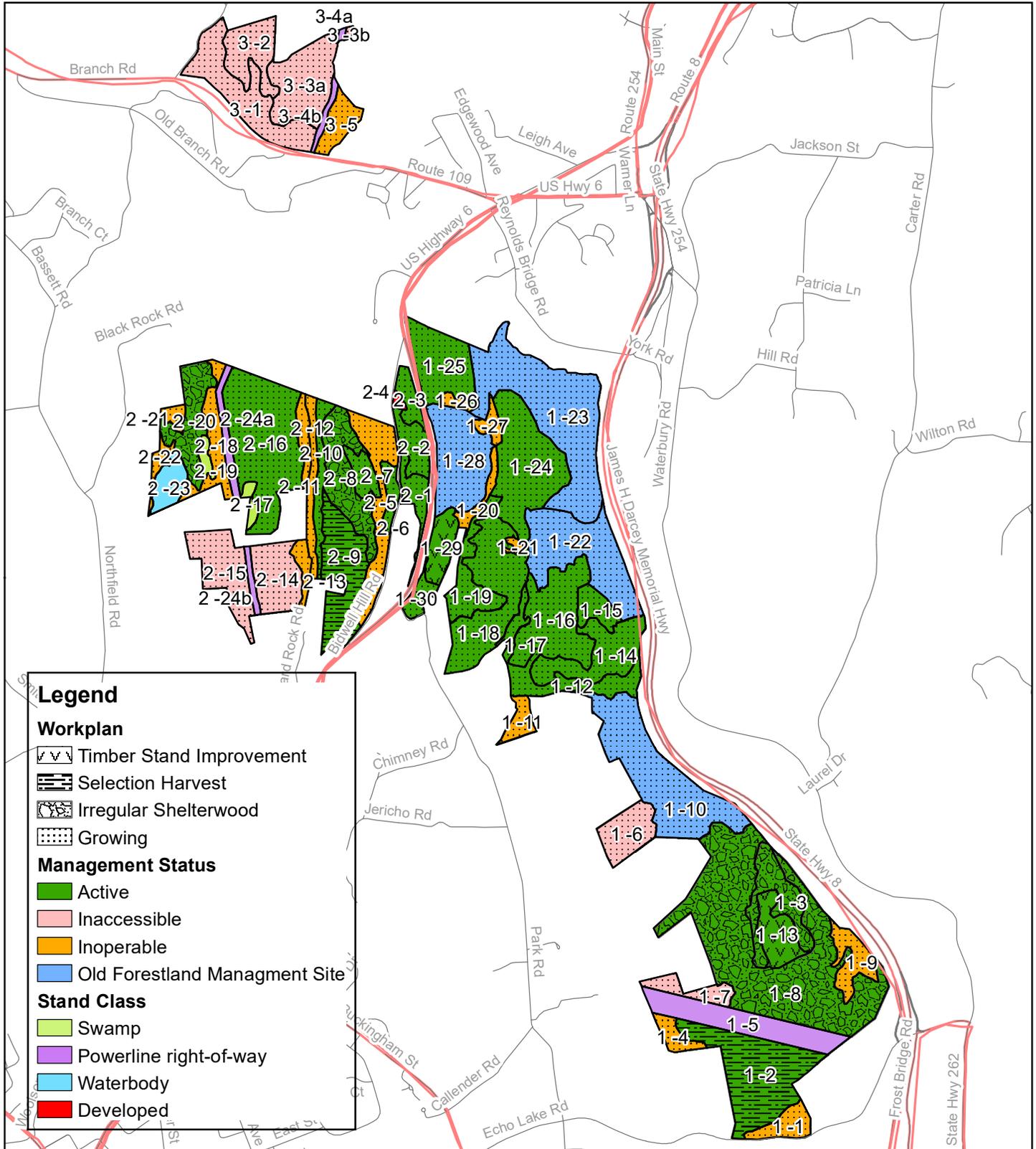


Map F - Work Plan Mattatuck State Forest: Cave-Black Rock Block

Watertown and Thomaston, CT
1,363 acres



April 2024
Prepared by: J. Humphreys



Coordinate System: NAD 1983 State Plane Connecticut FIPS 0600 Feet

Projection: Lambert Conformal Conic

Appendix A Review and Comments (DEEP and Non-DEEP)

DEEP Western District Review and Comments

Gerard Milne- DEEP Forestry Division

Joe Cassone- DEEP Fisheries Division

Peter Picone- DEEP Wildlife Division

Tammy Talbot and Jared Rice- DEEP Operations and Park Management

Skip Kearns- DEEP District Operations Division

David Nemecek- Connecticut State Environmental Conservation Police

DEEP comments indicate no concerns or are incorporated into the plan.

