

Town of Hardwick, Vermont

TOWN FOREST RECREATION PLAN



Vermont Town Forest
Recreation Planning

Vermont Town Forest Recreation Planning

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Chapter 1: Introduction

Acknowledgements

All community plans are the result of a collective effort. In the development of this Town Forest Recreation Plan many individuals provided considerable input and expertise to the outcome. The project team would like to thank them for their tremendous assistance.

Project Team

Steering Committee

- ❖ Eric Remick, Chairperson
- ❖ Andrew Meyer
- ❖ Ben Notterman
- ❖ Gail Johnson
- ❖ Danny Hale
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- ❖ David Mitchell
- ❖ Norma Wiesen
- ❖ Ron Wiesen
- ❖ Sue Rivard

Interagency Working Group

- ❖ VT Urban and Community Forestry Program—Project Lead
- ❖ VT Agency of Natural Resources—Department of Forests, Parks and Recreation
- ❖ VT Agency of Commerce and Community Development

Consultant Team

- ❖ SE Group—Project Lead
- ❖ Arrowwood Environmental—Natural Resources Sub-Consultant

OUR PARTNERS

The Vermont Urban & Community Forestry Program is a joint initiative of Vermont Department of Forests, Parks and Recreation (FRP) and UVM Extension. Working group members include FPR's Recreation Program, Agency of Commerce and Community Development, and Extension's Tourism and Marketing Program. Partners include over 40 organizations and stakeholders who have helped shape the process and deliverables.

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About the Vermont Town Forest Recreation Planning Community Assistance Program

Vermont has a long and proud tradition of town-owned and managed forests. Over 168 municipalities own over 67,000 acres of forestland, all open for public benefit. The values of these town forests are diverse, including watershed protection, wildlife habitat, forest products, outdoor classrooms, and neighborhood gathering places. Outdoor forest-based recreation is both a great opportunity and a growing challenge. Recognition of the economic and community benefits of forest-based recreation is on the rise. Concurrently, increased pressure from multiple recreation groups accentuate the need for planning assistance to balance the growing recreation interests and the health of the forest. In response, the Vermont Urban & Community Forestry Program and its partners received a grant from the US Forest Service to provide recreation planning assistance to ten diverse Vermont communities, and Hardwick was one of those selected!

Project Purpose and Scope

At the broadest level, the Vermont Town Forest Recreation Planning Community Assistance Program is intended to empower communities to move forward with confidence on recreation projects in their Town Forest. This process has provided robust community involvement and comprehensive consideration of potential



projects, so the community can move forward with confidence knowing that it is addressing the needs and preferences of its residents and visitors, is protecting the forest resources in its charge, and is effectively managing the forests for the resources and activities it values.

The project encompasses four key areas:

1. Developing the Vermont Town Forest Recreation Planning Toolkit to enable planning in ALL Vermont communities
2. Developing a compelling and inspiring vision to help guide the future management of the town forests
3. Developing discrete, clear and action-oriented strategies for improvement of recreation and stewardship that achieves the vision
4. Fostering implementation with support for local plan adoption, guidance for implementation, and the project toolkit



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Project Process

Over the past year, Hardwick has worked with a consulting firm that specializes in community planning, SE Group, in a robust planning process to develop an action-based town forest stewardship and recreation plan. The innovative planning model included a public visioning workshop, needs assessment, facilitated walks in the forests, a community survey, a public strategies workshop, and an engaged steering committee. The process has resulted in a plan that provides actionable strategies to assist the community in taking the next steps. This process has led to a Vermont Town Forest Recreation Planning Toolkit to support sustainable, forest-based recreation in town forests statewide.

How to Use This Plan

First and foremost, this plan is intended to document the community's desires for the town forest. Through robust public engagement, the planning process identified and solidified the community's comprehensive vision, which encompasses all the primary uses of town forests: conservation, recreation, education, and timbering and forest products. When decisions are being made about the town forest, the vision outlined in this document should be referred to and should inform how the community might weigh in on the future direction of the forest.

In addition to the establishing a shared vision for the forest, this planning process has also identified a series of concrete actions the town and its partners could take to implement the community's vision for the Forest in terms of recreation. Strategies for improvement of recreation could be physical enhancements—such as new trails, parking lots, or facilities—but strategies might also be non-physical improvements like enhanced maps and signage or policy-oriented strategies like creating a process for proposing and reviewing new trails or projects in the forest. Potential strategies were reviewed and prioritized by the steering committee and the public during the Draft Strategies Workshop. All strategies identified by the steering committee and project team are found within the action plan table, but the highest priority projects have also received enhanced detail in the action plan.

For each strategy, the action plans identify:

- Project description
- Action responsibility
- Timing (immediate, short, medium, long-term)
- Partners involved
- Action or planning dependencies
- Available toolkit & support resources
- Funding and grant opportunities
- Magnitude of costs (\$-\$-\$-\$-\$-\$-\$-\$-\$-\$)

Some of the strategies can be implemented directly by the town, its volunteers, and partners without additional funding or resources—others may require additional planning and design or require grants to complete. If grants or additional planning and design steps are needed, likely funding sources and implementation partners are identified in the action plan.



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The Vermont Town Forest Recreation Planning Toolkit—a companion to this plan—offers guidelines, designs, case studies, best practices, and standards for the town to pursue towards realizing its vision. Whether the next step involves recruiting volunteers, writing a grant application, or building a trail, the Toolkit can help the town and its partners move forward.

The Vermont Town Forest Recreation Planning Toolkit is available on Urban and Community Forestry's website at: <https://vtcommunityforestry.org/>

Community Benefits of Recreation in Town Forests

Recreation in town forests provides many benefits for local residents, economies, and the natural communities of Vermont.

Conservation and Habitat Protection

A town forest, as a protected natural area, has intrinsic conservation value. They act as habitat for local species and help conserve the area's natural resources. Town forests can connect existing forest blocks, providing a larger, safe habitat for species. Linked habitat blocks also allow species to travel and adapt to changing conditions. The forests also protect and buffer local streams, improving water quality and habitat for aquatic species. In absorbing and filtering water, the forests improve flood resiliency and water quality across the watershed. Forests also help protect soils and biodiversity and provide a buffer against pests and disease. As a municipally owned parcel, the forest can leverage additional funds for conservation through taxes and community development grants.

A town forest also provides humans with benefits from conservation by linking people to nature and allowing them to experience a wide range of natural environments. It is becoming clearer that contact with nature is an important element of a healthy life style. Providing convenient, local access to forests and natural areas can make it easier to connect with and experience nature, which is particularly important for the youth in our



communities. According to the Institute for Social Research, the average American boy or girl spends just four to seven minutes in unstructured outdoor play each day, and more than six hours each day in front of an electronic screen (National Wildlife Federation, 2016). This is startling data that has been causing a ripple effect across the country. Nearly every industry that works with young people across the nation has established initiatives to help change this statistic. From school districts and environmental education organizations to federal land managers, conservationists and the outdoor retail industry, new funding streams for outreach and programs have developed.



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There are several negative long-term effects of kids’ “nature deficit disorder,” as coined by Richard Louv, but the two greatest impacts are general health and well-being of America’s youth and the ability and desire for future generations to steward and value our public natural and wild areas, including our town forests. Although this national phenomenon is less of an issue in rural places like Vermont, convenient access to forests could help get even more young people outdoors more often.

Close to Home Recreational Opportunities

Town forests provide trails for both residents and visitors to enjoy. Town forest trails allow walkers, bikers, runners, skiers, and snowshoers to combine exercise and a natural experience in a convenient location without having to travel far from their home. Studies have shown that close and convenient access to recreation and the outdoors can significantly increase an individual’s physical activity levels (Schipperijn et al, 2017). Town forests may also connect surrounding trail systems, enhancing the community’s overall trail network. Town forest recreational opportunities can also integrate recreation with outdoor education through interpretive signage and nature walks, promoting other community values of health and nature education.

Economic Development

In Vermont, outdoor and forest-based recreation and the associated tourism are major drivers of the economy. Outdoor and forest-based recreation brings people into our communities. In the Mad River Valley, 78% of visitors have reported that trails and access to the outdoors was important in their decision to visit (MRV Moves, 2017). Trail users, both residents and visitors, will visit local restaurants and shops, bringing in tax revenue and creating jobs as well. Across our state, just four trail systems—the Catamount Trail, the Long Trail, the VAST system, and Kingdom Trails—have been found to generate over \$30.8 million annual economic activity, over \$2 million in annual tax revenues, and have supported over 365 jobs annually (VT Trails and Greenways, 2017). A single trail system in the Green Mountain National Forest—the Blueberry Lake Trails—has been found to generate \$1.8 million in annual sales, \$320,000 in annual tax revenues, and has supported 22 jobs annually (MRV Moves, 2017).



Many people when moving to Vermont will choose a location based on its natural features and recreational opportunities. Nationwide, the National Association of Realtors found that 80% of Americans consider having trails and places to take a walk one of their top priorities when deciding where they would like to live. This ranked higher than even “high quality public schools” in their Community Preference Survey, which was selected by 74% of survey



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respondents (National Realtors Association, 2015). Access to the outdoors is increasingly being seen as a cornerstone of quality of life, particularly in rural communities, and having this access allows communities to attract and retain their workforce, which in turn helps attract and retain businesses. Therefore, an accessible town forest can be a key factor for strengthening the economic vitality of Vermont towns.

Health Benefits

Almost all hospitals and health providers encourage patients to include some form of physical activities in their daily lives to increase many aspects of their health. By providing convenient access to the outdoors, a town forest encourages community members to walk, bike, ski, snowshoe, or run in the forest regularly.



Obesity is one of the most significant health threats today. More than two-thirds (68.8 percent) of American adults are considered to be overweight or obese. More than one-third (35.7 percent) of American adults are considered to be obese (U.S. Department of Health and Human Services, 2016). Vermont has slightly lower rates of overweight and obese Adults at 57.7% overweight and 23.2% obese, but the issue is of critical importance in our state as well (CDC, 2012). Active lifestyles and physical activity help to combat obesity. Obesity exacerbates many other types of illnesses and reducing the levels of obesity leads to overall better health.

Studies have shown that trails and outdoor recreation contribute to healthy communities and lower healthcare costs for individuals and local governments. A 2004 cost-benefit analysis of using trails in Lincoln, Nebraska to reduce health care costs associated with inactivity found that for every \$1 invested in trails for physical activity, \$2.94 of public health benefits are produced (Wang et al, 2004).

Spending time in the forest's peaceful, natural setting is also proven to be beneficial to community members' mental health. In addition, the forest's trees improve the air quality of the surrounding area as well.



Chapter 2: Existing Conditions

Community Profile

The community profile presents relevant demographic, economic, and recreational information to planning for the town forests.

Summary

Hardwick is a small, rural community with impressive recreational assets given its size. The town's median age is right around the state average (42.9) but the median household income is well below that statewide average of \$56,104 and the poverty rate is above 11.2%. The town has gained notoriety in recent years as “The Town that Food Saved” with its strong, local agriculture economy. In relation to that, the town's land cover is more agricultural compared to some of the surrounding communities. However, Hardwick Trails provides a sizeable, high-quality network of recreational trails close to the village and there are many opportunities for forest-based recreation in Hardwick and the nearby towns due to the efforts of many organizations and volunteers.





