

Community Forest Management Plan Part I: The Little Big Forest USFS Criteria Highland Lake, Stoddard, N.H.



February 15, 2024

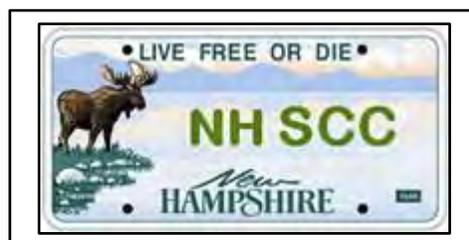
“Great Stewardship by Great Example”
Stoddard Conservation Commission

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With Assistance from the LBF Stewardship Committee AND.....



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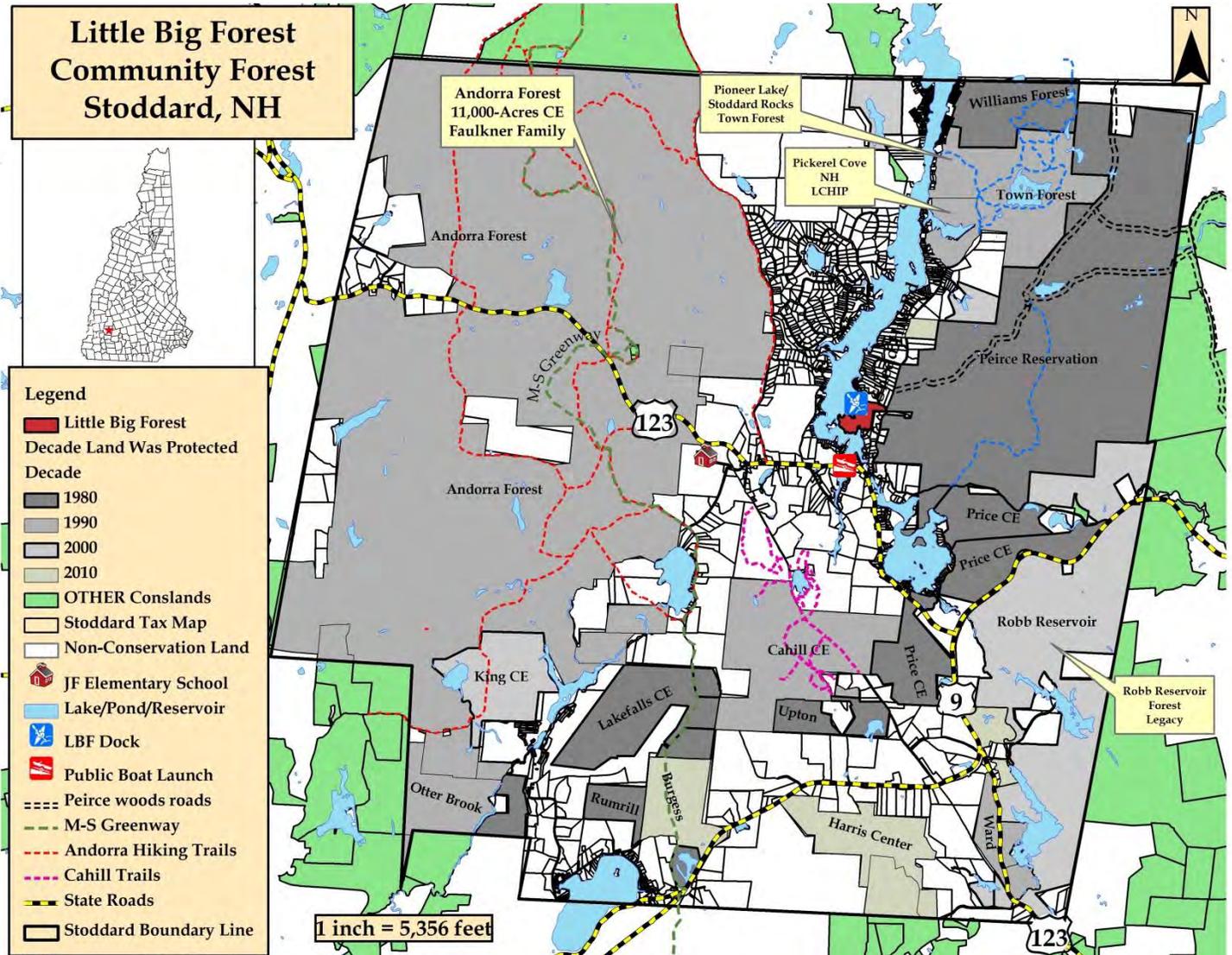
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Introduction

Highland Lake is a 5+ mile long, narrow lake that extends north/south between the hills that form parts of three watersheds. The Little Big Forest lies on the southeastern flank of the lake, cradled in a landscape that contains thousands of acres of protected lands.

The landscape level feature map (below) shows the juxtaposition of the Little Big Forest relative to the conservation lands. The landscape is rich with hiking, boating, and natural resource field trip opportunities. According to a study conducted in the northeast part of town in the 1990's, Stoddard has one of the most intact ecosystems south of the White Mountains.



Stoddard is a small hilltop town perched on the high, rocky divide between the Connecticut and Merrimack River valleys. It was one of the last towns in Cheshire County to be incorporated.....and it took a hardy people to do that.

While its population is relatively small, geographically Stoddard is the second largest town in Cheshire County. As towns and cities across NH became established and grew, the people shaped the land. But in Stoddard, where half the hills and half the rocks of Cheshire County can be found, the land shapes the people! Over the past 40 years private landowners working with land trusts have protected 65% of the land in town¹: these conservation lands help to define who we are.

In 2020, when COVID~19 came to town, it brought a tsunami of new growth; people with summer homes began converting and upgrading them for year round use. The few remaining undeveloped lots along Shedd Hill, the shores of Highland Lake and elsewhere in town, began hosting new residents. Fibercast high-speed internet became a great enabler!



When development outpaces the town's ability to properly regulate it, developers and landowners push the envelope of the regulatory bounds as in the picture above: a clear violation of shoreline regulations on Highland Lake (summer of 2021).

One area that had miraculously escaped growth was becoming available to developers or prospective buyers looking for sites for house lots, contained 40+ acres with over 4,000 feet of pristine frontage along the southern end of Highland Lake.

In April of 2021, three lots (totaling 40-acres) owned by Mr. Wilson of Connecticut, were listed by The Masiello Group of Keene, NH as "3 contiguous lots (that) total over 41 acres and offer multiple possible house sites. A June 27, 2019 Appraisal prepared for Mr. Wilson developed a "conceptual design of a lake front subdivision" that "analyzed 26 house lots with 150 feet of lake-front per one-acre lot!" While this proposal didn't take into consideration the towns zoning regulations for

¹ See History of Stewardship starting on page 3 of this plan

development of private roads, both the planning board and ZBA do not have a good track record AND developers with deep pockets often get their way. This was a real threat that galvanized the community into action when residents became aware of this.

The Conservation Commission inquired as to what could be done to acquire, protect and manage this land for the benefit of the Stoddard residents, James Faulkner Elementary School (JFES) students, and camp owners on Highland Lake, and to preserve the land's outstanding wildlife habitat and other natural resource values.

Conservation Outcome Sought

On July 8, 2021, Stoddard conservation commission chair Geoff Jones and abutter Craig Walker met with the owner Steven Wilson and his realtor to discuss his land. He said he bought the land to provide a place to teach his kids how to camp and fish and to discover the secrets and joys of the natural world. Regretfully, his personal circumstances had changed and he could no longer keep the land. Jones seized the moment to express the towns' strong desire to acquire the land so that the children of Stoddard will always have a place, where they too, can learn to camp and fish.

At the meetings end, Mr. Wilson offered the town the gift of time to achieve a conservation outcome.

There are pivotal points in a town's history where an event helps to galvanize a community towards a higher purpose. The community effort to protect "Little Big Forest" provides the common ground and "purpose" that citizens from all walks of life can come together on. Furthermore, it builds upon a long history of land stewardship!

Legal Assistance Sought to Initiate Acquisition

At the conclusion of the meeting with Mr. Wilson, the conservation commission sought the services of attorney Thomas Masland, an attorney experienced in helping towns and land trusts protect land. In May, 2022, the Conservation Commission, with support from the Stoddard Board of Selectmen, obtained a signed Option Agreement (OA) from the landowner to purchase the property. It would take 10 months of intense negotiations before a signed Option Agreement was obtained.

Key provisions of the OA included:

- It established a purchase price firmly set at \$1.3 million. This turned out to be a critical and strategic point, because the appraised price came in at \$1,335,000.00, thirty-five thousand dollars *more* than the selling price, which meant this was a **bargain sale**. This factor played an important role in all aspects of the fundraising effort;
- A nonrefundable Option Fee of \$25,000, applicable to the purchase price, due at the execution of the OA;
- Raising or receiving commitments for 75% of the funds needed to purchase (and close) by December 1, 2022;
- With the successful completion of the two aforementioned requirements, the OA was extended to June 30, 2023; it required a second nonrefundable \$25,000 payment, also applicable to the purchase price;

The final deadline for compliance with the terms of the OA required that all funds required to purchase and close needed to be raised (or received as commitments) on or before May 30, 2023. The town successfully closed on the purchase of the Little Big Forest on July 7th, 2023



*Left to right: Christopher Madden, BOS chair; realtor Jillian Exel, Geoff Jones, chair Stoddard Conservation Commission, Jason Kovarik, Stoddard Con Com, Michelle Pong, Stoddard Town Administrator.
LBF landscape portrait by local artist Richard Whitney.*

Description, Locatin and Access to the LBF

From the intersection of Rte. 123 and Shedd Hill Rd. in Mill Village, Stoddard, turn right at the fire station onto Shedd Hill Rd. Travel approximately .7 miles to the top of Shedd Hill Rd. Turn left into the parking lot with kiosk and seasonal porta-potty (scheduled to be built in spring/summer 2024). This will be the main public entry point.

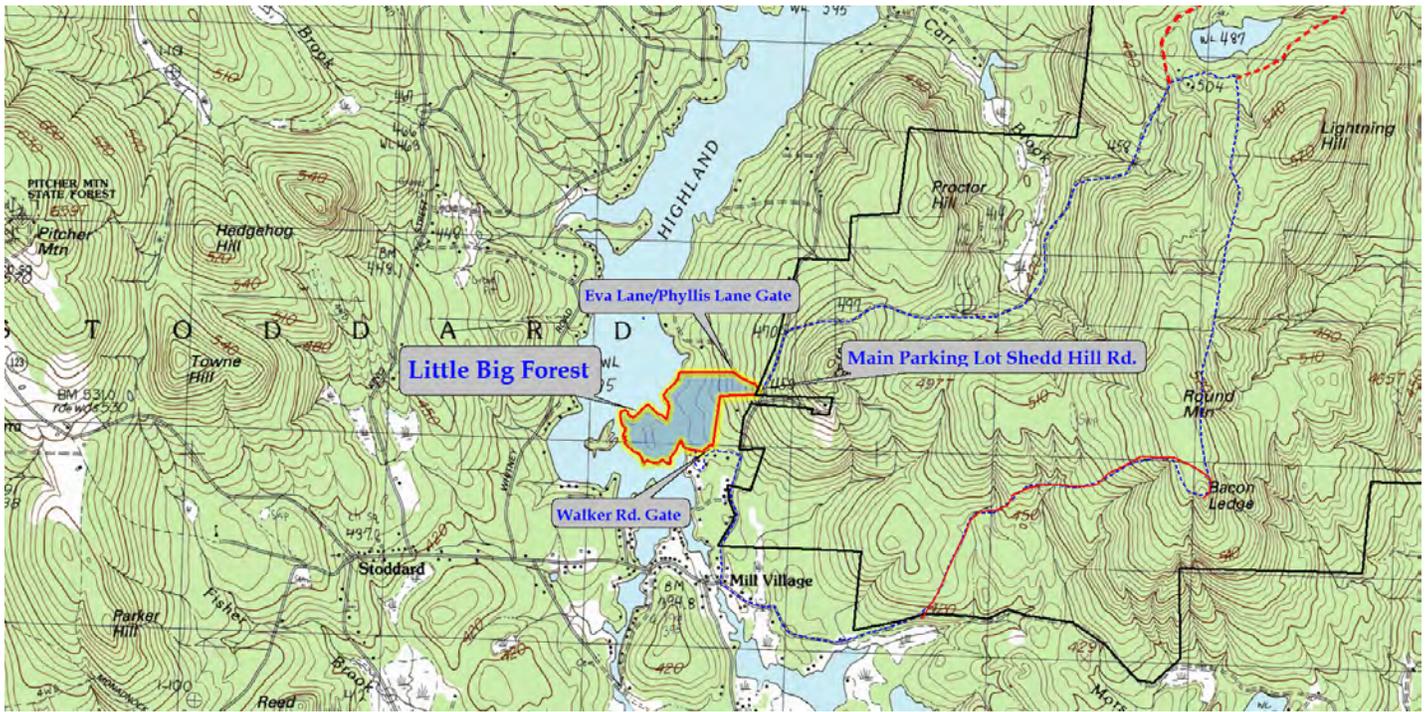
GPS Coordinates:

Latitude: 043° 05' 09.9595"N

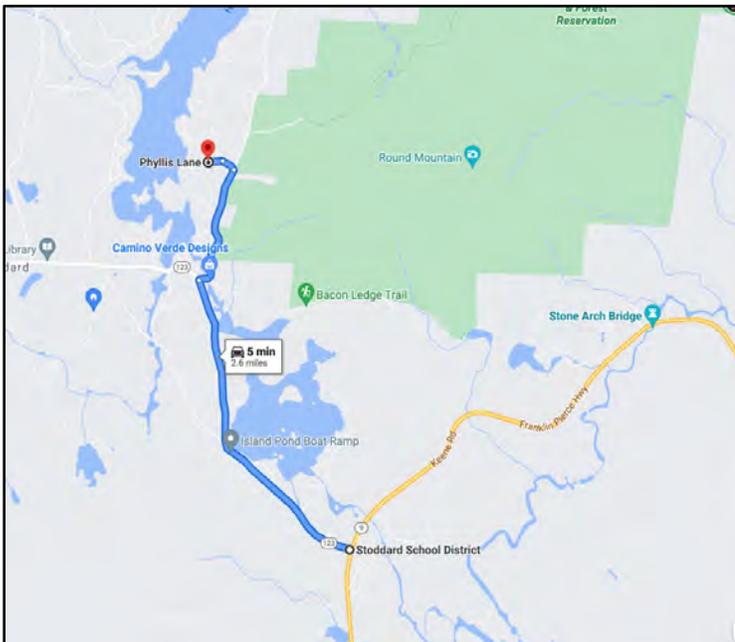
Longitude: 072° 05' 25.8895"W

The LBF is located at the narrows of the southern end of Highland Lake on the eastern flank. Highland Lake is an artificially impounded body of water. The land is located along the toe of the slope to Stacy Hill. Several thousand acres of conservation land lie directly across the street from Shedd Hill, including the Peirce Reservation.

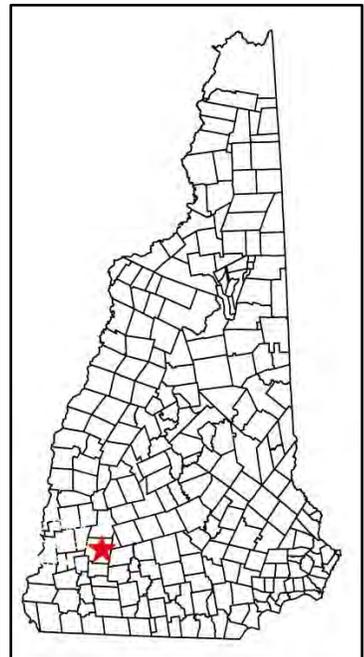
The steepest part of the property is the eastern end of Lot M-121 L-1; the other two lots have a fairly flat, but undulating terrain.



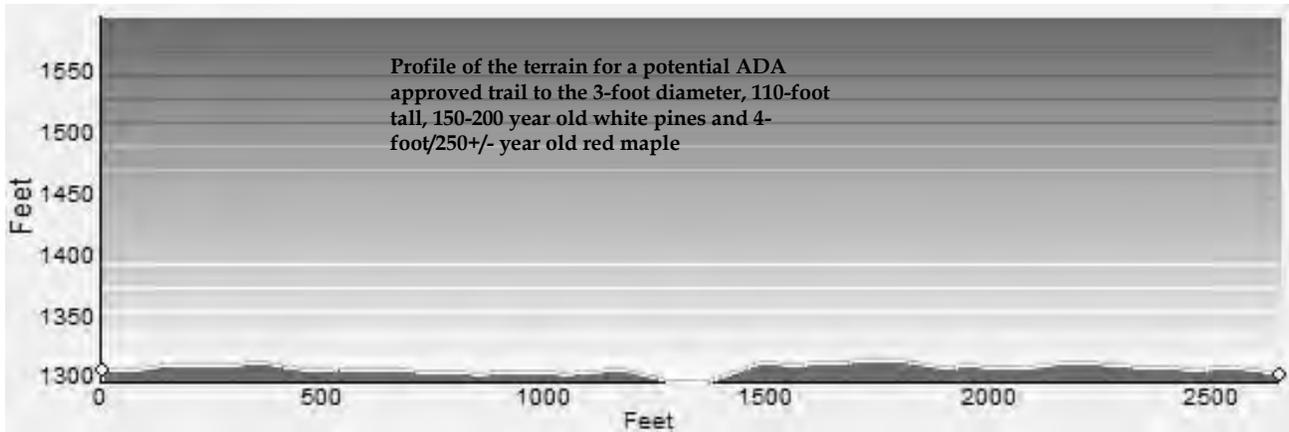
Visitors wishing to gain access to the lake with canoes or kayaks can do so by portaging the short distance from the Phyllis Lane gate (off Eva Lane) to a dock near the cabin. The access road to the cabin is a well-constructed woods road. This road would also allow ADA visitors easy access to a planned trail system that would accommodate their needs. In the future, once a cul-de-sac is built near the cabin, Phyllis Lane may be available for vehicular use to launch boats by the public.



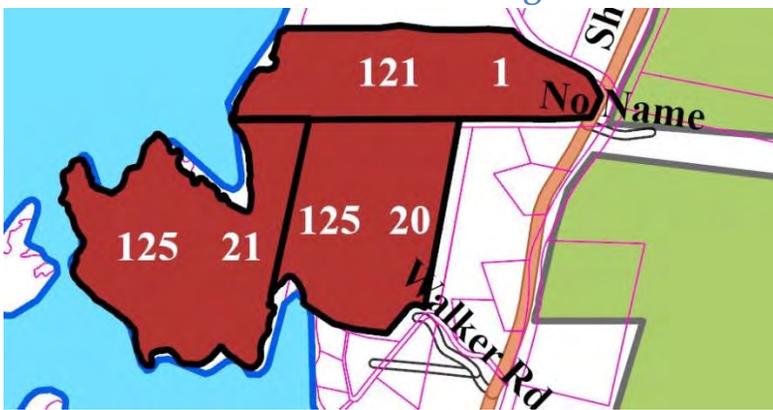
From the Jct. of Rte. 9 and Rte. 123 west, travel west 1.8 miles to Mill Village; turn right onto Shedd Hill Rd. (by the Fire Station) continue north 0.7 miles around a twisting road that heads up a steep hill. Near the top of the hill before Eva Lane, turn left into the main parking lot with kiosk and porta-potty. **LBF is located in the NE part of Cheshire County.**



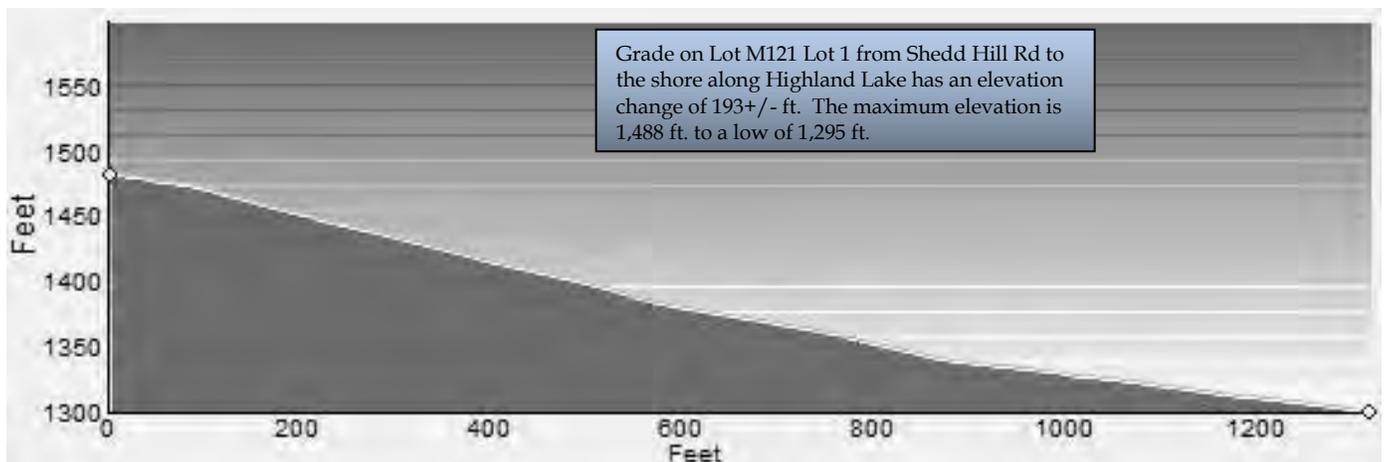
The following map shows the gentle nature of the terrain of Lots M125 L 20 & L21:



The LBF consists of three abutting lots:



Lot M-121 L-1, northerly 11.9-acre lot, has approximately 100+ feet of frontage along Shedd Hill and will host the main parking lot. It joins Eva Lane with common frontage for 500+/- feet along the southwest side of the road. The deed prohibits building along Shedd Hill and Eva Lane. As the lot extends westward from Shedd Hill, the terrain has a 15%-50%+ grade with a fair amount of surface rocks and boulders. As the property approaches the lake and levels off, some of the soils become hydric.



Lot M-125 L-20 is the southeasterly 12.5 acre lot. It has approximately 100 feet of frontage along Walker Rd. A metal gate is located at a sharp bend in Walker Rd. where one or two cars can park, however the public is discouraged from using this area because the Walker Rd. is private and the LBF is not part of the Walker Road Association.

Lot M-125 L-21 is the most westerly and largest lot at 15.8 acres. It hosts some of the largest white pines and 42-inch red maple. The lot lacks deeded access.

Cultural Features

Stonewalls and stone piles indicate that portions of this property were farmed long ago. The deed also makes mention of barb wire fencing. There is no evidence of recent or extensive commercial timber harvesting. For the most part, there is lack of evidence of extensive logging activity, as there is no evidence of skid trails, logging slash, or log landings. There are two little used trails: one enters Lot M-125 L-20 and skirts along the eastern bound north to south, continuing onto Lot M-121 L-1. Both trails peter out after a brief distance and suggest they may have been created to conduct test pits decades ago. Scattered stumps 40+ years old and older can be found on the eastern end of M-125 L-20 and in eastern sections of Lot M-121L-1. However, most of the LBF has no evidence of past logging activity.

A second trail seems to originate from the Walker's property and meanders in a westerly direction across Lots M-125 L-20 and L-21, continuing to the raised point on the northwesterly peninsula that has a grand view of Mt. Lovewell, 8+ miles to the north, in Washington, NH.

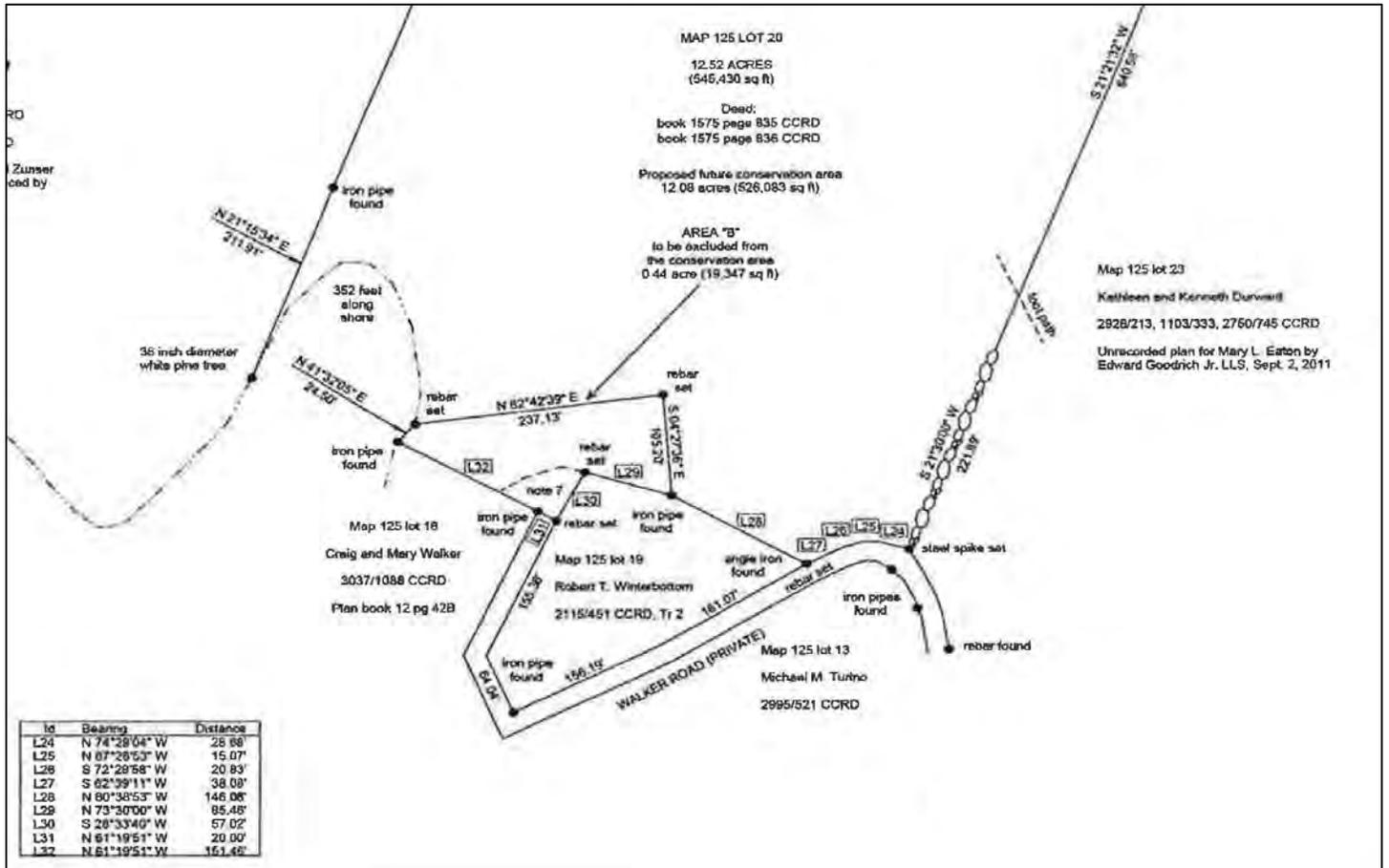


The land appears to have been left idle with little use for the past 70+ years, with the exception of a small, rustic cabin in the NW corner of M-121L-1 (see section on buildings for more information).

A well-built woods road known as Phyllis Lane follows the northern bound running east/west provides vehicle access to the cabin via Eva Lane.

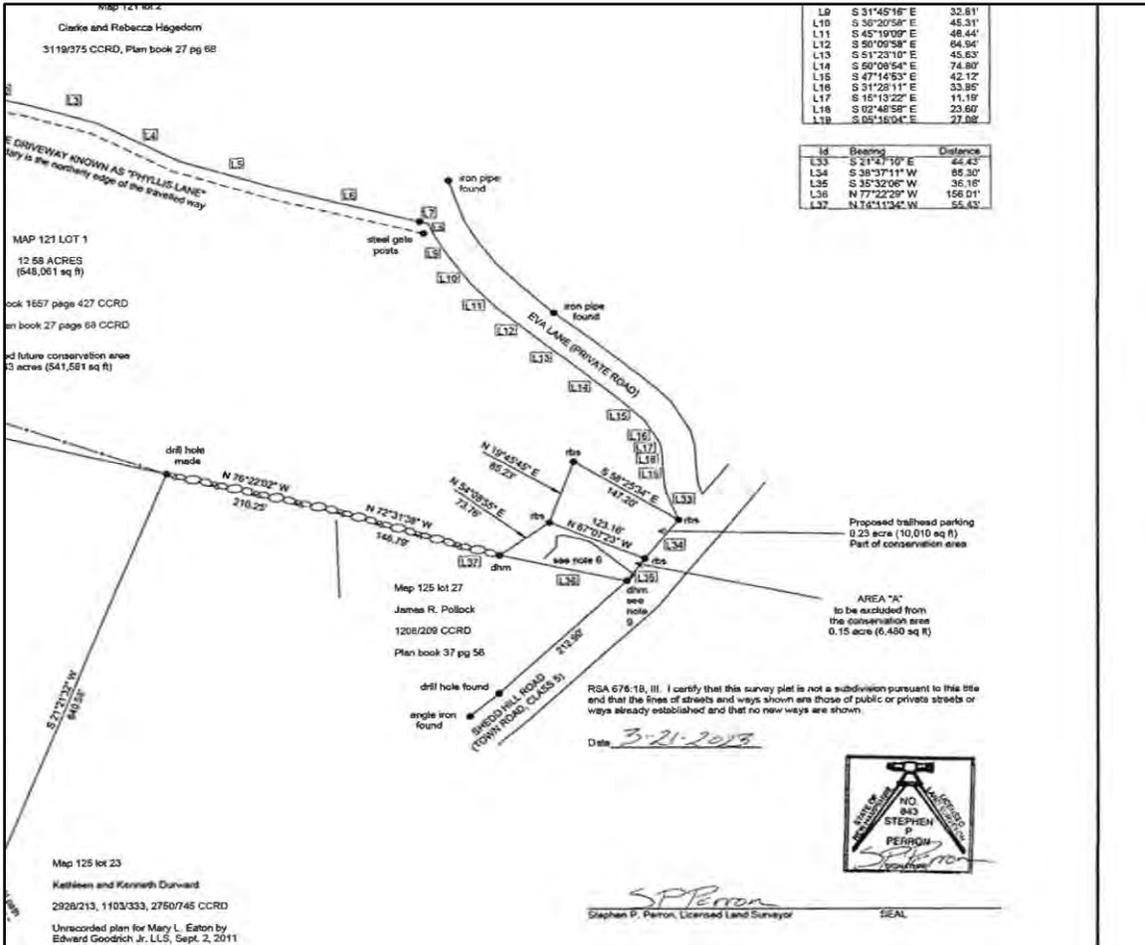
Boundary Lines

A property survey of the bounds was conducted in May of 2022 by licensed surveyor Stephen S. Perron, (LLS #843) of 54 Portsmouth St., Concord, NH. During the course of the survey, two encroachments were discovered. One encroached area associated with the Walker property included a driveway and parking space at the end of Walker Rd. Mr. Walker requested permission to survey out a parcel of the Wilson lands for a future state approved septic. This request was granted. It expanded the exclusion area to 19,347 sq. ft.



The second encroachment involved land associated with the Pollock property, where Mr. Pollock had stored various outdoor equipment and small buildings on 6,480 sq. ft. of land. Because the survey preceded the appraisal, the encroached parcels were appraised separately and excluded from the conservation land. Both owners agreed to pay the town the appraised value. The Planning Board approved the boundary line adjustments at their February, 2024 monthly meeting.

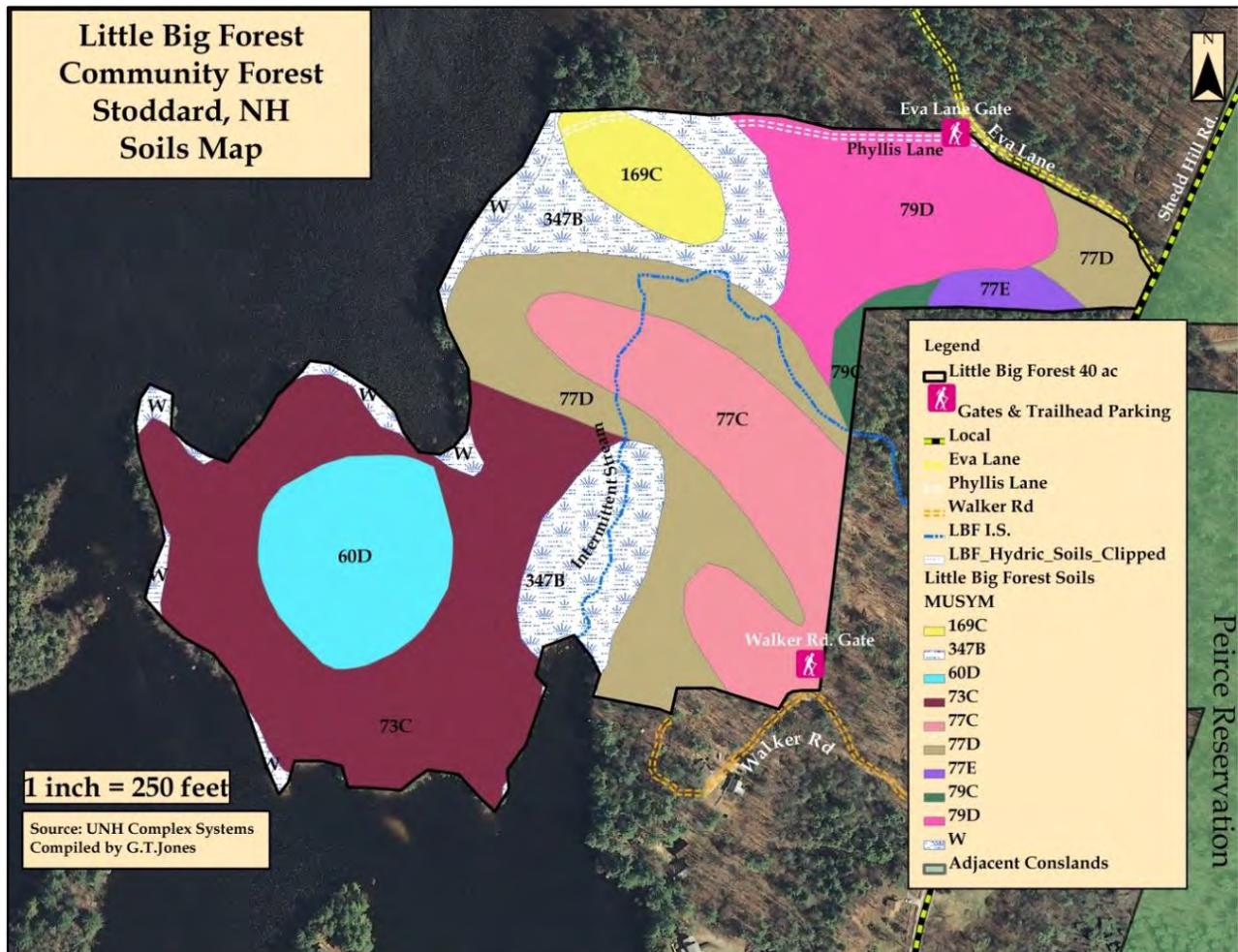
All corners are identified by field markers that are a combination of set rebar, found iron pipes and drill holes. All corners will be blazed in red in the spring of 2024 and refreshed every 5 to 7 years.



Here is an example of the extent of the Shedd Hill/Eva Lane encroachment. Approximately 6,480 square feet of the Wilson Land was impacted. This issue was resolved by the planning board at their February, 2024 monthly meeting.

Soils

A majority of the soils are comprised of Berkshire and Marlow Fine Sandy Loam that are well drained, yet have a high potential for erosion. Sixteen acres are classified as farmland of local importance. Approximately 40% of the acreage has slopes that range from 25 to 50%, a majority of which is in the eastern end of Lot M121-L1. A narrow band of hydric soils lies east of the Lot M125-L20 and drains across the NE corner into a wetland seep that continues onto Lot M125-L20 into more hydric soils to the north on Lot M12-L1.