Other Stakeholder Review and Comments

Connecticut Forest and Park Association

Connecticut Land Conservation Council

Housatonic Valley Association

Northwest Connecticut Land Conservancy

Thomaston First Selectman

Thomaston Inland Wetlands and Watercourses Commission

State Historic Preservation Office

Watertown Inland Wetlands and Watercourses Commission

Watertown Town Council

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Appendix C Definitions

This section includes a list of commonly used forestry terms.

Acceptable Growing Stock (AGS) – Trees that meet the landowner’s objectives. Usually this includes saleable trees that are of good form, species and quality and would be satisfactory as crop trees.

Acidic Rocky Summit Outcrop – A natural vegetation community type characterized by dry to xeric exposed summits, ledges, and other outcrops (gneiss, schist, granite, or sandstone bedrock) with a vegetation of small trees, low shrubs, grasses, and herbs. It is a type of Connecticut Critical Habitat.

Aerial Photo – Photo taken from a position above the earth’s surface, such as a plane or satellite.

Age class – The trees in a stand that became established at, or around, the same time. The range of tree ages in a single age class is usually less than 20 percent of the expected age of that class.

Basal area – The cross-sectional area of a tree’s stem at 4.5 feet above the ground, or breast height. Basal area per acre is often used as a stand metric to determine stand stocking and density.

Best Management Practices (BMPs) – Procedures and treatments that lessen soil erosion, sedimentation, stream warming, movement of nutrients, and visual quality during or following forest management activities.

Biological diversity – The variety and abundance of species, their genetic composition, and the communities, ecosystems, and landscapes in which they occur. Also, the variety of ecological structures and functions at any one of these levels.

Board-foot volume – The volume of wood expressed as the number of boards 1’x1’x1” thick (a board foot or BF).

Carbon dioxide equivalent (CO₂e) – The number of metric tons of carbon dioxide emissions with the same global warming potential as one metric ton of another greenhouse gas.

Carbon sequestration – The process of removing carbon from the atmosphere for use in photosynthesis, resulting in the maintenance and growth of plants and trees. The rate (or amount and speed) at which a forest sequesters carbon changes over time. In the northeastern United States, carbon sequestration (rates) typically peak when forests are young to intermediate in age (around 30-70 years old), but they continue to sequester carbon through their entire life span.

Carbon storage – The amount of carbon that is retained in a carbon pool within the forest. Storage levels increase with forest age and typically peak in the northeastern United States when forests are old (>200 years).

Critical Habitat – Significant natural community types designated as key habitats for species of Greatest Conservation Need. These habitats are known to host rare species with very specific habitat associations.

Core Forest – Unfragmented forest land that is 300 feet or greater from the boundary between forest land and non-forest land, such as developed areas, agricultural fields, non-forested wetlands, and turf and grass. Small Core Forest patches are less than 250 acres, Medium are between 250-500 acres, and Large are greater than 500 acres. Core Forests can be managed to promote a diversity of species and age classes to promote resilience.

Cutting Cycle – The time interval between harvesting operations when uneven-aged methods are employed using group or single tree selection.

Diameter at Breast Height (DBH) – The diameter of a tree trunk measured at 4.5’ above the ground.

Endangered Species – Any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act (CGS Sec. 26-304).

Forest Product – Any raw material yielded by a forest.

Forest Type – A classification of forests based on species abundance and composition of the overstory, with the overstory defined as all trees in the 1" DBH class and larger. Species composition is based on the proportion of total stand basal area represented by each species or species group. Forest type designations are not assigned to stands until they grow out of the seedling stage into the sapling class. The USDA Forest Service identifies 140 forest types.

Forest Types mentioned in this plan are:

Chestnut Oak - Associates – scarlet oak, white oak, black oak, pitch pine, red maple, red oak. Sites—rocky outcrops with thin soil, ridge tops. Classified under Oak-Hickory Group in USDA Forest Service Classification.

Chestnut Oak - Black Oak - Scarlet Oak - Associates – northern red oak, white oak, shagbark hickory, pignut hickory, tulip poplar, red maple, Eastern white pine, pitch pine. Site—dry upland sites on thin soiled rocky outcrops on ridges and slopes. Classified under Oak-Hickory Group in USDA Forest Service Classification.