Population: 2,949



Median Age: 42.2



of School Age Children: 651



49 % Male 51 % Female



Household Median Income: \$40,900



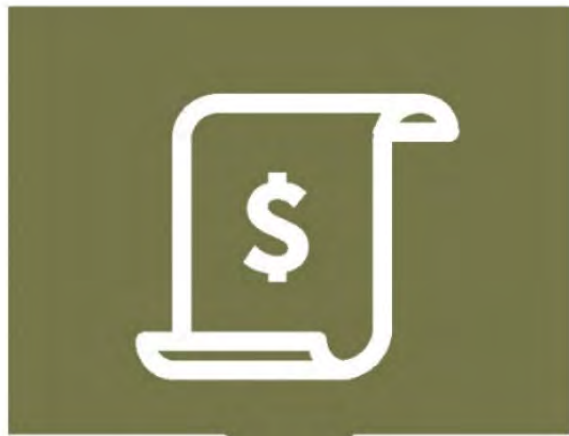
Residents Below Poverty Level: 15 %



6 % Residential Units in Seasonal/Recreational Use



13 % County Employment in Travel & Tourism



Grand List Assessed Value: \$21,858,700



Number of Parks and Open Spaces: 6



Miles of Trails: 9.6



of Playgrounds: 15



Vermont Town Forest Recreation Planning

Town Forest Profile

Forest Overview

This planning process has looked at two town forests: Hardwick Trails behind the Hazen Union School and a municipal forested parcel on Buffalo Mountain.

The Hardwick Trails forest block is comprised of multiple parcels each with government ownership between the school district and various town departments. A 9.6-mile multi-use trail network is popular for skiing, hiking, snowshoeing, and mountain biking and includes a short Fitness Loop. The forest hosts community events and local poets' work is displayed through the forest. The Hazen Union School uses the property for educational and recreational programs, as do other schools in the region. The Green Mountain Technology and Career Center (GMTCC) Forestry Program teaches and practices forestry and sugaring on the parcel. Winter trails are groomed, and cross-country ski and snow shoeing equipment is available to community members in a cabin at the entrance to the trails. In addition to the myriad of human benefits, the forest also provides immense intrinsic, conservation and wildlife values.

Buffalo Mountain is a remote, 70-acre parcel on top of the mountain. The property currently experiences limited use. ATV/snowmobiling routes intersect on the property and there is limited road access from a town class 4 road.

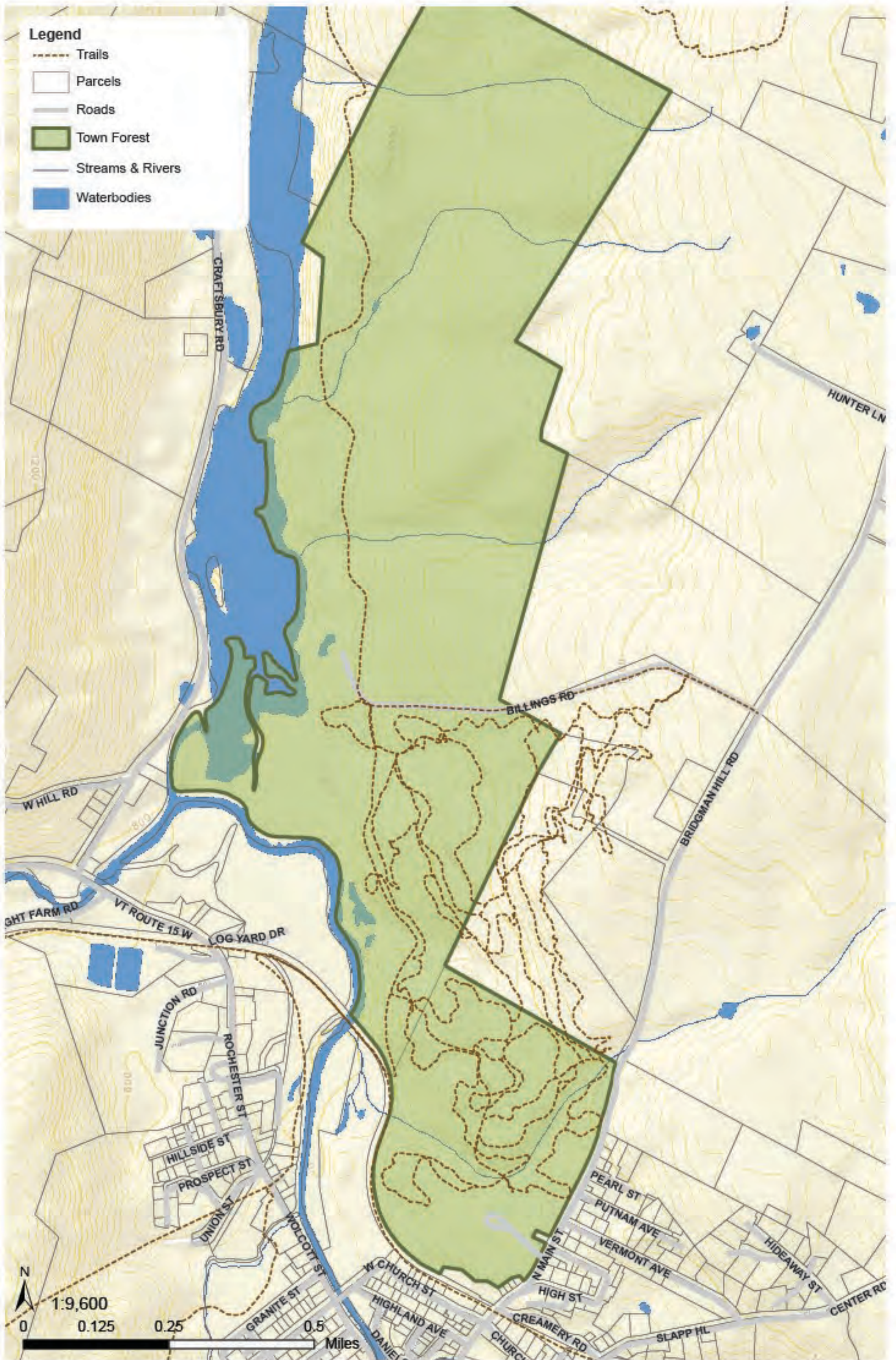
Land Ownership and Conservation Background

As stated above, a portion of the Hardwick Trails property is owned by the Town, while the other portion is owned by the school district. The trail system is maintained by the Hardwick Trails Committee and other volunteers. The GMTCC forestry program also helps with maintenance of the property. There has been no planning or inventories done on the town-owned parcel. Some natural resource inventories have been conducted on the school owned parcel.

The town has long owned the Buffalo Mountain forest but has largely held it in reserve, with no substantial improvements. Some forest management has occurred, but no other plans or natural resource inventories have been completed on the parcel.