In short: Ninety-five percent of the acreage has a combination of steep slopes, highly erodible/hydric soils, that if commercially logged and/or developed to its maximum allowable potential could have adverse impacts to sedimentation and nutrient enrichment to Highland Lake.

Another band of hydric soil lies along the SW border of Lot M125 L21. This area has noticeable amounts of windthrow in the hydric soils. The grayish color of the soil indicates depletions associated with hydric soils, confirming the soils map data.

Forest Profile

The LBF consists of three main forest types that are peculiar to each lot.

Map 125 Lot 20 12.5 Acres:

Forest Type dominated by exemplary red oak, mixed hardwoods and scattered super canopy white pine. The overstory of this lot is populated by large white pine and red oak scattered in the

overstory. The red oak ranges in diameter from 14" to 20" at breast height and is 1.5 to 2 logs in merchantable height (24-32 feet). Evidence of past agricultural use lies in scattered piles of stones; scattered old stumps can be found along the eastern side. However there is a lack of recent harvesting.



White ash, yellow and white birch, beech, red oak, red spruce, hemlock and big toothed aspen can be found on the western side of the lot, representing good diversity of tree species and quality.

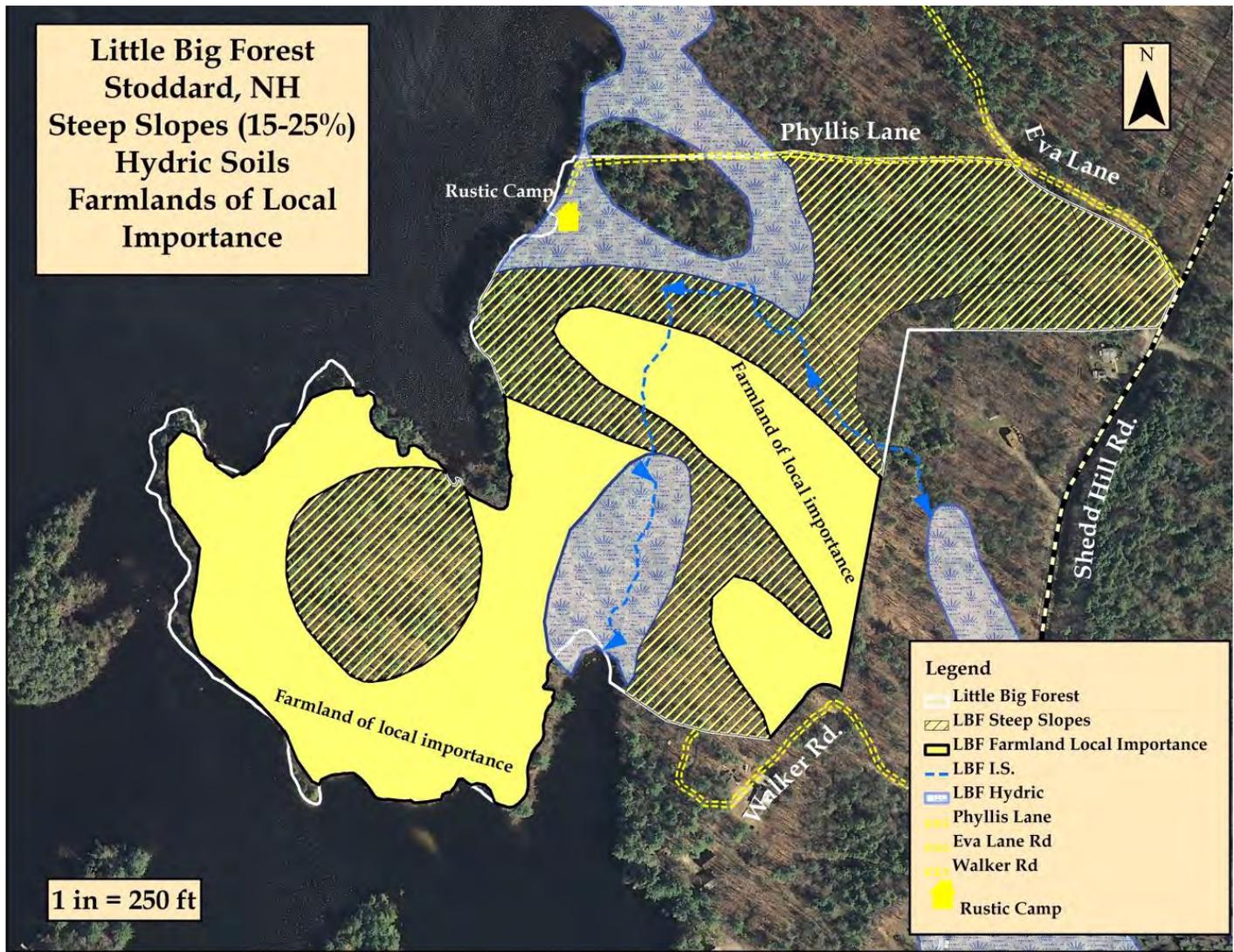
The stand has scattered surface rocks, acorn mast and deer scat. This lot has excellent wildlife habitat: red oak in the overstory provides hard mast, along with scattered beech; hemlocks, in both the overstory and midstory provide year round cover, along with the white pines in the overstory. The understory and midstory provide vertical diversity, which creates diverse habitat for songbirds.

Map 121 Lot 1 11.9 Acres:

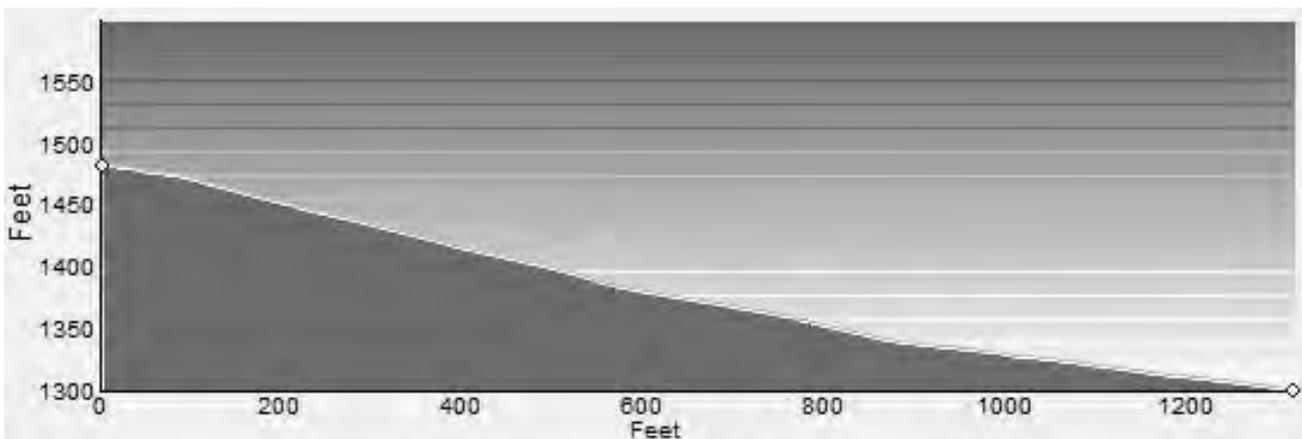
The forest type on this lot is dominated by tall white pine in the overstory; co-dominates of hemlock and mixed hardwoods in the understory.

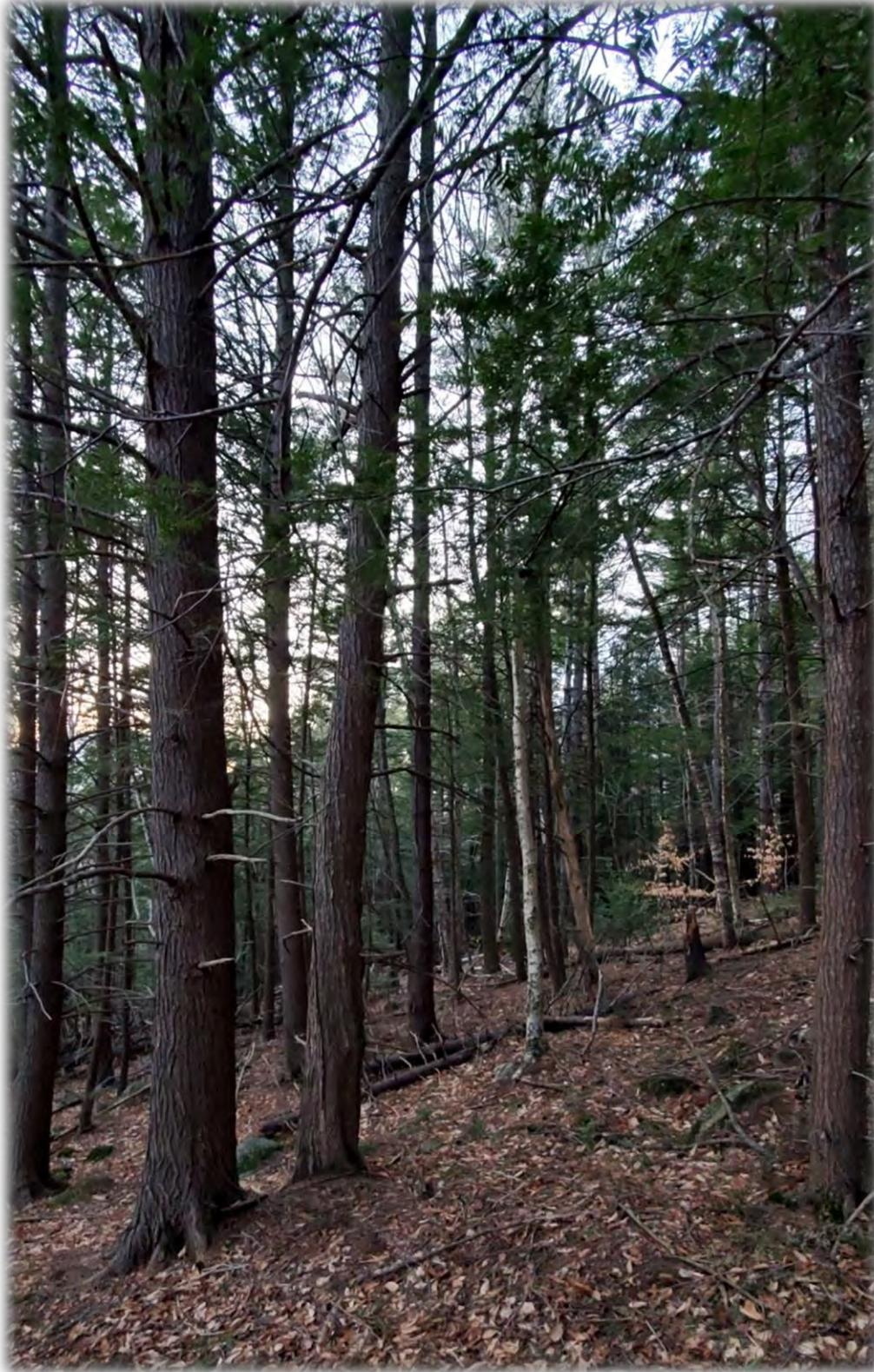
There is a dense understory throughout most of the lot, with a high percentage of downed coarse woody debris (valuable structural habitat for a variety of species.....even though visually it is rough for lay people to appreciate).

The northern lot has the greatest percentage of steep slopes (25-50%) according to USGS soils maps.



This lot offers the greatest vertical relief and steep slopes of the three properties, with a slope that ranges from 15 to 50%.





Red spruce, hemlock, beech saplings and poles occupy the midstory. Given the hydric soils on the lower western side and the rising slopes with scattered rocks on the eastern end, causes one to Wonder if these lots have been left undeveloped because of topographical constraints or because of the former owner's objectives?



A vein of large “super canopy” white pine runs along the lower western side extending along the northern bound, rising upward to the east. (The above picture and on the previous page, do NOT do justice).

Map 125 Lot 21:

Forests in this lot are dominated by “super canopy” white pine that are 2-3 feet in diameter; over 100+ feet tall; and between 150 and 200 years of age. Beneath is a mature stand of red oak, mixed hardwoods with hemlock (especially in dense pockets in the understory). The stand of pine lines the shoreline perimeter and is approximately 150 to 200 feet wide. Large white pine and red oak can also be found scattered throughout the peninsula, all of which is stunning and striking.

Interspersed and beneath the pine and oak are beech (some very free of beech scale), white birch, red maple, yellow birch, hemlock, and an occasional black cherry. The understory is fairly open in much of this lot.

The undeveloped shoreline has downed trees and limbs of varying sizes and ages providing important shoreline habitat for insects, amphibians, reptiles and birds. This is how 80% of the lake shore looked like in the 1950’s, before the camp lot boom.



These lots provide an invaluable corridor connecting protected lands on both sides of Highland Lake. The LBF provides wildlife with a crossing point at the southern narrows of Highland Lake to the woods and conservation lands of Andorra Forest to the west.



Very old red maple on the left, estimated to be 200-250 years of age; and 2 foot beech, straight and relatively free of beech scale.

Community Benefits to the Town

Through the desired and approved uses of the Little Big Forest, the community of Stoddard will have an opportunity to appreciate and enjoy the outstanding ecological attributes of this community forest. Enjoyment of the Little Big Forest will help to encourage a conservation ethic among the townspeople, and particularly among young people engaged in the educational and recreational uses organized in the Little Big Forest.

For the students of the James Faulkner Elementary School (JFES), the Little Big Forest will serve as an outdoor learning laboratory that illuminates their relationship to the natural world and the interconnectedness of their community. In addition to the students involved in the school-sponsored outdoor educational activities, the Student Leaders participating in the work of the LBF Stewardship Committee will have an opportunity to express themselves and to influence decisions about recommended management activities – gaining valuable experience and knowledge in the process.

Residents of Stoddard and the surrounding areas also benefit from the protection of wildlife habitat and diverse biota that contribute to our collective efforts to conserve biodiversity, while enhancing the experience for users of Highland Lake and the protected lands of the Town.

The Little Big Forest is a valuable addition to the ongoing efforts of the Town of Stoddard to protect the woodlands and natural environment, lakes and water bodies and other elements that contribute to the quality of life as well as the recreational and educational activities of the town's residents.

Educational Benefits & Opportunities

The Little Big Forest provides unique and meaningful outdoor learning opportunities where students at all grade levels can engage in hands-on learning across the disciplines throughout the year.

The LBF includes a well-built rustic cabin that could be readily renovated into a wonderful environmental field classroom surrounded by 40 acres of forest as a living learning laboratory.

The property is readily accessible by foot or boat and is within a 5-minute drive from the James Faulkner Elementary School (JFES). While the school already has outdoor learning spaces in the woods surrounding the school (known as "Base Camp"), this property provides a much larger area for expanded activity as well as the additional resource of the lake as both an aquatic habitat and an essential part of the town's history of development.

Here is what some JFES stakeholders say about the importance of the JFES outdoor education:

- *"They learn so much by being outside. They learn to take risks and learn what their limits are in a way they can't in the classroom"* --teacher Mia Leonard-Solis
- *"My hopes and goals for how JFES will use LBF in the future are to extend our learning in an adventurous way"* --Student Leader Charlotte Miller, Grade 4

- *"I feel that everyone should be able to explore the LBF property. I want to help more people learn about nature...I hope that LBF can be our second Base Camp" --Student Leader Jaxon Leonard, Grade 4*



- At a time when so many schools across the country were struggling to hit the “right notes’ (in dealing with COVID) JFES came up with a lesson plan for success in the great outdoors;
- For kids who need specialized learning plans or breaks to move around, learning outside has been a literal breath of fresh air. One student says *“It’s so much easier to concentrate and focus here than it was in my other school,”*

Adult education programs could easily be conducted on the LBF, focusing on a variety of natural resource issues including, but not limited to the following:

- ✓ Issues affecting Highland Lake;
- ✓ Importance of undeveloped shoreline in maintaining healthy aquatic ecosystems;
- ✓ Importance of conservation lands (65% of this town) and forever wild conservation easements (20% of the conservation lands or over 6,000 acres are in a forever wild designation.....extraordinary for the private sector to voluntarily provide);
- ✓ The value of old and older-growth forests (on-site examples);
- ✓ The role of soil mycorrhizae in forest ecosystems;
- ✓ The role of predators in maintaining healthy forest ecosystems;
- ✓ Edible mushrooms;

Little Big Forest Shoreline Benefits

LBF has over 4,000 feet of undeveloped shoreline on a lake that has over 19 miles of heavily developed shoreline. When combined with the 1-mile+ of protected shoreline in Pickerel Cove, Highland Lake now has 10% of the lake frontage permanently protected. This is significant, given the important role that natural shorelines have in contributing to the ecological health of lakes.

Shoreline Facts²

Why protecting shoreline, like the 4,000 feet of undeveloped shoreline on the LBF, is so important:

- Qualities that make shorelines attractive to wildlife may be very different than what makes them attractive for boating and swimming;

² NH Cooperative Extension Fact Sheet on “Shorelines”

- Shorelines bordered by mature forests are critical yet rare habitats in NH;
- Shorelines surrounded by large blocks of forest will support the greatest number of wildlife species;
- Little Big Forest provides 4,000 feet of protected shoreline with 40-acres of mature, undisturbed forests. Native aquatic vegetation, submerged rocks, boulders, logs, stumps and dead trees that have fallen in the water are all features with high quality shoreline habitat that can continue to flourish without the threat of development;
- Bald eagles live beside the water's edge of lakes and larger rivers. They depend upon large trees along the shore for both nesting, hunting, and winter roosting. The Little Big Forest has dozens of super canopy white pines along the shore (2-3+ft in diameter; 100+ feet tall). Someday, eagles may call the LBF home;
- Little Big Forest has several shallow coves protected from motor boats by stumps and logs. Artificial nests could be safely placed in these protective areas;
- Little Big Forest provides potential habitat for over 33 species of NH wildlife that can be found along undeveloped shorelines, of which 8 are state threatened or endangered species;
- Once water quality and habitat has been degraded, it can be very difficult to restore its quality.

Natural shore lands are often used as travel corridors by many animals including moose, deer, bear, mink, beaver, and otter. When these features are absent it can result in more human/wildlife conflicts, but more likely it results in a loss of these species of wildlife in the area. Natural shorelines take on added importance when they help link larger blocks of valuable protected wildlife habitat. They play an important role in maintaining the health of the surrounding forests, residential areas and aquatic life of the lake!

These lots provide such a link; an "ecological umbilical cord" that allows the "ecosystem services" generated on the thousands of acres of protected lands to the east, to connect with and flow to the terrestrial and aquatic ecosystems that the Highland Lake ecosystem health relies upon!



Live trees and snags along the shore (cavity trees) offer nest sites for wood ducks, mergansers, owls, woodpeckers, nuthatches, wrens, and bluebirds. Squirrels, bats, fishers, porcupines, gray fox also use cavity trees to rest and den in. King fisher, swallows, hawks, and osprey perch & feed on branches of snags that hang out over the water.

All of these species interact with aquatic life and processes. They enhance the biodiversity of both the upland forests and the water, which is critical to the health of the lake ecosystem. Trees, shrubs, and vines produce a variety of berries, seeds, and nuts. Highbush blueberry, dogwoods, viburnums, shadbush are some examples of berry producers that the above aforementioned species will use. Highbush blueberry shrubs line a majority of the 4,000 foot shoreline.

Manicured lawns of Shoreland camp owners that alter or displace native vegetation often results in less biodiversity of birds, insects, and mammals, whose collective absence have a negative impact on the lake ecology.

Diversity of vegetation attracts insects that are a critical source of food for birds, fish, and other aquatic organisms. Dragonflies feed along the water's edge and often lay eggs in the water, producing aquatic larvae that are a source of food for frogs, snakes, salamanders, turtles, herons, mink and fish.

Undeveloped shorelines provide travel corridors used by many animals such as moose, deer, bear, mink and otter. They take on added importance when they help link larger blocks of valuable protected wildlife habitat.

Undeveloped land within 100 feet of a shoreline helps to protect water quality and provide some (if not all) the habitat for many species of wildlife; reduce floods; moderate water temperatures; and filter sediments and nutrients from surface runoff.

The NH Department of Environmental Services has buffer zones of 50 to 150 feet; the USF&W has buffers up to 500 feet. The Reason for these "no build buffers" is to protect a significant amount of activity in the soils that involve subterranean amphibians, salamanders, soil microorganisms, and mycorrhizal fungi network. The latter is particularly important in the uptake of phosphorus, which is one of the major nutrients required by plants. *Plant uptake keeps the phosphorous from accumulating in the lake where it is often the limiting nutrient for aquatic blooms (most notably cyanobacteria blooms).*

The shoreline along Highland Lake is approximately 80%+ developed; with the exception of Pickerel Cove, it lacks large sections of natural shoreline for all of the above attributes to exist and or thrive.

Storm frequency and intensity is increasing as the insidious effects of climate change intensify; the result of the burning of fossil fuels and inaction by politicians and the public to effectively combat it.

One of the best natural systems "shock absorbers" are forests: particularly undisturbed forests, of which the majority of the land in Stoddard falls under.

This is doubly important, as Stoddard sits on the watershed divide between the waters that flow east into the North Branch of the Contoocook that flows into the Merrimack.

Waters on the west side of town flow into Otter Brook, which joins the Ashuelot River in Keene, which in turn joins the Connecticut River to the west.

Benefits to Highland Lake (As a Model to Develop Awareness of how Lakes in NH are Under Siege)



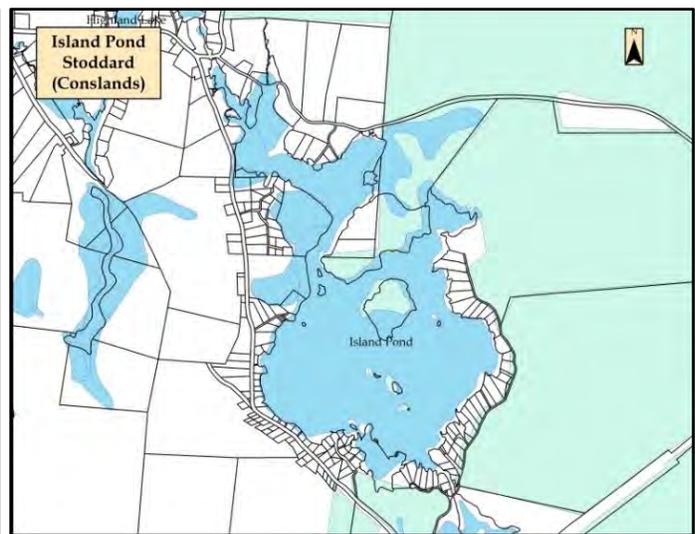
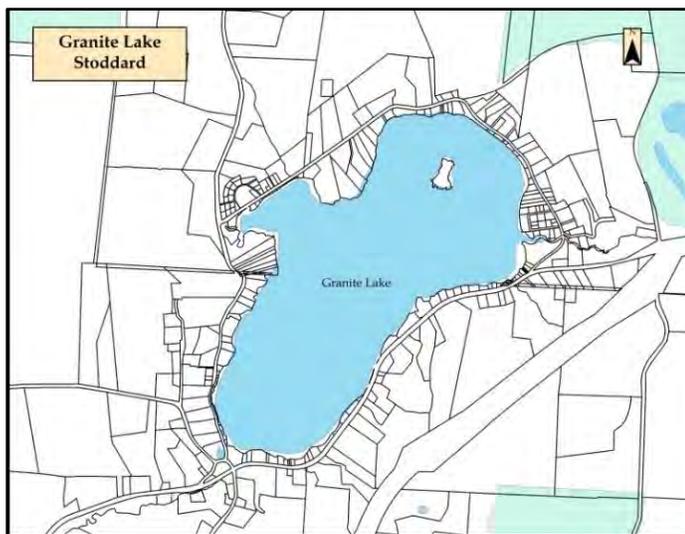
Lakes have to breathe too!

Lakes breathe through the delicate process between plants and aquatic life. Clear waters allow sunlight to penetrate the water. During the day plants produce oxygen through the process of photosynthesis and oxygenate the water so fish and other aquatic life can breathe.

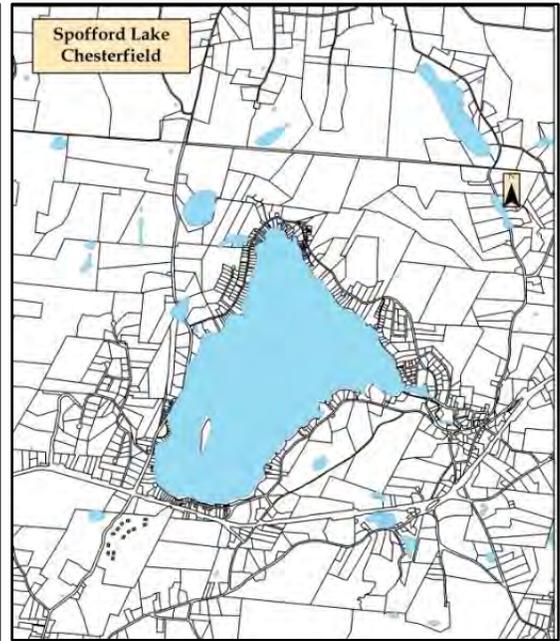
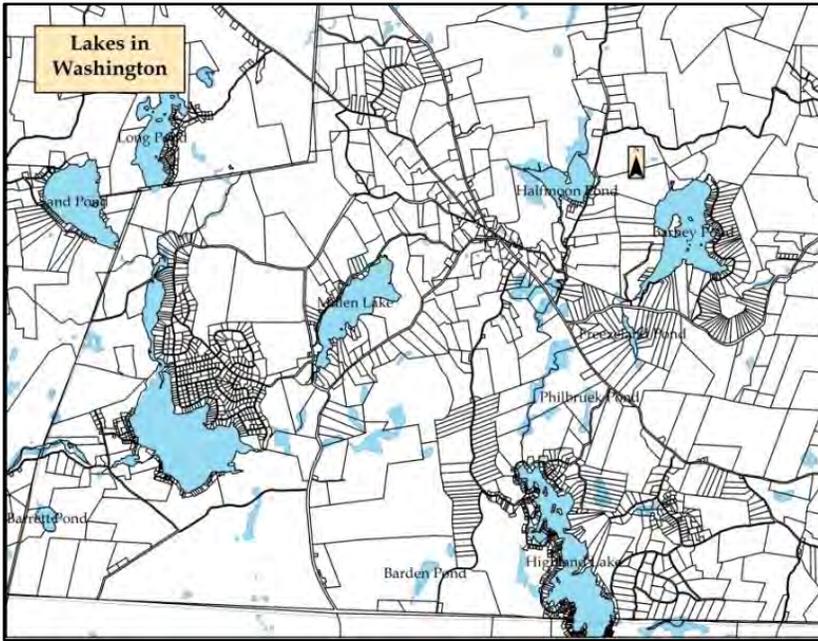
Undeveloped shorelines serve as an ecological pipeline and help to ensure that the “lungs of the lake” function properly, the way they always have.

Live and dead trees (snags) that have cavities provide nest sites for wood ducks, mergansers, owls, woodpeckers, nuthatches, wrens, bats and bluebirds. Squirrels, fishers, porcupines, gray fox also use cavity trees to rest and den in. King fishers and swallows feed on branches of snags that hang out over the water. Hawks, bald eagles and osprey all perch on the dead branches of tall pines that line the shore.

The interaction between undeveloped shoreline, where shrubs and trees hang over the water's edge and where dead and dying trees are, provide the varied habitat for insects that in turn help feed the fish; all help to ensure that the “lungs of the lake” function properly, the way they always have.



What are we doing to our lakes? Ecologically speaking we are “sentencing them death row” because we are stripping them of their ecological lifeline: their undeveloped shoreline!!



When shoreline is developed; trees and shrubs are removed, along with dead and decaying wood and replaced with lawns, fertilizers, pesticides, and docks.

The age-old process that has kept lakes healthy is compromised.

The Little Big Forest lots provide an “ecological umbilical cord” that allows the “ecosystem services” generated on the 40-acre forest AND on thousands of acres of protected lands to the east, to connect with and flow to the terrestrial and aquatic ecosystems that the Highland Lake ecosystem health relies upon!

Benefits Relative to Storms & Runoff

Development has permeated the hills of the watershed, particularly between the shoreline and Shedd Hill road to the east and extensively along the western shore from the Mill Village Store extending north to its end in Washington.

The Hidden Lake developed, established in the mid 1970’s, has had a profound negative impact on Kennedy, Rice, and Upton Brooks that flow into Highland lake along the southwestern side. The negative impact comes from increased nutrient and sedimentation runoff during storm events and loss of critical wildlife habitat.

Extensive development south of Pickerel Cove on both sides of the lake, and the high density siting of camps on the Washington end, collectively have diminished the health and vigor of the forests, soils and water quality of Highland Lake....a lake that is already eutrophically advanced (nutrient enriched).

This intense development will have long range negative impacts on groundwater, as septic systems age and begin to inevitably fail; as septic systems fail they will put the lake water at increased risk from nutrient enrichment that results in algal blooms, die-off and inevitable reduction of available

oxygen for aquatic life. More development means less permeable soil that results in greater surface water runoff as the 2005 October flood demonstrated.

Stewardship Benefits

Sixty-five percent (65%) of the town is permanently protected. These conservation lands give the town a permanent opportunity to institutionalize the importance of land protection and to instill a love and understanding of land for ALL generations, by providing a formal place to conduct long-term environmental education in a spectacular and iconic setting!

- The LBF is easily accessible to residents (seasonal and permanent) from both land and water with options for a small parking lot and waterfront dock (due to shallow waters, probably limited to small boats);
- A well-built rustic cabin that could easily be transformed into an outdoor learning center for children at the James Faulkner Elementary School (that already has a robust outdoor education center) and adult environmental programs.



Recreational Benefits

The LBF will provide a launch site for canoe/kayak field trips to and from Pickerel Cove and the town forest of Pioneer Lake/Stoddard Rocks/Williams Old-Growth forest, etc.

- A destination for canoeists and kayakers as a way to stretch their legs;
- A gathering spot for organized canoe and kayak trips along the lake; or integrated boating and hiking field trips to the town forest and the Stoddard Rocks trail network via Pickerel Cove;
- Hikes to a vast network of trails on the adjacent Peirce Forest & Wildlife Reservation and thousands of acres of conservation lands;
- Canoe/kayak trips between Highland Lake and Island Pond (with a short portage);
- Could host a senior citizen user friendly trail to scenic outlooks;



- Could host an ADA trail enabling physically challenged individuals the opportunity to experience older/ecologically mature forests that are usually in remote, difficult areas to access;
- Could host a primitive/low-impact overnight campsites for organized youth groups like JFES students, local Scout groups, and Kroka;
- Ownership will help protect lake water quality that in turn protects the real estate values of all lake residents!!

Integrate Trail Layout and Use with Wildlife Concerns

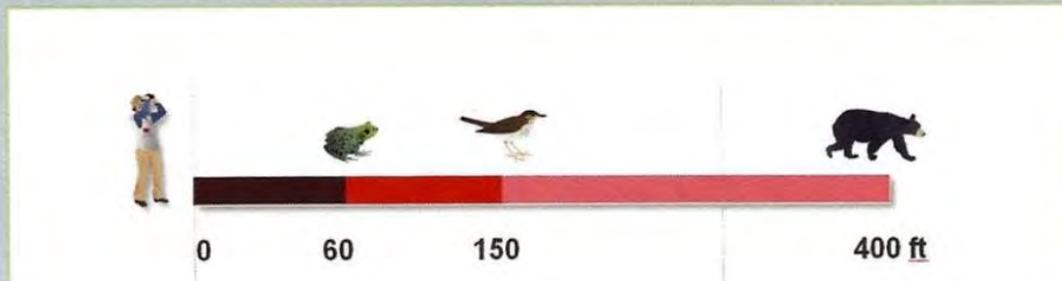
Care and diligence must be taken when laying out and using hiking trails, because foot traffic can disturb wildlife in one or more of the following ways:

- Physiologically by creating stress: increasing the heart rate, temperature, or hormones;
- Behaviorally: altering foraging habits, heightened vigilance, fleeing from perceived predators;
- Reproductive success: reducing the number of nest built, eggs laid, or young born and successfully raised;
- Predation: scaring away adults leaves young behind, vulnerable to predation; adults may be preyed upon in their flight.
- Mortality: fleeing animals cross highways and are hit; wheeled vehicles crush small critters on woods roads and trails.

While disturbances may seem brief and innocuous, the cumulative impacts from intermittent OR frequent use can be significant, particularly during breeding seasons, during harsh winters, or during hunting season, when they are already energetically stressed.

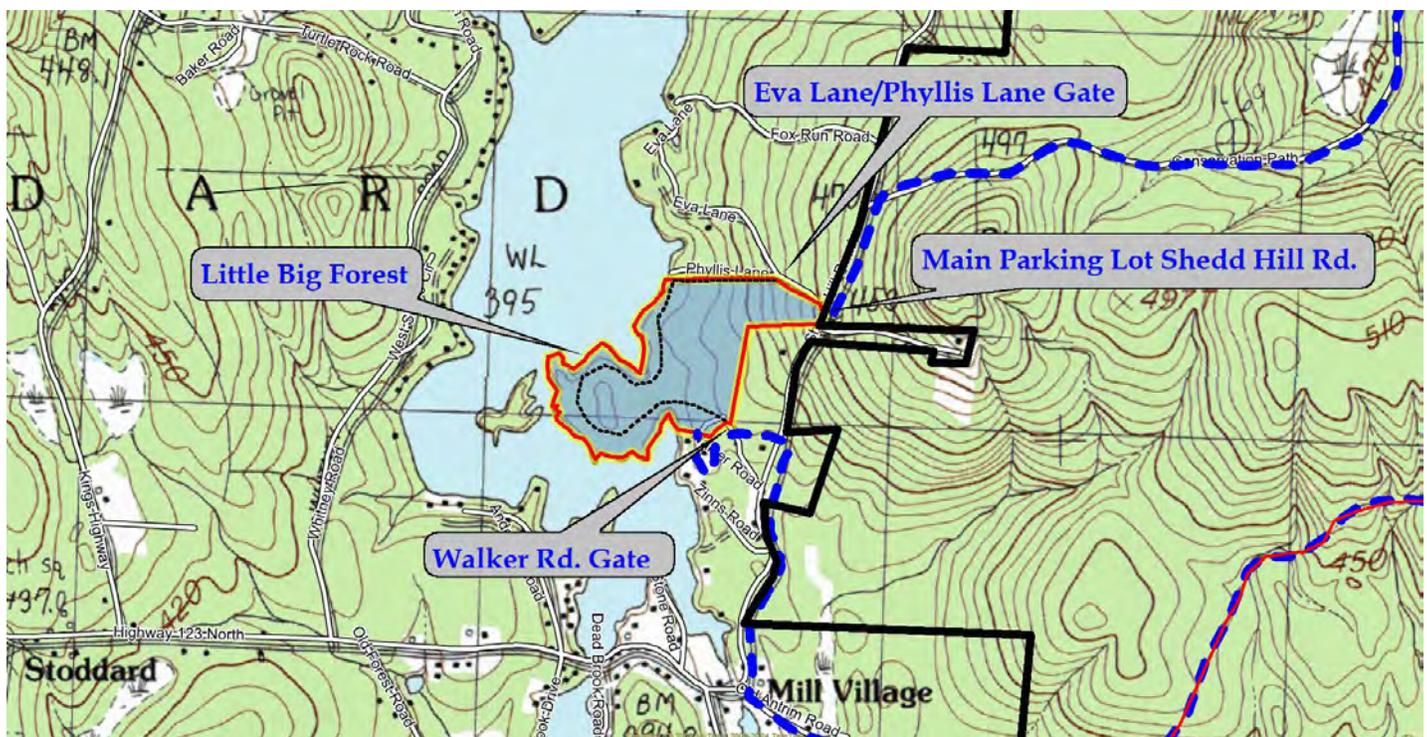
CORRIDOR OF INFLUENCE - DISTANCE IN NH

In New Hampshire, a trail's corridor of influence on wildlife is about 400 feet in each direction. This distance is equivalent to one and a third football fields, or the length of nine school buses, on either side of the trail.