Eastern Hemlock - Associates- beech, sugar maple, yellow birch, basswood, red maple, black cherry, white ash, white pine, paper birch, paper birch, northern red oak, and white oak. Sites—cool locations, moist ravines, and north slopes. Classified under White-Red-Jack Pine Group in USDA Forest Service Classification.

Sugar Maple - Basswood - Classified under Maple-Beech-Birch (Northern Hardwood) Group in USDA Forest Service Classification.

Mixed Upland Hardwoods - Associates – Any mixture of hardwood species typical of the upland central hardwood region, should include at least some oak. Sites- wide variety of upland sites. Classified under Oak-Hickory Group in USDA Forest Service Classification.

Northern Red Oak - Associates- black oak, scarlet oak, chestnut oak, and tulip poplar. Sites—spotty distribution on ridge crests and north slopes in mountains but also found on rolling land, slopes, and benches of loamy soil. Classified under Oak-Hickory Group in USDA Forest Service Classification.

Red Maple - Oak - Associates – the type is dominated by red maple and some of the wide variety of central hardwood associates include upland oak, hickory, tulip poplar, and sassafras. Site—uplands. Classified under Oak-Hickory Group in USDA Forest Service Classification.

Red Maple Lowland - Classified under Elm-Ash-Cottonwood Group in USDA Forest Service Classification.

White Oak - Red Oak - Hickory - Classified under Oak-Hickory Group in USDA Forest Service Classification.

Yellow Poplar - White Oak - Northern Red Oak - Classified under Oak-Hickory Group in USDA Forest Service Classification.

Forest-Type Group – A broader classification of forests created by aggregating similar forest types. The USDA Forest Service identifies 28 groups. The State of Connecticut uses group names found in Connecticut forests.

Forest-type Groups mentioned in this plan are:

Oak-Hickory Group

Pine- Hemlock Group - Subgroup under USDA Forest Service White-Red-Jack Pine Group

Northern Hardwood Group - Maple-Beech-Birch Group in USDA Forest Service Classification.

Invasive species – A non-native species that exhibits an aggressive growth habit and can outcompete and displace native species.

LiDAR – Light Detection and Ranging is a remote sensing method that uses light from pulsed laser to measure distances to the Earth.

Log Rules – Methods of estimating the amount of lumber that can be sawed from logs of given lengths and diameters. The log rule statutorily mandated in Connecticut is the International ¼ -inch Rule.

Mast – Nuts of trees that serve as food for wildlife.

Mature tree – A tree that has reached biological maturity shows declining year-to-year volume growth.

Multiple use (multi-use) trails – Trails not specifically designated as hiking trails, but can be used for multiple forms of recreation including biking or horseback riding.

Native plant – A species that naturally occurs in a given location where its requirements for light, warmth, moisture, shelter, and nutrients are met.

Non-commercial treatment – Any forest management activity that does not produce enough revenue to pay for the costs associated with the treatment.

Nutrient – Elements and other chemical substances that support biological activity.

Old Forestland Management Site– A classification used by the Forestry Division which withdraws forestland from timber utilization for the span of the management plan. It can be continued indefinitely with succeeding plans.

Old-Growth Forests– Forests that were never directly affected by intensive human land use.

Overstocked – A forest stand condition where too many trees are present for optimum tree growth.

Regeneration – The number of seedlings or saplings existing in a stand. The process by which a forest is renewed by direct seeding, planting, or naturally by self-sown seeds and sprouts.

Relative Density – An index of crowding in forest stands, also called the tree-area ratio; a measure of the absolute stand density expressed as a ratio to the density of some reference level. The reference level is usually the stand density of a fully stocked stand for a particular species composition, site, and method of treatment.

Release – To free trees from competition by cutting, removing, or killing nearby vegetation.

Rotation Age – The age at which a stand is considered ready for harvest under the adopted plan of management or the culmination of mean annual increment.

Shade tolerance/intolerance – The relative capacity of tree species to become established and grow in shade.

Silviculture – The art, science, and practice of establishing, tending, and reproducing forest stands with desired characteristics.

Silvicultural Treatments - Different types of cutting methods used to manage a forest for desired outcomes.

Clearcut - Used in even-aged management to regenerate a new forest using seeds already in the soil, seeds

brought in from adjacent areas by wind or animals, and/or sprouts from stumps. All stems are removed to provide maximum sunlight for the new forest. Trees such as black cherry, yellow poplar, aspen, and paper birch often regenerate after clearcuts. This method is often used to create early successional wildlife habitat.

Patch cut - Removal of overstory trees to create patches of regeneration within a stand.

Seed Tree - An even-aged silvicultural technique similar to a clearcut but leaves several residual trees per acre to provide a seed source for regenerating target species.