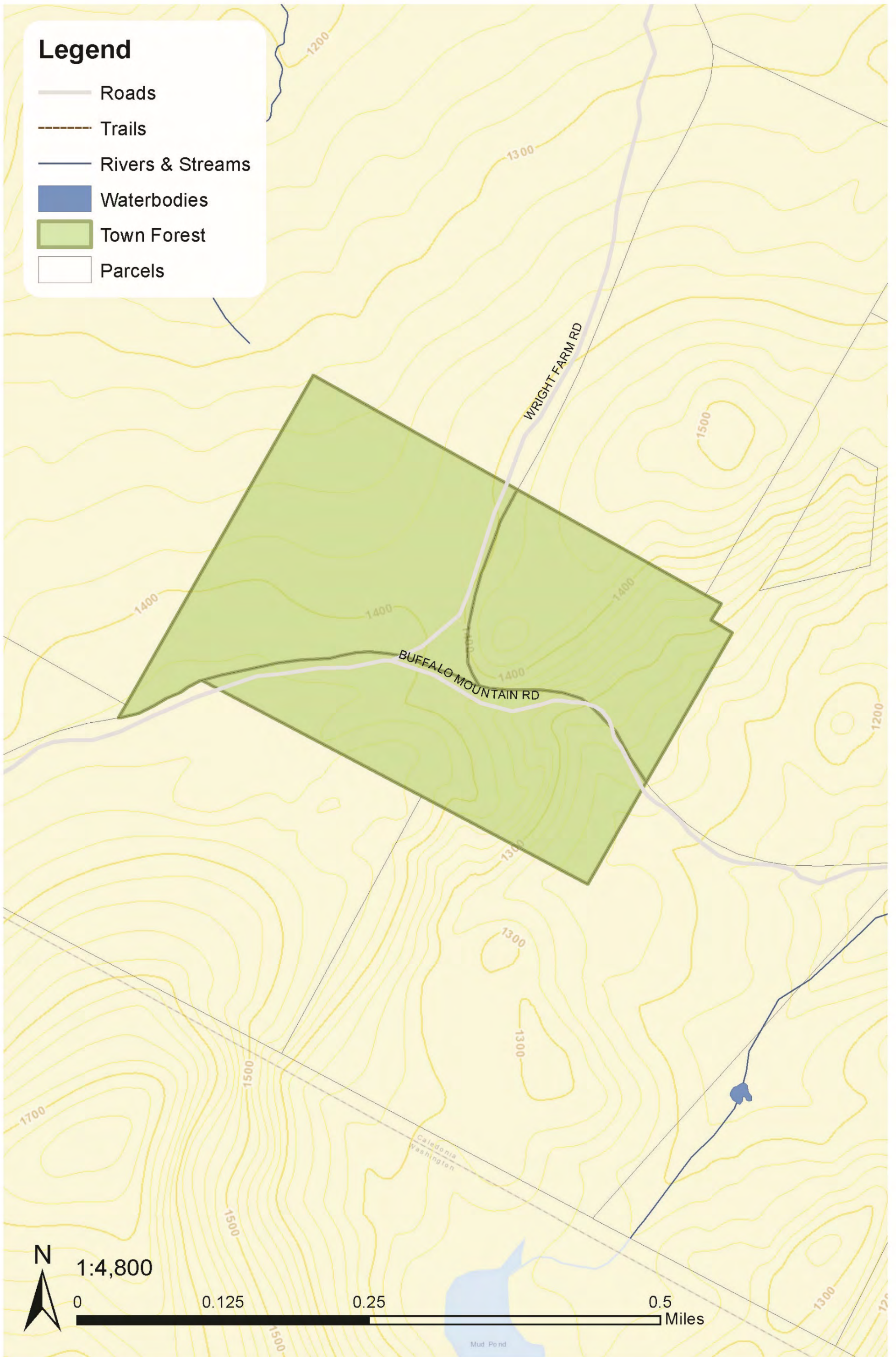


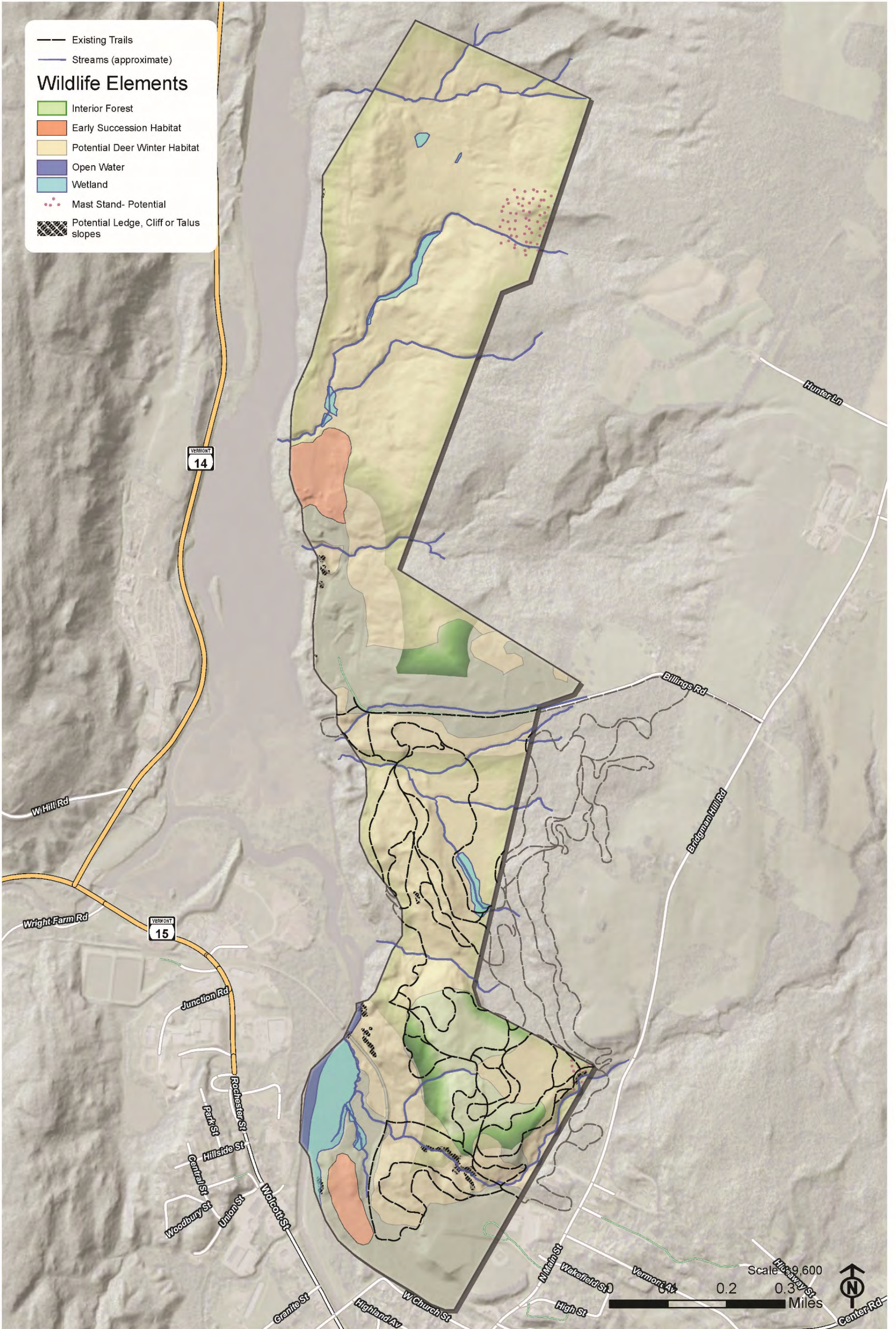




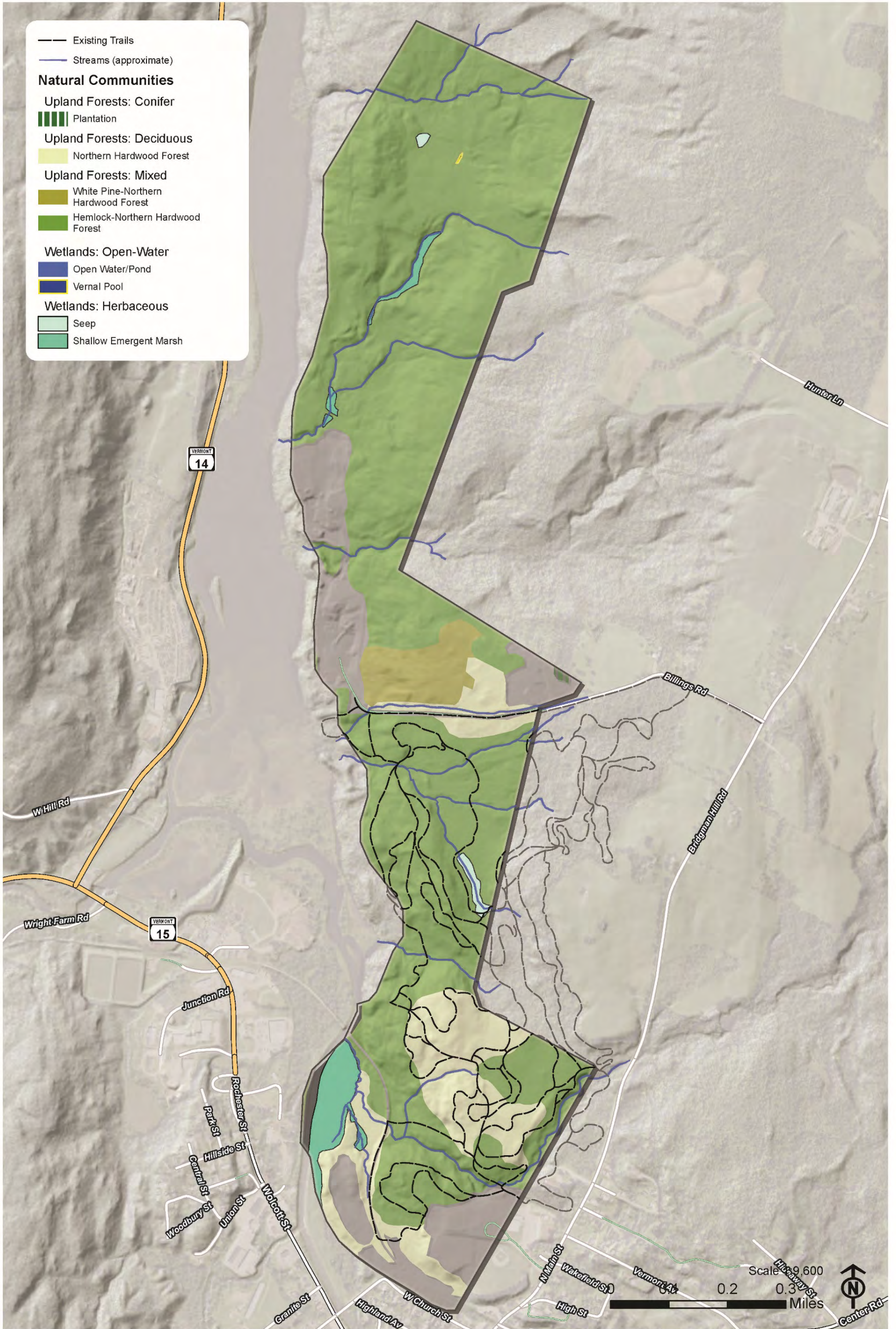
Legend

- Roads
- - - Trails
- Rivers & Streams
- Waterbodies
- Town Forest
- Parcels











Chapter 3: Public Engagement Summary and Needs Assessment

To bring the “town” into town forest, a robust public engagement process was at the heart of this plan. There were multiple workshops open to the public, a community survey, and many steering committee meetings to guide the plan. Through this process, the public identified issues, needs, desired attributes, and strategies to enhance the forests. The public also offered feedback on the strategies and draft plans, to ensure a fit with the town and forests’ needs, interests, and capacity.

Public Engagement

Kickoff Summit

A project kickoff summit with all 10 towns was held at the Bethel Town Hall on Friday, November 17, 2017. The summit introduced members of the town steering committee to the project and served as an initial opportunity to provide input. The project team provided a background of the project and an overview of the process. Through a working lunch, the committee members completed a SWOT worksheet (Strengths, Weaknesses, Opportunities, and Threats) to begin thinking about and analyzing the forest.



A web survey was also available for other committee members who were not present to provide their thoughts. Facilitators led a community breakout session for the committee to speak to existing conditions, issues, and their vision for the town forest. From Hardwick, four people were in attendance.

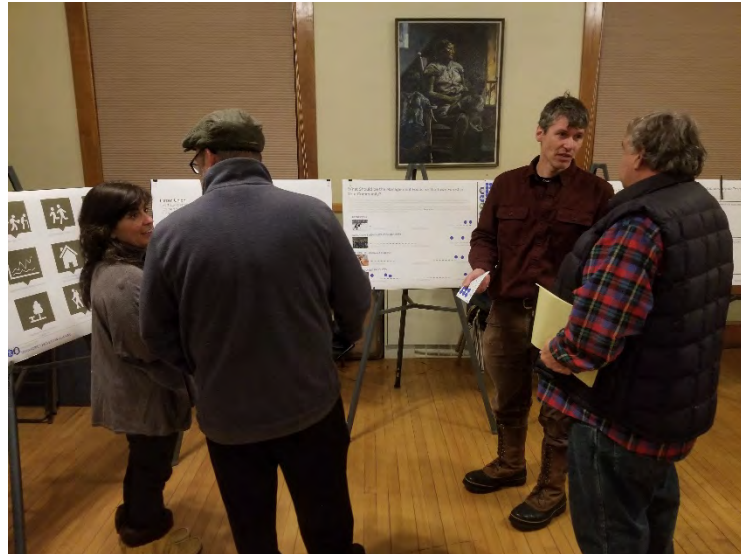
Steering Committee Process

The Steering Committee, made up of members of the Hardwick Trails Committee and other community members, was instrumental to the process. Members of the steering committee, attended the kickoff summit, helped plan and spread the word about the public workshops, reviewed the draft strategies and draft plan, and met with the project team and on their own to provide ideas and feedback throughout the process.

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Visioning Workshop

A Visioning Workshop for Hardwick Trails and Buffalo Mountain was held at Hardwick Memorial Building on January 24, 2018. The meeting was a drop-in anytime, open house format with questions about an overall vision for the town; the balance of recreation, education, conservation/natural resources, and forest products; the natural resources present on the site; and future activities in the Town Forest.



Attendees wrote responses on boards, completed dot exercises,

and drew their ideas and knowledge on maps. Members of the project team and local steering committee were available for one-on-one chats with attendees, and a general comment box was provided for open-ended feedback. Background/baseline information about the project, the community, and the forests, was also provided. 11 people signed in and an estimated 25-30 people were in attendance.

Please see Appendix 1 – Visioning Process Results, which combines the findings from this meeting and the community survey.

Community Survey

The Community Survey was launched at the public visioning workshop on January 24, 2018 and remained open through the Sunday after Town Meeting Day—March 11, 2018. The community survey asked the same questions as the public visioning workshop, in order to give the people who could not attend the meeting an opportunity to provide input. Both online and hard copy surveys were made available. The community was made aware of the survey through a variety of methods including flyers distributed around town, press-releases and news articles, and email blasts and social media posts. In total, the survey received 56 responses—46 online and 10 hard copy.

Please see Appendix 1 for the Visioning Process Results, which combines the findings from the visioning workshop and the community survey.

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Strategies Workshop

A Strategies Workshop for Hardwick Trails and Buffalo Mountain was held at the Police Station Community Room on July 17, 2018. The meeting was a combination presentation and open house. First, the attendees learned about the project process, the toolkit, vision framework, the management plan, and draft strategies. The meeting transitioned to an open house where attendees prioritized the draft strategies on boards and had the opportunity to have one-on-one discussions with members of the project team and steering committee. Attendees also indicated locations for the draft strategies on a large map. About 10-12 people were in attendance.

Please see Appendix 2 for the Strategies Workshop Results.



Implementation Summit

Representatives from our town attended the Town Forest Implementation Summit held on November 9, 2018 at the VYCC West Monitor Barn in Richmond, VT. The summit included representatives from all 10 pilot communities and provided opportunities for networking and information sharing. Attendees learned about commonalities and major takeaways across all ten town forests, the action plans developed by each of the towns, grant opportunities, and interpretive signage. The attendees heard from a panel about management and public decision making, received a sneak preview of the Vermont Town Forest Recreation Planning Toolkit, and took a walking tour of Richmond's town forest and the VYCC trail infrastructure.