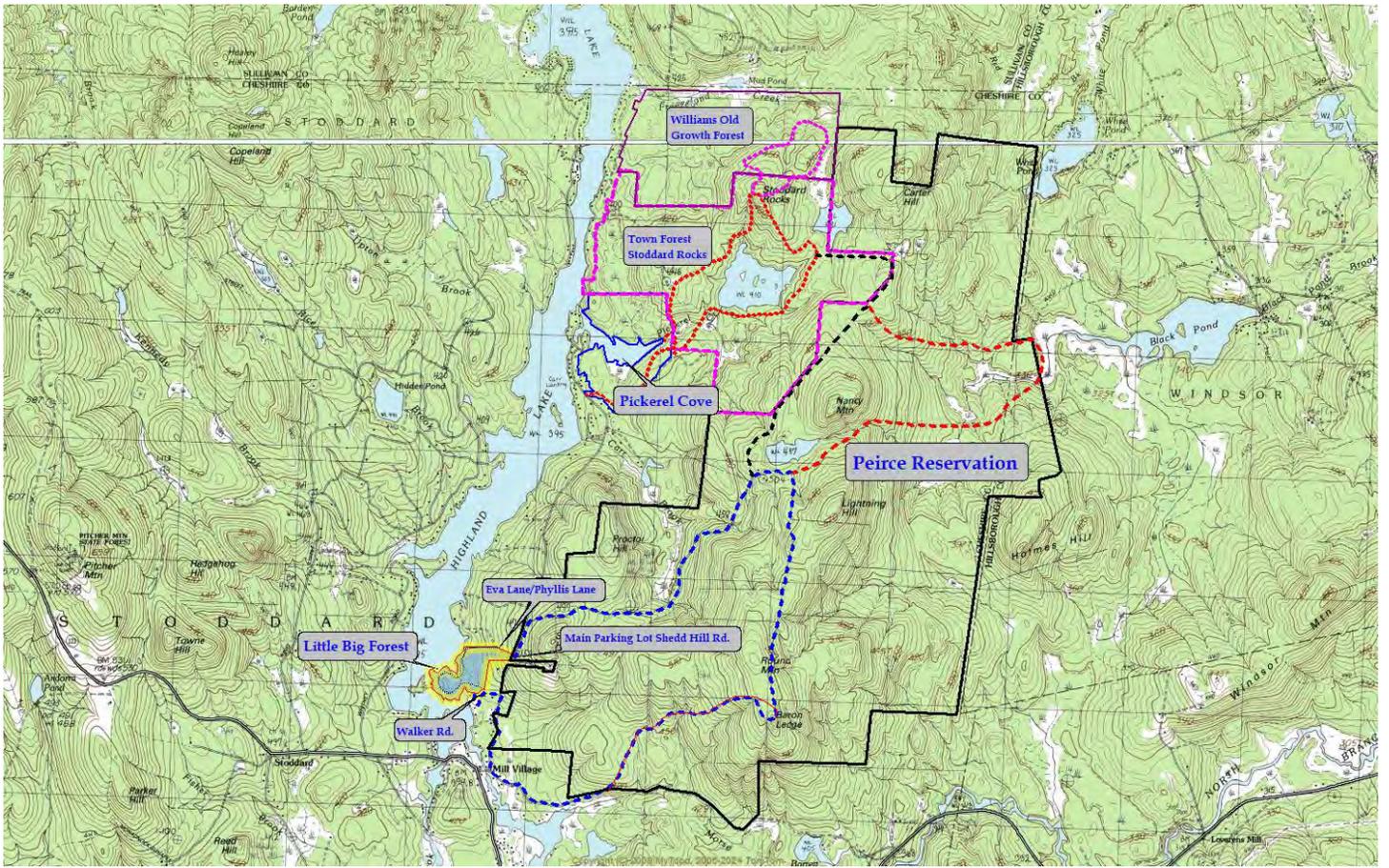


The N. H. Fish and Game Dept. has spent considerable time and effort determining the “average corridor of influence” for wildlife in our state. After extensive review of scientific literature they have determined the average “flight distance” for the following:

- Amphibians and reptiles is 60 feet;
- Birds become alert and frightened 150 feet on either side of a trail;
- Mammals become alert to human presence at an average distance of 400 feet.

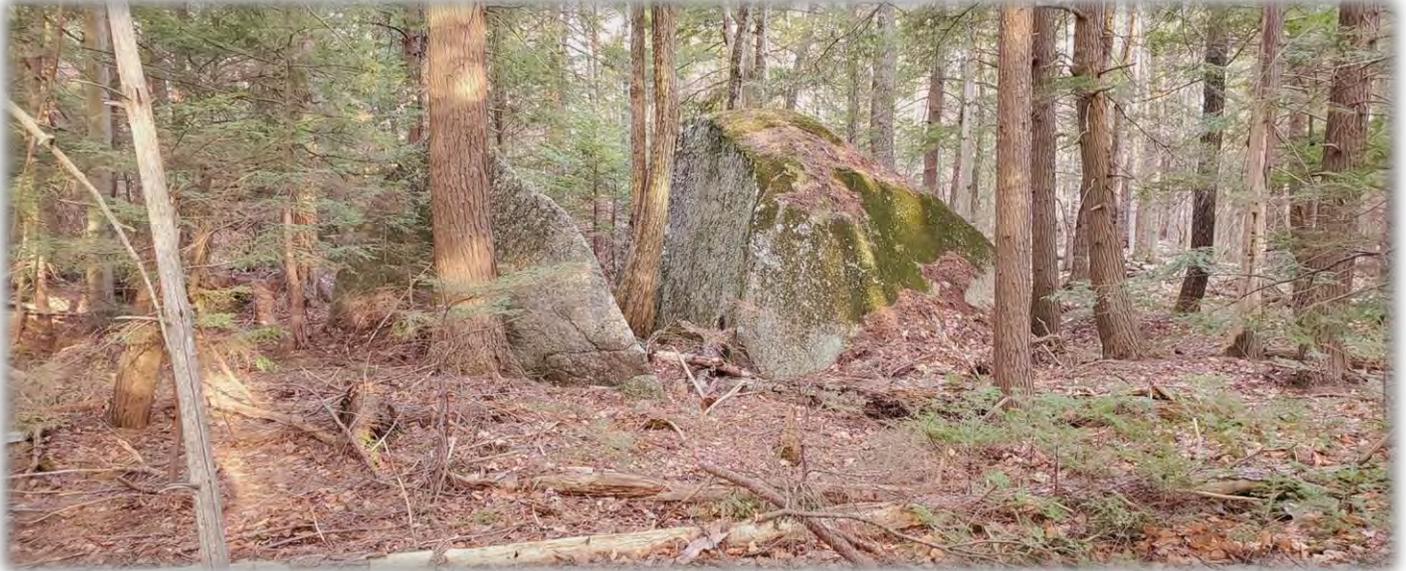


Conservation Lands & Hiking Trails in Close Proximity to the Little Big Forest



The “peninsula” lot has a lot of aesthetic and recreational appeal and has a fairly open understory. The LBF could host a number of thoughtfully placed “backcountry” campsites for organized school groups (or groups like Kroka).





Big trees among big rocks add to the visual delight.

Mr. Wilson purchased these three lots back in the 1990's, so he could teach his children how to camp and fish; now the town of Stoddard owns the land so that the children of Stoddard will always have a place to call their own, where they too, can learn to camp and fish and understand the importance of conservation lands that surround their homes among the hills and lakes of Stoddard!



The Peninsula had the greatest appeal and potential for siting desirable house lots, but now it will host well sited primitive campsites.

Community Involvement

Central to the success and purpose of the U.S. Forest Service's Community Forest Program is community involvement. In April of 2021, when the Stoddard conservation commission decided to pursue a conservation outcome for the 40-acre forest that would become known as the Little Big Forest, assistance and approval was sought from the community. The first substantial support came in the form of a letter of support from the Stoddard Board of Selectmen dated September 27, 2021.

Additional letters of support soon followed from

- Terrestrial Forest Ecologist Dr. Tom Wessels, Professor Emeritus, Antioch University, Keene, NH (11/2/2021)
- The staff and school board of the James Faulkner Elementary School (JFES) (11/10/2021);
- The Island Pond Association (11/23/2021);
- The Highland Lake Unified Association Board of Directors (11/29/2021);
- The Eva Lane Lot Owner's Association Executive Board (1/6/2022);
- UNH Cooperative Extension Forestry Specialist Steven Roberge (1/6/2022);
- The Davis Public Library, Stoddard, NH (1/7/2022);
- The Stoddard Historical Society (2/28/2022).

As the fundraising effort began in earnest, a fundraising committee was established with the following volunteers (friends and neighbors of the Little Big Forest):

Deborah Anderson, Sabine Duran, Kathy Durward, Don Healy, Jason Kovarik, Terri LaRoche, Anita Shaw, Jaelynn Stetson, and Geoff Jones (chair).



They provided the impetus and organization skills for several very successful "wine & cheese" fundraising gatherings on the lake and around town.



Other community outreach events included reaching out to the elementary students as JFES for a fundraising movie night; participation in an Olde Home Days Float; and a Halloween JFES School Event.



Management Objectives for the LBF Community Forest and strategies to implement those objectives

A draft management plan was written and made available on May 15, 2022 to the public on the town conservation commission website. This plan was shared with the public in August – September 2023 as part of the public outreach effort. Key elements for the proposed management objectives were summarized and discussed during a series of listening sessions organized with the support of the Conservation Commission and the Stewardship Committee in September through October 2023.

At the November 2023 meeting of the Stewardship Committee, the following Goals and Objectives were circulated for review and comment and later adopted:

Overall Long-Term Management Goals:

1. Protect the ecological integrity of the Little Big Forest and maintain the ecological values of this old growth forest, wildlife habitat and town conservation area protected from human interference and disturbance;
2. Conserve the Little Big Forest as a protected area with undeveloped shoreline on Highland Lake, relatively undisturbed wildlife habitat, protected watershed and natural features that are accessible to the people of the Town of Stoddard with provisions for their sustainable, low-impact use related to education and recreation;
3. Educate the public, mobilize public support, and engage the community in the continued protection of the Little Big Forest by raising awareness of the environmental importance and multiple benefits accruing to the Town from its conservation and sustainable, and multiple use management;
4. Develop, implement and update (as necessary) the community forest management plan to support the realization of the management goals for the LBF as an ecological, educational and recreational resource for the Town of Stoddard.

Specific Management Objectives and Strategies:

- A. Establish a Little Big Forest Stewardship Committee to assist the Stoddard Conservation Commission in protecting and managing the Little Big Forest, by providing advice and guidance on the preparation and implementation of a Community Forest Management Plan to support the achievement of the Management Goals for the Little Big Forest; ensure the periodic review and updating of the LBF Management Plan;
- B. Manage the Little Big Forest primarily as an “old growth” forest, by monitoring the impacts of natural disturbances (wind, hurricanes, ice storms, extreme weather) and allowing them to continue to be the dominating force that determines natural forest succession and influences forest condition, with only minimal influences by human interventions;
- C. Monitor the health and diversity of the biota of the LBF including wildlife populations and the natural vegetation, and consider interventions useful to the maintenance of the existing diverse wildlife habitat and ecosystem features, including the diverse array of fungi;
- D. Intervene as needed to prevent or reduce the spread of wildfires and to minimize and control fires which could damage the forest and surrounding properties; ensure adequate controls on the use of cook stoves and campfires on the property;

- E. Monitor and intervene as needed to protect the undeveloped shoreline and other features of the Little Big Forest to ensure its continued value and function as a filter for runoff and benefit for the water quality of Highland Lake and surrounding landscapes;
- F. Manage the Little Big Forest to the extent feasible and sustainable as a “community” forest with a range of permitted uses for educational and recreational uses, including limited numbers of overnight campers, visiting school groups, and informal visitors primarily from the town of Stoddard;
- G. Adopt and enforce specific guidelines designed to protect the wildlife habitat and wildlife populations that use the Little Big Forest, including provisions to require dogs to be leashed and hunting to be allowed by prior authorization with the Town of Stoddard Conservation Commission;
- H. Develop and maintain the existing rustic cabin and associated infrastructure to enable its use as a learning center for the James Faulkner Elementary School and its outdoor education curriculum;
- I. Develop and maintain an appropriate network of trails, signage and parking facilities to enable visitors and members of the Stoddard community to enjoy and appreciate the attributes of the forest, and to safely visit and recreate in the Little Big Forest;
- J. Organize periodic listening sessions to raise awareness about the values, benefits and potential uses of the Little Big Forest, and to seek public participation in the ongoing protection and management of the LBF as a community forest;
- K. Foster collaboration between the Stoddard Conservation Commission, the LBF Stewardship Committee and the James Faulkner Elementary School to encourage and guide the engagement of the school faculty and students in the educational uses of the LBF; develop and oversee an annual program of educational activities in keeping with the overall management goals of the LBF.
- L. To be eternally vigilant of the LBF by monitoring its use on a regular basis, identifying problems as they arise and quickly addressing them when they do, so they don't recur or harm the LBF in any way.

L-CHIP RESTRICTIONS (Exhibit B):

(Link to RSA 227-M <https://www.gencourt.state.nh.us/rsa/html/NHTOC/NHTOC-XIX-A-227-M.htm>)

The Restrictions described herein shall become effective and enforceable upon Recipient's acquisition of the Property.

1. **The Property** will be maintained in perpetuity as open space. Any acts, uses or management activities undertaken on the Property will be consistent with the purposes of NH RSA 227-M and will not materially impair the significant natural habitat, open space, forestry and other conservation attributes referred to herein and described and set forth in a Property Conditions Report prepared and maintained by Recipient with copy provided to LCHIP (hereinafter referred to as the “Conservation Attributes”);

2. **Public Access** - Pursuant to RSA 227-M:15, the Property will be open for passive recreational purposes, and the public will have a right of pedestrian access to, on, and across the Property for hunting, fishing, and transitory passive recreational purposes, and camping for organized groups by permit only, in perpetuity except that Recipient may post against:
- **vehicles, motorized** or otherwise;
 - **access**, to forest land during harvesting, establishment of plantations or other active management activities;
 - **access**, to the interior of any buildings on the Property;
 - **access**, by the public during an emergency situation where public safety could be at risk, but only for so long as the emergency situation exists and subject to Recipient providing notice of such temporary posting to LCHIP at the earliest practicable time;
 - And
 - **access**, to locations within the Property that become subject to incidents of problematic or abusive uses or behaviors by said public that are detrimental to the Purposes of this Agreement or significantly impairing of the Conservation Attributes;
 - and/or where such access would place the public safety at risk, but only after recipient obtains LCHIP's prior written approval of such posting for the purpose of managing such issues for a defined period of time as the Recipient and LCHIP may agree. Said problematic or abusive uses or public safety concerns may include but will not be limited to: making of fires, malicious destruction of the Recipient's real or personal property, potential hazards for visitors atypical to a natural and undeveloped setting, or development of unauthorized trails or structures. LCHIP will have the sole discretion to limit or prohibit passive recreational use of the Property on a case-by-case basis, where such activity would be inconsistent with the purpose for protecting the Property and/or when public safety would be at risk;
 - Nothing herein will prohibit Recipient from disallowing specific individuals or entities access under lawful court orders or injunctive relief. Recipient will be under no duty to supervise said public access, use, or purpose except as expressly provided for above and, pursuant to NH RSA 227-M, Recipient will not be liable to any user of this right of access for injuries suffered on the Property unless those injuries are caused by the willful or wanton misconduct of the Recipient;
3. **Property Management** - The Property shall be maintained in perpetuity as open space without there being conducted thereon any industrial or commercial activities except in the accomplishment of forestry or outdoor recreation or education uses (hereinafter "permitted uses"), provided that any acts, uses or management activities undertaken on the Property shall be consistent with the purposes of NH RSA 227-M, shall not materially impair the Conservation Attributes of the Property, and shall not harm state or federally recognized rare, threatened, endangered species or other species of conservation concern, or exemplary natural communities;

4. All permitted uses of and management activities conducted on the Property shall be carried out in accordance with all applicable local, state, federal, and other laws and regulations, and in accordance with then-current, scientifically-based accepted best management practices for the sites, soils, and terrain of the Property;
5. **Structures and Improvements** - There shall be no structure or improvement constructed, placed, or introduced onto the Property, except those necessary in the accomplishment of the permitted uses and are not materially detrimental to the Conservation Attributes. The existing structures and improvements, as documented in the Property Conditions Report, may be expanded, rebuilt, or removed as necessary in the accomplishment of the permitted uses as long as such expansion or rebuilding is not materially detrimental to the Conservation Attributes. Total impervious surface coverage on the property shall not exceed 5,000 square feet. Any new structures or improvements with a footprint in excess of 200 square feet shall be subject to prior written approval by LCHIP;
6. **Waste and Material Storage** - There shall be no dumping, injection, application, burning or burial of man-made materials, building demolition or construction debris, trash, tires, plowed snow from locations other than the Property, vehicle bodies or parts or similar materials, wastes generated off the Property, or materials known to be environmentally hazardous permitted on the Property;
7. **Mining, Quarrying, Excavation** - No mining, quarrying, excavation, or removal of rocks, minerals, gravel, sand, topsoil, or other similar materials on or from the Property shall be permitted except in the accomplishment of permitted uses, but in no case shall any rocks, minerals, gravel, sand, topsoil, or other similar materials be marketed for sale;
8. **Disturbance or Alteration of Terrain** - There shall be no disturbance of the surface or alteration of the topography of any portion of the Property except in the accomplishment of permitted uses.

Proposed Charter of the Little Big Forest Stewardship Committee

Name: the group will be called the Little Big Forest Stewardship Committee (SC)

Purpose: the SC has been established to assist the Stoddard Conservation Commission in:

- Engaging the townspeople of Stoddard in protecting and managing the Little Big Forest as a community forest;
- Complying with the reporting requirements stipulated by the organizations and persons that helped to fund the purchase of the property now known as the Little Big Forest;
- Advising the Stoddard Conservation Commission on management policies and activities that are in keeping with the protection of the ecological integrity of the LBF and which help to provide for desired educational and recreational uses;
- Collaborating with the James Faulkner Elementary school faculty and students to help realize the potential full value of educational and recreational programs linked to the conservation and managed use of the Little Big Forest;

- Working with the Stoddard Conservation Commission and interested community members to review the draft Management Plan for the LBF and to finalize the Management Plan, including associated land use policies, in anticipation of its formal adoption by the Stoddard Conservation Commission;
- Collaborating with the Conservation Commission to identify opportunities for the organization of activities and the mobilization of human and financial resources to help implement the LBF management plan and to achieve the conservation and management goals for the LBF;
- Assisting the Conservation Commission to identify issues related to the use of the LBF that need to be addressed by the Town of Stoddard and the Conservation Commission;
- Assisting with other tasks and activities as recommended by the Conservation Commission.

Organization: the SC is constituted by the Stoddard Conservation Commission from interested friends of the Little Big Forest who have ties to the Town of Stoddard and are interested in the conservation of the Little Big Forest as a community forest for the Town of Stoddard. The SC is also committed to ensuring the full participation and engagement of the younger generation in Stoddard in the management planning and in the organization of educational and recreational programs in the Little Big Forest. To this end, the SC will work with the James Faulkner Elementary School to encourage student leaders to become members of the SC and to attend the monthly meetings.

The SC will include persons who agree to fulfill the responsibilities of the following positions:

- **Chairman:** responsible for convening and chairing periodic meetings of the SC, as needed, with a meeting agenda to be prepared in consultation with the Chair of the Conservation Commission
- **Vice Chairman:** responsible for assuming the duties of the Chairman if the Chairman is not available
- **Secretary:** responsible for circulating the meeting agenda and supporting documents, and for preparing meeting notes and summaries of action items, for referral to the Conservation Commission and Town of Stoddard as appropriate.
- **Liaison for the Board of Selectpersons:** responsible for providing guidance in relation to the interests and responsibilities of the Town of Stoddard and for facilitating communities with the Town BOS.
- **Liaison for the Conservation Commission:** responsible for providing guidance in relation to the interests and responsibilities of the Conservation Commission and for facilitating communities with the members of the CC.
- **Liaison for the James Faulkner Elementary School (JFES):** responsible for highlighting the importance and facilitating the achievement of the educational and recreational goals for the

LBF, and for recruiting and enabling Student Leaders from the JFES to serve as members of the Stewardship Committee.

Student Leaders: Applications from interested Student Leaders from the 4th and 5th grades of the JFES will be received and reviewed on an annual basis to aid in nominating interested students. Selected Student Leaders will be responsible for providing a student perspective and an essential voice in making decisions about the Little Big Forest trails, infrastructure development and educational programming that will impact JFES students. The Student Leaders will also cooperate with and support the teacher serving as the JFES Liaison to keep the JFES student body and teachers informed about and engaged in the LBF educational and recreational programs. As the program continues and students move to the Keene middle and high schools, if interest continues in the LBF, student representatives could possibly continue (TBD).

Members of the SC are encouraged to serve for a term of 1 to 2 years.

Meetings: the SC will meet periodically as necessary to fulfill its mandate and to carry out its activities. Initially, the SC will convene a meeting on the third Wednesday of each month, beginning at 6 pm. Unless otherwise agreed, the meetings will be held at the Stoddard Town Hall. Public notification of the SC meetings and decisions taken will be ensured through notices and meeting minutes posted on the webpages for LBF Stewardship Committee, Conservation Commission and Little Big Forest.

Description of the long-term use and management of the LBF Community Forest, including policies and guidelines for land use

In keeping with the proposed management goals, objectives and strategies, a primary consideration for the long-term use and management of the LBF Community Forest is the protection of the ecological integrity of this old growth forest and maintenance of a full range of ecosystem services associated with this forest. This includes watershed and shoreline protection, conservation of wildlife habitat and biological diversity, carbon sequestration and carbon storage, climate regulation and nutrient cycling.

The Town of Stoddard through its Conservation Commission will be responsible for ensuring the continued protection and conservation of the Little Big Forest, with assistance and support from the Stewardship Committee and interested members of the Stoddard community.

The Little Big Forest **is an ecological treasure and will be managed as an uncut and relatively undisturbed old growth forest by allowing this mature ecosystem to naturally evolve with minimal human disturbance.** The community forest will also be managed to maintain the existing diverse wildlife habitat that includes a range of forest types and conditions and other natural features including dead and down cavity trees and coarse woody debris.

The LBF Community Forest will be managed to provide educational and recreational benefits that can be realized through low-impact sustainable uses. This will include hiking and forest bathing walks along a designated loop trail by individuals and small to medium sized groups. Dogs are

allowed to accompany walkers but must be kept on leashes (or under voice command) and owners must accompany them and clean up after their dogs.

The LBF will also be managed to enable a series of educational activities and teaching programs to be organized by the JFES and other student groups, as well as with Boy Scouts and Girl Scouts, including supervised overnight camping, hands-on environmental studies, and fieldwork for merit badges.

Short term visits and overnight camping by young people participating in programs of Kroka Expeditions, a non-profit wilderness expedition school based on a year-round, organic farm in Marlow, New Hampshire, will also be permitted, with prior authorization from the Stoddard Conservation Commission.

Recreational use that is thoughtfully planned and monitored, and appropriately sited, generally in proximity to the existing cabin and dock, will be permitted.

Minimum impact camping and dispersed camping techniques shall be practiced at all times!

Students and faculty from Antioch University of New England, Keene State College, the University of New Hampshire, and others involved in higher education and research will be encouraged to carry out studies to improve our knowledge of old growth forest ecosystems and to organize field trips and student visits that are consistent with the long-term conservation of the LBF.



Antioch College graduate students in Professor Peter Palmiotto's 2022 forestry & wildlife class visit the LBF

Description of ongoing activities that promote community involvement in the development and implementation of the LBF Community Forest Management Plan

To raise awareness and encourage community involvement in the conservation and management of the Little Big Forest, the Stoddard Conservation Commission initially organized a LBF Fundraising and Publicity Committee. This committee played a critically important role not only in preparing the grant proposals and in mobilizing the funds need to purchase the LBF (former Wilson land) and acquire the land for the forest, but also in engaging the community in a campaign to spread the word and highlight the importance and potential benefits of conserving such a unique ecological treasure.

Hundreds of private donations followed as the townspeople rallied to respond to the financial need and opportunity to conserve the Little Big Forest.



Basket weaver Ray Lagasse (center back row) donated his time and materials for local participants to make their own baskets. The event raised nearly \$1,500 for the LBF. Fundraisers like this generated thousands of dollars for the LBF and kept the community engaged.

These fundraising gatherings provided a forum to raise awareness about the attributes of the forest and to discuss the potential educational, recreational, and other uses and benefits. It also helped connect neighbors with neighbors.

The successful fund-raising and campaign to purchase and conserve the Little Big Forest was also supported by the establishment of a dedicated website with photos, links to documents and other information about the Little Big Forest. <https://thelittlebigforest.com/> The website also provides access to an online survey designed to collect information about desired uses and priorities for the conservation and management of the forest.

The Keene Sentinel, a local newspaper and one of the nation's oldest (established 1799), played a pivotal role in publicizing the protection effort for the LBF and fundraising needs.



Photos by HANNAH SCHROEDER / Sentinel Staff
Geoffrey Jones, chair of the Stoddard Conservation Commission, is hoping the commission can raise enough money to purchase 40 acres of land known as the Little Big Forest.

Stoddard Conservation Commission seeks help to finish Little Big Forest fundraising

By JAMIE BROWDER
Sentinel Staff

STODDARD — As part of a project totaling \$1.5 million, the Stoddard Conservation Commission is looking to raise the last of the funds needed to purchase the Little Big Forest.

The Little Big Forest is 40 acres of undeveloped land with 4,000 feet of shoreline at the southern end of Highland Lake.

Intent on protecting the property's ecological, recreational and wildlife habitat, the Stoddard Conservation Commission, led by Chairman Geoffrey Jones, became interested in acquiring the land when it went up for sale in April 2021.

According to a news release from the commission, owner Steven Wilson approved the commission's plan in July of that year. An October 2022 appraisal determined the land was worth \$1,335,000. Another \$200,000 was estimated for project costs, bringing the total to \$1.5 million.

To date, \$1,360,846 has been raised from donors and grants, Jones said.

That includes a \$400,000 N.H. Land and Community Heritage Investment Program



The Little Big Forest is home to trees as old as 250 years or more, which have not been cleared or cut, according to Geoffrey Jones, a forester and chair of the Stoddard Conservation Commission.

grant that the commission received in November.

The U.S. Forest Service Community Forest Grant Program also awarded the project \$600,000, as one of only 12 projects funded nationwide, according to the news release.

Jones said in his 45 years of being a forester, he's never seen land quite like the

Little Big Forest.

The land is untouched, he said, populated with trees estimated to be as old as 250 years or more. He and a photographer who visited the property with him were able to determine the land has more than 30 different species of fungi — more kinds than Jones had ever seen in one place.

Jones believes the forest's broad appeal is because people can visit it to pick blueberries, fish, hike, canoe and paddle.

It's also special, he said, because of its location on the southern end of the lake, which forms a wildlife corridor that lets deer, bears and moose come across the water and get to the other side.

"It's kind of a bridge between the protected lands on both sides of Highland Lake," Jones said.

On the property sits a rustic cabin, which Jones said he's enthused about students of James Faulkner Elementary being able to use.

"I've never seen anything as exciting as this piece of land, and it has captured the imagination of the whole town," he said.

See STODDARD on Page B5

Stoddard's 'Little Big Forest' secures \$600k grant from USDA

By SENTINEL STAFF

STODDARD — The town conservation commission's goal to purchase 40-acres of forest along Highland Lake got a big boost this week, with the announcement of a \$600,000 grant from the U.S. Department of Agriculture.

Stoddard's "Little Big Forest" project was one of 11 proposals nationwide to receive funding through the U.S. Forest Service Community Forest Program, the conservation commission said in a news release Wednesday.

Earlier this year, the Stoddard Conservation Commission entered into a \$1.3 million deal to purchase the undeveloped land by next June. The property, between Walker Road and Eva Lane, contains 4,000 feet of shoreline at the southern end of Highland Lake. The group aims to preserve its plantlike and wildlife habitat which includes geese, loons, moose, deer and otters.

The forest is also home to dozens white pines more

than three feet in diameter and 110-feet tall, hence the name the commission has given the land. In addition to public access to scenic trails and a launch site for canoes and kayaks, the group also plans to convert an existing rustic cabin into a classroom for James Faulkner Elementary School and add campsites for other youth groups such as Kroka, a wilderness expedition school.

With the addition of legal fees, appraisals and other expenses, the project will cost a total of \$1.5 million, according to the news release. The conservation commission has also applied for a \$500,000 grant from the N.H. Land and Community Heritage Investment Program, and is seeking to raise \$200,000 in private, local donations, the group said in the release.

The commission said previously that it aims to all of the money privately, with no taxpayer dollars. If the group falls short of the fundraising goal, plans for making up the difference will be discussed at the May 2023 town meeting.

In 2022-2023, dozens of meetings and briefings were organized to promote community involvement in the acquisition of the former Wilson land and in the development of a management plan for the proposed community forest.

In conjunction with fieldwork in the forest and these public meetings and consultations, a draft Community Forest Management Plan was drafted by the Conservation Commission chair Geoff Jones (also a licensed NH forester) and shared publicly online through the websites of the Conservation

Commission (posted June 2022) and the Little Big Forest. Public review and comments were encouraged.

In addition, an online survey was developed and circulated to gather additional feedback about the proposed objectives of ownership of the community forest, and to rank their interest in potential facilities and amenities related to educational and recreational uses.

To encourage further community involvement and to support the updating of the draft community forest management plan, the Conservation Commission assisted with the organization of a Stewardship Committee for the Little Big Forest. This committee was organized in August of 2023 when interested townspeople met to explore what could be done to assist the Conservation Commission in its efforts to conserve and manage the Little Big Forest.

The committee includes representatives of the Board of Selectmen of the Town, the Town Planning Board and the Conservation Commission, a representative of the James Faulkner Elementary School as well as townspeople with an interest in forest conservation and living in close proximity to the forest.

The Stewardship Committee has designated officers and meets monthly since September 2023.

During its monthly meetings in September and October, 2023, the Stewardship Committee discussed and then adopted a Charter to specify its purpose and to guide its organization and activities (see page 33). The Stewardship Committee has an advisory role and exists to assist the Conservation Commission in the protection, conservation, and management of the Little Big Forest. This Charter was prepared and adopted as a living document than can be revised to account for continued interactions with the public.

One of the primary activities of the Stewardship Committee has been to support the Conservation Commission in its efforts to promote community involvement in the development and implementation of the management plan for the Little Big Forest. To the extent possible, the committee has helped the Conservation Commission to engage the public to discuss their vision for the priority uses and effective protection of the community forest.

Accordingly, during the monthly meetings of August, September, October and November, 2023, the Stewardship Committee focused its efforts on briefing the public about the attributes and potential uses of the LBF, and gleaning information from the public about desired uses and proposed management provisions.

Public listening sessions were organized for the public and were supported by distributing handouts summarizing the proposed management goals and objectives, with a view to guide feedback and suggestions for modifications. The listening sessions were held on the following dates:

- July 7th at the town hall in conjunction with Olde Home Days;
- August 23rd, 2023 at the town hall held by the conservation commission at their monthly meeting;

- Sept 9, 2023 held at the James Faulkner Elementary School in association with “Back to School” night, where valuable information and student sentiments were obtained;
- September 22, 2023 James Faulkner Elementary School: one session was held for K-2 students and one for grades 3-5 with total attendance of about 55 students. Teachers facilitated the session by sharing the news about the recent purchase of the Little Big Forest and an overview of the resources available on site. Students then collaboratively brainstormed ideas for specific learning activities related to each grade level's science and social studies topics and learning targets, as well as community recreation activities and events (see suggestions in Part III the Addendum to this plan).

The public listening sessions were attended by approximately 40 interested persons. They learned about the LBF through a PowerPoint presentation and facilitated discussion session. The presentation highlighted the key attributes of the forest and explored possible uses and benefits to the community. The participants also learned about the ongoing suggestions for priority uses and management obtained through the online survey.



Through these awareness-raising, outreach, survey and meeting activities, the public were encouraged to share their ideas about what excites them about the acquisition of the Little Big Forest, what concerns them about its care and protection, and what ideas they have for its use as a recreational and educational resource.

The public noted their interest in enabling educational and recreational uses of the forest that were consistent with its protection and conservation, particularly by students of the JFES and young people engaged in scouting programs. They also raised questions about provisions for walking trails, information kiosks and signage, parking, use of the cabin and dock, ADA requirements related to access and use, fire control, control of dogs, sanitation, policies about camping, hunting, and the use of motorized vehicles.

The members of the Conservation Commission and Stewardship Committee took careful note of suggestions and concerns raised, provided preliminary responses, and noted that these matters would be addressed in the updated LBF Community Forest Management Plan and land use policies.

The community responses indicated a strong interest in developing clearly marked and ADA accessible walking trails in the forest, interpretive signs and a visitor center along with environmental education programs.

Some of the specific suggestions from interested townspeople included the following:

- *“To me, the #1 attraction of the LBF is its shoreline access. A shoreline trail will offer spectacular views of the lake and its many shoreline habitats. This should be our first trail; it would be an in and out trail and hopefully with benches in areas for wildlife observation.”*
- *“I visualize the LBF to be an area to take a stroll, sit and listen, to meditate on its beauty”.*

In November, December 2023, the Stewardship Committee reached out to the Librarian of the Davis Public Library in Stoddard to see if the library could offer more reference materials related to conservation, management and desired uses of the Little Big Forest.

The town Librarian has since identified and set aside a small collection of particularly relevant and useful materials. When the updated management plan for the Little Big Forest has been completed, a printed copy will be added to this collection, in addition to the online version available on the websites for the Conservation Commission and the Little Big Forest.

To help ensure continued community involvement in the conservation and management of the Little Big Forest, the monthly Conservation Commission and Stewardship Committee meetings will be publicized on the Town’s activity calendar and remain open to the public. An annual report will be prepared and presented to interested members of the community, and information about current and proposed activities to conserve the forest and benefit the community will be summarized at the annual Town Meeting and publicized in the Annual Town Report.

Engaging James Faulkner Elementary School Student Participation

James Faulkner Elementary School (JFES) has an established commitment to place-based outdoor learning. Even in pre-pandemic days, JFES focused on outdoor activities like overnight canoe trips for 5th graders on Highland Lake and All School Hikes multiple times throughout the school year.

While the COVID-19 pandemic presented unique challenges for all schools, the JFES community is especially proud of how the history of commitment to outdoor education made staff and students better prepared to adapt to these challenges through increased creative use of outdoor spaces known as "Base Camp" on the school campus.

During this time, staff was especially interested in pursuing additional outdoor educational spaces and resources such as the Little Big Forest. Though the restrictions of the pandemic are no longer in place, *the legacy of that era lives on in a renewed interest and commitment to utilizing the Little Big Forest resources for hands-on, interdisciplinary, place-based learning that simply can't happen in the same way within the 4 walls of the indoor classroom!*

In 2011, when the town received the 732-acre Stoddard Rocks/Pioneer Lake forest, the conservation commission reached out to the JFES teachers, offering to lead day long/all school hikes for the

students. The offer was accepted and several day long hikes have occurred in the intervening years. Hundreds of Stoddard's children have had their lives enriched by these experiences. On one such outing, a young lad screamed out *"this is the best day of my life!"*

When the COVID~19 pandemic ambushed the nation in 2019, it forced schools nationwide to hold fully remote or hybrid classes. However, the Stoddard School District offered students and faculty an alternative: the option to return in-person, by going beyond the walls of their traditional classroom by creating a new outdoor space that allowed for safe distancing and the option for mask-less learning, while simultaneously giving the student's time outdoors.



Forester and Con Com Chair Geoff Jones grabs the student's full attention with tall tales....