Shelterwood - Used in even-aged management. Understory and lower crown canopy trees are removed to allow the new stand to regenerate in partial sunlight. Trees to be retained are usually of the best quality to serve as a desirable source of seed. After adequate regeneration is established, the overstory is removed in one or two cuts. Shelterwoods are often used to regenerate species such as oak and white pine that have irregular crops of seed.

Irregular shelterwood - This treatment is intended to regenerate new age-classes of forest while maintaining high levels of horizontal and vertical structural diversity. Stands develop with 2-3 age-classes post-harvest and incorporate a variety of shade tolerance regimes across a harvest area.

Selection harvest - Used in uneven-aged management. Trees are removed singly or in small groups, maintaining a continuous canopy. Selection harvests tend to favor trees that can grow in partial shade such as sugar and red maples, black and yellow birch, beech, and hemlock.

Group selection - An uneven-aged silvicultural technique where trees are removed in groups usually 1/10 to 2/3 acre in size, but sometimes up to 1 or 2 acres on large properties. Group selection can be applied in combination with single-tree selection to create a more varied landscape.

Single-tree selection - An uneven-aged silvicultural technique where trees are removed singly or in groups of 2 or 3, which maintains a continuous canopy and an uneven-aged or uneven-sized mixture.

Thinning - Used in even-aged management to reduce stand density to improve growth and health. The crowns of crop trees are released on at least two sides and preferably three or four sides.

Timber Stand Improvement (TSI) - A thinning made in immature stands to improve the composition, structure, condition, health, and growth of the remaining trees.

Site Index – An expression of forest site quality based on the height of a dominant or co-dominant tree at age 50 (in the eastern United States).

Size Classes – A designation of trees based on their DBH.

Sawtimber - Trees 12-inch DBH (diameter at breast height, or 4.5 feet off the ground) and larger that contain at least one 8-foot sawlog.

Poletimber - Trees between 5 and 11 inches DBH. These trees are too small for sawlogs, but could be sold as pulpwood, fuelwood, or other small products where such markets exist.

Saplings - Trees 1 to 5 inches DBH.

Seedlings - Trees less than 1-inch DBH.

Soil Compaction – The process by which the void space in soil is decreased. Compaction can cause decreased tree growth, increased water runoff and soil erosion.

Species diversity – The number of different plants, animals, and other life forms coexisting in a community.

Species of Special Concern – Any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its populations or has been extirpated from the state (CGS Sec. 26-304).

Species of Greatest Conservation Need – Species of wildlife, including low and declining populations as each State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of wildlife of the State and are listed in a state’s Wildlife Action Plan.

Stand – An area of trees of a certain species composition (cover type), age class or size class distribution and condition (quality, vigor, risk), usually growing on a fairly homogeneous site.

Even-aged stands contain trees in the main canopy that are within 20 years of being the same age. These stands are sometimes designated by age-class (e.g. a 40-year old stand) or broad size-class (e.g. seedling/sapling, poletimber, sawtimber).

Uneven-aged stands contain trees of several 15- to 20-year age-classes. These stands generally contain trees of many sizes (seedlings through sawtimber) due to the range in ages and the differences in growth rates among species.

Stand condition – The relative number, size, species, quality, and vigor of trees in a forest stand.

Stand density – A quantitative measure of the proportion of area in a stand occupied by trees such as basal area or trees per acre.

Stocking – A subjective indication of stand density that helps determine whether the stand needs to grow further, be thinned, or regenerated.

Sustainable Forest Management – A dynamic and evolving concept, which aims to maintain and enhance the economic, social, and environmental values of all types of forests, for the benefit of present and future generations.

Threatened Species – Any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a “threatened species” pursuant to the federal Endangered Species Act, except for such species determined to be endangered (CGS Sec. 26-304).

Understory – The saplings, shrubs, seedlings, and other vegetation growing beneath the forest canopy and above the herbaceous plants on the forest floor.

Unacceptable Growing Stock (UGS) – Trees of low quality or less valuable species that should be removed in a thinning.

Watershed – An area of land through which precipitation is redistributed into components of the hydrologic cycle, including evaporation, groundwater, and streamflow. A watershed is all the land giving rise to streamflow at a selected point in a stream channel; the area drained by a river or stream and its tributaries.

Wetland – A land/water ecosystem characterized by periodic inundation. The soils are developed under the influence of saturation and support plants and animals adapted to these conditions. In Connecticut, inland wetlands are defined by soil type. The soil types are characterized as poorly drained, very poorly drained, alluvial, and flood plain.