Needs Assessment

Through the public engagement process, community members identified the issues and needs associated with the forests to be resolved in this planning process. Additional issues and needs were identified via site visits and natural resources assessments. The following issues and needs were identified:

1. Define management scheme through multi-party collaboration
2. Improve access and awareness of Buffalo Mountain parcel
3. Creation of a scenic vista point or destination on Buffalo Mountain
4. Creation of a forest management plan for Buffalo Mountain

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5. Creation of a forest management plan for Hardwick Trails
6. Connecting Hardwick Trails to a broader regional trail system
7. Connectivity with Lamoille Valley Rail Trail
8. Coordinated forest education program

Chapter 4: Town Forest Vision Framework

A vision framework is a critically important tool that informs the goals and direction of the town forest recreation plan. The vision framework encompasses all forest uses—not just recreation—to understand how recreation should fit in with the community’s overall intent for the forest. The vision framework is directional, descriptive, and aspirational, communicating what the community believes are the ideal conditions for the forests—how things would look if all opportunities and issues were perfectly addressed.

The vision framework includes:

1. A discussion of the management balance in the forests; and
2. A list of key attributes that describe the community’s desired character for the forests

The vision framework is broad enough to encompass a variety of local perspectives. Unlike a simple one or two sentence vision statement, a vision framework allows for more complexity to be communicated and better illuminates the community’s desired character for the forest—which is often multi-faceted.

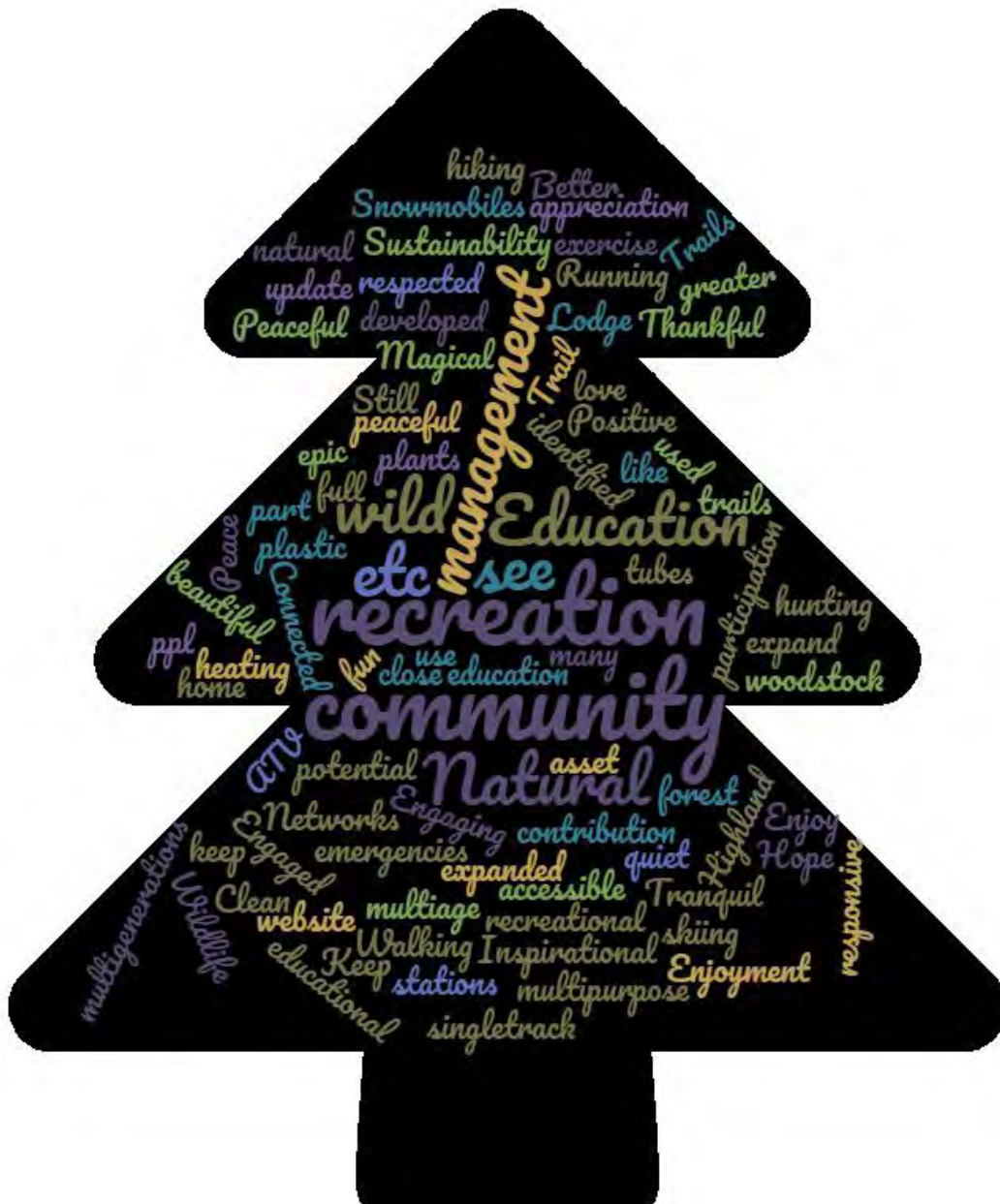
The management balance discussion and list of key attributes work together to communicate the community’s overarching aspirations for the forest. Both aspects of the vision framework should align, without repeating each other. The management balance describes the community’s management priorities for the forest, while key attributes are a list of words or short phrases that expand upon the management balance and describe the community’s desired future character for the forest. These two pieces work together and support each other to communicate the multi-faceted values of the community.

Visioning

At the public visioning workshop and in the community survey, attendees/respondents were asked, “What word or phrase best describes your EXISTING experience with the town forests in your community?” and “What word or phrase best describes your DESIRED FUTURE experience with the town forests in your community?” The results of these exercises are demonstrated in the word clouds below. The size of the words in the word clouds corresponds to the number of times that word was used in the responses.

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Desired Future Experience



Many of desired experience response were similar to those for the existing experience. Words that came up more frequently for the desired experience were “Community,” “Natural,” “Management,” and “Education.”

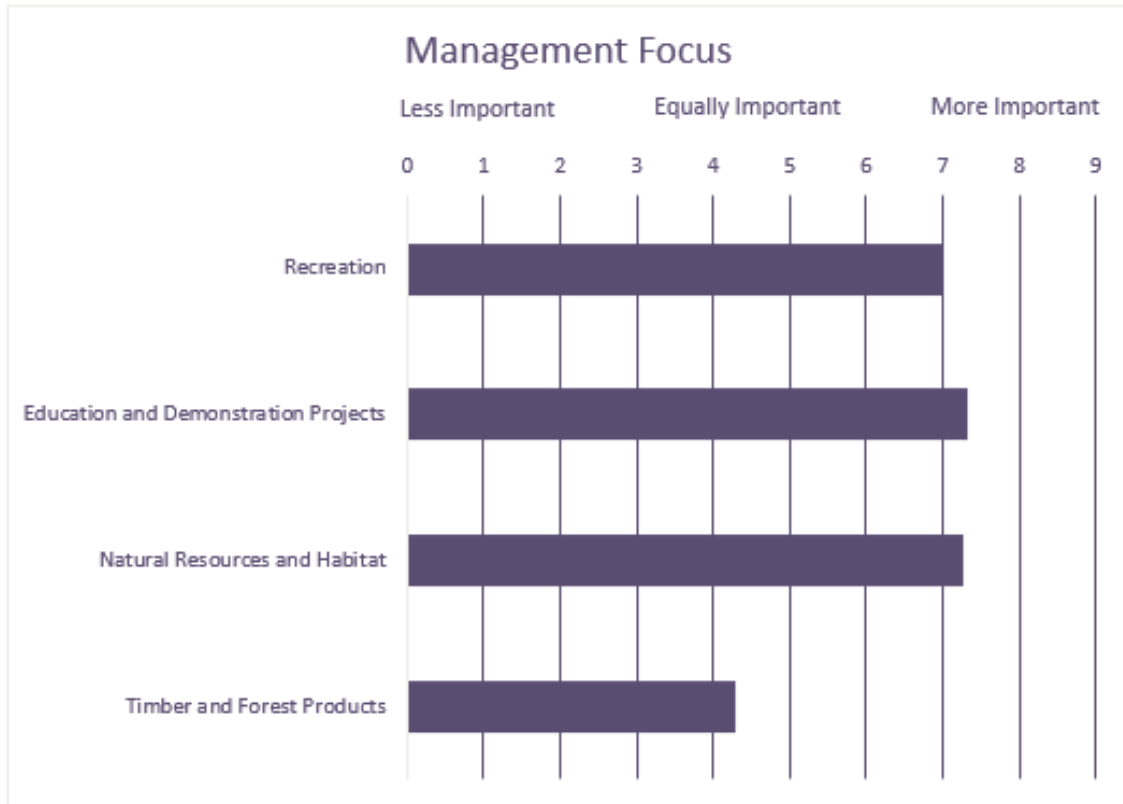
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Management Balance

Town Forests can be managed to provide a wide range of activities and community values. Four common use areas include Recreation; Education & Land Use Demonstration Projects; Natural Resources & Habitat; and Timber & Forest Products. While most publicly accessible forests provide some measure of all four types of uses, they tend to “lean” in one management direction or another.

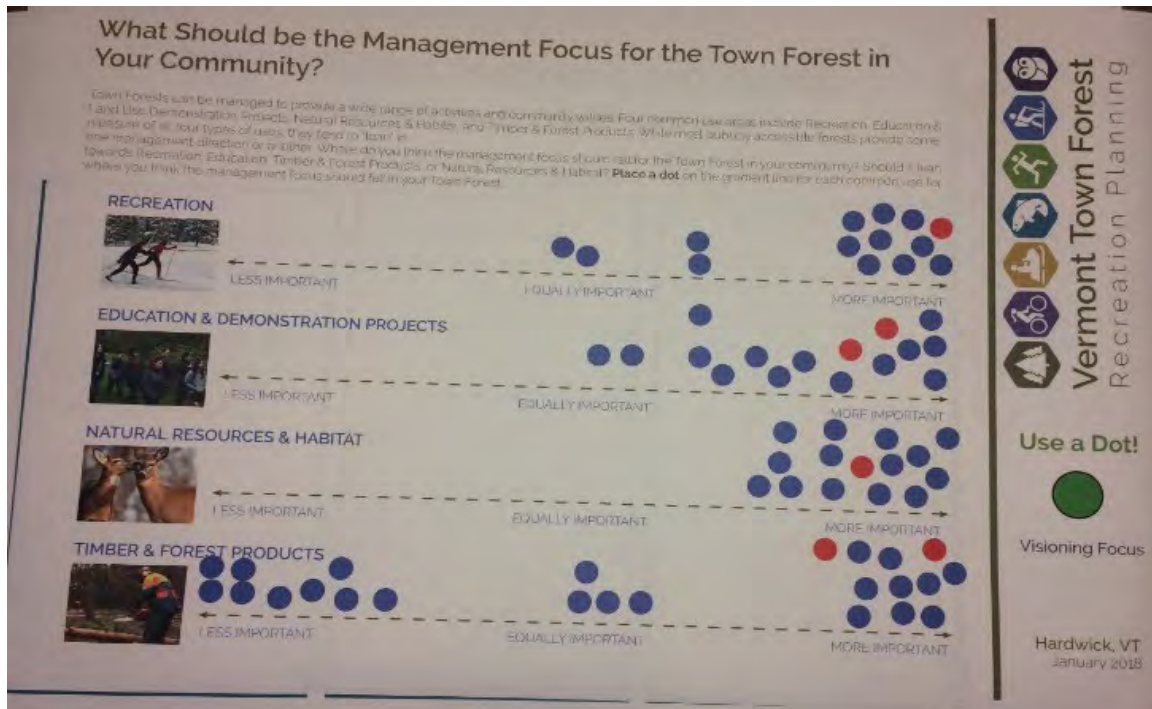
To understand the desired balance for Hardwick forests, the project team probed the steering committee throughout the Visioning Process (kick-off summit, forest walk, first steering committee meeting) and asked survey and workshop participants “Where do you think the management focus SHOULD fall for the Town Forests in your community? Should it lean towards Recreation, Education, Timber & Forest Products, or Natural Resources & Habitat?” Their responses are below:

Survey Respondents



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Workshop Participants



Through these interactions, the Hardwick community expressed that each of the four use areas are important in the management of the town forests, but that a slightly greater emphasis should be placed on Recreation; Education & Demonstration Projects; and Natural Resources & Habitat than on Timber & Forest Products. There was a difference of opinions on Timber & Forest Products amongst workshop participants.