Making the move took a lot of work and planning. For any new program to succeed, adaptive management strategy had to be implemented so the program could evolve as circumstances changed. After the initial start-up phase, everyone began to realize the benefits of being outside: teachers were able to cover the same curriculum while the students were learning in a much healthier and more enriching environment. Throughout the day, students could be found out and about the expansive school grounds: an art teacher had the students collecting materials for sculptures; a "base camp" was established where students could hang hammocks that would provide a welcomed relief from hard indoor desks. The hammocks provided ideal independent work space that helped students remain focused.



2014 JFES all school, day long hike to Stoddard Rocks & Pioneer Lake. Connecting students with local forests is an important goal of the Stoddard Conservation Commission.

As the outdoor curriculum took on a greater role, teachers realized they would need more outdoor space to accommodate all of the students safely. But places to expand were limited. When the school was approached about the idea of having a 40-acre forest with a rustic cabin, old-growth trees, and 4,000 feet of undeveloped shoreline as an outdoor classroom, a short five minute ride from the school, they were ecstatic (some would later say, it sounded too good to be true, so they didn't want to get their hopes up).

In October and November 2023, a special effort was made to engage the staff and students of the James Faulkner Elementary School in discussions about potential educational and recreational programs to be developed in the Little Big Forest. These efforts generated lively exchanges and many suggestions which were shared with the Stewardship Committee. In addition to informing discussions about provisions to be included in the revised Management Plan for the Little Big Forest, especially about educational programs. These interactions led to a decision to invite direct student participation in the Stewardship Committee.

With over two thirds of the town in permanent conservation, now that the town owns the Little Big Forest, one of the goals is to provide a place to cultivate a sense of stewardship awareness and appreciation in people of all ages, but particularly children. One of the best ways to do that is to have a town forest that connects schools to the forest and encourages students to participate in the stewardship of that forest.

In that spirit, the SC approached the JFES School to see if the students would be interested in participating in management decisions of the Little Big Forest. Fifth-grade teacher Maggie Forrestall circulated a student leader application form to JFES students in the 4th and 5th grades, in hope of finding one student who might be interested in being the representative to the LBF Stewardship Committee.

To her surprise, five students responded. The Stewardship Committee was so impressed with the enthusiasm and quality of the applicants interest, they suggested that the JFES form a school LBF Stewardship Committee consisting of all five of the students. The students accepted the challenge.

With guidance and support from 5th grade teacher Ms. Forrestall, the students will meet twice a month during the lunch hour, as a JFES Stewardship Committee, and work together as leaders for the engagement of JFES students in the stewardship and educational uses of the LBF.

The goal of their participation is to encourage a life-long commitment of JFES students to the conservation and the stewardship of the LBF (and the Pioneer Lake/Stoddard Rocks town forest) and other protected lands in the town of Stoddard.

Little Big Forest JFES & Adult Stewardship Committee



Front row Adult Stewardship Committee: Milosh Bukovcan (Eva Lane representative), Jason Kovarik (Stoddard con com and planning board), Robert Winterbottom (chair), Tim Rowehl (vice chair, Walker Rd. representative), Terri LaRoche (secretary, BOS), Geoff Jones (chair Stoddard con com), Jaelynn Stetson (Stoddard con com), Maggie Forrestall (JFES 5th grade teacher), missing Craig Walker (abutter LBF, Walker Rd. rep),

Back row JFES Stewardship Committee: Peyton Allain, Grade 4; Charlotte Miller, Grade 4; Jaxon Leonard, Grade 4; Rebecca Meyer, Grade 5; Cooper Mullahy, Grade 5.

JFES LBF Education Vision Statement

The following is a Vision Statement was drafted by 5th-grade teacher Maggie Forrestall and fully supported by the JFES staff, to guide and support the educational uses of the Little Big Forest by the JFES:

"We, the staff and students of the James Faulkner Elementary School, envision the Little Big Forest as a learning laboratory where students learn to be in relationship to themselves, each other, the natural world, and the local town community. We imagine this space as a student-centered extension of our school campus where students ask important interdisciplinary questions, participate in rigorous hands-on learning, and achieve meaningful and measurable growth in collaboration with peers, adults, and community members. We hope that educational programming at the Little Big Forest will help inspire the children of Stoddard to develop a strong sense of belonging and interconnectedness as an investment in their own wellbeing as well as the wellbeing of their community."

The conservation commission further envisions the Little Big Forest as an inspirational place where the following skills can be taught:

1. Teach students how to best develop their powers of observation;
2. Encourage students to be curious; to ask critical questions; to explore the answers to those questions on their own and collectively;
3. Learn to effectively research topics and answers to questions;
4. To develop a deep appreciation and awareness of the "Secrets of Life";



5. Learn how to become good stewards of land: whether it is their backyard or someone else's "back forty".

In order to further support the engagement of the JFES in the enjoyment and appreciation of the Little Big Forest, the Conservation Commission received a \$12,500 grant from the Trust for Public Lands "Nature near Schools Program" to assist in providing for the transportation of staff and students to and from the LBF.

Some options being considered are to pursue additional funding to purchase a van or small bus, or to arrange for periodic leasing or rental of a suitable vehicle on a long-term basis.

FES Timeline for Proposed Activities on the LBF

Moving forward into the 2024-25 school years and beyond, JFES staff and students envision monthly visits for each class to the Little Big Forest for interdisciplinary science, math, Social Studies, and ELA learning.

For example, the fifth grade class might visit the property in September, October, and November to study exchange of energy and matter in ecosystems and observe evidence of local economic development throughout the past two centuries, then return in December and January to investigate gravity through winter recreation activities and host a stargazing night to observe the seasonal movement of stars as evidence of the earth's orbit around the sun.

The school also hopes to create important annual traditions such as All School Hikes, camping trips, and community picnics that would take place at the Little Big Forest.

Finally, the property presents a myriad of opportunities to extend educational opportunities in Unified Arts, afterschool clubs, and staff wellness.

Plans for the Utilization of existing structures and proposed needs for further improvements

A rustic, well-built cabin lies in the northwest corner of lot M121 L1 that has an outside of 20-feet x 26-feet. One enclosed, first floor unfinished room has a dimension of 11-feet x 20-feet; contains a small Jötul wood stove and a small loft. Sliding glass doors are present, including a wall of windows lakeside. An enclosed lakeside porch with has the dimensions of 8-feet by 25-feet, with a side porch access of 5-feet x 10-feet.

Listening sessions with the Stoddard community and the James Faulkner Elementary School noted community interest in maintaining the cabin and ensuring that it is available for use related to the permitted educational and recreational uses of the Little Big Forest. Several persons expressed an interest to have an Education/Visitor Center in the forest.



During the monthly meetings of the LBF Stewardship Committee, the proposed uses of the cabin and other infrastructure (such as a fire pit, tables and chairs, sanitation facilities) were discussed in more detail, including needed repairs to the cabin and possible improvements as well as potential funding for those improvements and additions.

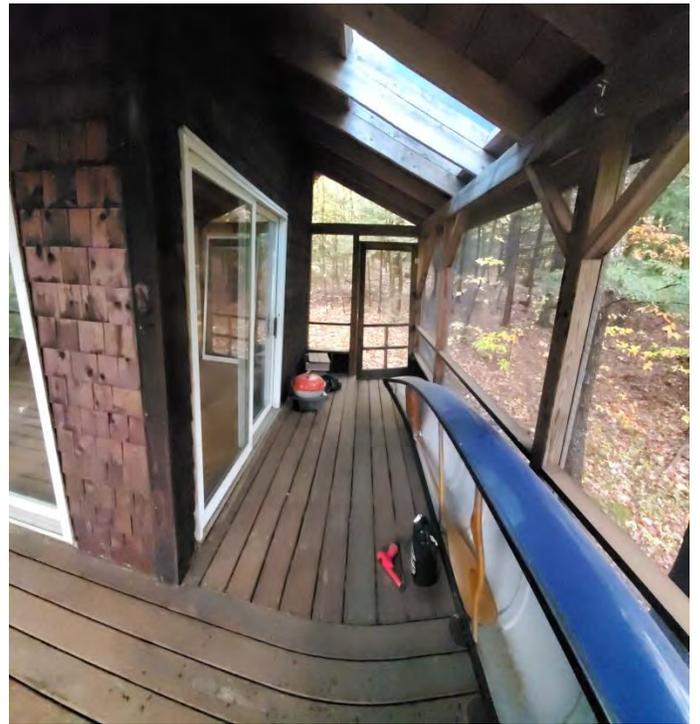
The Stoddard James Faulkner Elementary School is very interested in the building and site as an affordable/accessible property to expand their robust and established outdoor curriculum. The school would like to organize educational activities that would make use of the cabin as soon as April 2024.

Site visits will be conducted by members of the Stewardship Committee and Conservation Commission to consider what improvements would be needed to make the building suitable for the 5th grade students (for starters).

Some necessary minor repairs were made and additional routine maintenance will be organized as needed by volunteers and donations.

In 2024, the committee suggests that student use of the cabin and adjacent area be supported by installing portable toilets, bottled drinking water, and battery-operated lights. In its present condition, the cabin can be used in conjunction with overnight visits by students, and to provide shelter as needed during educational field activities.





With respect to medium- and longer-term planning for maintenance and improvements to support the educational and recreational uses of the community forest, the Stewardship Committee has outlined the following for consideration by the Conservation Commission and the Town of Stoddard:

Outdoor Education Classroom / Cabin: First Phase: year 1

- Battery Operated lighting;
- Port-A-Let for bathroom;
- Bottled water supply;
- Check current wood stove for safety and functionality (Heat);
- Ensure minor repairs to cabin, stairs, screens as well as periodic cleaning;
- Provide minor improvements to outside meeting area, fire pit and seating to enable use as an outdoor classroom;
- Provide appropriate arrangements for the storage of educational materials and items regularly needed and used by the staff of the JFES to support the school's outdoor educational and recreational activities in the forest;
- Provide suitable infrastructure and systems to manage waste, relying for the most part on "carry in / carry out" and supervision of participants to avoid littering and accumulation of trash;
- Consider septic for gray water (from sink).

Improvements for the Second Phase: Year 2-5

- Better lighting, possibly Solar;
- Composting toilet;
- Better water supply, pull from lake for washing hands and dishes; still will need bottled water for drinking;
- Possible Gas cooktop – stove;

Improvements for the Third Phase: Year 5 plus

- Full capacity Solar or on grid electric;
- Full Septic system;
- Well for water;
- Covered outside meeting area (pavilion);

In addition to the existing cabin/classroom, there is a small wooden deck located not far from the cabin and close to the lakeshore. This may need to be modified to support a docking system for small boats (kayaks and canoes).

Along the northern boundary of the forest, an unimproved dirt road exists (Phyllis Lane) to provide access by vehicle from Shedd Hill Road (town road) and Eva Lane (private road) to the area off the cabin and dock near the shoreline. Vegetation and fallen trees need to be removed on an as needed basis.

SC Recommendations for Infrastructure Improvement for the LBF in 2024

During public listening sessions organized by the Conservation Commission and in follow up discussions by the Stewardship Committee, the following actions were identified and are proposed to be carried out in 2024, in addition to continued maintenance and upgrades of the cabin, school campsite and outdoor classroom facilities.

- Establish a parking area adjacent to Shedd Hill Road (publicly assessable town road), near the intersection of Shedd Hill Road and Eva Lane (privately maintained road), to enable parking for vehicles transporting students as well as the general public;
- Erect an information kiosk at the parking area to identify the Little Big Forest and to provide useful information about trails, facilities, permitted uses as well as a summary of the reasons for its establishment as a community forest and primary sources of funding for its protection and conservation;
- Provide a seasonal porta-potty at the main parking area on Shedd Hill;
- Blaze the property lines along the boundaries of the Little Big Forest and maintain regular surveillance of the forest to prevent encroachment and unauthorized use;
- Make use of the existing access along Eva Lane and Phyllis Lane and improve the road along the northern boundary of the forest to include a turnaround area and temporary parking for a few vehicles. In addition to the parking area of Shedd Hill Road, this would provide a second point of public access for a more limited number of users. This would enable ADA access as well as limited use by vehicles involved with maintenance and management of the cabin and other facilities;
- Maintain and upgrade the existing dock to provide safe access from Highland Lake by canoe, kayak and paddleboard to the area of the forest near the cabin and outdoor classroom, and nearby walking trail along the shoreline;

- Build and mark a shoreline trail and loop trail to facilitate access on foot by visitors, from the parking area, down to the cabin and along portions of the shoreline area, across the forest and through representative sections of the forest back to the point of departure;
- Install rustic benches at appropriate sites and intervals along the loop trail to enhance opportunities for wildlife viewing and enjoyment of the forest and to provide resting points for older adults;
- Provide appropriate interpretive signage along the trail and at particularly noteworthy sites in the Little Big Forest to guide and enhance the visitors' experience and to further the aims of educational and recreational uses of the Little Big Forest. In addition to signs related to directions and distance for users of the walking trail, this could include signage related to the presence of wildlife, exceptional biodiversity, geological features, striking examples of the old growth forest, and other noteworthy elements;
- Identify and remove remnants of barbed wire fencing and other potential hazards that could injure students and visitors or otherwise interfere with the safety of educational and recreational uses of the community forest;
- Consider opportunities to develop and maintain a publicly accessible set of resource materials to enhance the knowledge and appreciation of the Little Big Forest and conservation in general; this could include continued cooperation with the Davis Public Library in Stoddard to have a designated shelf for reading materials related to the Little Big Forest (copy of the management plan, texts and articles related to forest ecology, birds and wildlife, botany, geology, forest bathing, etc.). A similar set of materials could also be made accessible in the cabin / outdoor education center in the forest, along with appropriate posters and nature guides.

Description of public access and the rationale for any limitations on public access

The Little Big Forest is currently accessible to the public on foot from existing trailhead gates at Phyllis Lane/Eva Lane junction to the north and Walker Rd. to the south. Limited access by boat can be obtained from the shore near the cabin on the northwest side of the property on Highland Lake. A 10-20 car parking lot is scheduled to be constructed in the spring/early summer of 2024 off of Shedd Hill Rd. near the Eva Lane entrance. A kiosk and porta-potties will greet visitors.

In keeping with the management goals and objectives for the forest, and to facilitate use for educational and recreational purposes, public access would be guided and managed as follows:

- Shoreline access would only be permitted near the existing dock, and be limited to relatively small groups of persons with canoes, kayaks, and paddleboards;
- Shoreline access would not be permitted from the "sandbar" or from other points along the shoreline to protect the shoreline vegetative and to avoid disturbance to wildlife and ecologically sensitive areas;

- Access on foot would be primarily from the primary parking area located adjacent to Shedd Hill Road, and along the marked walking trail. Access and walking through the forest, off the loop trail, would be discouraged, except in the vicinity of the cabin, dock, outdoor classroom, and adjacent areas, to avoid damage to wetland areas and other ecologically sensitive areas;
- Access for country skiing and snowshoeing and winter hiking is permitted, and visitors are encouraged to keep to marked trails and established areas for public access and use;
- Access by cars and trucks, ATVs, snowmobiles, or other motorized vehicles is not permitted except to park in the designated parking area on Shedd Hill Road; limited use of Phyllis Lane is permitted with prior permission, particularly for disabled persons and small groups engaged in maintenance activities or other sanctioned educational and recreational uses;
- Overnight camping in the forest is not allowed unless it involves small groups of supervised persons and is organized in connection with sanctioned educational and recreational programs for the Little Big Forest;
- To reduce the need for clean-up and waste removal, post signs to prohibit littering and to encourage users and visitors to “carry in/ carry out” and avoid littering;
- In keeping with NH state statues and LCHIP guidelines, the forest is not closed to hunting, but permits are required for hunting. We encourage hunters to use utmost safety and common sense while pursuing hunting activities, recognizing there will be considerable public use of this property for educational and passive recreational pursuits. (To reduce possible conflicts, hunters will be encouraged to hunt on thousands of acres of other protected lands in Stoddard that are also open to hunting);
- The use of open fires is not permitted except in the vicinity of the cabin and the outdoor classroom, using portable fire containers (Solo stoves or commercial metal fire pits.

Funding, Status and Purpose of LBF Ownership

Once the Option Agreement was signed, the commission faced the following fundraising challenge:

- \$1,300,000 purchase price for 40 acres of forest with 4,000 feet of undeveloped shoreline on Highland Lake, Stoddard, NH
- \$100,000+ project costs (legal, appraisals, surveys, closing, administrative, etc.)
- \$100,000+ stewardship fund
- Total Fundraising Goal: \$1,500,000

The Little Big Forest was purchased on July 7, 2023 by the Town of Stoddard using funds raised by the Stoddard Conservation Commission and townspeople, with the assistance of the Little Big Forest Fundraising and Publicity Committee.

In 2021-2023, multiple generous grants and contributions were received from many individual donors, totaling over \$1.5 million.

Funding For Acquisition: Sources and Acknowledgements



USFS: In June, 2022, the Little Big Forest was awarded a \$600,000 from the USFS Community Forest Grant Program. The LBF was one of only 12 projects funded nationwide; of the 12 projects funded, it is one of only FIVE to receive the maximum amount of \$600K!! This was the first and largest grant that sent a clear message to the town, other grants, and the general public that the town had a viable and very important land protection project. It helped to prime and animate the fundraising success. The town is forever indebted to the U.S. Forest Service for their generosity.

N.H. Land and Community Heritage Investment Program (LCHIP): On November 16, 2022 the LCHIP Board of Directors unanimously awarded the Little Big Forest a \$400,000 grant from LCHIP. It was the largest grant awarded in the 2023 LCHIP round. (At the Sept. 2023 field review by the LCIP site team, Stoddard conservation commission chair Geoff Jones was told if "they awarded points for passion, they would triple our score"they must have awarded those points)! The town wishes to express the deepest and long-lasting gratitude to this program!

NH State Conservation Committee Conservation Moose Plate Grant Program: On November 21, 2022 the Little Big Forest project was awarded the full SCC 2023 grant award of \$30,000!

Local Groups: The following local foundations and organizations contributed to the Little Big Forest:

- **The Bailey Foundation** (Three \$20K donations: 1st on Nov. 22, 2022; 2nd on Jan. 13, 2023; and the 3rd on December 2023, 4th on January 2nd, 2024): Another \$20,000 is pledged in for payment in December, 2024). The Bailey Foundation will contribute a minimum of \$100,000!
- **The Putnam Foundation** on Nov. 3, 2022: \$25,000;
- **Ashuelot River Hydro** on Dec. 8th Pledge: \$20,000 (making good on their pledge on March 18, 2023);
- **The Fidelity Charitable Fund** Jan. 17, 2023: (Ariel Phillips and Gwyndaf Jones): \$5,000;
- **The Lesser Foundation** Nov. 22, 2022: \$3,000;
- **The Keene Lions Club** Oct. 11, 2022: \$1,000;
- **The Highland Lake Unified Association** Oct. 7, 2022: \$1,000;
- **The Stone Ford Society** Feb. 6, 2023: \$1,000;
- **Trust for Public Lands Nature Near Schools Grant** April 2023: \$12,500;
- **Anonymous Foundation in Maine:** May 15, 2023 the capstone grant of \$92,000!

This is a breakdown of where the money came from:

- ✓ \$213,000+ from 290+ private donations
- ✓ \$260,000+ from 8 local foundations
- ✓ \$1,030,000 from 3 public agencies
- ✓ \$21,000+ miscellaneous

The Little Big Forest covers over 40 acres and includes more than 4,000 feet of undeveloped shoreline on Highland Lake which is now protected as conservation land. The purpose of protecting and conserving this old growth forest is to provide an educational and recreational area for students of the James Faulkner Elementary School, Stoddard residents and the general public to engage with nature. The Little Big Forest will be managed by the Stoddard Conservation Commission with the support and assistance of the Little Big Forest Stewardship Committee.





Recommended Stewardship Activities

James Faulkner Elementary School Wish List

Materials Wish List		
TOP priority (this year)	Medium priority (next 2 years)	Low priority (next 5 years)
bathroom!	possibly more snowshoes	XC skiing??
community homebase--flat and open with a firepit?	microscopes	water source in cabin (heat source?? might have to be turned off seasonally)
	water sampling tools	picnic shelter--large outdoor covered gathering space?
	trail cameras!	boating--students seem very interested in this
	variety of measuring tools	
	tree/plant/fungus ID resources	
	mapping tools, GPS	
Programming Wish List		
TOP priority (this year)	Medium priority (next 2 years)	Low priority (next 5 years)
Education Coordinator (part-time paid position--someone as main contact to coordinate group time, gear check out, etc).		could younger students do a "practice" camp out during the day? set up tents, have a fire, cook, etc. to get ready for Kroka overnight
transportation: can we have access to a van for individual classes to use? and could still use a bus for schoolwide events (we need to talk to Jill more about the logistics)		swimming/boating safety as part of PE??

Stewardship Timeline

<u>Activity</u>	<u>Timeline</u>
Clean out cabin	Spring 2024
Install Shedd Hill Parking Lot	Spring 2024
Install Shedd Hill Kiosk	Spring 2024
Install Kiosks at Phyllis Lane & Walker Rd Trailheads	To Be Determined
Parking Lot Porta-potties	Spring 2024 (after parking lot construction)
Trail Layout; blaze and add QR Codes	Spring 2024
Paint Boundary Line & Corners	Spring 2024
Make Improvements to Waterfront Deck	Spring/Summer 2024
Design and Construct Dock Near Cabin	Spring/Summer 2024
Purchase Kayak/Canoe Docks	Spring/Summer 2024
Develop long-range plan for building and improvement needs	On-going
Identify Minimum Impact Overnight Camp Sites (rotate use to minimize impact)	On-going



501-C3 Status

The Stewardship Committee will pursue 501-C3 status to help facilitate the reception of donations and to provide better control and accountability for funds raised through grants and donations for the Little Big Forest Stewardship Fund. Currently, funds are being kept by the town treasurer.

Stewardship Budget

<u>Little Big Forest Budget</u>	
<u>Revenue</u>	<u>Amount</u>
M & T Bank (1/24/2024 statement)	\$ 131,752.00
Balance from Town Funds (12/31/23)	\$ 17,409.00
BLA abutter payments	\$ 18,000.00
Bailey Foundation 12/2024 payment	\$ 20,000.00
Balance All Sources	\$ 187,161.00
<u>Projected Expenses to Get LBF Ready For Public Use</u>	<u>Amount</u>
Kiosk and signs	\$ 2,500.00
Shedd Hill Parking Lot	\$ 5,000.00
Porta-potty (PJ&D Septic: \$140/mo.)	\$ 1,100.00
Boundary Line Maintenance paint	\$ 110.00
2 Igloo 5 gallon Top Water Coolers	\$ 60.00
4 LED Battery Powered Lanterns	\$ 250.00
1 34-inch steel Nordic Wood Burning Fire Pit or Solo Bonfire Stove	\$ 250.00
Phyllis Lane Cul-de-sac turnaround	
Trail (hiking developed by con com/vol.)	
10 Trail Sign QR Codes (\$12 each?)	\$ 120.00
Kayak dock	\$ 2,500.00
Misc. building supplies: for cabin or docks	\$ 10,000.00
Trail Markers (Have in house)	\$ -
Estimated Expense to get LBF fully operational	\$ 21,890.00
JFES Wish Material List 2024 and Beyond	
12-15 pairs of snowshoes	
2-4 microscopes	
Water Sampling tools & supplies (TBD)	
Trail Cameras	
GPS & Mapping Software	
5-6 Canoes, paddles, lifejackets	
Forestry Measuring Tools (TBD)	

The Little Big Forest

Deep in the heart of the wild,
Where nature's beauty runs free,
Lies a place that's forever preserved,
A haven for every tree.

It's called The Little Big Forest,
And it's unlike any other,
For here the trees stand tall and proud,
Never tilled nor pastured.

The old-growth stands serene and strong,
A testament to time,
A place where creatures great and small,
Can roam and freely climb.

Three-quarters of a mile of shore,
On Highland Lake it lies,
A peaceful oasis, still and calm,
Beneath the open skies.

The rustling leaves sing sweetly,
And the birdsongs fill the air,
A symphony of nature's best,
For all who come to share.

The Little Big Forest is a treasure,
A sanctuary of peace,
A place to find one's inner calm,
And let the worries cease.

Let's cherish this pristine paradise,
And all it has to offer,
So that generations yet to come,
Can find its tranquil coffer.

~Anonymous



Addendum

1. Part II Community Forest Management Plan: The Little Big Forest History of Stoddard Conservation & Profile of LBF Natural Resources of Highland Lake, Stoddard, N.H.
2. Part III Addendum to LBF Community Forest Mgt. Plan
 - a. Contact Information: Stewardship Committee, Stoddard Conservation Commission, Town Administrator
 - b. Letters of Support
 - c. Jones-Apgar 2/21/2022 Timber Appraisal
 - d. LBF Maps
 - i. LBF Inventory Sample Pts. 200' x 200'
 - ii. LBF Parcel Tax Map
 - iii. LBF Landscape Level Map
 - iv. LBF Property Map: Proposed Trails & Trailheads
 - v. LBF Soils Map
 - vi. LBF Beards Brook Watershed, Forest Blocks, Aquifers/Wetlands & Conservation Lands
 - vii. Stoddard Conservation Lands with Forever Wild Easements
 - e. JFES Student Leader Applications
 - f. Summary of Public Listening Sessions
 - g. Defining Mature Old Growth (Society of American Foresters position statement).

Community Forest Management Plan Part II: The Little Big Forest History of Stoddard Conservation & Profile of LBF Natural Resources Highland Lake, Stoddard, N.H.



February 15, 2024

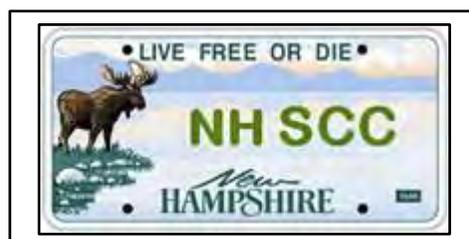
“Great Stewardship by Great Example”
Stoddard Conservation Commission

Plan Prepared by: Geoffrey T. Jones, Chair, NH LPF #151
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With Assistance from the LBF Stewardship Committee AND.....



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Overview of Stewardship in Stoddard

The Little Big Forest is located in N'Dakinna the homelands of the Abenaki people who were the original stewards for thousands of years prior to European American settlement. The current-day town of Stoddard was founded in 1774 and has an established conservation legacy that can be traced back to Christopher Robb, a business man who in 1853 opened the gates to a new sawmill in South Stoddard.

To supply his mill with wood, Robb acquired thousands of acres of forestland around Island Pond and Highland Lake to feed his growing saw mill business.

Around 1871, Robb built a dam that now forms Highland Lake, so he could float logs to his mill in the summer and haul them with oxen over the ice in winter.

Unlike other lumbermen of his day, Robb was a firm believer that forests should be tended as carefully as a vineyard or an orchard; he believed in good utilization with little waste.

Robb's sense of stewardship was carried forward, when Betty Babcock established the first large tract of conservation land in town when she donated 3,400 acres of land on the east flank of Highland Lake to the Society for the Protection of N. H. Forests in 1978 in honor of Charles L. Peirce, a local resident and historian.



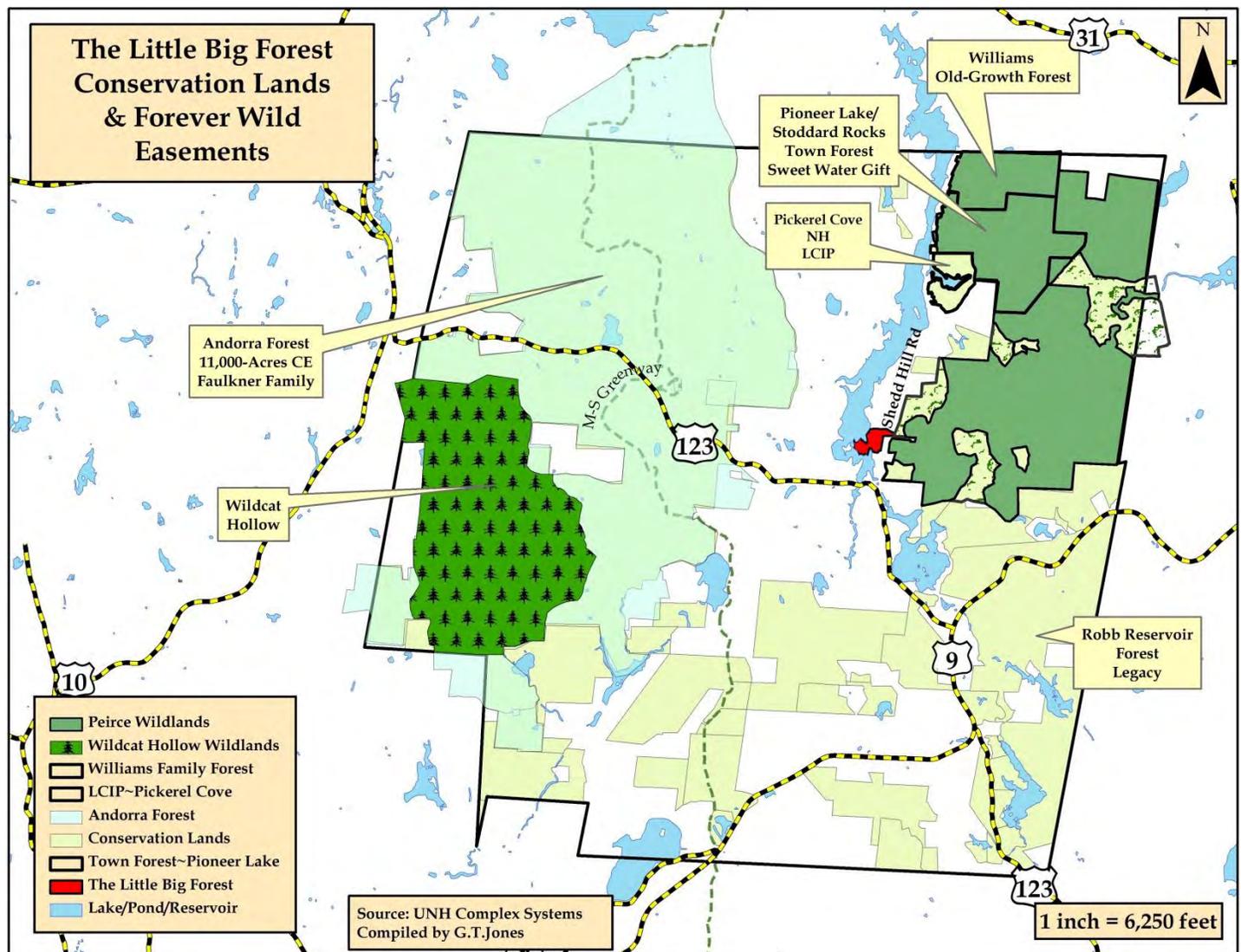
Over the past 40 years, other private landowners followed Babcock's lead, resulting in 65% of the town being permanently protected through their *voluntary generosity* and the efforts of several land trusts, including: the Society for the Protection of NH Forests, Sweet Water Trust, The Nature

Conservancy, the Audubon Society of NH, The Harris Center, and the Trust for Public Land and now the Stoddard Conservation Commission.

Of the 60+ parcels of land protected *before* the LBF, only two involved the use of public funds: LCHIP funds for 125-acre Pickerel Cove; Forest Legacy, LCHIP, and Moose Plate Funds for 1,666-acre Robb Reservoir.

It is interesting to note: of the 22,000+ acres of conservation land in Stoddard, over 6,000 acres are protected with *"Forever Wild"* easements. As these protected forests are allowed to age over time, they will help restore important habitat elements that may have been temporarily lost or don't exist in surrounding areas that are under continuous forest management or other activities. They also help to re-colonize these disturbed areas with important fauna and flora, while their own biodiversity elements are restored naturally.

Conservation Lands of Stoddard



Conservation groups believe that at least 30% or more of forest and agricultural lands have to be permanently conserved to preserve their economic and ecological integrity. "A resilient forest is one

that will continue to be a forest into the future". It is imperative that family forest and farm owners make formal plans to protect the future of their working lands!¹

Collectively, these forested areas provide a great resource that contains abundant and diverse habitat for a wide range of wildlife and bird species; a great forest resource for local materials and jobs; a great recreational resource for people seeking a variety of outdoor activities.....and a great place to live and make a living off the land.

In 1963, the NH General Court passed RSA 36-A:2 that enabled towns to establish a conservation commissions for the proper utilization and protection of the natural resources and for the protection of watershed resources of said city or town. Stoddard established its conservation commission (SCC) in 1963². Some of the important stewardship activities and accomplishments that the SCC has been involved in include the following:

- In 1990-91-Stoddard residents rallied against an ill-proposed development project slated to place 125 high end condominiums in Pickerel Cove. They defeated the proposal, then partnered with SPNHF to raise the \$95,000 purchase price;
- In 1999 successfully advocated the use of a wooden (v. concrete) bridge to replace the aging Mill Village bridge;
- From 1999-2008 helped lead the regional effort to reduce the size of a proposed \$66 million dollar upgrade of Keene's bypass, by successfully promoting a less damaging practical alternative: Roundabouts. Stoddard recruited letters of support from 10 other conservation commissions from towns in Cheshire County; SCC chair Geoff Jones was an articulate and important voice advocating for the least damaging practical alternative to the DOT proposed upgrade: Roundabouts!

OPINION
THE KEENE SENTINEL WEDNESDAY, MARCH 21, 2007 PAGE 8

Why this roundabout confusion?

By GEOFFREY T. JONES

After 10 plus years of an ongoing public debate about the virtues of roundabouts that has included countless articles in *The Keene Sentinel*, dozens of editorials and op-ed pieces, hundreds of letters to the editor, and dozens of public information meetings that included world renowned roundabout engineers, I find it quite perplexing that five former mayors, a former state senator, 2,000 petitioners and even a rocket scientist still don't get it. What do these folks do with their spare time? Certainly reading *The Sentinel* or going to public meetings can't be high on their list.

After a 10 year public outreach effort in Keene, I think many of these folks either haven't been paying attention, or perhaps they have forgotten some of the details, or maybe, heaven forbid, they have a trained incapacity to learn or accept new ideas. Some folks can be excused because they are newcomers, while some are just plain contrary. But mostly, I think the resistance comes from people who either don't like or are afraid of change.

According to the Insurance Institute for Highway Safety, the biggest impediment to building roundabouts is the negative perception held by some drivers and elected officials:

"Drivers may be skeptical, or even opposed, to roundabouts when they are proposed. However, opinions quickly change when drivers become familiar with roundabouts. A 2002 institute study in three communities where roundabouts replaced stop sign-controlled intersections found 31 percent of drivers supported the roundabouts before construction compared with 63 percent shortly after. Follow-up surveys conducted in these communities after roundabouts had been in place for more than one year found the level of public support increased to about 70 percent on average."

To their credit, Keene's elected and public officials have resisted the negative perception and kept an open mind. They have listened carefully to a group of citizen activists who have been advocating the use of roundabouts. They have hired the best roundabout engineering experts and, if allowed to act on their recommendations, they stand to improve some long-standing failed intersections throughout Keene — and at considerable savings to local taxpayers. I find it quite ironic that many of the critics of the proposed (and carefully conceived) roundabout at the intersection of Main, Winchester and Marlboro are squawking about the \$4.2 million price tag, while many of these same people were zealous advocates of a \$66 million bypass upgrade that made neither engineering, economic nor environmental sense.

For people who still find themselves in the dark or lost in space about roundabouts, I suggest that you work the *Sentinel* archives or go to the Internet and look up roundabouts. You will find a wealth of information that explains what modern roundabouts are and how they differ from older traffic circles like the one at the head of the square. You can learn how traffic flows and how easy it is to navigate safely as a (veteran) driver, trucker, first responder, bicyclist or pedestrian. You can learn a whole host of other benefits about roundabouts and why hundreds of communities across this country have installed over a 1,000 roundabouts in recent years with thousands more on the drawing boards.

Sitting up here in the hilltop town of Stoddard, in a stratum of air free from the smoke and fumes of the traffic congested lowlands, the benefits of roundabouts are pretty clear. For me, the most compelling reason to adopt roundabouts is this: Because roundabouts improve the efficiency of traffic flow, they reduce vehicle emissions and fuel consumption.