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Key Attributes

The following list of key attributes are the words or short phrases that communicate what the community believes are the ideal conditions for the forests – how things would look if all opportunities and issues were perfectly addressed, which may be the same or different from how things currently look. This list is based on the analysis of public and committee input received through the visioning process, as well as the review of the community's demographics, profile, forest information, and surveys.

1. Year-round recreation (snowshoeing, skiing, biking, hiking)
2. Peaceful and quiet
3. Sustainable and well-maintained trail system
4. Protection of wildlife habitat
5. Community center
6. Protection of forest integrity
7. A piece of a larger connected forest block
8. Inclusive of all community perspectives
9. Maintain healthy balance between stewardship and human uses
10. A working landscape providing a variety of forest products
11. Accessible and encouraging of community use
12. Sustainable management for multiple uses
13. Multi-dimensional
14. Multi-generational
15. Kids in the outdoors
16. Solitude, rest, and rejuvenation
17. Opportunities for learning about stewardship, history and the forest
18. Well-known community asset

Chapter 5: Action Plan

Introduction

The Action Plan is a set of recommended strategies and projects to achieve the town's vision. These strategies and projects were developed based on the key attributes, needs assessment, forest walks, and input from the steering committee and community. From a larger initial list of strategies, the steering committee has selected and edited the strategies to craft an action plan well-suited to the community's interest, needs, and capacity.

The Action Plan includes an Action Plan Table, detailed "project pages" for the highest priority strategies, and an Action Plan map to graphically display the highest priority strategies.

Action Plan Table

The Action Plan Table on the following pages includes all the strategies for the town and additional information to help with implementation. The strategies were categorized under Parking & Access; Trails; Other Facilities & Structures; Education & Programs; Events; Maps, Outreach, and Promotion; and Administrative Actions. Each strategy has the following additional information:

- A detailed strategy description
- Responsibility – who the responsible parties are to pursue this strategy (i.e., Town, Conservation Commission)
- Timing (ongoing, short, medium, long-term) – when the responsible party should begin pursuing this strategy
- Partners involved – possible partners to be involved in this project (i.e., Vermont Land Trust, Vtrans, local trails groups, local schools)
- Planning required – planning, designs, assessments, or studies that needs to happen before this strategy can be pursued (i.e., trail system design, wildlife habitat assessments)
- Relative Cost (\$,\$\$,\$\$\$\$,\$\$\$\$) – a ballpark estimate of what the project will cost. One dollar sign is little to no cost, two dollar signs is moderate, three dollar signs is more expensive, four dollar signs is very expensive. \$-\$\$ indicates the relative cost is between those two levels. \$/\$\$ indicates that the project can be either \$ or \$\$, depending on the chosen route (i.e., volunteer trail counts vs. electronic trail counter)
- Funding Opportunities – potential sources of funding for the project. These could be grants, local business sponsorships, or fundraising events
- Toolkit and Support Resources – the toolkit elements that provide guidance on pursuing this strategy. Guidance from Vtrans, the Vermont Town Forest Stewardship Guide, or other support resources can also be useful to pursue this strategy

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Strategy or Action	Description	Responsibility	Timing (Ongoing, short, medium, and long-term)	Partners Involved	Planning required	Relative Cost (\$-\$-\$-\$-\$-\$-\$)	Funding Opportunities	Toolkit & Support Resources
1. Parking & Access								
Improve access to Buffalo Mountain	Explore new locations on Buffalo Mountain for parking and public access. Consider parking opportunities from Kate Brook Road/ Buffalo Mountain Road.	Town/ Town Forest Committee	Medium-Term	Trails Committee, VAST-Ridge runners, other users	Road, Parking lot and trailhead design	\$\$\$\$	LWCF, RD, RFG	-Trailhead Kiosk -Volunteer Designs -Parking Considerations Toolkit
Trail network connectivity	Explore options for linking both Buffalo Mountain and Hazen Union to surrounding trail networks and rail networks (i.e. Hardwick to Woodbury Rail Trail, Lamoille Valley Rail Trail, Highland Lodge trails, and Craftsbury trails).	Trails Committee	Medium-Term	LVRT, Woodbury, Craftsbury, Town/ Town Forest Committee, etc.	Trails Master Plan, individual designs	\$\$\$	RTP, RD, TAP, BPP, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards -Land Conservation and Recreational Access Toolkit
Vehicle wayfinding signage	Add vehicle wayfinding signage from town and major roadways to Buffalo Mountain.	Town/ Town Forest Committee	Medium-Term	Vtrans/Town Highway Department	Signage design	\$\$	BPP, Vtrans Signage Program	-Trail Markers and Wayfinding Toolkit -Vtrans Signage Program
Encourage linking trail networks to town center	Encourage the connectivity of trail networks with the town center and create an in-town access point and parking where trail users can depart or return to	Town/ Town Forest Committee	Medium-Term	Trails Committee, etc.	Trails Master Plan	\$\$	RTP, RD, TAP, BPP, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards -Trailhead Kiosk -Volunteer Designs -Parking Considerations Toolkit

2. Trails								
Existing trail conditions assessment and review	Study current trail infrastructure on Buffalo Mountain and Hardwick Trails to asses baseline of current trails and logging roads to establish direction in future trail development and design. Decommission trails or reroute trails as needed.	Trails Committee	Short-Term	--	Trail reroute & redesign	\$	RTP, RTC, VHCP, ERG	-Trail assessment forms -Natural Resource Guidance Toolkit -Sustainable Trail Standards
New trails at Hardwick Trails	Add loop trail north of Billings Road. Add connection trails to Lamoille Valley Rail Trail and to Craftsbury Outdoor Center.	Trails Committee	Medium-Term	Craftsbury, VAST-Ridge runners, LVRT	Trail design	\$\$\$	RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards -Land Conservation and Recreational Access Toolkit
Trail spur to the Lamoille Valley Rail Trail	Build a short spur trail to connect the Hardwick Trails with the Lamoille Valley Rail Trail, possibly as an ADA accessible path.	Trails Committee	Medium-Term	LVRT, VAST-Ridge runners	Trail design	\$\$	RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards
New rugged multi-use paths on Buffalo Mountain	Develop multi-use non-motorized natural surface trails that are optimized for hiking and foot traffic but designed to accommodate multiple user groups.	Trails Committee	Medium-Term	--	Trail design	\$\$	RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards
New mountain bike trails on Buffalo Mountain	Build "bike-optimized" multi-use natural surface trails to ensure desired experiences for all user groups.	Trails Committee	Medium-Term	--	Trail design	\$\$	RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards
New snowmobile and ATV trails on Buffalo Mountain	Develop additional motorized use trails on Buffalo Mountain. Consider further improvements to Wright Farm Road.	VAST-Riidgerunners	Medium-Term	Trails Committee	Trail design	\$\$\$	RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN	-Sustainable Trail Standards
Ensure sustainable trail building	Ensure that ecologically sensitive areas are protected from degradation by looking to the Sustainable Trail Standards	Trails Committee	Ongoing	All	--	\$	--	-Natural Resource Guidance Toolkit



	and Natural Resource Guidance Toolkit.								-Sustainable Trail Standards
Multi-season trail use with a variety of activities	Forest activities in all seasons are currently in action and should continue into the future. While some trails may need to be rerouted or reconstructed to better accommodate desired uses, the current layout of the Hardwick Trails seems to be working well. Four season trail use is encouraged into the future.	Trails Committee	Ongoing	--	Trail reroute & redesign	\$	RTP, RTC, VHCP, ERG		-Sustainable Trail Standards
Continue to support groomed winter trails	The groomed cross-country ski trails have been identified as a fabulous community resource, but the effort puts a strain on the town's dedicated trail volunteers. More resources and equipment would help support the long-term sustainability of the grooming program.	Trails Committee	Ongoing	--	--	\$\$\$\$	RTP, LF, BJJ		-Sustainable Trail Standards -Volunteer Development and Recruitment Toolkit
3. Other Facilities and Structures									
Update and expand public rental equipment at Hardwick Trails	Seek funding sources to purchase more cross-country ski, mountain biking, snow showing, etc. equipment which can be made publicly available for rent	Trails Committee	Short-Term	--	--	\$\$	VCDP, VCF, LF, BJJ, TCPN		-Programming Partnerships Toolkit
Build a warming hut on Buffalo Mountain	Building a rest area/warming hut at near summit of Buffalo Mountain is of interest. Structures such as this may be year-round facilities to serve trail users in all seasons. Consider a lean-to or open sided pavilion as part of the structure.	Town/ Town Forest Committee	Medium-Term		Trails Committee, VAST-Ridge runners, other users	Architecture and design	\$\$\$\$	LWCF, RD, VCDP, RFG, VCF, LF, AIG, BJJ	- Sustainable Facility Standards



Pause Places	Develop a series of "Pause Places" or "mini-destinations" along the Buffalo Mountain trail system. These may be a rest stop, an informational stop, or both. All pause places should include a bench or appropriate rocks/boulders for seating and should capitalize on locations with the potential for views, sunsets, rest, and rejuvenation. The summit of Buffalo mountain has been identified as a potential location of interest given the views. Opportunities for natural and historical interpretation should also be explored. Some could also include public art.	Trails Committee	Long-Term	Program and educational partners	Historical and natural resource research, pause place design	\$\$	LWCF, RTC, RTP, RFG, AIG	- Pause Places Toolkit -Bench Volunteer Designs '-Interpretation Guidance Toolkit
Create and maintain locations for birding and viewing wildlife.	Build more locations to sit and observe wildlife at Hardwick Trails and new locations at Buffalo Mountain.. Benches are encouraged in a variety of locations. Coordinate with Pause Places.	Trails Committee	Long-Term	Program and educational partners	Pause place design	\$\$	LWCF, RTC, RTP, RFG, AIG	- Pause Places Toolkit -Bench Volunteer Designs '-Interpretation Guidance Toolkit
4. Education & Programs								
Existing programming in the forest should continue	Continue existing education, camp, and art programs in the forest. Engage programs about needs in development of any new trail connections, interpretive signage, or pause places.	Town/ Town Forest Committee	Ongoing	Program and educational partners	Pause place design	\$	--	-Programming Partnerships Toolkit
Coordinate nature education, photography, nature writing and other classes	Where community members are utilizing the town forest for public nature education classes, ensure that a town forest class schedule is made publicly available	Town/ Town Forest Committee	Short-Term	Program and educational partners	--	\$	TCPN	-Programming Partnerships Toolkit



Maintain opportunities for GMTCC Forestry program	The GMTCC Forestry Program relies on the town forest for forestry education, professional development and programmatic diversity and the forest should be made available to the program in the future.	Town/ Town Forest Committee	Ongoing	GMTCC	--	\$	--	-Programming Partnerships Toolkit
Botany and plant identification	Create plant and tree identification tags that can be placed around the forest where they are visible to hikers and can educate the public on dendrology and the silvics of the forest. Integrate species lists with this effort accordingly.	Town/ Town Forest Committee	Medium-Term	Program and educational partners	--	\$\$	RTP, RTC	-Interpretation Guidance Toolkit
Interpretive signage	Develop interpretive signage that supports educational programs and self-guided learning. Coordinate with development of the pause places	Town/ Town Forest Committee	Short-Term	Program and educational partners	Historical and natural resource research, pause place design	\$\$	LWCF, RTC, RTP, RFG, AIG	-Interpretation Guidance Toolkit
Story Walk	A Story Walk is an innovative and delightful way for children – and adults! – to enjoy reading and the outdoors at the same time. Laminated pages from a children's book are attached to wooden stakes, which are installed along an outdoor path. As you stroll down the trail, you're directed to the next page in the story.	Trails Committee	Medium-Term	Library	--	\$	VCF	- Story Walk Toolkit
5. Events								
Races in the forest	Hold small-scale mountain bike, trail running or Nordic races in the forest. Consider race series or local-serving adventure race (GMARA or Tough Mudder, etc.) as well .	Trails Committee	Medium-Term	Race organizers, etc.	Event and parking plan	\$	VCF, VHCB, LF, BJF	-Programming Partnerships Toolkit



6. Maps, Outreach, & Promotion

Improve maps for both Town Forests	Create maps that show all trails in the forest and make these maps readily available both online and in print. Explore opportunities to engage local businesses in sponsoring map printing. Ads from local businesses can not only fund map printing, but can also help connect forest use with economic activity in the village.	Trails Committee	Medium-Term	Town/ Town Forest Committee	Graphic design	\$-\$	RTP	-Mapping and Promotion Toolkit
Update the Hardwick Trails website	Update the Hardwick Trails website to ensure content is current and fresh, particularly around the Buffalo Mountain parcel;	Trails Committee	Medium-Term	Town/ Town Forest Committee	Website design	\$	TCPN	-Mapping and Promotion Toolkit
Mapping Buffalo Mountain	Map development of the Buffalo Mountain parcel is encouraged and there is a need to establish baseline environmental conditions with field surveys and detailed analysis.	Town/ Town Forest Committee	Short-Term	Trails Committee	Mapping and natural resource inventory	\$\$	CCG, MPG, ERG, VCF, VHCP, BJB	-Mapping and Promotion Toolkit
Measure forest use	Use trail counters or volunteer trail counts to gather data about the number of users of the Hardwick Trails.	Trails Committee	Short-Term	Town/ Town Forest Committee	--	\$/\$\$	RTP, RTC, Regional Planning Commission	- Volunteer Trail Counting Forms

7. Administrative Actions

Adopt formal process for proposing and reviewing new trails and facilities	Process will include ecological concerns and will provide all stakeholders and user groups an opportunity to propose new trails and facilities.	Town/ Town Forest Committee	Medium-Term	Trails Committee	Review, adjustment and adoption of model process	\$	--	-Model Proposal Process -Natural Resource Guidance Toolkit
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Create Town Forest Committee	Where the management focus extends beyond trail maintenance, consider utilizing a Committee that represents a variety of perspectives from the community. Such a committee should include at least one representative from the Hazen Union School, GMTCC, the Trails Committee, the Town of Hardwick, and other public members as deemed necessary by the community.	Town	Short-Term	Trails Committee	--	\$	--	- Vermont Town Forest Stewardship Guide
Coordinate maple syrup production with recreational trail use	Where seasonal recreational use of Hardwick Trails conflicts with the infrastructure and use of the forest for Maple Syrup production, seek to coordinate uses and minimize conflict through collaborative management.	Trails Committee	Ongoing	GMTCC	--	\$	--	- Forest Stories: Marshfield Case Study on Mountain Biking and Maple Sugaring.
Create a Management Plan for the Buffalo Mountain Town Forest	Plan for the long-term success of the forest through developing a forest management plan. Coordinate with the management zones in the forest.	Town/ Town Forest Committee	Medium-Term	Trails Committee	--	\$\$	CCG, MPG, ERG, VCF, VHCP, BJF	- Natural Resource Guidance Toolkit -Vermont Town Forest Stewardship Guide '- Management Zones Toolkit
Create a Management Plan for Hazen Union	Plan for the long-term success of the forest through developing a forest management plan. Coordinate with the management zones in the forest. Maintaining aesthetics and stewardship of natural features/resources should be included as components of any management plan.	Town/ Town Forest Committee	Medium-Term	Trails Committee	--	\$\$	CCG, MPG, ERG, VCF, VHCP, BJF	- Natural Resource Guidance Toolkit -Vermont Town Forest Stewardship Guide '- Management Zones Toolkit



Management zones	Consider management zones of the forest to consider and plan for all uses. Designate areas more suitable for wildlife habitat, hunting, or mountain biking, for example.	Town/ Town Forest Committee	Medium-Term	--	--	\$	CCG, MPG, ERG, VCF, VHCP, BJJ	-Management Zones Toolkit
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Detailed Project Pages

The following pages provide more detail on the strategies that are mostly likely to achieve the community's vision for the forest and that have been identified by community members and the steering committee as top priorities. These project pages include the key attributes and needs assessment items that the strategy responds to, a more detailed description of the rationale and process to carry out the strategy, and the other items included in the action table.

Trail Network Connectivity

Key Attribute #:

11

Need #:

2

6

7

Estimated Cost:

\$\$\$

Timing:

Medium-Term

With two town forests and many other trails in the vicinity, Hardwick has an opportunity to create numerous trail connections and become a major trail hub.

The Lamoille Valley Rail Trail passes a few hundred feet from the trail network at Hardwick Trails. Creating a connection between the two will bring rail trail users to the forest and create easy access from all parts of Hardwick and surrounding communities.

The Hardwick Woodbury Rail Trail runs from the Woodbury Town Forest to the base of Buffalo Mountain. By formalizing this route, adding signage, and including it on maps, more people could walk, bike, or ski between the two town forests and towns.

The Craftsbury Outdoor Center trails system is a world-class cross-country ski and mountain bike system located a few miles from Hardwick Trails. Even closer, Craftsbury maintains trails around Highland Lodge. Creating a connection from Hardwick Trails to those systems would offer an expansive, exciting skiing and biking experience right from Hardwick's village center.

Given Hardwick Trails' proximity to downtown, an access portal, or de facto trailhead, should be added there. There should be a safe access route leading to Hardwick Trails and a trail kiosk with maps and information about the trail systems. This would encourage forest users to support downtown businesses and vice versa.

These proposed connections range in difficulty, length, and cost to complete.

Responsibility:

Trails Committee

Partners Involved:

LVRT, Woodbury, Craftsbury, Town/Town Forest Committee, etc.

Planning Required:

Trails Master Plan, individual designs

Funding Opportunities:

RTP, RD, TAP, BPP, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN

Toolkit Resources

Land Conservation and Recreational Access Toolkit

Parking Considerations Toolkit

Sustainable Trail Standards

Trailhead Kiosk Volunteer Designs



Hardwick Trails Interpretive Signage

Key Attribute #:

17

Need #:

8

Estimated Cost:

\$\$

Timing:

Short-Term

Given its proximity to Hazen Union, Hardwick Trails could offer outdoor educational learning opportunities for both students and other visitors through interpretive signage. Such signage throughout the forest would present information about natural features, wildlife, and other forest processes. Interpretive signage locations on the Proposed Recommendations Map inform trail users about wetlands, wildflowers, and streams. At wildlife viewing/birding platforms, signage should list the birds and wildlife found in the area – with images so people can identify species. These should be in tandem with the existing species identification lists available at the trailhead kiosk.

Plant and tree identification tags can be placed around the forest where they are visible to hikers and can educate the public on dendrology and the silvics of the forest.

Hazen Union students could be involved in the preparation of these signs. Science classes could research and write these signs to learn about the ecology of their forest and identifying plants, wildlife, and trees.



Toolkit Resources

Interpretation Guidance Toolkit

Responsibility:
Town/ Town Forest Committee

Partners Involved:
Program and educational partners

Planning Required:
Historical and natural resource research

Funding Opportunities:
LWCF, RTC, RTP, RFG, AIG



Vermont Town Forest Recreation Planning

Enhance Community Cross-Country Skiing

Key Attribute #:



Need #:



Estimated Cost:

\$\$\$

Timing:

Ongoing\
Short-Term

Hardwick Trails, as a free, groomed cross-country skiing trail system, is an incredible asset to the community. Going forward, additional resources and community support are necessary to ensure that this remains an accessible, high quality trail system.

Currently, the trail system is groomed by a small crew of volunteers. Grooming is a very time-consuming (and cold!) task, putting a strain on the existing volunteer corps. Recruiting more volunteers, acquiring better equipment, and additional financial resources would support they long-term sustainability of the groomed trail system.

Hardwick Trails also currently offer cross-country skiing equipment for loan, at no charge. Many people in the community take advantage of this, often exhausting the supply on busy days. Acquiring more skiing equipment would enable more people to enjoy the trails, especially for youth or adult programming where most participants are a similar size. Grants, collection drives, and partnering with the Craftsbury Outdoor Center are all opportunities to collect additional equipment.

Responsibility:

Trails Committee

Partners Involved:

--

Planning Required:

--

Funding Opportunities:

RTP, VCDP, VCF, LF,
BJF, TCPN

Toolkit Resources

Sustainable Trail Standards

Volunteer Development and Recruitment Toolkit

Programming Partnerships Toolkit



Vermont Town Forest Recreation Planning

New Trails at Hardwick Trails

Key Attribute #:



Need #:



Estimated Cost:

\$\$\$

Timing:

Medium-Term

New mountain bike and cross-country connections at Hardwick Trails would enhance the trail network and help create links to nearby trail networks.

The area of the forest north of Billings Road presents an excellent opportunity. Currently, only the VAST trail runs through that section of the forest. Given the popularity of the existing trail system, Hardwick Trails will soon be ready for an expansion. A stacked loop system, open to both mountain biking and cross-country skiing is proposed for this area. There would include the connector and side trails to create shorter loops and a link to the VAST trail.

Creating connections to trails beyond the forest should also be a key component of expanding the trail system. From the proposed loop trail north of Billings Road, a new trail should be explored to connect to the Craftsbury Outdoor Center trail network, enabling people to ski or bike between the two. Given the popularity of Craftsbury, a connecting trail would bring many visitors to explore Hardwick Trails.

Another connection opportunity is to the Lamoille Valley Rail Trail on the southern end of the forest. The rail trail passes only a few hundred feet from the existing fitness loop trail. Rail trails attract many visitors and the connection trail will enable them to experience Hardwick Trails. The rail trail connection would also enable local residents to reach the forest sans driving.

Responsibility:

Trails Committee

Partners Involved:

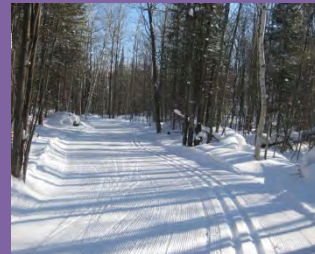
Craftsbury, VAST-Ridge runners, LVRT

Planning Required:

Trail design

Funding Opportunities:

RTP, RD, VCDP, RFG, VCF, LF, PBCG, RWJF, TCPN



Toolkit Resources

Sustainable Trail Standards

Land Conservation and Recreational Access Toolkit



Vermont Town Forest Recreation Planning

Improve Access to Buffalo Mountain

Key Attribute #:

11

Need #:

2

Estimated Cost:

\$\$\$\$

Timing:

Medium-Term

Buffalo Mountain has long been town-owned land. Yet the parcel has been very underutilized due to the difficulty of access. In the winter access is via the VAST trails that intersect on the town forest. In the warmer months, there is no maintained road access and visitors must walk, bike, or take an ATV into the forest on a relatively undeveloped route.