According to a recent study cited by the Insurance Institute for Highway Safety, "replacing traffic signals and stop signs with roundabouts reduced carbon monoxide emissions by 32 percent, nitrous oxide emissions by 34 percent, carbon dioxide emissions by 37 percent, and hydrocarbon emissions by 42 percent. Constructing roundabouts in place of traffic signals can reduce fuel consumption by about 30 percent. At 10 intersections studied in Virginia, this amount equated to more than 200,000 gallons of fuel per year."

Imagine, if you were to apply this effort across the national landscape, the enormous environmental and economic savings that could be realized.

If we can't solve the reasonably simple problems associated with failed traffic intersections with commonsense solution of carefully considered roundabouts in a progressive city like Keene, how on God's green earth are we going to solve the incredibly pressing and complicated issues surrounding climate change, that has no easy answers?

Ironically, roundabouts not only hold the promise of solving local traffic problems, but if used extensively and where appropriate, they collectively could help us begin to address some of the root causes of climate change. We all need to make a better effort to understand the issues confronting our communities and how they fit into the global picture.

Geoffrey Jones of Stoddard is a forester, chair of the Stoddard Conservation Commission and a longtime advocate of roundabouts.

¹ Catanzaro, Paul, et al, *Increasing Forest Resiliency for an Uncertain Future*, Hadley Printing, Holyoke, Mass., 2016 p.6

² Source: New Hampshire Association of Conservation Commissions, 54 Portsmouth St., Concord, NH

- In 2006 helped support the local effort to protect 1,600+ acres around Robb Reservoir. Persuaded residents to appropriate \$50,000 towards a \$3 million dollar statewide initiative, resulting in a unanimous vote of support from the town;
- In 2011 led opposition against a poorly sited cell tower proposal on a remote hill surrounded by conservation land in southwestern Stoddard. The SCC identified an alternative site that hosts the tower today;
- In 2012 initiated the effort to convince Sweet Water Trust (SWT) to donate 730-acres of land including Stoddard Rocks and Pioneer Lake to the town. This effort resulted in a unanimous vote by the town to accept the SWT property that included a \$50,000 stewardship donation for maintenance of the dam, as well as a town approved match of \$10,000 towards the same fund;
- In 2012 the Con Com was an intervenor in a proposed wind farm in NW Antrim on Tuttle Hill that would impact adjacent conservation lands that contained the NH F & G Dept.'s highest wildlife habitat ranking; the SEC defeated the project on aesthetic grounds (the first time the NH Site Evaluation Committee ever denied a permit);
- In 2013 established a trailhead parking lot and trail to new town forest surrounding Pioneer Lake and Stoddard Rocks;
- In 2014 developed a formal relationship with the Stoddard James Faulkner Elementary School; led a day long hike to the forest with the 60 students K-5th grade; additional outings and presentations have been made;
- In 2016 took the early lead to defeat an ill-proposed bobcat season by enlisting the support of 30 other town conservation commissions; the bill was soundly defeated due to unprecedented public outcry;
- In 2016 the Con Com was an Intervenor in a 2nd attempt to establish a wind farm on Tuttle Hill in Antrim; this time the project was approved by a 5:1 vote by the Site Evaluation Committee and upheld by the NH Supreme Court in February 2018;
- In 1999-2018 hosted dozens of presentations on conservation topics in conjunction with Olde Home Days attended by over 1,000 citizens. These annual forums have topics that underscore the importance of all the conservation lands in town, cultivating an awareness and pride that has culminated in town support for many conservation initiatives over the years, including protecting the LBF;
- In 2012-forward: proven track record of stewardship taking care of 732-acre town forest, maintaining trails; earthen dam; kiosk; leading field trips for JFES and Antioch students; and general public in conjunction with Olde Home Days; protecting the property from unwanted vehicular encroachment, etc.;
- 2021-2023: Led the successful effort to raise \$1.5 million through several grants and donations to protect 40-acres of forest with 4,000 feet of undeveloped shoreline on Highland Lake, known as the Little Big Forest.

Who owns the Conservation Land of Stoddard?

The Society for the Protection of New Hampshire Forests (SPNHF) has had the largest and earliest hand at protecting land in Stoddard, beginning with the 1978 gift of 3,400 acres of land from Betty Babcock, in honor of long-time resident and local historian Charles Lyman Peirce. SPNHF owns seven separate forests that total 4,230 acres and hold another 13,109 acres under conservation easement on seven other tracts, including 10,400 acres on Andorra Forest, the heart of the

Monadnock Highlands. Here is a summary of parcels of protected land; who owns them; the decade they were protected and their respective acreages:

Who Owns The Conservation Lands of Stoddard?		
<u>Decade</u>	<u>NAME</u>	<u>Acreage</u>
1980	Peirce Reservation-SPNHF	3,381.0
1980	Price CE (9 tracts)	828.0
1980	Lakefalls Associates-CE	467.0
1980	Williams Forest-SPNHF	357.0
1980	Rumrill Forest-SPNHF	118.0
1980	Daniel Upton-SPNHF	169.0
1990	Andorra Forest-CE	10,372.0
1990	Pioneer Lake/Stoddard Rocks (conveyed to town in 2012)	717.0
1990	Otter Brook-TNC	272.0
1990	Ward-CE (4)	178.0
1990	Pickerel Cove-SPNHF	125.0
2000	Robb Reservoir-Harris Center	1,666.0
2000	King-CE	406.0
2000	Loverens Mills-TNC	282.0
2000	Wild Lake-CE	138.0
2000	Whitney/Sherman-CE	75.0
2010	Wilson Tavern-Harris Center	337.0
2010	Burgess-CE	286.0
2010	Luneau-CE	138.0
2010	Chandler-CE (2 tracts)	91.0
1980-2021	Miscellaneous-CE (22 tracts)	717.0
1980-90	Cahill (4 tracts)	920.0
2023	The Little Big Forest (town of Stoddard)	40.0
	Total	22,080.0

What Do Residents Say About the Conservation Lands? Notable Quotes

Here is a sampling of how residents regard the importance of the conservation lands of Stoddard:

- “I used to view land protection as a luxury; now I view it as a necessity” ~the late Marylou Eaton, town matriarch;

- Pioneer Lake is “my happy place; it’s where I go when I am having a bad day”~ Stoddard resident;
- “The conservation lands are my gyroscope: they help keep me grounded; they are my gymnasium; they keep me fit”;
- “Projects like this help unite and galvanize a community.”
- “I just finished my first review of your report. Your descriptions of the lands and your evaluation of the environmental importance of the Little Big Forest tracts literally brought tears to my eyes (good tears). “ ~abutter Craig Walker

Landscape Level Features

Landscape Level Highlights of Little Big Forests Community Forest (LBF)

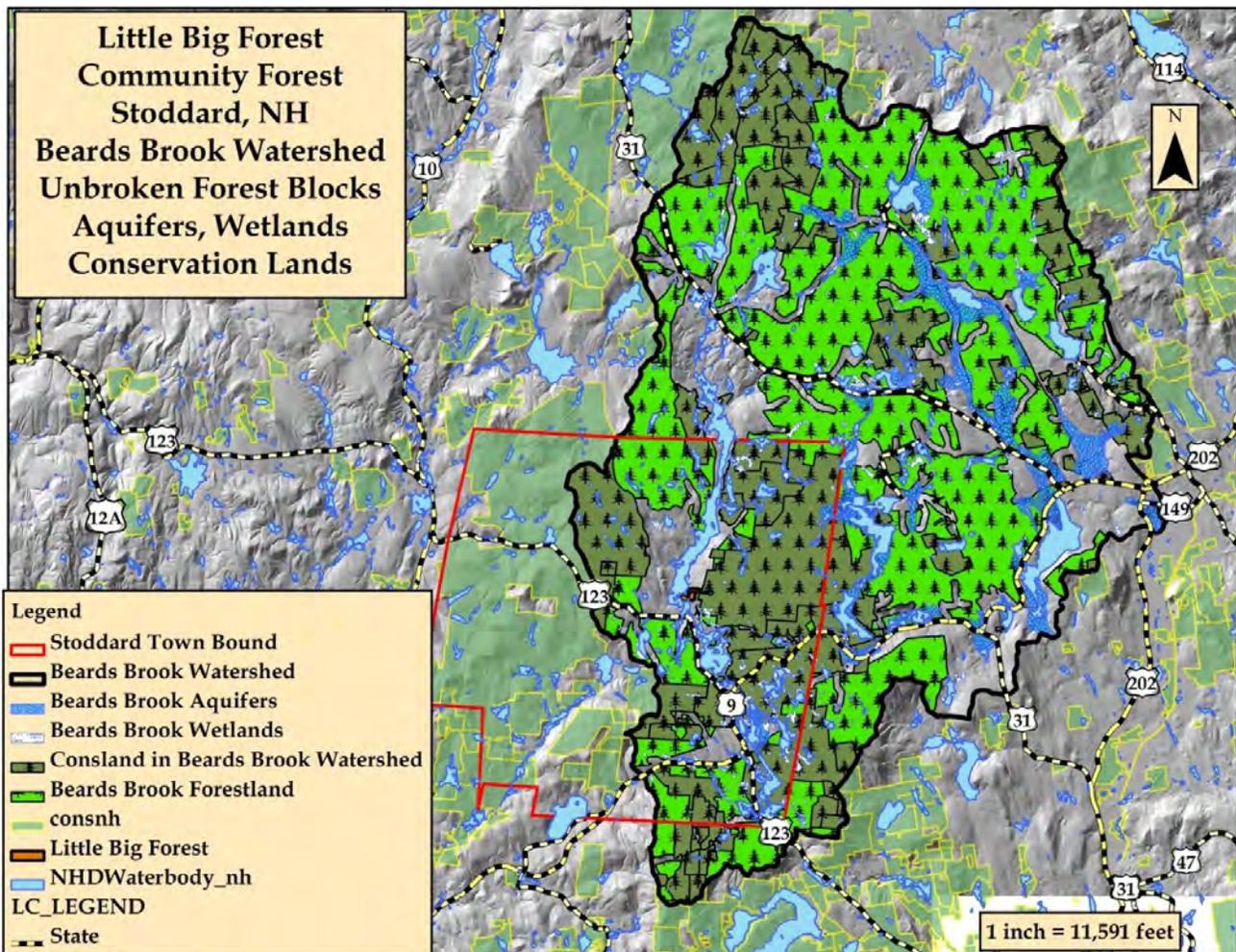
- **Sixty-five percent** of the town is in conservation land (22,080 acres); approximately one-third of the protected lands (6,500+ acres) are in a “forever wild” designation;
- In looking at the mosaic of protected lands in Stoddard, shoreline protection is the one habitat type that is severely under represented; adding these 40-acres will protect a unique and extraordinary “ecological treasure”;
- Little Big Forest has **4,000 feet of undeveloped shoreline**, which is approximately 4% of Highland Lakes 19 miles of shoreline: combined with Pickerel Cove’s shoreline of 1+ mile: **10% of the total shoreline is NOW protected.** This is important, because Highland Lake has 700-1,000+ camps/house lots many having less than 150 feet of frontage, all with some sort of septic system, well water withdrawal, and many are have lawns laced with varying levels of fertilizers, herbicides, and pesticides. Collectively these camps and the activity associated with them are taking its toll on the health of the lake;
- Little Big Forests and Pickerel Cove represent “**Ecological Life-lines**” that link the ecosystem services of thousands of acres of protected lands to the ecosystem of Highland Lake; these services supply the biodiversity that is so important for ecological health and resiliency of lakes and forests: they aid in the survival and/or rebounding from stresses caused by climate change, development of the shoreline that has already taken place, and other human induced stressors;
- **According to forest ecologist Tom Wessels, the LBF lands most likely have always been forested; the soils never plowed or pastured:** (portions of one Lot M121-L1 were fenced and perhaps farmed as unimproved pastureland for sheep). The network of mycorrhizal fungi and other soil microorganisms should be healthy and intact; this is significant, because they are critical to maintaining the ecological health of forest and lake ecosystems, by preventing nutrients from being leached into surface waters and are part of a **major (global) carbon sink**;
- Highland lake is home to nesting loons, a variety of ducks and Canada geese and is frequented by great blue herons and osprey; bald eagles perch in the super canopy white pines on the peninsula with increasing frequency, someday they may nest;
- Forests on the “peninsula” are believed to have been uncut for at least the past 150-200+ years. Large white pines, in excess of 3-ft in diameter and 110-feet tall AND straight, are scattered throughout the overstory of the peninsula. One very large red maple is estimated to be 200 to 250 years old!!! As the super-canopy white pine age and senesce, broken tops will make excellent bald eagle nesting habitat; studies on trees 150 years in age and older reveal that over 20,000 species are involved with the cradle to grave existence of these trees!!

- Little Big Forest would be the first property in Stoddard where the terrain would lend itself to an ADA trail system that would enable people with special needs to experience a 100-200 year old forest that is usually found in remote areas difficult to access. The forest is right under our nose, a short distance from Mill Village where the fire station, Village store, and Post office are located;
- A well-built rustic cabin will be kept and renovated into a community center for outdoor education and field trips to talk about a variety of natural resource issues, expanding James Faulkner Elementary School (JFES) existing nature based curriculum in stimulating new ways.

This project has had all of the excitement and energy that the public efforts to protect Pickerel Cove, Robb Reservoir, and the Stoddard Rocks/Pioneer Lake experienced: it is a tremendous unspoiled area close to Mill Village, AND it will build upon the legacy of previous community land protection efforts.

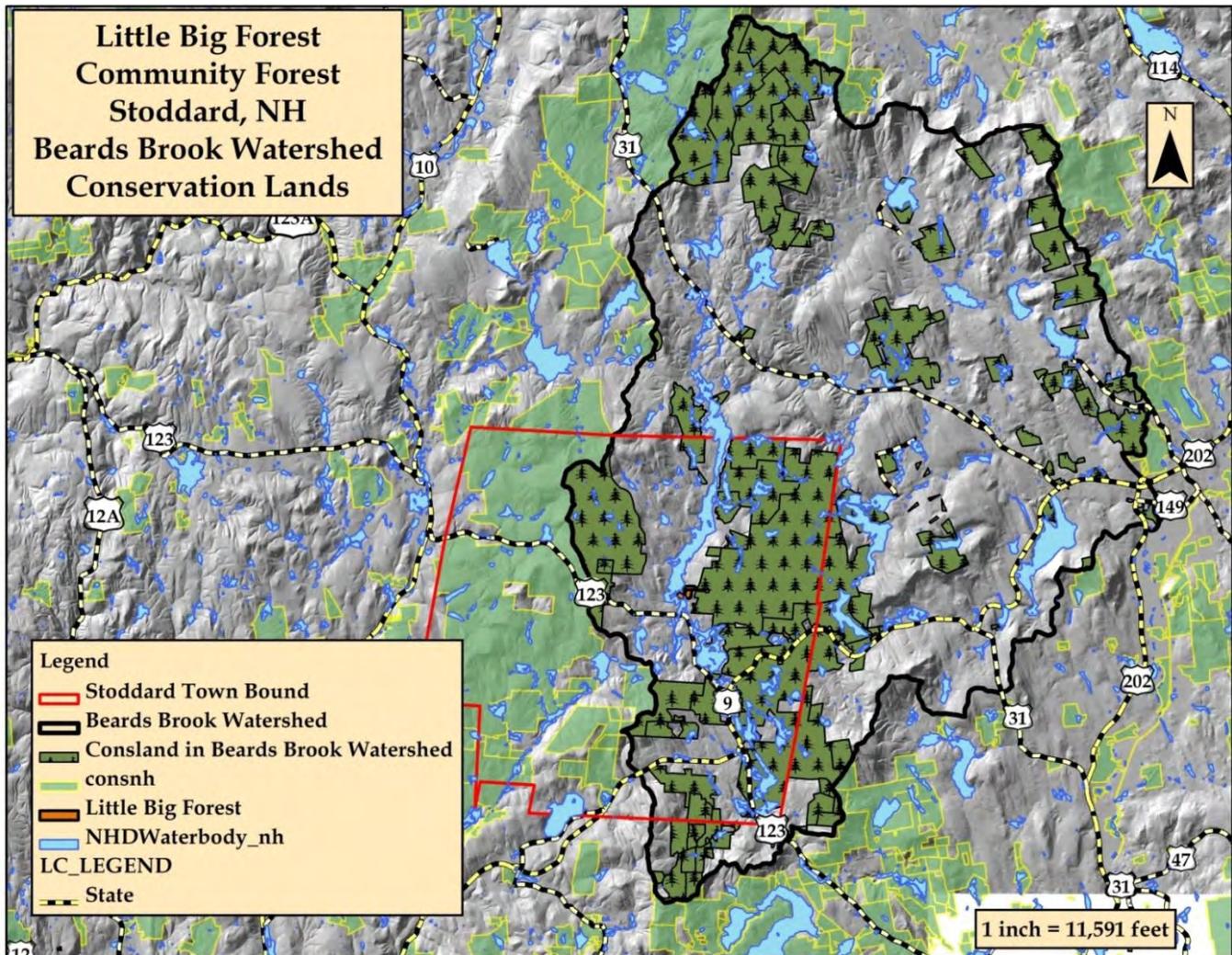
Unfragmented Forests

After the Civil War, farms in New Hampshire were abandoned in favor of more productive lands in the Midwest and West. For nearly a century, N.H. experienced a period of forest recovery that culminated in 87% of the state being re-forested; second only to the state of Maine. Today, however, the amount of forest cover has dropped below 80%, because of several waves of development dating back to the 1960's!



Sixty-eight percent of the 4.6 million acres of forestland in NH are owned by private landowners³. Maintaining the integrity of forests is important for economic reasons, as forest products companies of NH produce \$2.2 billion annually, providing jobs in the timber and the recreational resource for the tourism industry⁴. Forests are important ecologically, because they filter our drinking water, sequester and store carbon dioxide in vegetation and the soil with its hidden mycorrhizal network and provide habitat for plants and animals that form the web of biodiversity that all life depends upon.

In the fall of 2020, the University of New Hampshire, in collaboration with an independent forest researcher, completed a study that showed forests of N.H. are declining at an alarming and increasing rate. Using satellite imagery and a powerful geographic information system they analyzed geographic data from the past 22 years to estimate the loss of forest cover. Their findings show that the rate of forest loss has nearly doubled from 14% between 1996 and 2001 to 27% between 2010 and 2018. Between 1996 and 2018, N.H has lost more than 238,000 acres: an average of more than 11,000 acres annually. This latest round of research shows that “we need to take intentional steps to protect New Hampshire’s remaining forests”. ~one of the researchers



³ The Economic Importance of New Hampshire’s Forest-Based Economy 2011, NH Division of Forest & Lands

⁴ Ibid.

In particular, large unfragmented forest blocks of roadless, undeveloped land provides important habitat for many species of birds and mammals that live in the NH woods that depend on these large, unbroken forestlands. Fragmentation of these lands due to human activity fractures wilderness systems, wildlife corridors, natural communities and ecosystems, degrading their natural functions.

It also destroys important "escape" habitat that wildlife seek, when other important habitat they use is fragmented or lost to development. Habitat loss due to fragmentation is one of the largest threats to biodiversity world-wide. Keeping them from further development is of paramount importance to the health and vigor of wildlife and people, as many of these species are indicators of ecosystem health, which we all depend upon.

An "unfragmented forest block" is an area of forest that is not broken up by roads, development or water bodies. Forest blocks that are 500-acres in size are large enough to provide wildlife habitat for a variety of birds and mammals, protect water quality, and remain economically viable for forest management activities. Forest blocks that are 5,000 acres and greater enhance the ecological and economic value of forests. Large blocks of this size usually occur further north, primarily in the White Mountains and Coos County, however Cheshire County is well represented.

Unfragmented forest blocks, with protected lands embedded add permanence to the landscape; they provide important habitat and traveling corridors, connecting woodlands with lakes and wetlands that are used by a wide variety of song birds that require deep interior unbroken forest canopies, both game and non-game species. In particular, this region represents great habitat for turkey, grouse, snowshoe hare, coyotes, fox, deer, moose, fisher, bear and bobcat.

Conversion of forests to other land uses eliminates all the benefits that forests provide: in other words, **"no forests equal no forest benefits"**!

Water Quality

Around 80% of NH is forested, which provides a natural filter for drinking water, blessing this state with an abundance of high-quality ground and surface water. Forests provide the environs for unmolested headwaters, uplands, and basins for streams, rivers, ponds, lakes and wetlands that are all connected through complex ecological processes.

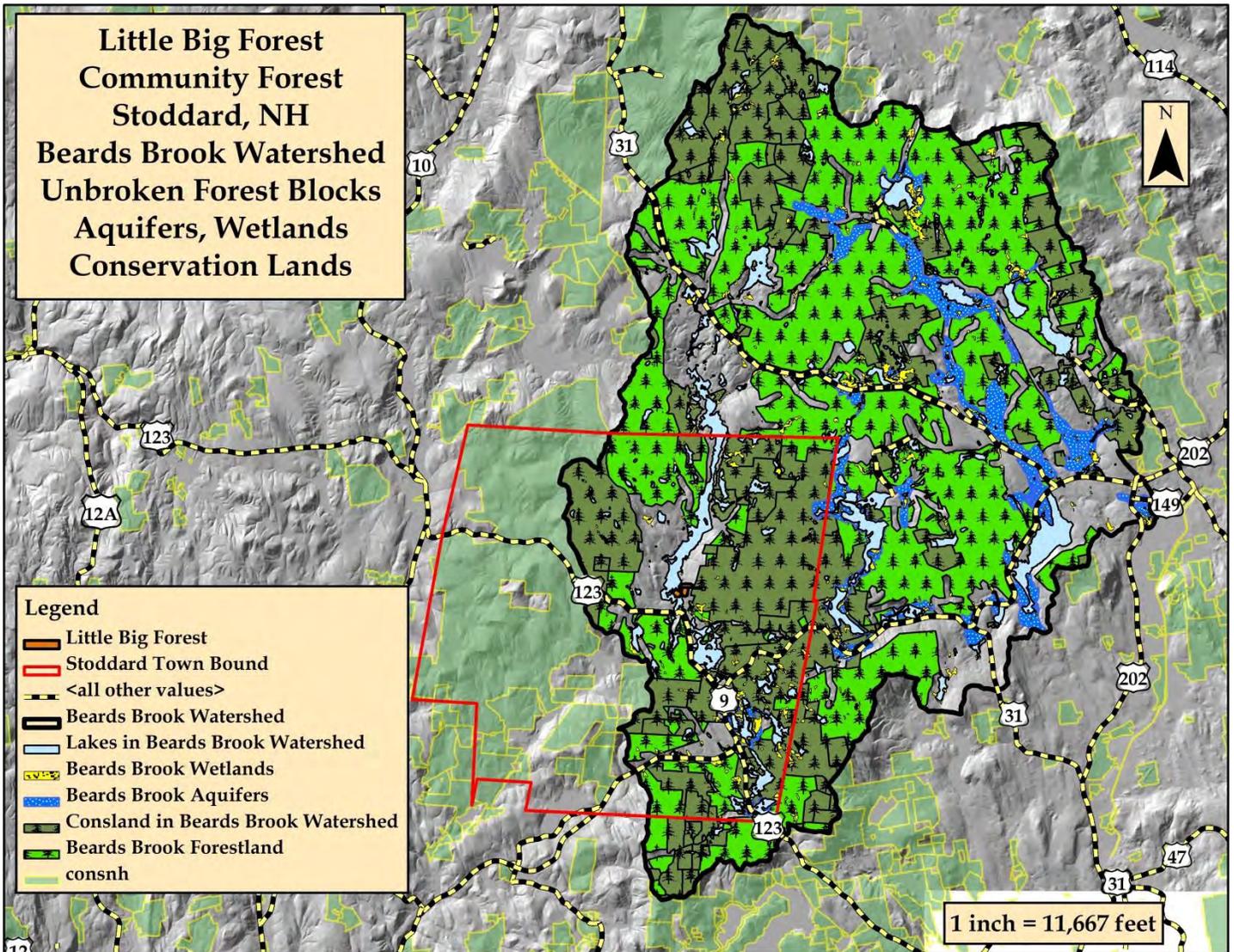
Because forests act as a great filter and produce some of the purest drinking water there is, converting forestland to non-forested uses poses a great threat to our water quality through poor land use practices and accidents. LBF lays in the southwestern side of the 77,293 acre Beards Brook Watershed. It is interesting to note that 53,744 acres of this watershed or 69% consists of large forested blocks (these "unfragmented forest blocks have no development; no utility lines; no public roadways). In addition, 24,675 of those forested acres or about 32% have been protected from development, which more than triples the statewide average of 10% of NH's drinking water that comes from protected sources!

Within the Beards Brook Watershed, forestland owners can play an important role in maintaining high water quality standards by leaving buffers around water courses, wetlands, ponds and lakes, and by following best management practices (BMP's) when engaged in farming and timber harvesting projects that disturb soil.

Adding the LBF into the protective custody of the Stoddard Conservation Commission will provide the best long-term protection for the surface and ground water quality of this forest, because the land will not be subjected to disruptive uses of logging or site conversion to development!

Features of Beard Brook Watershed

Feature	Number of Parcels	Acreage	Percent of the Watershed	Significance
Beards Brook Watershed	1	77,293	100%	25 largest out of 113 Watersheds state wide.
Unfragmented Forest Blocks	16	53,744	69%	Unbroken forest blocks provide the best source of surface and drinking water and the best habitat for wildlife, especially large apex predators.
Conservation Lands	158	24,675	32%	Land Trusts have set a goal of protecting 30%+ of the land in each town; each state. The late world renowned biologist E.O. Wilson suggests we need to protect 50% of the Earth. These two figures are the yardstick by which to measure our progress.
Unfragmented Forest Blocks in Conservation	113	20,843	27%	It is one thing to have large, unforested blocks: it is best to protect them from future development with conservation easements or fee ownership by governments or land trusts.
Wetlands	1,251	7,738	10%	Wetlands on the surface provide a hydrological link to underground aquifers. It is important to protect them from contamination. Wetlands embedded in forestlands that are under easement are the best form of protection for water sources.
Wetlands Protected				No info. available
Aquifers	91	5,002	7%	Less than 10% of the drinking water sources in NH are protected.



Wildlife

The lands adjacent to the LBF include former pastures long since abandoned and now reforested; fire scarred lands whose forest types show the progression of vegetative succession from such disturbances; ledge outcrops; stands of high elevation red spruce; wetlands; managed forestlands of white pine and mixed hardwoods; and pockets of old-growth scattered throughout a predominate northern hardwood forest.

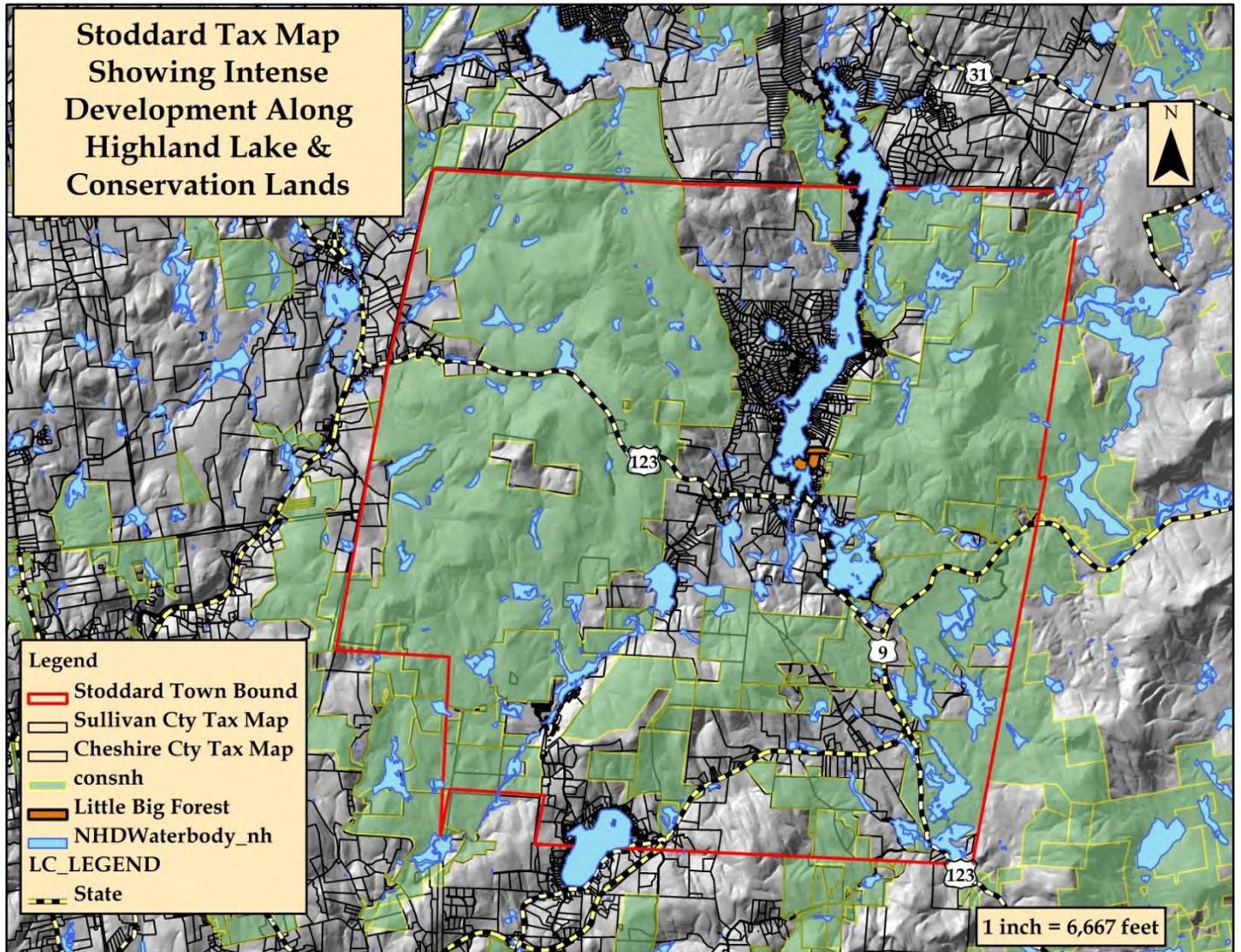
Most of the reptiles, amphibians, birds and mammals that one would expect to find in this region historically, can be found on these lands, remain a true testimony to the resiliency and resource richness of this land.



Bald Eagles are expanding their nesting sites in the area. The LBF has prime roosting & nesting sites that have attracted this eagle's interest.

The 3-Little Big Forest lots combined, offer diverse and valuable habitat for mammals, songbirds, amphibians, reptiles, and waterfowl. The forest has vertical diversity and a diversity of tree species that provide mast, softwood cover, and appeal to a variety of songbirds and mammals. With over 4,000 feet of undeveloped, irregular shoreline that has shallow waters with stumps and rocks that precludes motorboats, it provides excellent shelter and habitat for waterfowl. Upwards of 20+ ducks and a pair of loons have been observed in the protected bay.

While conducting the field inventory, fresh deer scat was observed in several areas, barred owls were calling, winter wrens, hermit thrushes and other songbirds were in their spring song. Many locals have observed wildlife (bear, turkey, fox, and coyotes) crossing Shedd Hill road from the protected lands of the Pierce Reservation to these lots. Additionally, ducks, geese, and loons are frequently observed in the waters along the shoreline and bay of these properties. It is a sanctuary for wildlife, waterfowl, and people paddling in canoes and kayak.



As groundwater becomes nutrient enriched from the intense development that Highland Lake has experienced (septic systems, lawns and use of fertilizers and weed killers), well water could potentially be compromised or pumped dry: a combination of overuse and climate induced droughts....there are no stratified aquifers in the watershed; all well water comes from the bedrock.



As Highland Lake water quality degrades from intense and increasing use, so too, will the recreational experience for swimming, boating, fishing, and just plain sitting on the dock or porch. Add to this degraded experience, hillsides packed with development, night lights, barking dogs, lawn mowers, random fireworks throughout the summer, loud music and always....always the background din of traffic noises from Rte. 123 and Rte. 9. All of these aforementioned factors beg that more undeveloped shoreline be protected and spared the fate that most of the lake has experienced.

Invasive Plants and Insects

Endemic populations of native insects and pathogens are important in healthy forest ecosystems. However, introduced non-native exotics can cause excessive damage. Insects are prey species at the very bottom of the food chain. Along with other decay organisms, some insects transform dead and dying plant material (including trees) into nutrients that feed new plants. Insects and diseases become problems when populations reach out-of-balance, epidemic levels. Tree-growth loss and mortality can occur and the economic impact can be severe.

The most devastating insect and disease outbreaks often occur when non-native pests are introduced into locations where they have no natural enemies. Diseases introduced in the past such as the Dutch elm disease, the chestnut blight, and the butternut canker have virtually eliminated their host species.

No invasive plants were identified on the property, however many pesky invasives are in the area. It is important for the town to remain vigilant for several damaging insects that include the following.

Insects of concern for Stoddard:⁵

- Asian Long-horned beetle, found in Worcester, MA in August 2008, but hasn't been found in NH.....yet!! It can devastate hardwood trees and forests.
- Hemlock wooly adelgid was first discovered in Portsmouth, NH in 2000. This small, wingless insect uses its piercing mouth-parts to feed on small hemlock twigs. HWA, if left untreated, can kill a tree in 4 to 10 years. Untreated outbreaks of HWA weaken the tree and leave it susceptible to damage from other pests, such as elongate hemlock scale and hemlock borer. Maintaining trees in a healthy condition lessens damage by other pests. HWA populations can

⁵ <https://www.nhbugs.org>
LBF Mgt. Plan Part II
2024

be found in more than half of the towns in New Hampshire and every county except Coös. This pest can be introduced into new areas by birds and other wildlife, and through human activities, such as the movement of infested nursery stock and forest products. HWA was found in Stoddard in 2020.

- Emerald Ash borer attacks white ash trees; they often die within 3-5 years. EAB has been found in Stoddard and is expanding. Remain vigilant; seek advice from the UNH county forestry resource specialist.
- Jumping worms, also known as snake worms or crazy worms, are an invasive earthworm introduced to North America from eastern Asia. Jumping worms consume the upper organic layer of the soil, native plants may slowly disappear and invasive species take their place. As the forest floor structure changes, other species are negatively impacted, such as ground nesting birds, amphibians, and invertebrates. FISHERMAN BEWARE: Jumping worms are occasionally sold as fishing bait or for use in vermicomposting. Do not purchase them for these purposes, or any other purpose.⁶
- Japanese knotweed which is progressively invading the town along Rte. 123. Small populations are present near Island Pond off of Old Antrim Rd.

For more information on damaging invasive insects and disease, go to: <https://nhbugs.org/>

For more information on damaging invasive plants, or to print out enlargements of the maps, go to: <https://extension.unh.edu/resource/invasive-plants>

Secrets of Old(er) Growth Forests

While there is no universally accepted definition of old growth, the term came into use in the 1970s to describe multispecies forests that had been left alone for at least 150 years.⁷ The LBF has species composition, multiple age and diameter classes, and vertical diversity layering that are consistent with old-growth characteristics.

The summer and fall of 2021 were exceptionally wet, with well over half the year's rain fell within this period, setting the stage for an explosion of mushrooms. The variety of colors, shapes, and species was described by a visiting mycologist as a "fungal feast". Mushrooms are the fruiting bodies of underground fungi: the species abundance and diversity is indicative of a robust and expansive fungal network; they are clear visual indicators of a healthy forest soil, which is where ecosystem health and all forest life begin.

Decomposition or decay is the very beginning of a fundamental natural process that enables life. There is no regeneration without degeneration of organic compounds, because energy is not lost, it is transformed – and it is the fungi that are heavily responsible for this vital transformation. For example, if we look at a fallen tree in the forest and imagine it is composed of building blocks, we can understand how decomposition works: fungi weave their way through the blocks, loosening them until they are "free" and ready to "rebuild" in another form.

⁶ <https://www.nhbugs.org/damaging-insects-diseases/jumping-worms>

⁷ Smithsonian Magazine. Science/January 2022. "The Old Man and the Tree.

<https://www.smithsonianmag.com/science/the-old-man-and-the-tree-180979242/>

About 500 million years ago, fungi facilitated the movement of aquatic plants on to land, fungal mycelium serving as plant root systems for tens of millions of years until plants could evolve their own. This association transformed the planet and its atmosphere – the evolution of plant-fungal partnerships coincided with a 90% reduction in the level of atmospheric carbon dioxide. Today, most plants depend on mycorrhizal fungi – from the Greek words for fungus (mykes) and root (rhiza) – which weave themselves through roots; provide plants with crucial nutrients; defend them from disease and link them in shared networks sometimes referred to as the “wood wide web”. These fungi are a more fundamental part of planthood than leaves, wood, fruit, flowers or even roots.



A mosaic of the mushroom diversity photographed on LBF, September of 2021.

Dr. Rick Van de Pol....(a mycologist) identified them: **Upper left** - *Hygrocybe flavescens*, edible, but not great; Upper right - *Coltricia perennis*, not really edible but medicinal (immune support, etc.); Center right - *Tricholoma fumosoluteum* (or close), poisonous and ill-smelling; Lower right - *Cortinarius iodes*, Iodine Cort, edible, not too bad but don't eat too many of them; Lower inside right - *Geoglossum simile* or black earth

tongue, *edibility unknown*; Center - Inocephalus quadratus, Salmon Unicorn Cap, *poisonous*; Lower left - Trichaptum biforme, Violet-tooth Polypore, *not edible but medicinal* (anti-cancer); Lower left above - Hygrocybe miniata, Fading yellow waxy cap, *edible but watery*; Left center - another Cortinarius iodes.

Climate and the Role of The Forest (It's Resiliency)

New England forests have often been referred to as the "Resilient Yankee Forest", as they have a high tolerance and adaptability to change brought about by various disturbances. Most of the New England forests have been cleared twice and faced threats like the chestnut blight that removed this once dominant tree species from the landscape. Other stressors created by pests like the gypsy moth, Dutch elm disease, hurricanes, acid deposition, and the loss of many predators, have taken their toll on these forests, yet today they continue to define our regional landscape. Our forests now face another stressor: climate change. Understanding how stressors reduce a forests resiliency, adaptability, and impair its ability to function properly will help to inform actions that can help them survive.

To quote directly from the Smithsonian magazine⁸: "If the goal is to minimize global warming, climate scientists often stress the importance of afforestation, or planting new forests, and reforestation, or regrowing forests. But there is a third approach to managing existing forests: proforestation, a term coined by climate scientist William Moomaw to describe the preservation of older existing forests. (Moomaw was a lead author of five major reports of the Intergovernmental Panel on Climate Change, which was awarded the Nobel Peace Prize in 2007.) All of these strategies have a role to play. But what Old-growth expert Robert Leverett has helped show in the last few years is how much more valuable proforestation is than we first thought. *Leverett has provided hard data that older trees accumulate far more carbon later in their life cycles than many had realized: In studying individual Eastern white pines over the age of 150, Bob was able to determine that they accumulate 75 percent of their total carbon after 50 years of age – a pretty important finding when every year counts in our struggle to mitigate the effects of climate change. Simply planting new forests won't do it.*"

The article continues to state: "A recent study Leverett co-authored with Moomaw and Susan Masino, a professor of applied science at Trinity College in Connecticut, **found that individual Eastern white pines capture more carbon between 100 and 150 years of age than they do in their first 50 years.** That study and others challenge the longstanding assumption that younger, faster-growing forests sequester more carbon than "mature" forests.

The research bolsters the importance of proforestation as the simplest and most effective way to mitigate climate change through forests.

Indeed, according to a 2017 study, if we simply left the world's existing forests alone, by 2100 they would have captured enough carbon to offset years' worth of global fossil-fuel emissions – up to 120 billion metric tons.

Keeping the LBF in a forever wild state is a prudent course of action.

⁸ <https://www.smithsonianmag.com/science/the-old-man-and-the-tree-180979242/>

It is difficult to guess what challenges climate change may present landowners in the next 50-100 years. The best way to deal with uncertainty for potential extreme events is to manage a woodlot so that it has a capacity to deal with a wide range of potential future conditions. Here are some strategies and practices that will help:

- Adopt adaptation actions to address forest stressors that foresters are already dealing with like invasive species and insect pests;
- Be observant of changes in the forest and be creative in how you respond to the changes, using old and new tools to address environmental stressors that continue to change and intensify;
- We expect the most immediate and drastic effects in the places where changing climate conditions (e.g. longer growing season, warmer temperatures, shifting precipitation patterns) interact with existing stressors (e.g. invasive plants, exotic pests, overstocking, deer browse), so be vigilant and prepared;
- Double the size of road culverts; use a minimum of 30" on access roads;
- Vigorously practice and implement BMP's to prepare for larger and longer precipitation events;
- Maintain diversity in the forest, they have more resilience to disturbance, while low-diversity forests have fewer options to respond to change. Examples of forest diversity include diversity in: species, structural characteristics, and genetics.....all of which help reduce risk and increase adaptability;
- Maintain unbroken forest canopy along riparian areas, especially softwood cover.
- Stands managed for a high stocking of large diameter trees also have the highest carbon stores (manage for long rotations, where possible);
- Use thinnings to promote younger age classes that maintain higher rates of growth; promotes higher sequestration rates; and enhances structural and compositional complexity⁹



⁹ D'Amato, Antony, et al, "Forest management for mitigation and adaptation to climate change: Insights from long-term silvicultural experiments", Forest Ecology Management 262 (2011) 803-816. pp 803, 814-815.

NHNHB Data Check for Threatened & Endangered Species



New Hampshire Natural Heritage Bureau

DNCR - Division of Forests & Lands
 172 Pembroke Road, Concord, NH 03301
 Phone: (603) 271-2214 Fax: (603) 271-6488

To: Geoffrey T. Jones
 Loveland Forestry
 PO Box 336
 Stoddard, NH, 03464

From: NH Natural Heritage Bureau
Date: 2022-01-03
Re: Review by NH Natural Heritage Bureau of request dated 2021-12-23

NHB File ID: 3820 **Town:** Stoddard, NH
Project type: Landowner Request **Location:** M121-L1; M125 Lots 20-21; Steve K. Wilson Property

We have searched our database for records of rare species and exemplary natural communities on the property(s) identified in your request. Our database includes known records for species officially listed as Threatened or Endangered by either the state of New Hampshire or the federal government, as well as species and natural communities judged by experts to be at risk in New Hampshire but not yet formally listed.

NHB records on the property(s): **None**

NHB records within one mile of the property(s):

Plant Species	Last Reported	Listing Status		Conservation Rank	
		Federal	NH	Global	State
common mare's-tail - <i>Hippuris vulgaris</i>	2019	--	T	G5	S2

Listing codes: T = Threatened, E = Endangered, SC = Special Concern
 Rank prefix: G = Global, S = State, T = Global or state rank for a sub-species or variety (taxon)
 Rank suffix: 1-5 = Most (1) to least (5) imperiled, "--", U, NR = Not ranked, B = Breeding population, N = Non-breeding, H = Historical, X = Extirpated

A negative result (no record in our database) does not mean that no rare species are present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.





Natural Heritage Bureau
Landowner Report

Project ID Number: 3820

NOTE: Any rare species and/or exemplary natural communities in this area are not shown unless they occur, at least in part, within the property bounds.

Property Bounds # of Records

Plant Occurrence:	0
Animal Occurrence:	0
Natural Community:	0
Ecological System:	0




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<https://www.theguardian.com/commentisfree/2021/nov/30/fungi-climate-crisis-ally>

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D'Amato, Antony, et al, "Forest management for mitigation and adaptation to climate change: Insights from long-term silvicultural experiments", *Forest Ecology Management* 262 (2011) 803-816. pp 803, 814-815.

Appendix

Glossary

Access road: A temporary or permanent route into forest land for over-the-road vehicles.

Advanced regeneration: Young age classes that have become established naturally without the influence of harvesting.

Age class: Intervals of tree age used to describe stand characteristics, e.g., 10- or 20-year age class.

Basal area: A measure of tree density determined by estimating the total cross-sectional area of all trees measured at breast height (4.5 feet) and expressed in square feet per acre.

Beaver flowage: Flat water behind a beaver dam.

Best management practices (BMPs): As used in this book—a practice or combination of practices determined by the State to be the most effective and practicable means of controlling point and non-point pollution at acceptable levels. These guidelines, some of which are incorporated into law, are found in *Best Management Practices for Erosion Control on Timber Harvesting Operations in New Hampshire*, published by the N.H. Dept. of Resources and Economic Development, Division of Forests and Lands.

Biodiversity: The variety and variability of all living organisms.

Biomass: The living or dead weight of organic matter in a tree, stand, or forest. Or as it relates to harvesting: The wood products obtained (usually) from in-woods chipping of all or some of portion of trees including limbs, tops, and un-merchantable stems, usually for energy production.

Boreal: Pertaining to northern latitudes. A climate zone with short, warm summers and snowy winters.

Borrow pit: The area from which gravel is removed to build up a roadbed.

Browse: Leaves, buds and woody stems used as food by woodland mammals such as deer and moose.

Butt: The base of a tree, the large end of a log. A butt log is the first log cut above the stump.

Cambium: Layer of living cells between the bark and the wood.

Canopy: The more or less continuous cover of branches and foliage formed by the crowns of adjacent trees and other woody growth.

Calcareous: Soil or rock containing calcite (calcium carbonate). Calcareous soils generally have pH's around 6.0 or 7.0.

Cavity trees: Trees, either alive or dead, which contain hollowed out areas. Used as shelter for a variety of animal species.

Cellulose: A principle chemical constituent of wood cells.

Co-dominant (crown class): A tree whose crown helps form the general level of the main canopy and whose crown receives full light from above and little from the sides.

Coppice: The production of new stems from stump or roots. A plant derived by coppicing.

Crop tree: A tree retained for maximum longevity due to desired characteristics such as commercial quality or biotic contribution.

Crown: The part of the tree or woody plant bearing live branches.

Crown closure: The percent of the stand canopy overlying the forest floor.

DBH: (diameter at breast height) The average diameter of a standing tree, measured outside the bark at a point 4.5 feet above the ground.

Diameter class: Intervals of tree size (often 1 or 2 inches) used to describe stand characteristics, e.g., 10" or 12" diameter class.

Disturbance: Any relatively discrete event that changes the make-up of a stand, community, or ecosystem. Natural disturbances include windstorms, insect outbreaks, or fire. Human disturbances include harvesting.

Dominant (crown class): A tree whose crown extends above the general level of the main canopy and whose crown receives full light from above and partial light from the sides.

Ecosystem: A community of species (or group of communities) and its physical environment, including atmosphere, soil, sunlight and water.

Ecosystem integrity: The ability of an ecosystem to continue to function over the long term without the loss of biological diversity or productive capacity. The ecological integrity of an area is maintained when the following conditions are met:

1. All community types and successional stages are represented across their natural range of variation.
2. Viable populations of all native species are maintained.
3. Ecological and evolutionary processes such as disturbance, nutrient cycling, and predation, are maintained.
4. The biological diversity in the area can respond naturally to change.

Early successional habitat: Young, regenerating forest and shrubby areas used by animals requiring the thick cover the vegetation provides. The seedling-sapling stage of the early successional type of aspen-birch differs vegetatively and structurally from the "young forest" seedling-sapling stage of other types, and these differences result in different benefits to wildlife.

Edge: A transition between two (or more) relatively distinct habitat types, stands, or vegetation types. Edges are often described as being either "hard" or "soft." Hard edge describes a very abrupt transition between one habitat with short vegetation (e.g., field or recent clear-cut) and another with a tall, vertical wall of live trees that grow right up to the edge of the short vegetation. Soft edge describes a more gradual transition between habitats with different vegetation heights, such as occurs where a field with short grass, transitions into a slightly taller shrub border, which transitions into a stand of taller trees.

Endemic: A population of potentially injurious plants or animals that persist at low levels. Also can mean native to a particular area.

Ephemeral: Existing for a short time; short-lived.

Epicormic sprouting: Small branches occurring on the stem and branches of some tree species in response to increased light, often from thinning or removal of substantial portions of the tree crown.

Even-aged stand: All trees are the same age or at least of the same age class. A stand is considered even-aged if the difference in age between the oldest and the youngest trees doesn't exceed 20 percent of the length of the rotation. From an ecological viewpoint, the minimum size of an even-aged stand could be considered as the size of the largest opening entirely under the influence of adjacent mature timber. The opening of critical size might be that which, at the very center, exhibited the same temperature regime as any larger opening. Such an opening is probably about twice as wide as the height of mature trees.

Exemplary natural communities: Include (1) all viable occurrences of rare natural community types, and (2) higher-quality examples of more common communities.

Fledge: The stage in a young bird's life when it has acquired its adult feathers and is able to fly.

Forb: An herbaceous plant other than grass.

Ford: A structure built for crossing a stream.

Forester: A person trained in the science of developing, caring for, and cultivating forests.

Forest management: The application of business methods and technical forestry principles to a forest property to produce desired values, resource uses, products, or services (see forest sustainability).

Forest type: A natural group or association of different species of trees which commonly occur together over a large area. Forest types are defined and named after one or more dominant species of trees in the type.

Forest sustainability: The capacity of a forest to produce the goods we desire today without compromising the productive capability and biological integrity on which future generations will depend.

Free-to-grow: A tree, often a seedling or small tree, free from direct competition for light, water or nutrients from other plants

Hydrology: The properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

Integrated resource management: The simultaneous consideration of various disciplines to balance competing demands on a natural system to maintain or enhance its health, diversity, and cultural and aesthetic value.

Invasive: A non-native plant capable of moving aggressively into an area, monopolizing light, nutrients, water, and space to the detriment of native species. Various referred to as exotic, nonnative, alien, noxious, or non-indigenous weeds. Non-native insects are usually referred to as "exotic."

JFES: James Faulkner Elementary School, the local elementary school K-grade 5. Middle school and High school students from Stoddard attend schools in Keene, NH

LBF: The Little Big Forest. Why the name? When promoting the protection of this land, people would always ask: "How big is it". The response: "40-acres". "Is that all?" The response: but it has Big Trees; Big Undeveloped Shoreline; Big Dreams; a Big Price Tag.....but it is a relatively small acreage to be used by (little) elementary students. Hence: "The Little Big Forest"...a name that captured the interest and imagination of funders, donors, and the public; a name people would remember!

Legacy tree: Usually mature, older tree left on-site after harvesting for biological, wildlife, spiritual, or aesthetic purposes.

Lignin: A complex polymer associated with cellulose and imparts rigidity to the cell.

Natural resource professional: Person by training, education or experience who has expertise in managing natural resources. May include foresters, wildlife biologists, loggers, wetland scientists, etc.

Natural community: Recurring assemblages (groups) of species found in particular physical environments.

Outwash: Soil mixed and deposited by glacial melt-water; sands and gravels.

Over-mature: Also called biological maturity. A tree or even-aged stand declining in vigor and health and reaching its natural life span. A tree or even-aged stand that has begun to lessen in commercial value because of size, age, decay, or other factors.

Overtop: When one tree (or shrub) is growing over another.

Overtopped (crown class): Also called suppressed. A tree whose crown is completely overtopped by the crown of its neighbors.

Overstocked: Too many trees in a stand (as compared to the optimum number) to achieve some management objective, usually improved growth rates or timber values.

Over-story: The upper-crown canopy of a forest, usually referring to the largest trees.

Pole timber: A DBH size-class representing trees that are usually more than 4.0 inches DBH and less than 10.0 inches DBH.

Predation: The act of capturing and killing other animals for food.

Prune: To remove living or dead branches for improved timber value, aesthetics, or vigor.

Regeneration: The renewal of a stand of trees by either natural or artificial (planting or seeding) means.

Residual trees: Trees left to grow in the stand following a silvicultural treatment.

Residual stand: A stand composed of trees remaining after a harvest.

Residual stocking: The numbers of trees left after a harvest.

Revegetation: The re-establishment of vegetation on bare soil by natural or artificial (planting or seeding) means.

Rotation: The period between regeneration establishment and final harvest. The age at which a stand is considered ready for harvest. Used in even-aged systems.

RSA: Revised Statutes Annotated, the compilation of the laws of the State of New Hampshire.

Seep: A spot where groundwater oozes to the surface, forming a small pool.

Silviculture: The art and science of establishing and tending trees and forests.

Site index: A measure of the relative productive capacity of an area based on tree height growth.

Snag: A dead or dying standing tree often left in place for wildlife.

Stand: A group of trees reasonably similar in age structure and species composition and growing on a site of sufficiently similar quality to be distinguishable from adjacent areas.

Stocking: An indication of the number of trees in a stand as compared to the optimum number of trees to achieve some management objective, usually improved growth rates or timber values.

Stream gradient: The grade (slope) of a stream. A measure of steepness.

Succession: The replacement of one plant community by another over time in the absence of disturbance.

Supracanopy trees: Super-dominant trees whose crowns protrude above the main crown canopy.

Tolerance: The capacity of a tree to become established and grow in the shade.

Understory: All vegetation growing under an over-story.

Vascular plants: Plants having tissues that conduct (transport) water, minerals, and food throughout the plant's roots, stems and leaves.

Vernal pool: A temporary body of water that forms in shallow depressions or basins, lacks a permanently flowing outlet, supports vernal-pool indicator wildlife species (e.g., spotted salamanders, wood frogs, fairy shrimp) and holds water for at least 2 months after spring ice-out.

Viewshed: The landscape that can be seen from a viewpoint or along a road or trail.

Water bar: An excavated, shallow channel or raised barrier of soil or other material laid diagonally across the surface of a road or skid trail to lead water off the road and prevent soil erosion.

Windfirm: The ability of a tree's root system to withstand wind pressure and keep the tree upright.

Wind-throw: Trees felled by wind. Also called blowdown or windfall.

Community Forest Management Plan The Little Big Forest Addendum Highland Lake, Stoddard, N.H.



February 15, 2024

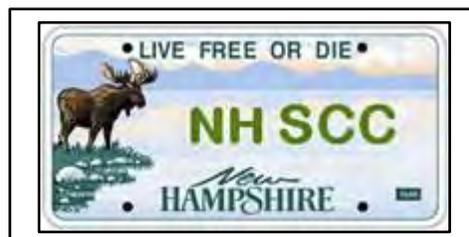
**“Great Stewardship by Great Example”
Stoddard Conservation Commission**

Plan Prepared by: Geoffrey T. Jones, Chair, NH LPF #151
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603-446-3439 (h)

With Assistance from the LBF Stewardship Committee AND.....



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TOWN OF STODDARD

1450 ROUTE 123 NORTH

STODDARD, NEW HAMPSHIRE 03464

TEL.: 603-446-3326 FAX: 603-446-7770

Incorporated 1774

BOARD OF SELECTMEN

September 27, 2021

Stoddard Conservation Commission
1450 Rt. 123 N
Stoddard, NH 03466

Dear Commissioners,

Congratulations on the opportunity to purchase some significant waterfront property. The Town of Stoddard has long been an advocate of open space preservation. It is our understanding that the Conservation Commission will be raising funds to purchase approximately 40 acres of land that will foster public access to the forest and shoreland abutting Highland Lake. This is a unique opportunity to give area families and visitors more access to recreational opportunities, and to preserve precious natural area for our wildlife.

Our Master Plan highlights our municipal vision of "protecting the natural, historic and cultural resources" of our community. The area in consideration is a local of great old growth pine trees and is a corridor for wildlife that visit the shores. The shoreline area is home to ducks and other migratory waterfowl who utilize the rocky shoals as protection from boat traffic and predators. The site would also be conducive to a small park and primitive campsites.

The Selectmen applaud your efforts and offer our support in any capacity within our scope.

We wish you the best of luck in these endeavors.

Sincerely,

Robert Fee

Christopher Madden

Stephen McGerty

11/10/2021

To whom it may concern,

We are writing to express our full support of the Stoddard Conservation Commission's campaign to protect the pristine 40 acre, undeveloped, Steven Wilson Land on the southern end of Highland Lake. After reviewing Geoff Jones' "Walk Through " assessment and "History" reports, dozens of still photographs and incredible drone footage, there is no doubt in our minds as to the esteem of this treasure at the doorstep of our community. We feel it is a once in a lifetime opportunity for all citizens of Stoddard, to secure and safeguard this extraordinary resource, for the benefit of all citizens, especially the children, as well as its bountiful wildlife and endless ecological systems.

A few things that are unique and desirable about this 40 acre parcel is its evidence of old growth forest, its 4000 feet of undeveloped shoreline, and well-built rustic cabin. Although Stoddard comprises 63% conservation land and several bodies of water in town, many kids do not have the privilege to access these forests and waterways. The conservation of this land would open new opportunities and build equity by providing an avenue for all students of JFES to experience this unique forest habitat and diverse watershed in an environmental outdoor education setting with the terrain as its living lab. We have the uncommon opportunity to add this property to Stoddard's wild lands, forever protected for the children of Stoddard, who innately become the stewards of this land.

JFES has maintained an emphasis on outdoor education for over a decade by integrating things like a school garden program, bi-annual all school hikes, partnership with the Harris Center, collaboration with NH Fish and Game through the Trout in the Classroom project, and overnight wilderness canoe trips on Highland Lake with Kroka. These are all traditions that have held sound through the years because they have profound positive impacts on student health, growth, and learning. We also have a long-standing relationship with the Conservation Committee as we have partnered with them on several projects in the past. For example, in 2014 members of the Committee led an all school hike to Stoddard Rocks/Pioneer Lake, with the purpose of introducing the trails, lakes, streams and vernal pools as well as some old growth forest, cellar holes, glacial erratics, and a wide variety of habitats. This learning extended to the history of the property and town as we explored evidence of the 1941 Stoddard Marlow fire. Another example is the work done by Geoff Jones regarding GIS mapping with a large group of Upper Elementary students in 2015. Our interest in the Wilson Land directly correlates to and supports initiatives started years ago by former teachers, and it is our intent to cultivate our affiliation with the Committee.

We know first-hand the power Mother Nature has to ignite curiosity, provide meaning, and unlock the innate potential of every student by fostering intelligent, creative, systemic thinking, while encompassing diverse learning styles and abilities. These are the skills needed in the 21st century. It provides an inclusive setting where all students can feel connected and be successful. Outdoor learning encompasses a spectrum of curricular school activities and supports the study of more abstract topics. In most recent years we have expanded our focus in this area, and continue to develop and increase our outdoor learning spaces on campus with resounding support from the community and Stoddard Board of Selectmen. By preserving this

land, it would allow us to continue to enrich our curriculums through integrated, applied, purposeful project-based learning across all subject domains. It would provide us with accessibility to a rich and diverse environment and “base camp”, allowing us to launch more frequent daily trips outdoors. We thoroughly embrace the growing energy around the outdoor educational movement which has grown nationally since the onset of the Pandemic, and in fact have received local and national media coverage highlighting this progressive, effective, and comprehensive approach to learning.

Education should be a rich experiential journey of discovery, expression and mastery where all students and teachers learn and grow together. It is one of the most important investments a community can make in its future. It is a powerful agent of change, improves health and livelihoods, contributes to social stability and drives long-term economic growth. Above all it is our responsibility to ensure that every child gets the quality education they need to unlock their full potential and contribute to building a better world.

The acquisition of the Wilson property would provide JFES with the physical resources (a rustic classroom learning center surrounded by 40 acres of extraordinary forest) to expand our outdoor educational curriculum to a much higher level.

We support the Stoddard conservation commissions effort with enthusiasm and high hopes.

Sincerely,

Tina Marie Minard

Lower Elementary Teacher, JFES

Amanda Bridges

Upper Elementary Teacher, JFES

Stoddard School District School Board
200 School Street
Stoddard, NH 03464

February 22, 2022

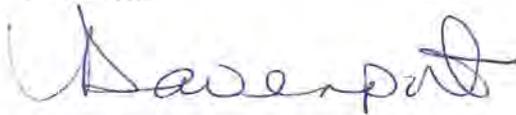
Dear Stoddard Conservation Commission,

On behalf of the Stoddard School District School Board, I am happy to write this letter supporting the commission's efforts to purchase the 40-Acre "Wilson Community Forest."

The preservation of this pristine parcel will benefit the residents of Stoddard and the James Faulkner Elementary School (JFES) community for years to come. JFES has had a long-standing commitment to outdoor education, and has been at the forefront of providing creative outdoor learning opportunities since the beginning of the COVID-19 pandemic. The Board is very excited at the prospect of adding the "Wilson Community Forest" to the list of local resources that can support the educational mission and values of JFES.

Thank you for your efforts to protect this amazing property for our community.

Sincerely,

A handwritten signature in blue ink that reads "Lisa A. Davenport". The signature is fluid and cursive, with the first name being the most prominent.

Lisa A. Davenport, Vice-Chair
Stoddard School District School Board

Board Members:

Alfrieda Englund, Chair

Lisa Davenport, Vice-Chair

Cynthia Lake, Member

**Island Pond Association
Board of Directors
PO Box 478
Stoddard, NH 03464**

November 23, 2021

Dear Stoddard Conservation Commissioners,

It is with great enthusiasm that our board supports your intended purchase of the 40 acres of land off Walker Road. That is a large piece of land and waterfront still not developed on Highland Lake, so establishing it as an open space preserve is of huge benefit to the overall watershed. Since Island Pond depends on the water flow from Highland Lake we clearly have a vested interest in the control of development on both lakes. Also much of Stoddard is in some form of conservation and these 40 acres will add to the natural corridor for our abundant wildlife.

Our board thanks you for your efforts and wishes you the best in the fundraising process. Please keep us in the loop as to the progress you are making towards your goal. Stoddard is fortunate to have such a committed conservation committee!

Sincerely,
David Lesser, IPA President

Board members:
David Lesser, president
Bob O'Brien, vice-president
Donald Flemming, treasurer
Charlotte Lesser, secretary
Paula Flemming
Geoff Molina
Harriet Beckwith

**Highland Lake Unified Association
Board of Directors
P.O. Box
Stoddard, NH 03464**

November 29, 2021

To Whom it May Concern

On behalf of the Highland Lake Unified Association (HLUA), we are writing this letter in support of the proposed purchase of the Wilson Property located off of Walker Road in Stoddard, NH. It is in the HLUA opinion that this parcel of land and its associated waterfront would be very beneficial to remain as open space for the health of the surrounding environment and watershed. This property is a unique opportunity to continue Stoddard's commitment to conservation. The preservation of open space, as well as the environmental systems that this parcel contributes to, are of utmost importance to the Highland Lake ecosystem.

The HLUA appreciates the efforts by your group. We will continue to monitor the progress of this project.

Sincerely
HIGHLAND LAKE UNIFIED ASSOCIATION


Kenneth Lafferty
President

Observations for the Wilson Property on Highland Lake in Stoddard, NH

Prepared by Tom Wessels

At the request of Geoff Jones, I walked the Wilson Property with him and two other members of the Stoddard Conservation Commission the morning of November 2, 2021. As soon as we entered this parcel from its southern border, it became clear that it was a parcel that had always been forested with evidence of a minor logging of red oak in its southeastern portion about 50 years earlier. It could be discerned that the parcel was never opened for agriculture due to the stump evidence left by that logging. There were a number of coppiced red oak stumps that showed evidence of being logged twice, once about 50 years ago based on the level of stump decay and then about 100 years before that, based on the coppiced stump diameters. The original oaks when cut were probably at least 60 years old, meaning that they germinated from acorns in the early 1800s, long before agricultural land in the region started to be abandoned.

As we continued into the forest all evidence of logging disappeared with the only visible evidence of disturbance being from blowdowns related microbursts and the 1938 Hurricane. This is not an old-growth forest, but it is a far older forest than is commonly seen in the region, with scattered old-growth trees. The most impressive being a large red maple with very coarse bark plates that I am guessing exceeds 250 years of age. The other attribute that was evident were its forest soils that were well developed and spongy due to the forest's age. Soils like these hold their nutrients tightly and add greatly to the local water quality of this section of the lake. Along with about 4,000 feet of undeveloped shoreline, this parcel is an important habitat for aquatic wildlife in this otherwise heavily developed shoreline.

As we continued to the northern portion of the property we came upon an old barbed wire fence line with evidence of trees along it that had low limb knobs indicating that north of the fence line was once open, most likely for pasture. Within this section of the property was a small lakeside cabin with water access.

One other feature of the property that is quite impressive are its large, tall, straight white pines. It is rare to see trees of this stature these days since they are so highly valued as timber. There was also no evidence of any invasive species during the walk.

Due to all these features the Wilson property is an impressive forest holding that I think is an important candidate for conservation. One that should remain unlogged to maintain its current attributes.

Tom Wessels
Terrestrial Ecologist
Professor Emeritus, Antioch University

**Eva Lane Lot Owners' Association
Executive Board
P.O. Box 247
Stoddard, NH 03464**

January 6, 2022

Stoddard Conservation Commission
1250 Rt. 123N
Stoddard, NH 03464

Dear Stoddard Conservation Commissioners,

On behalf of the Eva Lane Lot Owners' Association, we are writing this letter in support of the proposed purchase of the Wilson Property. The residents living along Eva Lane witness and experience the value of the 40+ acres on a regular basis. We see firsthand that this land is a natural corridor for the abundant wildlife living in the area. We have frequent encounters with a variety of wildlife including, but not limited to deer, moose, fox, bear, and bobcats. As we head out our driveways, it is best to factor in some extra time for a staring contest with a doe and her new fawn or tom turkey standing guard as his growing family crosses the road. When we see our neighbors, we share stories of our sightings of geese, otters, and even bald eagles. We can walk up Eva Lane and quickly access the Peirce Wildlife and Forest Reservation for a pleasant hike. Within minutes of launching our boats, we can enjoy the natural beauty of the 4,000 feet of shoreland and observe the waterfowl and aquatic life that are protected from boat traffic. In the fall we can view the beautiful foliage of the trees that have been able to thrive for so many years and in some cases, centuries. We can fall asleep listening to the call of owls occupying the old growth pine trees and awaken to the call of the loons. The Wilson property represents an extraordinary natural, recreational, and educational resource for the current and future citizens of Stoddard. We are writing to express our full support for the Stoddard Conservation Commission's campaign to protect this 40-acre treasure that is literally on our doorstep.

Sincerely,

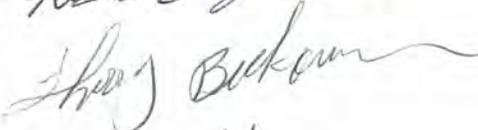
Charles Richmond, President



Richard Shaw, Vice President



Sherry Bukovcan, Treasurer



Anita Shaw, Secretary



January 6, 2022

Cooperative Extension

Forestry & Wildlife
212 Nesmith Hall
131 Main Street
Durham, NH 03824
V: 603.862.4861

extension.unh.edu

County Offices

Belknap County
527.5475

Carroll County
447.3834

Cheshire County
352.4550

Cöös County
788.4961

Grafton County
787.6944

Hillsborough County
641.6060

Merrimack County
255.3556

Rockingham County
679.5616

Strafford County
749.2529

Sullivan County
863.9200

Education Center
877.398.4769 (Toll Free in NH)

**UNH Cooperative Extension
State Office**
862.1520

Geoff Jones
Chair, Stoddard Conservation Commission
PO Box 336
Stoddard NH, 03464

Dear Geoff,

Thank you for the opportunity to visit the Wilson property on Highland Lake. As the former Cheshire County Extension Forester who covered Stoddard in my work, I was impressed with the condition and size of the property located on the lake. As you are aware, Stoddard is a rural town with a long history of land conservation, but the area of Highland Lake has experienced intense development and continues to be under pressure today. The Wilson property is truly a hidden gem.

I wanted to express my support for the Town of Stoddard to conserve this property to protect its forest resources. I'm also supportive of the concept for the property to serve as an educational and ecological resource for the Town and Region. As an Extension Educator providing forestry and natural resources education to the public, the Wilson property in Stoddard would serve as a wonderful resource to demonstrate natural systems uninterrupted by agricultural clearing or extensive timber harvesting – right in the heart of town!

Our Forestry & Wildlife Program at the University of NH Cooperative Extension is excited to work with the Town to provide educational opportunities should the property be conserved and serve as a resource to the public. Thanks again Geoff for the walk in the woods and I look forward to many more.

Best Regards,



Steven Roberge
Extension Forestry Specialist
UNH Cooperative Extension
603-862-4861
steven.roberge@unh.edu

Davis Public Library

1391 Route 123
Stoddard, NH 03464

January 7, 2022

Town of Stoddard Conservation Commission
ATTN: Geoff Jones, Chair
1450 Route 123 North
Stoddard, NH 03464-4153

RE: Wilson Community Forest Project

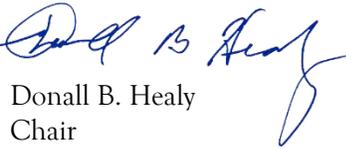
Dear Geoff:

At a meeting on January 3, 2022, the trustees of the Davis Public Library, at the recommendation of Inga Dellea, Library Director, voted unanimously to endorse and support the Stoddard Conservation Commission's efforts to acquire the "Wilson Lands" on Highland Lake and establish the "Wilson Community Forest" ("WCF").

The mission of the Davis Library is "*to promote community, civic engagement, life-long learning and fun for all through a variety of innovative physical and digital resources, programs and services.*" The WCF will provide a wonderful extension of the library's facilities, enabling it to offer outdoor programs such as animal tracking, identification of trees and mushrooms, photography and astronomy while increasing environmental awareness and responsibility.

I'm sure the library will develop other relevant programs as plans for the WFC progress. The trustees and director are looking forward to working with the Conservation Commission and other interested parties in creating this extraordinary community asset.

Sincerely yours,



Donall B. Healy
Chair

Stoddard Historical Society
PO Box 860
Stoddard, NH 03464

Feb. 28, 2022

Geoff Jones
Stoddard Conservation Commission
Stoddard, NH 03464

Dear Geoff:

I am writing on behalf of the Stoddard Historical Society in support of the Stoddard conservation commission's proposed Wilson Land protection effort. This property, as one of the few large undeveloped and not formally conserved pieces of land on the Highland Lake, could be used educationally to illustrate important elements of Stoddard history.

Portions of this land were used for agricultural purposes in the past. Stoddard was first settled for farming purposes and this property can be used to illustrate that history. When the farms were abandoned and grew back to forest, large logging and woodenware companies made use of the trees that grew on the farmland. The Wilson Land has not been logged for many decades and is similar to areas of the town prior to large scale harvesting for woodenware production.

Perhaps most importantly, the conservation of this tract will protect a large section of lake-frontage similar to much of the land on the lake prior to the development and construction of hundreds of cottages on and near the shore. This project would protect the quality of the water and wildlife in and near the lake while also illustrating what the shore frontage was like prior to extensive development in the 20th century.

The Stoddard Historical Society strongly supports the efforts of the conservation commission and the town in the Wilson Land protection effort.

Sincerely yours,

A handwritten signature in black ink that reads "Alan F. Rumrill". The signature is written in a cursive style with a large, sweeping initial "A".

Alan F. Rumrill
Curator and Past President
Stoddard Historical Society

May 9, 2023

Dear Stoddard Treasurer

I have enclosed a check for The Little Big Forest.

I heard about the project a few months ago and saw it in the newspaper and then I knew I needed to get involved with the project in some way.

I have a friend that lives in Stoddard and she told me about the 40 acres. After our conversation I knew I could help in some way so I have decided to do what I could do with a donation and hoping that you can get the balance of the money before the deadline.

I saw on the web site that the 3rd graders raised over \$900.00 on a weekend. Congrats to them and everyone that helped.

I hope the residents of Stoddard can raise the money before the deadline.

The people in Stoddard should feel good about what they have done for wildlife / Habitat / nature and everyone that will enjoy the property.

Good Luck
Paulette Bowen
Walpole, NH.