The Town of Hardwick could improve and maintain Buffalo Mountain Road from the west into the town forest. Until about a mile the forest, the road is a year-round drivable road maintained by the Town of Woodbury. For that last mile, Hardwick would need to improve the existing Class 4 highway to make it easily drivable in the summer but would not need to maintain it in the winter. Winter access would continue to be via snowmobile, ski, or snowshoe.

Forest visitors would drive that road into the forest and park at the proposed parking area at the existing VAST trail junction. A trailhead kiosk and warming hut (see below) would be located at the parking area to inform visitors about the forest.

Responsibility:

Town/ Town Forest Committee

Partners Involved:

Trails Committee, VAST-Ridge runners, other users

Planning Required:

Road, Parking lot and trailhead design

Funding Opportunities:

LWCF, RD, RFG



Toolkit Resources

Sustainable Trail Standards

Land Conservation and Recreational Access Toolkit

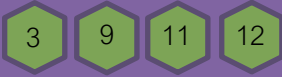
Parking Considerations Toolkit



Vermont Town Forest Recreation Planning

Trail System at Buffalo Mountain

Key Attribute #:



Need #:



Estimated Cost:

\$\$\$\$

Timing:

Medium-Term

The community's vision for Buffalo Mountain is for recreation, with trails for all user groups. Motorized (ATVs, Snowmobiles) and non-motorized (hiking, biking, snowshoeing, skiing) trail users would share the primary access to the parcel, but would each have their own trail network.

The motorized network would hug the property boundaries. The trails would be open to ATVs in the summer and snowmobiles in the winter. Other trail users would be discouraged from using the motorized trails. The motorized trail would be accessed from the existing VAST trails/roads as they cross into the town forest.

The non-motorized trail network would be on the interior of the motorized network. The network would be a combination rugged multi-use trail and mountain bike trails. Rugged multi-use trails are natural surface trails optimized for hiking and foot traffic but still open to other non-motorized users (i.e., mountain bikers). Mountain bike trails are optimized for biking with banked turns and technical features and would be open to foot traffic as well. These trails would begin from the warming hut/parking lot where a trailhead kiosk would have maps and information about multi-use trail system etiquette.

All trails should be built sustainably – avoiding ecologically sensitive areas and using trail building best practices such as out sloping, grade reversals, and switchbacks. For more information on building sustainable trails, see the Sustainable Trail Standards and Natural Resource Guidance in the toolkit.

Responsibility:

Trails Committee

Partners Involved:

VAST-Ridge runners

Planning Required:

Trail design

Funding Opportunities:

RTP, RD, VCDP, RFG,
VCF, LF, PBCG,
RWJF, TCPN



Toolkit Resources

Sustainable Trail
Standards

Natural Resource
Guidance Toolkit



Vermont Town Forest Recreation Planning

Warming Hut on Buffalo Mountain

Key Attribute #:

5 16

Need #:

3

Estimated Cost:

\$\$\$\$

Timing:

Medium-Term

A warming hut and picnic shelter in the town forest would be an appealing destination and a welcome respite in all seasons. The warming hut would be located near the summer parking area and would be an ideal place for visitors to picnic or take a break during a hike or bike ride. In the winter, the warming hut would be at the junction of two popular VAST trails, providing an excellent location to rest and warm up.

The hut would likely need to be managed maintained by volunteers, and would likely have “open” periods and “closed” periods where it is locked—either daily or seasonally. When “closed” the structure should still provide some shelter (lean-to/pole barn), picnic tables, and patio amenities. The inside could have a heat source, tables, and chairs. Either could include a grill or other food preparation amenities.

Responsibility:

Town/ Town Forest Committee

Partners Involved:

Trails Committee, VAST-Ridge runners, other users

Planning Required:

Architecture and design

Funding Opportunities:

LWCF, RD, VCDP, RFG, VCF, LF, AIG, BJF

Toolkit Resources

Sustainable Facility Standards



Vermont Town Forest Recreation Planning

Town Forest Committee

Key Attribute #:



Need #:



Estimated Cost:

\$

Timing:

Short-Term

Hardwick's town forests are well-loved community assets (and rightfully so!) with many passionate users, volunteers, and partner organizations and institutions, each with a vested interest in the management of the lands.

At present, the forests are managed collaboratively across owners and partners, but there is little formal structure to guide this collaboration. The Hardwick Trails Committee has often taken the lead, but with increasing demands for trail management and other management matters (timber management and other forest products, conservation, education, the balance of uses, etc.) an overarching town forest committee is becoming necessary. This need is further heightened by the planned improvements at Buffalo Mountain.

The committee should incorporate a variety of perspectives from across the community. It should include representatives from Hardwick Trails, Hazen Union School, Green Mountain Technology and Career Center, the Hardwick selectboard, and other townspeople as interested or deemed necessary by the town. Since Hardwick does not have a town conservation commission, a committee with a focus on conservation would be beneficial for Hardwick's town forests.

The town forest committee could also develop management plans for the two forests. Management zones, to balance the many uses of the forest, would be an important part of these management plans.

Responsibility:

Town

Partners Involved:

Trails Committee

Planning Required:

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Funding Opportunities:

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Toolkit Resources

Vermont Town Forest
Stewardship Guide

Natural Resource
Guidance Toolkit

Management Zones
Toolkit



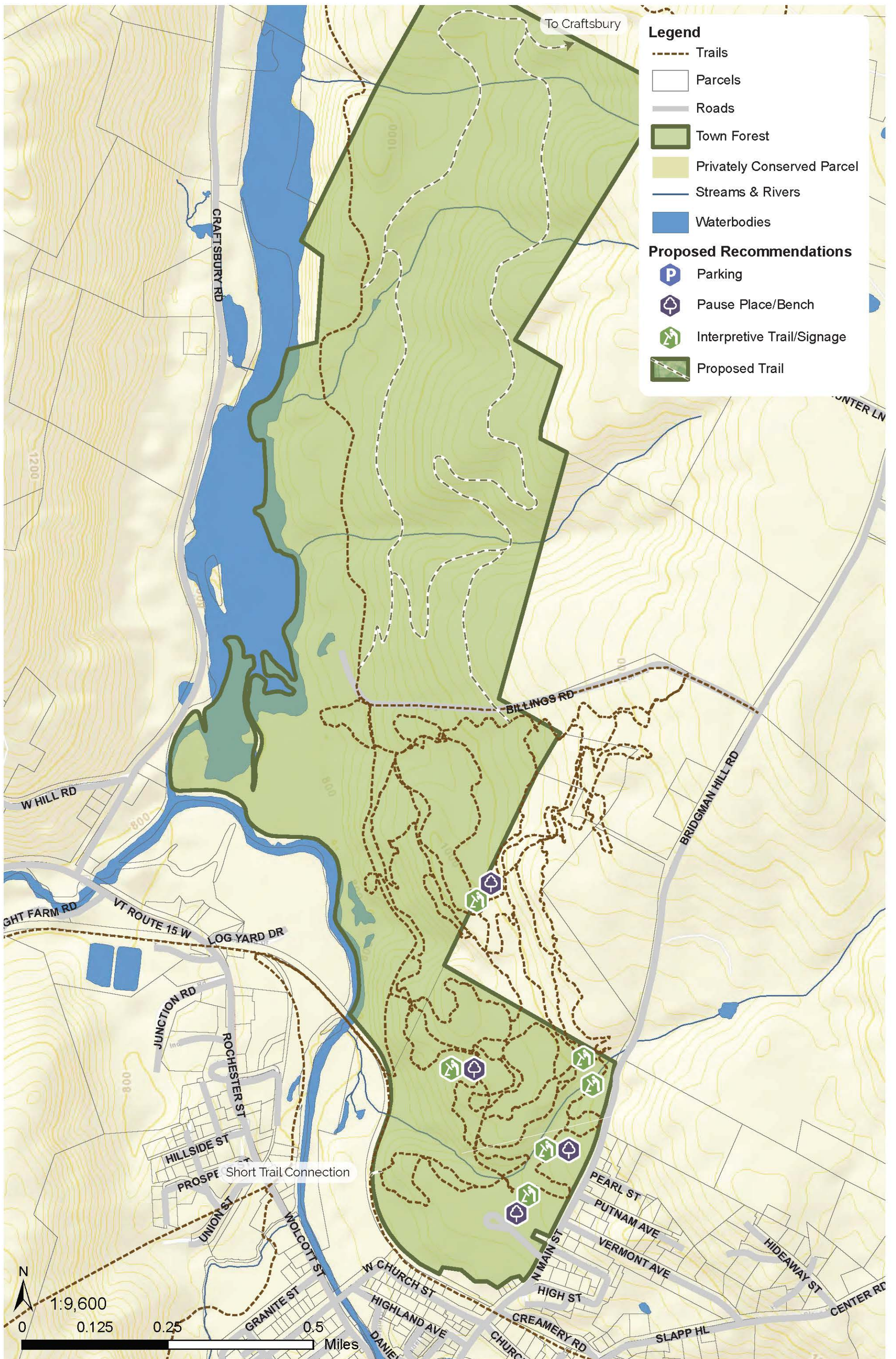
Vermont Town Forest

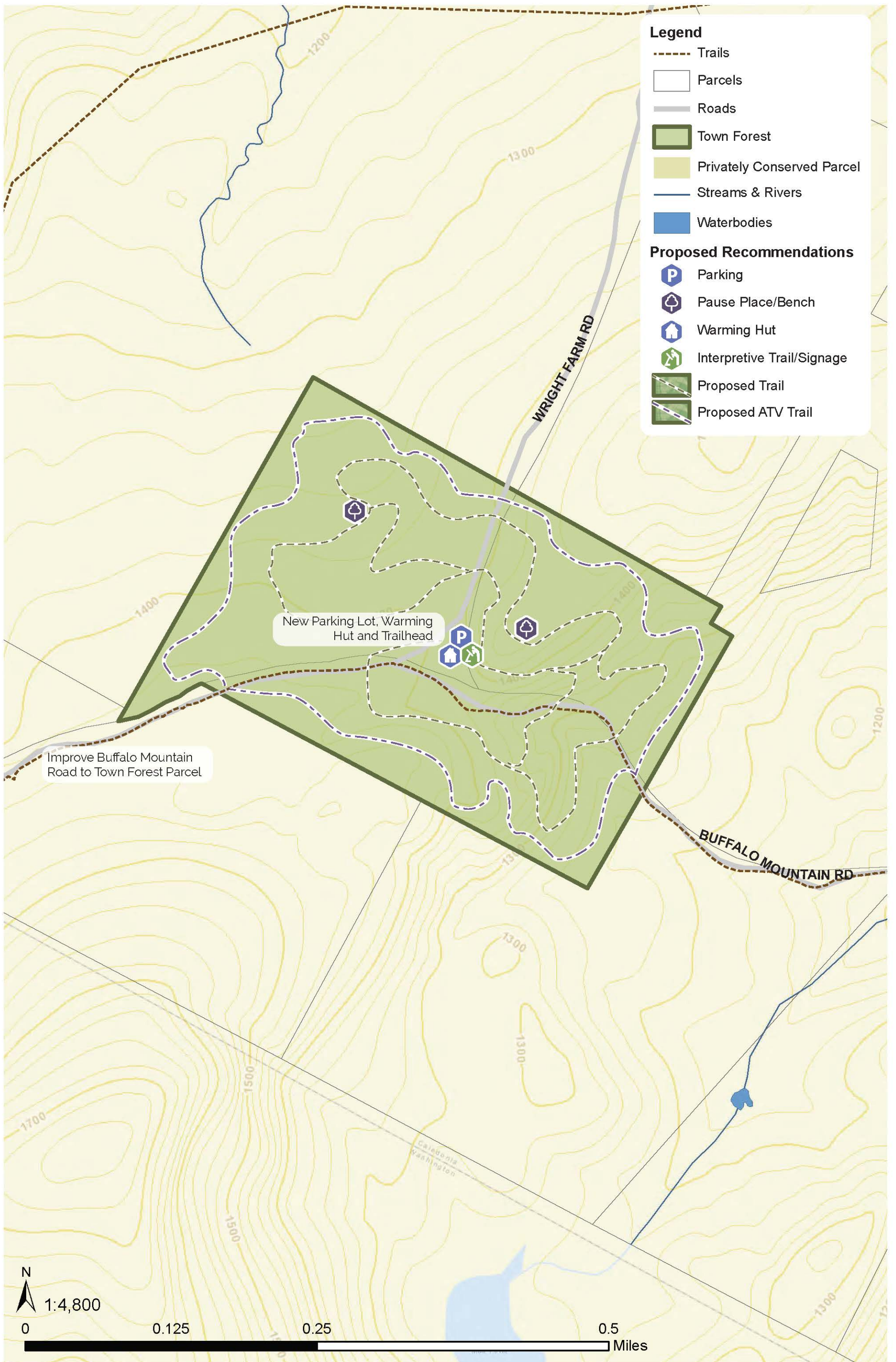
Recreation Planning

Action Plan Graphics

The following diagrams shows conceptual locations for the high priority strategies with a spatial component. These locations are based on the community's pinpointing of strategies at the workshop, the natural resources of the forest, the facilitated forest walks, and the project team's understanding of the right spacing and locations for these strategies. The locations on this map are generalized and, in most cases, further planning and design will be necessary before construction.