Peter S. Jensen & Associates, LLC

“Creating Trail Experiences”

P. O. Box 154

Washington, VT 05675

413.441.0204 work/mobile

www.trailbuilders.com

Jan 3, 2022

Mr. Geoffrey Jones,
Ms. Sabine Duran, Camino Verde Designs
PO Box 336
1 Old Antrim Road
Stoddard, NH 03464

RE: Trail assessment for potential land purchase Wilson Point, Stoddard, NH

Dear Geoff and Sabine,

Thank you for the opportunity to view the area you wish to see preserved and developed with an “all persons trail”. The forest, habitat, setting, terrain, lack of disturbance, and location would be an ideal location for a trail accessible to all as well as an excellent opportunity for interpretation of the natural environment.

I base these comments on my background and experience in the development of sustainable pedestrian trails through natural environments. My firm, Peter S. Jensen & Associates, LLC, has been an established trail contracting business partnership since 2005. Previous to the LLC formation, a sole proprietorship existed for trail development which I established in 1988. Membership has been held since 2001 in the Professional Trailbuilders Association (PTBA), now with over 100 trail contracting businesses globally. Per the attached company resume, our work has ranged throughout the Northeastern US and has varied from simple hiking trails to trails accessible to all. Our goal is to build trail experiences for our clients as well as for the general public.

We have developed many trails in unique and sensitive environments such as wetlands and on properties where aesthetics are a high priority. Recent projects similar to your proposed project have been developed at Parsons Marsh in Lenox, MA - an accessible trail and boardwalk for the Berkshire Natural Resources Council. Other projects include All Persons Trails for MA Audubon in Natick, MA, Worcester, MA, Belmont, MA, Princeton, MA, and Lenox, MA. We have also completed projects for The Nature Conservancy in Rhode Island (a 3,200 foot black locust boardwalk), New York (hiking trail and fiberglass bridge), and NH (accessible trail to be completed in Spring 2022) Two of our signature projects are the trail systems at Crotched Mountain in Greenfield, NH and at John Dillion Park in Long Lake, NY, each about 2.5 miles long.

All of this work is a result of my participation in the US Access Board's Regulatory Negotiation Committee for Outdoor Developed Areas in the late 1990's. At the time, I was representing the Appalachian Trail Conservancy as one of 25 committee members. As a trail builder and planner I played a large role in shaping the guidelines for trails. I also consulted with the US Forest Service in assisting the agency with developing their trail accessibility guidelines in 2003. The federal trail standards, now part of the Architectural Barriers Act (ABA) were finally issued in late 2012 and now serve as the best practices for developing trails for all on non-Federal lands (Federal agencies are required to use the trail standards in the development of trails on federal lands).

Our firm's emphasis is on the development of sustainable trails which create access for all, minimizes trail maintenance, reduces long term impacts on the trail environment, and provide positive trail user experiences. We want to ensure that projects are well built which begins with excellent design. As trail builders we feel that we become better trail designers as we fully understand the components needed for the development of high quality trails.

Based on the tour of the property you provided, I see excellent opportunities for an "all persons trail" providing access to this parcel of land where large white pine, eastern hemlock, and various hardwoods reside. Given the terrain, developing a trail which meets the US Forest Service Trail Accessibility Guidelines (FSTAG) is possible. Careful routing would avoid wetter sections and provide access to the natural features on the property creating a restorative experience for trail users. Educational benefits abound as well.

Conceptually, the beginning of the trail would be at the bottom of the existing wood road (to be the access road to the property) where parking could be provided for those needing it. Some form of a loop trail would be possible given the shape of the parcel and terrain. Short spurs off of the main trail (likely 5 to 6 feet wide) could provide access to more sensitive elements as well as help provide a more remote experience with those features. Due to the soil conditions, sections of the trail would be elevated boardwalk to bridge over sensitive wet sections but could also be used in other locations to protect tree root and mycelium systems in the vicinity of the impressively large trees. The concept of mycelium "bridges" could be introduced here to ensure the connectivity of this important species from one side of the trail to the other. Educational opportunities surrounding mycelium should also be encouraged. Several viewing platforms could provide designated access to various lake vistas thus protecting the shoreline in those locations.

Group use by local schools could be contemplated and this use would need to be considered in the overall design and layout when that phase of the project begins. Parts of the planning process would need to address the desires and impacts of groups. There are other group uses on Highland Lake which could benefit from trail development on this property as well as educational day excursions, by water. Groups traveling to the property will need access for larger vehicles which could be accommodated in the vicinity of the existing cabin near the northwesterly shoreline.

In general, the alignment of a trail would occur on higher ground with slight side slopes, undulate across the landscape so that storm water would naturally drain off the trail treadway and connect desired features which create the unique trail experience. Implementation of this type of trail will entail assessment of the features on the property, identifying the opportunities and constraints,

linking different natural features and vegetative types, and considering the social factors associated with the different user groups. Conceptual trail alignments would need to be refined until the desired alignment is identified. At that point, detailed layout could occur where tread grade would be considered as well as type of tread surface (compacted gravel, wood decking, composite decking, etc.). The other Federal trail standards would also be taken into consideration.

Each trail has its unique cost structure due to different widths, lengths, number and type of structures (bridges, boardwalks, stone cribbing/retaining, drainage structures, etc.), distance from materials, access, and labor/equipment needs. If a trail with a length of half a mile were to be constructed with several small bridges, several hundred feet of boardwalk, a viewing platform or two, a number of benches installed, and interpretive signage the cost could range from \$275,000 to \$450,000. The cost logically increases with more structures due to the associated material costs. Typically costs can be estimated once an alignment is determined and a trail construction log is completed. This will identify the quantities of materials needed. Labor sources will also have an influence on the project cost. Contracted workers, volunteer workers, organization staff workers, or some combination are possible methods of implementing trail projects.

I look forward to assisting you with this project in a planning/design capacity or as a planner/designer/builder. Most of the 30 plus year of trail contracting my firm has done has been design/build.

If you have any questions regarding the above information, please let me know.

Sincerely,



Peter S. Jensen
Trail Planner/Builder
Peter S. Jensen & Associates, LLC

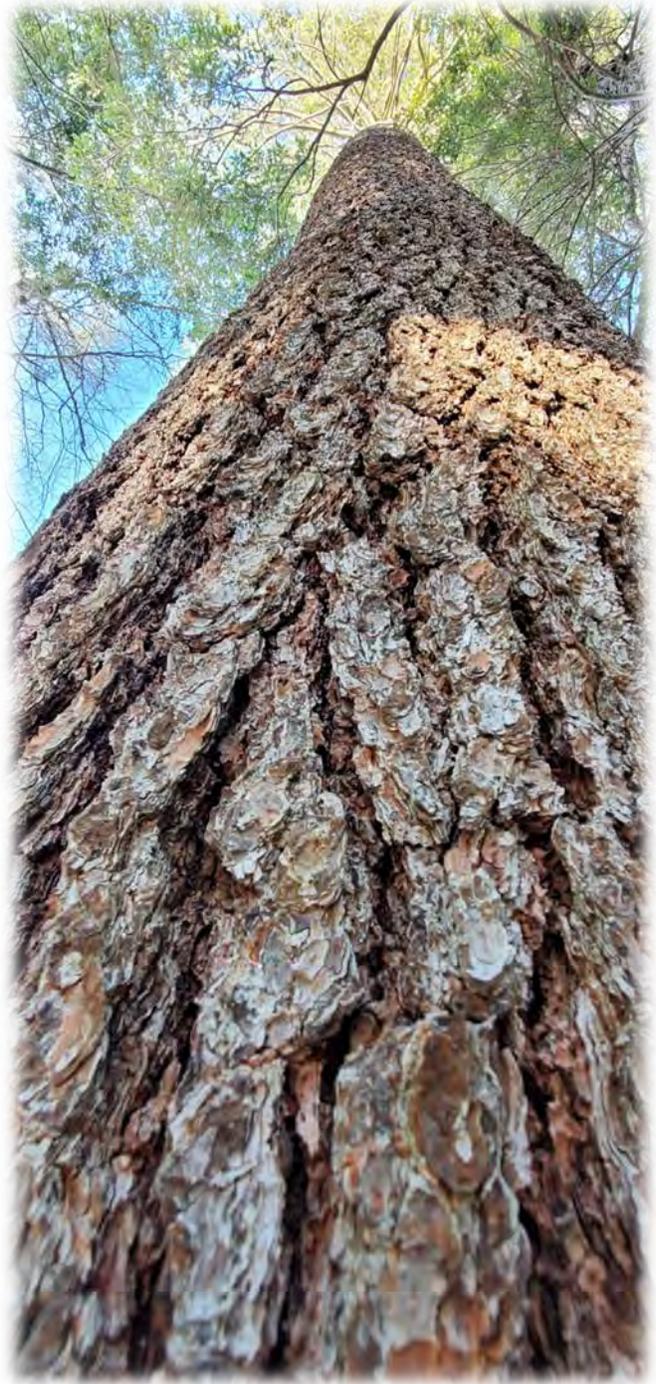
Attachment: LLC Project Resume

Wilson Timber Appraisal Report

Tax Map Lots

#M121-1; #M125-20; #M125-21, Stoddard, New Hampshire

February, 14, 2022



Prepared by

Geoffrey T. Jones

Licensed Forester # 151; TSP # 10-6525

1 Old Antrim Rd., Stoddard, N.H. 03464

Phone: 603-446-3439 (h); 603-499-6210

geoffreytjones@gmail.com

Wilson Liquidation Volumes and Values
41 Acres; 42 Points; 12.7% Standard Error

<u>Species</u>	<u>BF Volume</u>	<u>BF Stumpage Rate/MBF</u>	<u>Cordwood Volume (includes top wood) in cords</u>	<u>Total Stumpage Value</u>
White Pine	333,000	\$ 150.00	50.0	\$ 49,950.00
Hemlock	108,500	\$ 45.00	275.0	\$ 4,882.50
Balsam Fir	3,500	\$ 90.00		\$ 315.00
Red Spruce	12,500	\$ 90.00	5.0	\$ 1,125.00
Red Maple	30,500	\$ 100.00	450.0	\$ 5,300.00
White Ash	22,000	\$ 140.00	75.0	\$ 3,455.00
Aspen	0	\$ 40.00	25.0	\$ 125.00
White Birch	0	\$ 65.00	60.0	\$ 300.00
Yellow Birch	4,000	\$ 85.00	25.0	\$ 465.00
Beech	0	\$ 35.00	120.0	\$ 600.00
Red Oak	92,000	\$ 350.00	65.0	\$ 32,525.00
Total	606,000		1,150	\$ 99,042.50

NOTE: BF stumpage prices based on NHTOA 3rd Quarter 2021 "Market Pulse"; cordwood stumpage is \$5 cord for hdwd; \$0/cord for softwood. The stumpage prices have been volatile, especially the softwood pulp markets.

The field inventory was conducted between the dates of February 10, 2022 and February 13, 2022 by NH licensed forester #151 Geoffrey T. Jones, assisted by Sabine Duran (his wife, who holds a *Diplom Forstwirtin*, Master Degree Forestry, LMU Munich, Germany).

Forty-two sample points were taken on a grid spacing of 200-feet by 200-ft (a very intense sampling grid: see attached map).

The inventory field data was processed using the DS Cruiser, a forest inventory program developed by Ken Demaris, the former administer of the forest management

bureau for the NH Division of Forests and Lands, to provide efficient estimates of forest stand conditions in the Northeast. It is widely used by state agencies in northern New England and by private consultants.

The Standard Error is based on an 80% confidence level. The SE for this cruise was 12.7%, which means that 80% of the time the volumes above are within 12.7% of the actual volumes. This is well within the industry level of acceptability.

Due to the loss of low-grade markets, there is no market for softwood pulp, hence the \$0.00 stumpage value.

On February 14, 2022, I place the fair market stumpage value for the Wilson three lots at \$99,000+/-.

Respectfully Submitted,

The image shows a handwritten signature in black ink on the left, which appears to read "Geoffrey T. Jones". To the right of the signature is a circular professional seal. The seal has a double-line border. The outer ring contains the text "STATE OF NEW HAMPSHIRE" at the top and "PROFESSIONAL FORESTER" at the bottom. The inner circle contains the text "GEOFFREY T. JONES" and "No. 151" in the center, with "LICENSED" written below the name.

Geoffrey T. Jones
Licensed NH forester #151
1 Old Antrim Rd.
Stoddard, NH 03464
Tel. # 1-603-446-3439



February 21, 2022

Mr. Geoffrey Jones, Chair
Stoddard Conservation Commission
1450 RT123 North
Stoddard, NH 03464

RE: INDEPENDENT REVIEW OF STANDING TIMBER VALUE, WILSON POINT COMMUNITY FOREST

To Whom It May Concern:

My name is Matthew Apgar, and I am a Licensed New Hampshire Forester, (since 1992), employed by HHP, Inc. in Henniker, NH. HHP, Inc. has been in business since 1967 and saws nearly 13 million feet per year of hardwood lumber, along with operating a log concentration yard at our facility in Henniker, New Hampshire. I was asked to perform an independent review of the timber cruise and valuation done by Geoffrey Jones of the Wilson Point Community Forest located in Stoddard, NH which I completed on February 18, 2022.

After reading Mr. Jones' cruise report and the supporting documents provided to me, I performed a cursory walk through of the lots. As noted in the aforementioned report, this forest is comprised of the species that typically make up New Hampshire woodlands in this part of the state. Among them are White Pine, Red Oak, Hemlock, Spruce, and all of the mixed hardwood species commonly found in the region. The two most commercially viable species on this parcel are White Pine and Red Oak. The overall quality of the White Pine is average, with multiple large diameter stems present that appear to be in excess of 100 feet tall. While large and tall, the timber value of these stems is offset somewhat by the presence of lesser quality top wood logs and low grade material, for which there are limited or no markets. White Pine of this diameter and height will oftentimes be afflicted with some internal rot that does not cause immediate mortality but reduces timber value. Referring again to Mr. Jones' report, he has made note of the large tops of these trees that stick up prominently from the canopy of the surrounding forest, causing them to bear the brunt of damaging winds, ice, snow, etc. While some of these tops appear to be wind beaten, the presence of deep green colored needles indicates to me that these stems are reasonably healthy at the very least.

There are several very large, tall, and straight Red Oak stems present on this property that indicate the presence of high value saw timber with the balance of the Red Oak trees showing common defects such as frost cracks, crooks, and poorly healed limb scars. I noticed very few stems with the potential of grading out as veneer quality material.

I previously mentioned the presence of other, more commonly found hardwood and softwood species present in this forest that are typical in most New Hampshire woodlots. I found all of these to be average in quality and quantity.

The volumes generated by Mr. Jones in his report are calculated from a very intensive timber cruise, (slightly more than one plot per acre), with very high confidence levels from the statistical analysis point of view. The volumes and values listed in Mr. Jones' report represent a liquidation valuation of the timber resource on this parcel and are not intended to be used pursuant to a harvest; they have been presented in order to aid in the appraisal of the parcel's real estate value.

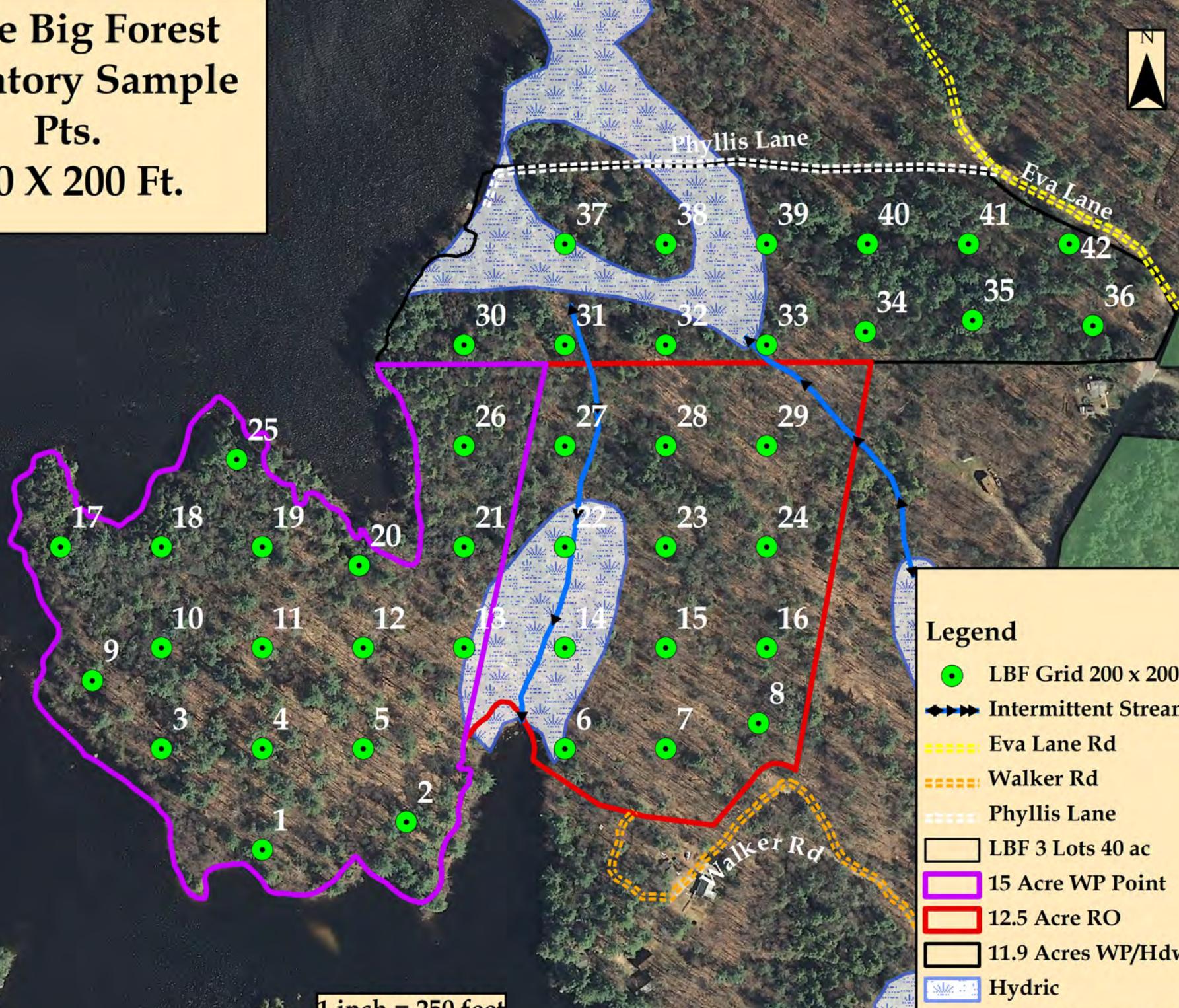
Based upon all of the above, I determine that Mr. Jones' use of average fair market value for each species and product is appropriate.

Respectfully submitted,

Matthew D. Apgar
Licensed NH Forester #224



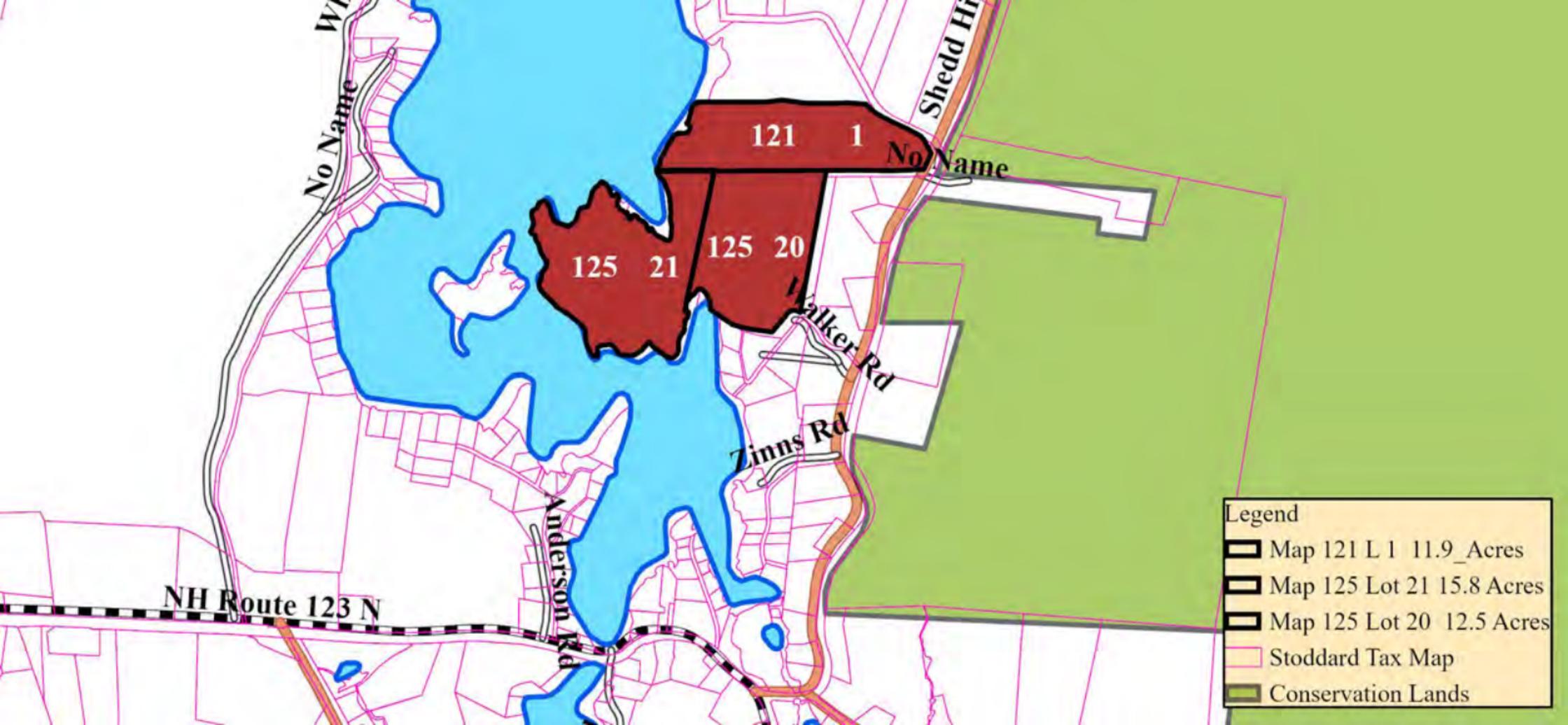
**Little Big Forest
Inventory Sample
Pts.
200 X 200 Ft.**



Legend

- LBF Grid 200 x 200
- Intermittent Streams
- Eva Lane Rd
- Walker Rd
- Phyllis Lane
- LBF 3 Lots 40 ac
- 15 Acre WP Point
- 12.5 Acre RO
- 11.9 Acres WP/Hdwd
- Hydric
- Adjacent Conslands

1 inch = 250 feet



Legend

- Map 121 L 1 11.9_Acres
- Map 125 Lot 21 15.8 Acres
- Map 125 Lot 20 12.5 Acres
- Stoddard Tax Map
- Conservation Lands

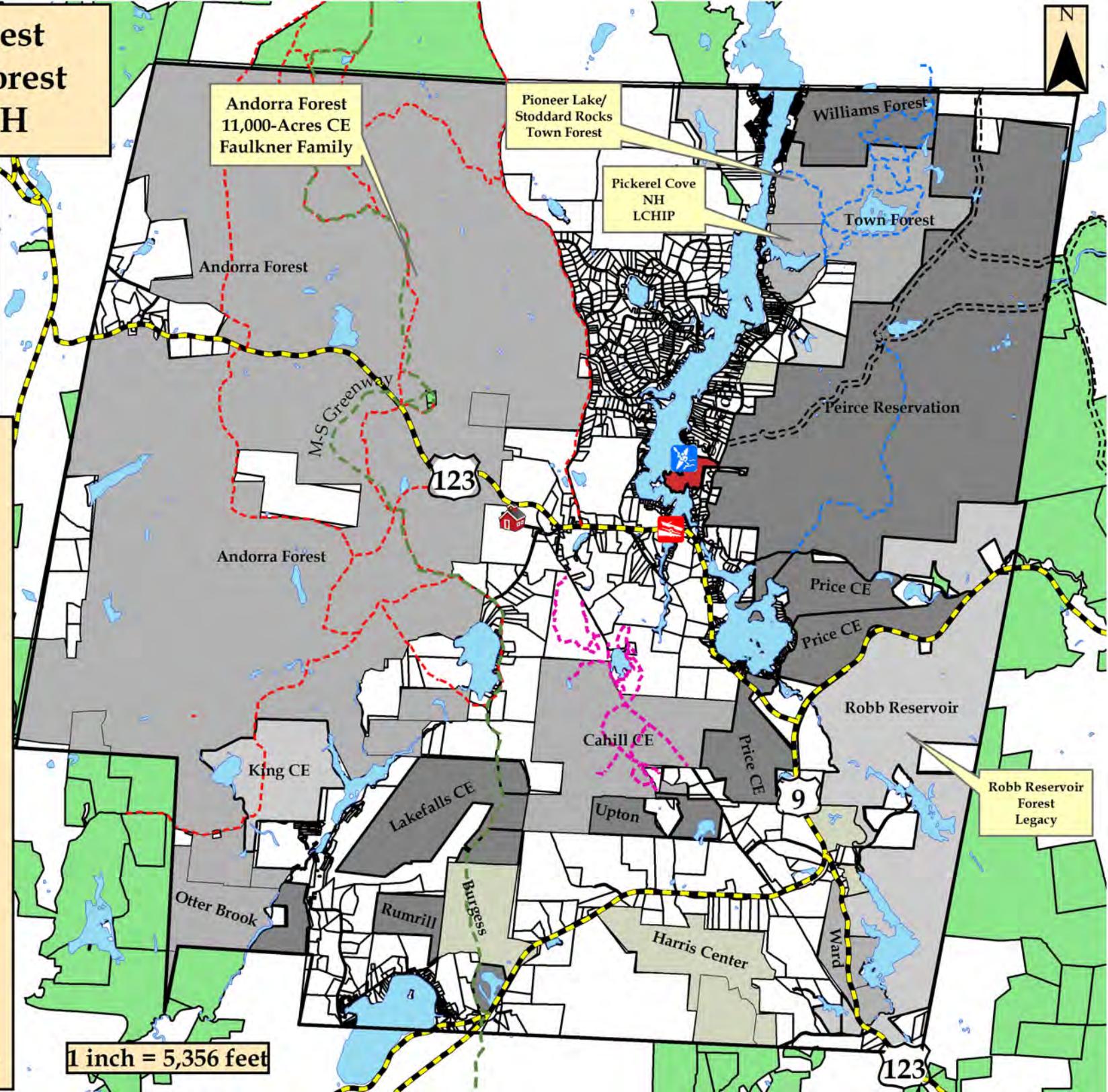
Little Big Forest Community Forest Stoddard, NH



Legend

- Little Big Forest
- Decade Land Was Protected
- Decade
- 1980
- 1990
- 2000
- 2010
- OTHER Conslands
- Stoddard Tax Map
- Non-Conservation Land
- JF Elementary School
- Lake/Pond/Reservoir
- LBF Dock
- Public Boat Launch
- Peirce woods roads
- M-S Greenway
- Andorra Hiking Trails
- Cahill Trails
- State Roads
- Stoddard Boundary Line

1 inch = 5,356 feet



Little Big Forest Trails & Parking Features Map



Phyllis Lane
Eva Lane
Shedd Hill Rd.
Kayak/Canoe Dock
Rustic Camp
Shedd Hill Parking

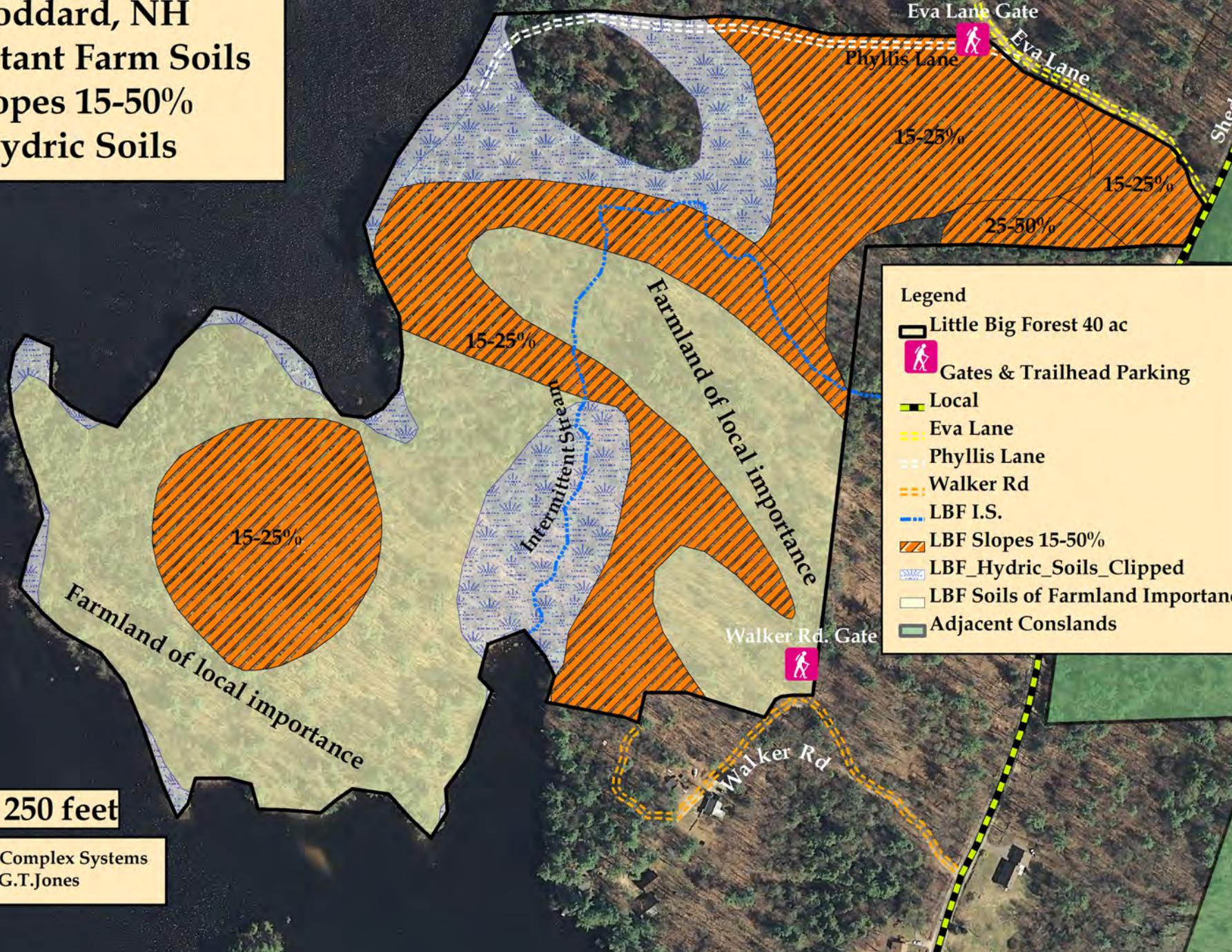
Large Split Rock
Fox Den
Intermittent Stream
Dual 30"+ WP
Walker Rd.
36" WP
40" RM

Legend

- Little Big Forest
- Shedd Hill Trailhead
- LBF Features ident**
- 40" RM
- Dual 30"+ WP
- Fox Den
- Large Split Rock
- Hiking Trail
- LBF Stream
- Phyllis Lane
- Eva Lane Rd
- Walker Rd
- Rustic Camp
- LBF Dock

1 in = 250 ft

**Little Big Forest
Community Forest
Stoddard, NH
Important Farm Soils
Slopes 15-50%
Hydric Soils**



Legend

- Little Big Forest 40 ac
- Gates & Trailhead Parking
- Local
- Eva Lane
- Phyllis Lane
- Walker Rd
- LBF I.S.
- LBF Slopes 15-50%
- LBF_Hydric_Soils_Clippped
- LBF Soils of Farmland Importance
- Adjacent Conslands

1 inch = 250 feet

Source: UNH Complex Systems
Compiled by G.T.Jones

Peirce Reservation

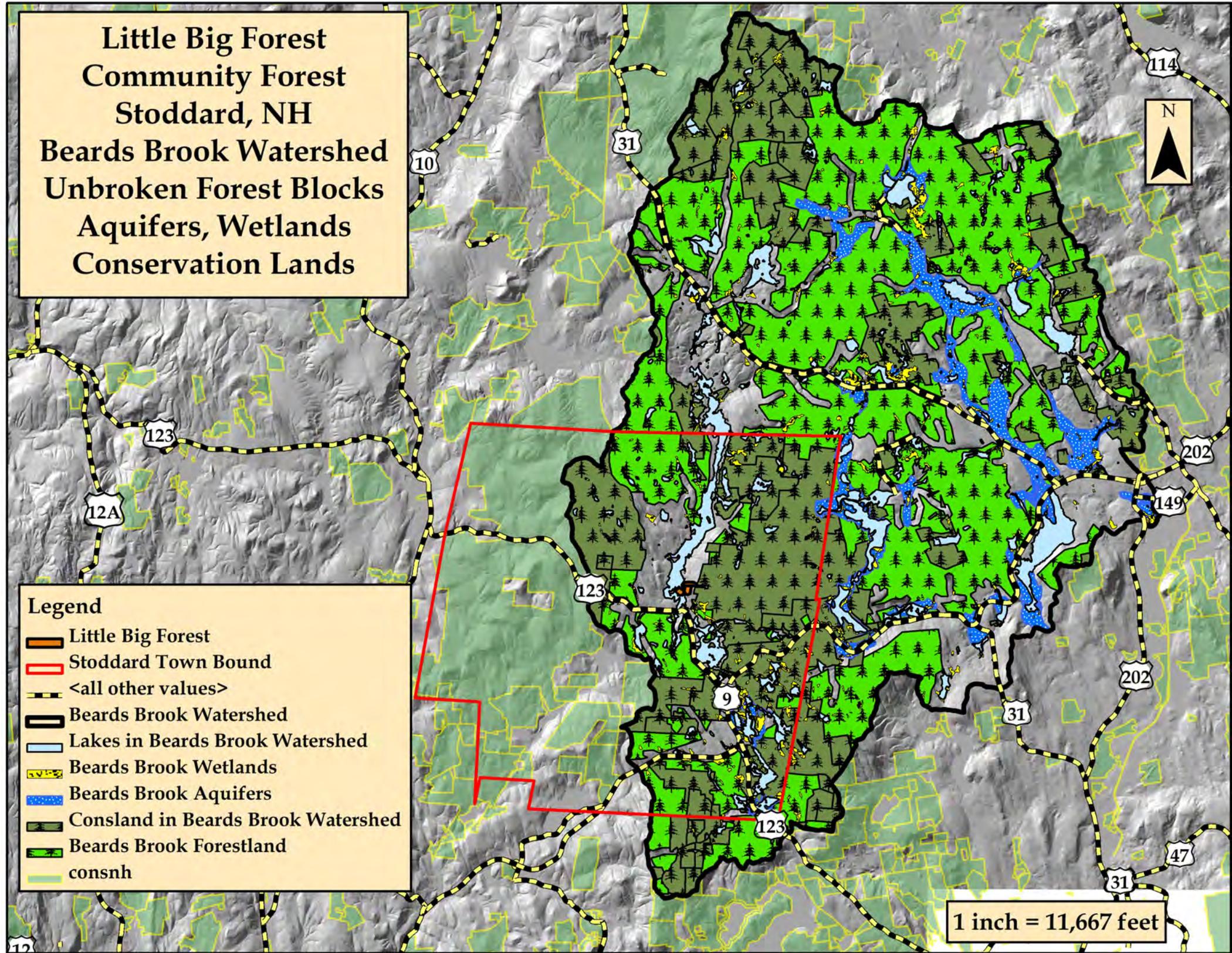
**Little Big Forest
Community Forest
Stoddard, NH**

**Beards Brook Watershed
Unbroken Forest Blocks
Aquifers, Wetlands
Conservation Lands**

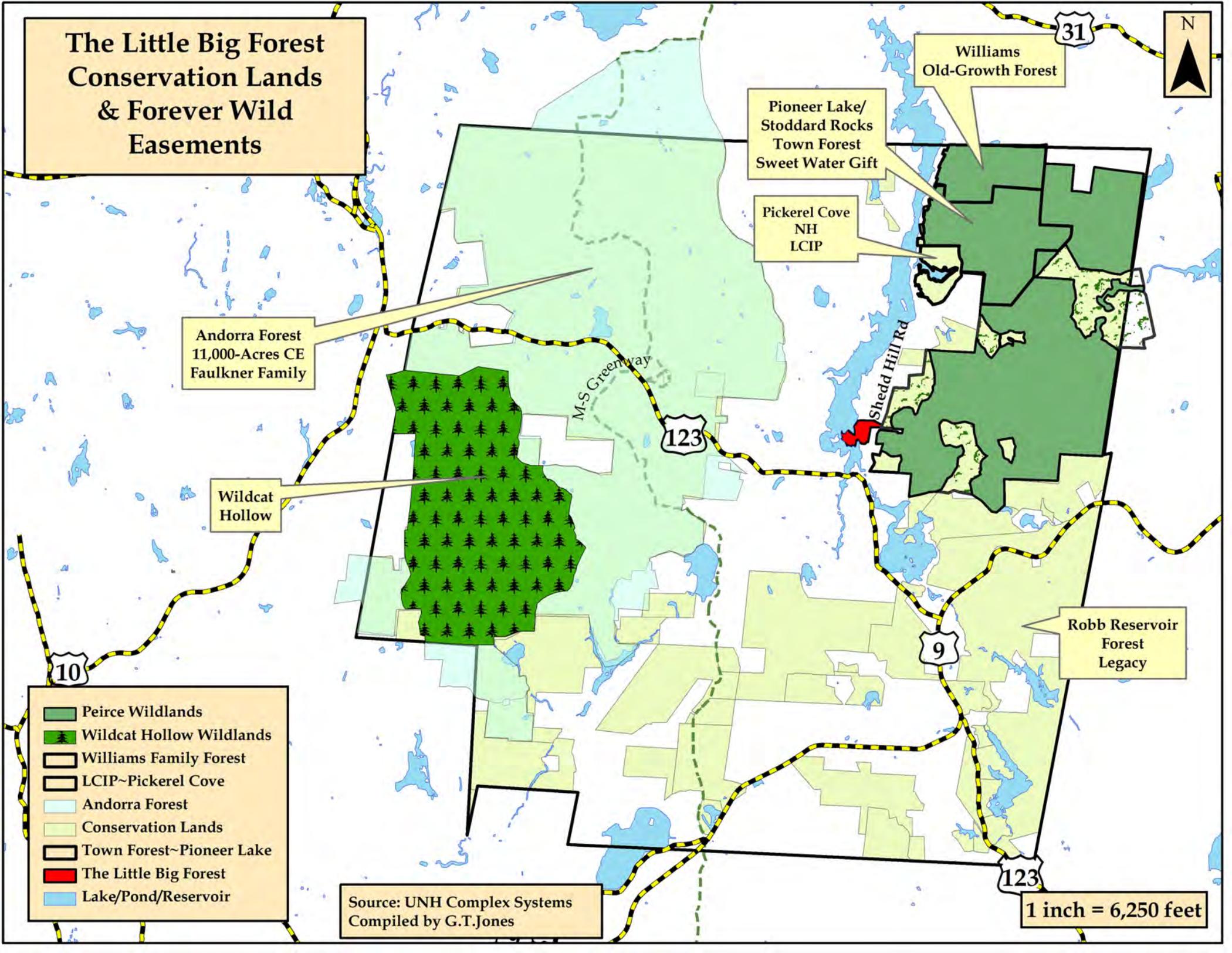
Legend

-  Little Big Forest
-  Stoddard Town Bound
-  <all other values>
-  Beards Brook Watershed
-  Lakes in Beards Brook Watershed
-  Beards Brook Wetlands
-  Beards Brook Aquifers
-  Consland in Beards Brook Watershed
-  Beards Brook Forestland
-  consnh

1 inch = 11,667 feet



The Little Big Forest Conservation Lands & Forever Wild Easements



10

123

31

Williams Old-Growth Forest

Pioneer Lake/
Stoddard Rocks
Town Forest
Sweet Water Gift

Pickerel Cove
NH
LCIP

Andorra Forest
11,000-Acres CE
Faulkner Family

Wildcat
Hollow

M-S Greenway

Shedd Hill Rd

9

Robb Reservoir
Forest
Legacy

- Peirce Wildlands
- Wildcat Hollow Wildlands
- Williams Family Forest
- LCIP~Pickerel Cove
- Andorra Forest
- Conservation Lands
- Town Forest~Pioneer Lake
- The Little Big Forest
- Lake/Pond/Reservoir

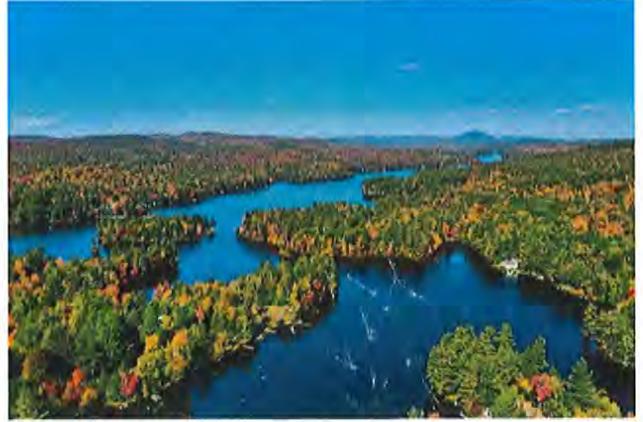
Source: UNH Complex Systems
Compiled by G.T.Jones

1 inch = 6,250 feet

123



Little Big Forest Stewardship Committee Student Leader Application



Who can apply?

This opportunity is for JFES students in grade 4 or grade 5.

What work will the student leader do?

The student leader will be expected to attend approximately four Stewardship Committee meetings throughout the school year (currently at Town Hall on the second Wednesday of each month at 7:00pm; parent/guardian should also attend, and you can leave part-way through if it goes later than bedtime).

Why is it important to have a student leader on the Stewardship Committee?

The student leader will serve as an essential voice to help make important decisions about Little Big Forest trails, infrastructure, and educational programming that will impact JFES students. Though Mrs. Forrestall is also a member, the student leader will represent the JFES student perspective and serve as a liaison between the Stewardship Committee and the student body, with teacher support.

How does the student leader get chosen? How long do they serve?

Students must fill out this application in order to be considered. Applications will be reviewed by Dr. Pinard and the Stewardship Committee. A student leader will be chosen from the pool of interested applicants. The student leader will begin immediately and serve for the remainder of the 2023-24 school year. Each year we will have a new student leader who serves for the entire year.

Want to be considered? Please fill out this section with your parent/guardian, answer the questions on the back, and return to Mrs. Forrestall by Friday, December 8.

This is not a JFES-sponsored activity

Name Rebecca Meyer Grade 5

Parent/Guardian Name Mary Meyer

Parent Email Address demivimed@aol.com

Parent Phone Number 603-446-3622/603-762-3141

Parent Signature 

OVER----->

Please answer the following questions using complete sentences. Check CUPS to make your application as professional as it can be!

1. Why are you interested in serving as student leader on the LBF Stewardship Committee?

I'm interested in serving as student leader because I think that the LBF should be used by JFES students. I also want student input to be heard, and be the voice for other JFES students. As well as I would like an extra out of school activity.

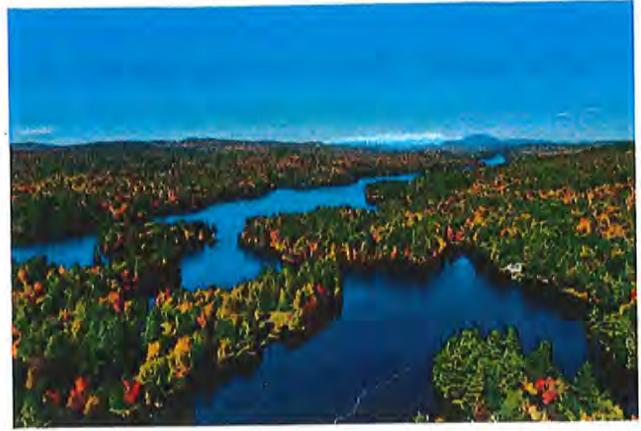
2. What are some of your hopes or goals for how JFES will use the Little Big Forest in the future?

Some of my ideas for how JFES students will use the LBF are field trips, learning activities, and an outdoor classroom all school hikes. It may also make a good 5th grade Krokait trip camping spot.

3. Why do you think you are the best candidate for this leadership position?

I think I would be the best candidate for the leadership position for a few reasons. I think I can communicate with students and adults well for their ideas and input. I feel like I am responsible and will take it seriously. I also would really like the LBF to be very successful.

Little Big Forest Stewardship Committee Student Leader Application



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This is not a JFES-sponsored activity

Name Charlotte Miller Grade 4

Parent/Guardian Name Christine Miller

Parent Email Address cmillerspeaks@gmail.com

Parent Phone Number 603 355 7548

Parent Signature 

OVER----->

Please answer the following questions using complete sentences. Check CUPS to make your application as professional as it can be!

1. Why are you interested in serving as student leader on the LBF Stewardship Committee?

I'm interested in serving as student leader on the Little Big Forrest (LBF) Stewardship Committee because it would be a great opportunity to help my community. I love nature, I would also be excited to learn about a town committee, and more!

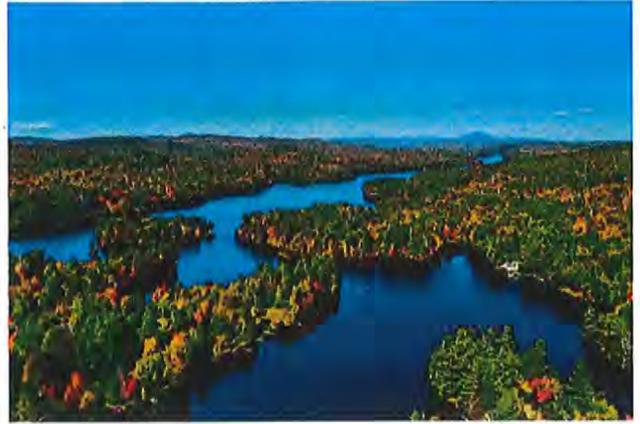
2. What are some of your hopes or goals for how JFES will use the Little Big Forest in the future?

My hopes and goals for how J.F.E.S. will use LBF in the future are to extend our outdoor learning in a adventurous way, for the students to have a chance for a reward - like a field trip to LBF.

3. Why do you think you are the best candidate for this leadership position?

I think I am the best candidate for this leadership position because I am persistent, cooperative, empathetic, responsible, respectful, helpful, independent. I also work really well with others. If I got this job I would work really hard to do my best giving a J.F.E.S. Student Perspective,

Little Big Forest Stewardship Committee Student Leader Application



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What work will the student leader do?

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This is not a JFES-sponsored activity

Name Jaxon Leonard Grade 4

Parent/Guardian Name Rachel and Patrick Leonard

Parent Email Address Rachel.Leonard0609@gmail.com

Parent Phone Number 603-491-7983

Parent Signature Rachel Leonard

OVER----->

Please answer the following questions using complete sentences. Check CUPS to make your application as professional as it can be!

1. Why are you interested in serving as student leader on the LBF Stewardship Committee?

I want to serve as a student leader because I feel that everyone should be able to explore TLBF property. I want to help more people learn about nature.

2. What are some of your hopes or goals for how JFES will use the Little Big Forest in the future?

I hope that TLBF can be JFES second basecamp. We could have our all school gathering and siesta time there. We could use it for our science class to explore and learn about nature.

3. Why do you think you are the best candidate for this leadership position?

I'm the best candidate because I really care about nature and TLBF is important to me. I could give a lot of advice about what kids would like to do there.

Little Big Forest Stewardship Committee Student Leader Application



Who can apply?

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This is not a JFES-sponsored activity

Name Cooper Mallaby Grade 5

Parent/Guardian Name Jon Mallaby Angela Mallaby

Parent Email Address Angela 18717@yahoo.com

Parent Phone Number (603)-831-9275 / (603)-831-9281
mom dad

Parent Signature Angela Mallaby | Jon Mallaby

OVER----->

Please answer the following questions using complete sentences. Check CUPS to make your application as professional as it can be!

1. Why are you interested in serving as student leader on the LBF Stewardship Committee?

because I have a lot of experience with the outdoors.

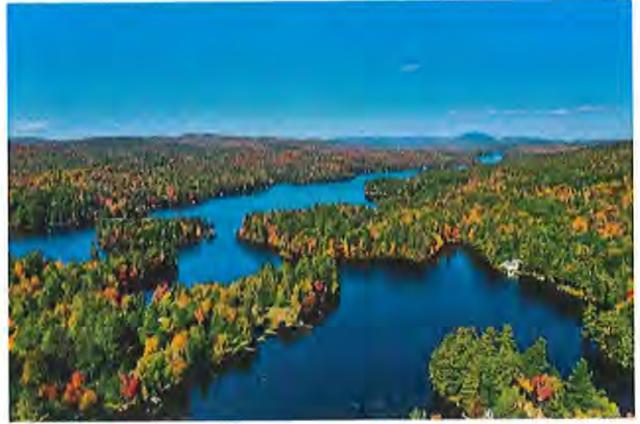
2. What are some of your hopes or goals for how JFES will use the Little Big Forest in the future?

- camping.
- School work out in a new place.
- exploring the Environment
- building forts

3. Why do you think you are the best candidate for this leadership position?

Because I have a lot of experience with outdoors and I have a lot of ideas for the LBF

Little Big Forest Stewardship Committee Student Leader Application



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This is not a JFES-sponsored activity

Name Peyton Allain Grade 4th

Parent/Guardian Name Alanna Allain

Parent Email Address aallain71@gmail.com

Parent Phone Number (603) 338-8636

Parent Signature Alanna Allain

OVER----->

Please answer the following questions using complete sentences. Check CUPS to make your application as professional as it can be!

1. Why are you interested in serving as student leader on the LBF Stewardship Committee?

I am interested because I really like to help people and nature.

2. What are some of your hopes or goals for how JFES will use the Little Big Forest in the future?

- Fishing trips
- Outdoor learning
- Nature hikes
- trash clean up (if there is any out there)
- Ice skating

3. Why do you think you are the best candidate for this leadership position?

I am the best candidate for the leadership position because I love nature and make a positive impact on exploring and helping nature.

Little Big Forest – Community Forest Public Listening Session
Stoddard Town Hall – Wednesday, August 23, 2023, 7-8:30 pm

List of Participants

Herb Healy	hhealy@hchresources.com	603 446 7180
Geri Bailey	geribailey103@sbcglobal.net	203 710 1322
Patrick Leonard	Patrick.leonard33@gmail.com	
Rachel Leonard	Rachel.leonard0609@gmail.com	
Bob Fee	selectperson2@stoddardnh.org	
Aaron Bryer	abryer@gmail.com	
Jaxon		

Members of the Conservation Commission and /or LBF Stewardship Committee attending:

Jason Kovarik	Jason.m.kovarik@gmail.com	
Geoff Jones	geoffreytjones@gmail.com	
Jaelynn Stetson	j.stetson613@gmail.com	
Milosh Bukovcan	milosh.bukovcan@gmail.com	
Tim Rowehl	trowehl@gmail.com	
Craig Walker	craigwalker744@gmail.com	
Tim Healy	thealy13@gmail.com	
Bob Winterbottom	rwinterbottom97@gmail.com	202 725 7371

Summary of the Listening Session

Geoff Jones and Jason Kovarik opened the session by welcoming those attending and thanking them for providing inputs about the conservation and management of the newly establishment Little Big Forest as a community forest for the Town of Stoddard. They highlighted the major benefits anticipated from the protection of this ecologically important old growth forest, including benefits related to education, environmental conservation, ecosystem services and recreation. They also highlighted the importance and need for public inputs as the Town moves ahead with steps to facilitate public access to the Little Big Forest and associated signage. They also noted that a Stewardship Committee for the Little Big Forest has been organized. Bob Winterbottom added a

word of thanks for those attending and introduced other members of the Stewardship Committee who were attending the session.

Geoff Jones then used a PowerPoint slide show to present a number of highlights about the special qualities of the 40-acre Little Big Forest, including its 4000 feet of shoreline which is now protected. He noted that a management plan has been drafted and posted online for interested persons to read and review, and he welcomed comments of the draft plan. He provided illustrations of notable features including a large diameter red maple estimated to be over 200 years old, and several large white pine trees towering over 100 feet with 3-foot diameters. He noted the amazingly diverse fungi found in the forest and underscored how the highest and best use for such an ecologically rich property is educational and recreational use by the public.

Geoff then reviewed options considered for providing public access to the Little Big Forest, and indicated that a good option would be to establish a public access parking area of approximately 50X100 feet adjacent to Shedd Hill Road, not far from the intersection with Eva Lane.

Questions were raised about a few issues:

- What might be the requirements under the ADA (Americans with Disabilities Act) for access to the community forest? Geoff responded that he wasn't aware of ADA requirements.
- What about provisions for fire control? Geoff noted it shouldn't be a problem, and that there is precedent for getting access for fire control to more remote areas in the vicinity of Stoddard Rocks
- What is the process for deciding about the specific locations of trails? Geoff noted that the CC would aim to locate trails to minimize negative impacts on wildlife.
- How will potential damage from public access be minimized? At this point, the LBF draft management plan stipulates that only "minimum impact" uses and activities would be permitted.

The dialogue continued, as questions were raised about a policy on possible access by dogs, and on access by snowmobile or other motorized vehicles. Geoff noted that a document on Land Use Policies has been circulated and is being reviewed by the CC and SC to consider what uses may be permitted or not permitted. Jason and Geoff also mentioned that there were some stipulations in several grants used to purchase the property which limited or restricted some uses, such as the use of motorized vehicles (snowmobiles, ATVs). Bob Fee noted that care should be taken to not be too aggressive in limiting access.

Geri Bailey wanted to know how the protection and management of a community forest might differ from a protected forest or other conservation land, and what will be the process to ensure adequate public input into a management plan that is finalized and adopted for the LBF? Bob Winterbottom and others noted that the CC and Stewardship Committee were keen to organize a series of sessions including this evening (Aug 23) and also additional sessions on Sept 9 as well as an informal session with students of the Faulkner Elementary School in Stoddard. Jason has also posted a public survey / short questionnaire to gather input about the relative importance of anticipated management objectives and amenities which might be provided -and people are responding. The inputs from the listening sessions as well as the questionnaire will be considered as the draft management plan is

reviewed by the Stewardship Committee and finalized in the coming months. And the public is also welcome to attend or to observe the deliberations of the LBF SC at their regularly scheduled monthly meetings on the second Wednesday of each month, which are set to begin on Sept 13 at 7 pm at the Town Hall.

Additional discussion followed to share information about the requirements of the LCHIP and Forest Service grants that enabled the purchase of the community forest. The group also noted that the Town is now sharing costs of road maintenance with the Eva Lane property owners association. Bob Fee suggested that the LBF register as a 501-3 (c) charitable / non-profit organization in order to facilitate payments from the Town or associated forest management accounts for road maintenance and other management costs.

Geoff noted that \$12,500 has been ear-marked for school related transportation for educational outings and related uses and may be used towards the purchase of a school vehicle, etc.

Discussion then turned to the issue of the cabin on the property and its possible uses, and associated management issues. A potential partnership with the Harris Center was raised as a possible option to facilitate reservations and to manage the use of the cabin by schools and others for educational visits. Policies and procedures will need to be clarified to govern overnight use of the cabin and to ensure minimal impact.

Several participants were interested in providing access from the lake by extending the existing wooden platform to make it possible to dock with canoes or kayaks and to visit the forest when out for a paddle.

The meeting ended with another round of thanks to all participants for attending the listening session and for sharing their thoughts; everyone was encouraged to help spread the word about upcoming listening sessions (on Sept 9 at 10 am at the JFES) and CC/SC meetings (on Sept 13 at 7 pm at the Town Hall) to ensure a good turnout and further inputs into the process of finalizing the draft management plan.

Ideally, the SC will be helping to facilitate a “visioning” session as part of these listening sessions and meetings to help ensure that the elaboration of public use guidelines and the finalization of the LBF Management Plan will meet the needs of the Town of Stoddard and address the priority interests of its residents.

Little Big Forest Public Listening Session
9/9/23 at 10:00 AM - JFES Community Room

Public Attendance:

Ken and Kathy Durwood	603 446 7889
Coren Patten	562 533 0217
Peter Carlisle	
Scott Semmens and Helen Tam-Semmens	603 446-7848
Mike Kelly	mjkcran@hotmail.com
Jean Kelly	jeankelly_hp1@yahoo.com
Michael Turino	turino12@yahoo.com

Stewardship Committee Attendance: Bob Winterbottom (Chair), Geoff Jones, Milosh Bukovcan, Tim Rowehl, Maggie Forrestall, Craig Walker and Terri LaRoche

Session Summary

Geoff Jones kicked off with a brief intro and introduced Bob Winterbottom.

Bob Winterbottom introduced himself as the chair of the Stewardship Committee (SC) as well as introducing other SC Members in attendance. Public in attendance also briefly introduced themselves.

Bob explained that the SC will be meeting on the 2nd Wednesday of every Month at 7PM at Town Hall and these meetings are open to the public. He encouraged Public Attendance to consider their input to finalize LBF Management Plan with Public Input and also to comply with the provisions of grants which helped the Town to purchase the property. He noted this was the 2nd listening session, and mentioned some of the issues discussed at the first session on 8/23 including:

- ADA requirements that may be applicable
- Fire Control issues
- Provisions for use / improvements to Cabin/Dock
- Views on Uses to be Permitted/Not Permitted
- Motorized Vehicles (not allowed)
- Road Access and maintenance

Geoff gave an overview of protected land in Stoddard (Sweetwater etc.) and shared the water/forest connection in a healthy ecosystem.

Craig Walker provided an introduction, rules (be respectful etc.) and the difference between a listening session and a brainstorming session.

Items/concerns discussed:

- Camping - don't allow unsupervised camping

- Permissible for organized groups of school children
 - Abutters have visual for monitoring behavior and potential abuses
 - Inappropriate behavior unlikely if not already occurring?
- School transportation – Bus? Earmarked grant funds could contribute to funding
- Cabin use?
 - Storage for educational material?
 - Toilet/Compost
 - Water
 - Maintenance
 - Who Uses
 - Scheduling/Permitting School use
- Litter control: encourage Carry in – Carry Out
- Liability considerations? (organized activities School/Town)
- Access to the forest from the Lake
 - How to minimize Impact – limit use?
 - Signage
 - Improve docks/ Accessible for overnight?
 - Smaller Size Fishing Pier
 - Fishing access vs. Shoreline Protection
- Hunting
 - How to Handle – LCHIP grant stipulates that forest cannot be closed to hunting
 - Not likely to be an issue – as hunters tend to use other areas with more suitable habitat
 - In hunting season, recommend orange vests for hikers, visitors
 - Signage: could stipulate – hunting by permission only?
 - Also: No Trapping/No Baiting/No Hounding
- Pets/Dogs
 - Prohibit?
 - Require dogs to be on a leash?
- Trails
 - Group seems to favor a loop trail
 - SC to recommend locations for trails and design, taking care to not disrupt wildlife use
- Parking and Information Kiosk (with information about funding agencies)
- Add info about Stewardship Committee to Town Web Site and LBF website
 - Provide point of contact (email address) for SC
 - At next SC meeting, discuss other ways to support participation in stewardship of LBF
- Draft Management Plan for LBF is intended to be a living document
 - What is the plan and process for modification?
 - Signage – Separate/modular?

In closing, Geoff Jones, Craig Walker and others thanked all participants for their attendance and suggestions. Following the latest meetings and listening sessions, Geoff also recapped the near-term actions that are anticipated by the Conservation Commission, namely:

- Provide for parking near the forest

- Set up an information kiosk (similar to what has been posted at the base of Pitcher Mtn)
- Lay out trails to provide access to the forest

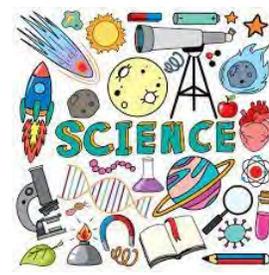
James Faulkner Elementary School Listening Session
September 22, 2023

How can we use the Little Big Forest for **recreation**?

- Games, picnic, all school hike or gathering
- Camping
- Summer camp for kids in Stoddard
- Swimming, fishing
- JFES camping-UE only
- Ice skating, sledding, skiing/snowboarding, ice fishing
- Hunting -deer or turkey, bear
- Didn't we buy the land to protect animals? Why hunting?
- Western Abenaki museum-artifacts, culture, history (community members can contribute)
- Boating-kayaking, canoeing, paddleboarding



How can the Little Big Forest help us learn about K-2 Science?



Topic	Ideas
<p>Weather</p> 	<p>Investigate the temperature of the air, water, sun, moon,. Measurements of the rain. Measure the wind. Catch lightning with a nature camera. Study the clouds. .Study the leaves (predict the weather.) How the air feels. Study the sun. Make our own study dials. Study the rain. Study the sun: how the sun can be so bright. Study the rain and how the clouds make rain. Study the water there, what lives in it and what</p>
<p>Plants and Animals</p> 	<p>Search for animals (snapping turtles, frogs, fish, birds,) Swimming: teach kids who don't know how to swim, look for animals under the water. Butterfly Research Study what animals eat. Study animal's dung. (What they eat, are they sick or healthy). Animal homes. Animal sizes. Study the trees. (their leaves, different types of trees, how they are different and how they're the same, how old the trees are). Study different mushrooms. Where they come from, what lives in mushrooms. Learn about acorns. Investigate the worms there. Look for bones. Study the animals: look for new animals that have never been seen. Search for different mushrooms (which ones can be eaten and which can not be eaten). Study why some mushrooms are poisonous.</p>
<p>Sun, Moon, & Stars</p>	<p>Go at night and look at meteor showers. At night look and count the stars, investigate them. Make telescopes. Look up and see if we can find the Milky-Way. Study the sun and how hot it gets</p>

	<p>Study the grass, the dirt, pine cones, pine needles. Look at the stars and see what they make (different animals, and shapes) Study the sun and see where it gets its brightness.</p>
<p>Land & Water</p> 	<p>Tree research Fish research. Plant investigation. Investigate how clean the water is. Investigate the dirt (see how wet or dry it is). Learn how many different types of fish are in the area. Count how many fish are in the water. Measure how much water is there. Study how long the fish are. We could go fishing and study them. Study the rocks! Study the water and what lives in it.</p>
<p>Sound & Light</p> 	<p>Study the sun and its power (cold days/warm days/hot days). Investigate animal sounds. How loud they are, the sounds they make, why animals make the animal sounds they make. Study where light comes from. Study the ozone. How it protects us from too much light. Study the sounds the animals make and try to figure out what the animal is. Listen to different bird sounds and learn Find where the sun is and study its light.</p>

Little Big Forest Brainstorm

How can the Little Big Forest help us learn about K-2 Social Studies?



Topic	Ideas
<p>Natural Resources</p>	<p>Study clean water. Making your own water filtration. Study rocks and stone in that area, and the benefits of what is in the rock/ stone. Test air quality. (Is the air better at Little Big Forst) Rock and stone Learn how to make and use fire. Study the grass, what are the benefits and uses for the grass.What is inside grass. Plan trees. What are the different types of trees to use for certain types of</p>
<p>Rules & Laws</p>	<p>Learn how to establish rules when we're at the land (lights,) Respect nature. Don't litter. Studying the process and procedures to make laws and rules. NO cutting down trees or their branches.</p>
	

<p>Community</p> 	<p>Have a clean-up day to keep the animals safe and healthy. Make friends with different animals.</p>
<p>Survival</p> 	<p>Collect different sticks and make different structures, to see what works and what doesn't. (Shelters) Learn to make campfires Leaves for shelter. Learn about nature's edibles. Learn how to pack to stay in the forest.</p>
<p>Culture: Art, Music, Dance</p> 	<p>Painting</p> <p>· Use the land to make different types of art. Use sticks and leaves to make our names. Use the spot for singing.</p>

Little Big Forest Brainstorm

How can we use the Little Big Forest to learn about
Grade 3 Science?



Topic	Ideas
Life cycles	Find examples of plants and animals at each stage
Weather and climate	Go there in each season to observe changes Measure weather data
Animal and plant reproduction and traits	Look for baby animals and plants Describe how individuals are the same and different
Fossil evidence and long term environmental change	Search underground for fossils Look at soil layers Learn about geology of this region

**Little Big Forest
Brainstorm**



How can we use the Little Big Forest to learn about Grade 3 Social Studies?

Topic	Ideas
Human impact on the environment	Pick up trash, pick up after yourself Take care of LBF Green Team jobs there, not just at school
Natural resources	Learn about responsible hunting Learn about tourism in our town Check water quality
History of how people impact their community	Robb and other important people in Stoddard Look for other evidence of humans besides the stumps in the water
	Make a map of trails, trees, landmarks, animals, plants, etc.

Using mapping tools	
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Little Big Forest Brainstorm

How can we use the Little Big Forest to learn about Grade 4 Science?



Topic	Ideas
Plant and animal relationship to environment	Study plants and animals where they live Collect plant specimens and research them Learn about hunting
Plant and animal adaptations	Observe plants and animals Trail cameras to see nocturnal animals and trails
Landscapes and erosion	Check for erosion on shoreline Measure before and after a big storm Use a drone to survey from above Study topographical maps
Natural hazards	Plan for dangerous weather when we are there Learn about wildfires Study extreme weather impact Build shelters Plan camping gear for the weather

Little Big Forest Brainstorm



How can we use the Little Big Forest to learn about Grade 4 Social Studies?

Topic	Ideas
NH history	Learn about Abenaki culture Find the oldest tree
Economic decision-making	Timber value vs. conservation value Budget for LBF
Connection between state/national/local	Host visitors from other places

NH geography	Use maps to navigate

Little Big Forest Brainstorm

How can we use the Little Big Forest to learn about Grade 5 Science?



Topic	Ideas
Gravity	Use hill for investigation–different shape/ weight objects Compare gravity in water and on land Engineering challenge
Ecosystems and energy flow	Observe wildlife connections Kayak to learn more about aquatic life Study rotten logs Visit in different seasons, including summer
Stars & seasonal daylight	Time lapse of stars Stargazing Campout with smores Light pollution investigation
Water & other natural resources	Test water quality, temperature Water filtering Swimming, fishing, ice skating Map the topography of lake



Little Big Forest Brainstorm

How can we use the Little Big Forest to learn about Grade 5 Social Studies?

Topic	Ideas
Human migration & settlement	Work on cabin Find artifacts and evidence of humans there
Colonial history	Learn about how it used to be 3 ponds Study dam Find artifacts
Technology and change in society	Use different kinds of technology for transportation, communication, mapping Explore the whole place
American government	Learn how they raised money to buy the LBF Learn about rules and regulations

Defining Mature and Old Growth:

Why it's so important to rely on place-based science and local expertise when attempting to define stages of forest structure.

Mature and old-growth forests provide an invaluable suite of benefits to society, ranging from spiritual and recreational value, to critical habitat and carbon storage. With Executive Order 14072, President Biden initiated an exercise to define, identify, and inventory mature and old-growth forests on our public lands. This move by the administration presents a terrific opportunity to conserve our forests through science-driven policy.

There is no scientific basis for a universal definition of mature or old-growth forest. Tree age, size, and carbon storage capacity differ dramatically across mature and old-growth forest types depending on species composition, site conditions, regional factors, and more.

Old-growth forests look dramatically different from coast to coast, state to state, and forest to forest. For instance, old-growth sequoia groves on the West Coast can be thousands of years old with trunk diameters of more than 30 feet and heights in excess of 250 feet, while an old-growth forest of pitch pine in the Northeast may include 300-year-old trees that never reach heights over 16 feet.

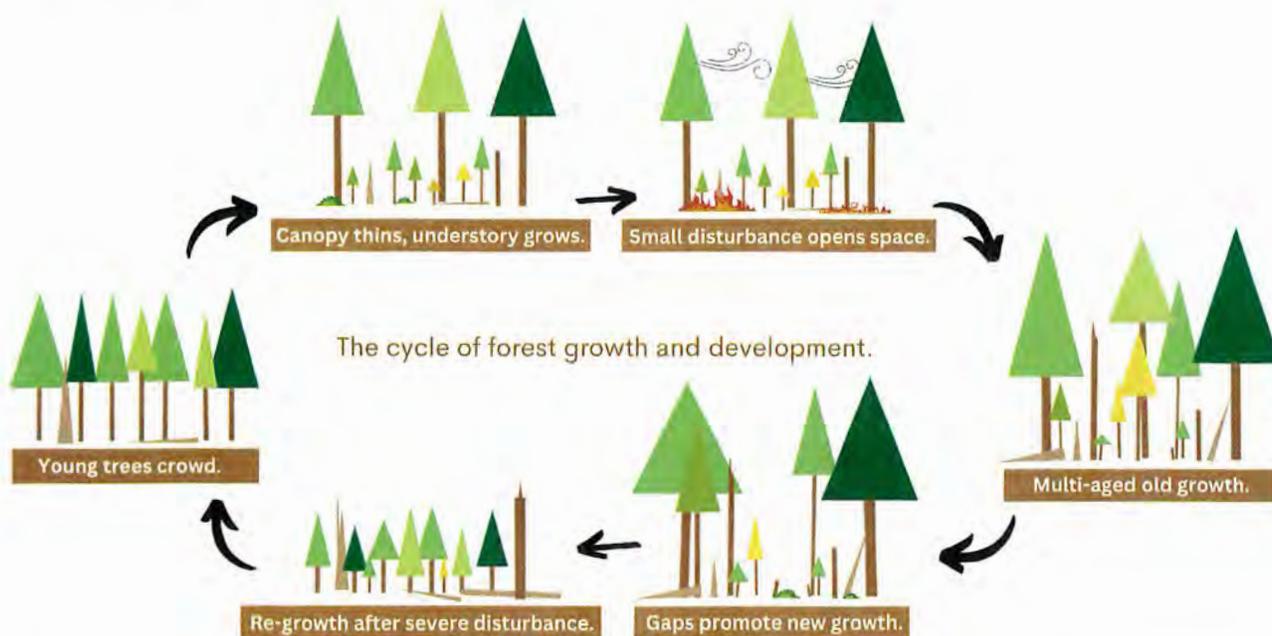


This is because "old growth" — as it's generally understood by forest researchers and professionals — refers to a stage in a forest's succession, not just the average age or size of the trees within it.

Old-growth forests will often include trees of diverse ages and sizes, dead and fallen trees, and canopy gaps and layers. You may also hear the term "old growth" used to describe a complex forest habitat based on these characteristics. The term "mature forest" refers to the stage before old growth and, therefore, is also defined on a local basis.

The solution to defining mature and old-growth forests accurately is recognizing the significant and varied structural differences that exist across all of America's forests. Science-based, meaningful, and accurate definitions will require site-specific evaluation and considerable local expertise. They cannot be based solely on tree age or tree size.

What are the greatest threats to old-growth forests? Old-growth forests are most threatened by climate-amplified disturbances like wildfire, drought, insects, and disease. According to the National Park Service, we lost 13-19% of all large giant sequoias between 2020 and 2021 due to a combination of climate-induced drought (and subsequent insect infestation) and severe wildfire.



What makes a healthy forest? Forests develop in stages over time. Severe disturbances may reset the cycle, but smaller disturbances allow forests to age and develop mature and old-growth features. As trees grow, they need resources like water and light. Small disturbances (whether it's a natural one, like a wind storm, or a human one, like a timber harvest) remove trees from a forest, making room for other trees to flourish.

Not all mature forests are healthy or destined to become old growth. For instance, a mature forest in the western US may be overly dense and particularly susceptible to catastrophic wildfire. Science-based management helps forests stay healthy, adapt to climate-change pressures, and develop and maintain old growth traits.

What are common misconceptions about mature and old growth?

- ✗ All forests, if left to grow, will become old growth.
- ✗ There is a universal age that can determine mature status.
- ✗ Old-growth forests are static and won't change if left alone.
- ✗ A forest managed by humans cannot have old growth features.
- ✗ Unmanaged mature and old-growth forests store carbon in perpetuity.