Chapter 6: Implementation

Town Forest Recreation Planning Toolkit

The Vermont Town Forest Recreation Planning Toolkit has been developed in concert with this plan and the nine other town forest recreation plans currently underway through the overall US Forest Service grant. The intent behind the toolkit was to build up a replicable process and a set of tools that could be used for both the professionally-facilitated process with the first ten communities, of which Hardwick is one, and for other towns to do their own recreation plans after this project has ended.

Perhaps more importantly for Hardwick, the toolkit includes a number of guidance documents, designs, case studies, best practices, and standards the Town can use to implement strategies identified in this plan. The action plan table and detailed project pages identifies the most relevant toolkit resources for each strategy. In addition, the full list of toolkit resources is described below.

The toolkit is organized through six (6) specific “pods.” These include an existing conditions and assessment pod, a public engagement pod, a natural resource pod, a plan development pod, an implementation pod, and a stories pod. Each are described below.

The Vermont Town Forest Recreation Planning Toolkit is available on Urban and Community Forestry’s website at: <https://vtcommunityforestry.org/>



Vermont Town Forest Recreation Planning

Existing Conditions Pod

The existing conditions and assessment pod provides a checklist to communities to identify background information and municipal plans that should be considered in developing their plan. This pod also includes trail counting forms and extrapolation sheets modified for Vermont from the National Bike and Pedestrian Documentation Project materials. Trail and facility assessment checklists are also included, so the baseline conditions of the town forest can be well understood. Information about available resources such as VT UCF and the county foresters are also provided. Instructions on how to use the VT Center for Geographic Information (VCGI) interactive map viewer to produce basic maps is also included in this pod.



Vermont Town Forest Recreation Planning

Public Engagement Pod

The public engagement pod provides a series of promotional material templates, such as flyers and press releases, and public meeting materials, like informational boards and handouts, that communities can use to explore concepts and constraints with the public. Informational board templates provide opportunities to both present information and gather feedback through write in questions, dot exercises and similar interactions. Surveys and visioning materials that allow towns to identify their priorities for use of their forests are an integral part of this pod. Finally, guidance and best practices on how to facilitate steering committee and public meetings round out the range of materials available in this pod.



Vermont Town Forest Recreation Planning

Natural Resources Pod

The natural resources pod, developed by Arrowwood Environmental includes guidance for using ANR's Natural Resource Atlas for general resource mapping, a process for inventorying natural resources in the forest, workshop and survey questions for natural resources, and a model process for proposing and evaluating new trails or facilities. Most importantly, the natural resources pod also includes the Natural Resources Guidebook and associated activities and resources matrix. The guidebook includes information and links to relevant regulatory documents and contact information at both the State and Federal level for each of the following natural resource areas: Vernal Pools, Deer Wintering Areas (DWA), Ledges/Cliffs/Talus, Mast Stands, Interior Forest, Significant Natural Communities, Wetlands, Rare, Threatened or Endangered Species, Floodplain Forests, Streams/Rivers, Early Succession Forests, and Lakes and Ponds. The guidebook also includes an activities matrix for each of these resources that provides compatibility, management information and recommended buffers for a range of activities and facilities, including: Hiking Trails, Biking Trails, X-C Ski Trails, ATV trails, Snowmobile Trails, New Access Roads, Structures/Buildings, Parking Lots, Forestry/Logging, Camping, Sugaring, and Extraction (gravel, sand).



Vermont Town Forest Recreation Planning

Example Content from the Natural Resources Guidebook

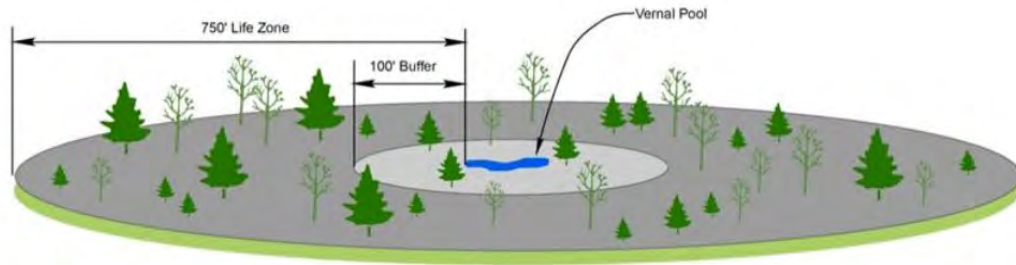


Figure 1. Vernal Pool management zones

Vernal Pool Management Matrix

Activity	Compatibility in Pool*	Compatibility in 100' Buffer*	Compatibility in 750' Buffer*	Comments (seasonal restrictions, buffers, mgmt.)
Hiking Trails	N	Y	Y	Avoid creating ruts or standing water
Biking Trails	N	Y	Y	Avoid creating ruts or standing water
Ski Trails	N	Y	Y	Avoid creating ruts or standing water
ATV trails	N	N	Y	Avoid trails through wet areas. Avoid creating ruts or standing water. Close trails during spring migration period.
Snowmobile Trails	N	Y	Y	Avoid trails through wet areas. Avoid creating ruts or standing water. Close trails during spring migration period.
New Access Roads	N	N	Y	Avoid roads through wet areas. Avoid creating ruts or standing water. Close roads during spring migration period.
Structures/ Buildings	N	N	Y	See guidelines in text and links provided. Only appropriate if most of buffer remains forested.
Parking Lots	N	N	Y	See guidelines in text and link provided. Only appropriate if most of buffer remains forested. Runoff needs to be managed.
Forestry /Logging	N	N	Y	Some forestry activity compatible with vernal pools, see text and links provided.
Camping	N	N	Y	Camping may be compatible in larger buffer zone. See general guidelines in text.
Sugaring	N	Y	Y	Refer to forestry guidelines in text and links provided.
Extraction (gravel, sand)	N	N	N	Extraction can disrupt local hydrology and negatively impact nearby pool. See development guideline in text and links provided.

* In many cases, an activity is deemed compatible only if the management recommendations listed in the comments, text and links provided are adhered to.



Vermont Town Forest Recreation Planning

Plan Development Pod

The plan development pod can help facilitate the development of a Town Forest Recreation Plan by other interested communities or update this existing recreation plan. The pod includes templates and guidance on crafting a vision statement for a town forest as well as case studies of each of the 10 selected communities and their plans highlighting the process they undertook. The plan development pod also includes a recreational improvements strategy database that allows communities to search sample implementation actions based on resources, topics or activities. This database includes all strategies contained in the 10 established plans, and their relative cost. Template action plan tables and bubble diagram map guidance is also included.



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Implementation Pod

The implementation pod contains a number of tools to aid in the implementation of this plan. In addition to a list of available grant, funding and support resources relevant to town forests, the pod also includes grant writing best practices to help make sure you get the necessary funds to move forward. Design guidance and standards for building sustainable trails and facilities for a wide range of user types is also provided. Guidance on acquiring additional lands or easements is also included. Volunteer designs, materials lists, and construction instructions are also provided in this pod.



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Town Forest Story Pod

The town forest story pod includes personal narratives and how-to webinars from participants in the 10 town forest process on what it actually takes to be a volunteer managing a town forest in your community. The stories share tips, tricks, and pitfalls to help keep you on course, as told by others in the same role!



Vermont Town Forest Recreation Planning

Grants and Funding Sources

For most of the strategies and projects in this plan, moving them forward will require financial resources. Luckily, Hardwick and the town budget do not have to go after it alone. There are many grants and alternative funding sources that can help provide the necessary funding. Perhaps the best approach to move a project forward is to select a project with strong community support, secure grant funding, and leverage local resources and volunteers.

The description of each grant below suggests the types of projects the grant funds, the required match from the town if necessary, and a link for more information. Some grants have been identified in the Implementation Matrix using their respective abbreviation.

Federal and State Grants and Programs

Land and Water Conservation Fund State and Local Assistance Program (LWCF)

The Land and Water Conservation Fund (LWCF) state assistance program provides matching grants to help local communities enhance the outdoor recreation resources on public land. LWCF funding has benefited nearly every county in America, supporting over 40,000 projects. The grants create parks and open spaces, protect wilderness and forests, and provide outdoor recreation opportunities. Eligible projects are acquisition of land for parks and public outdoor recreation or development and/or renovation of existing facilities for outdoor recreation. This 50:50 matching program is the primary federal investment tool to ensure that families have easy access to public, open spaces. In Vermont, LWCF is administered by Vermont Department of Forests, Parks & Recreation.

<http://fpr.vermont.gov/recreation/grants/lwcf>

Surface Transportation Block Grant Program (STBG)

The State Surface Transportation Program (STP) is the main program of Federal Transportation Funds, managed by VTrans, for transportation improvements on state highways. Possible projects include recreational trails, pedestrian and biking enhancements, sidewalks, and signed routes.

<https://www.fhwa.dot.gov/specialfunding/stp/>

USDA Rural Development Loan and Grant Assistance (RD)

USDA Rural Development (RD) forges partnerships with rural communities (defined as towns and villages with less than 20,000 inhabitants), funding projects that bring housing, community facilities (including trails and active transportation facilities), business guarantees, utilities and other services to rural America. This program provides funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community. Relevant to this plan, possible projects include transportation facilities, parks, and community gardens.



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<http://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program>

National Park Service Rivers, Trails, and Conservation Assistance Program (RTC)

The National Park Service Rivers, Trails, and Conservation Assistance (RTC) program supports community-led natural resource conservation and outdoor recreation projects across the nation. Their national network of conservation and recreation planning professionals can partner with community groups, nonprofits, tribes, and state and local governments to design trails and parks, conserve and improve access to rivers, protect special places, and create recreation opportunities. Current projects include trail rehabilitation, interpretive trails, connector trails, trail master plans, trails collaboratives, and rail trail connectors. No monetary grants are made.

<https://www.nps.gov/orgs/rtca/index.htm>

FHWA Recreational Trails Program (RTP)

The Recreational Trails Program (RTP) provides funds to communities for development and maintaining recreational trail projects. Grants are awarded to well-planned projects that help to develop, protect, and maintain trails and trail systems that improve connections in the community, livability, user-ability, and are maintained for public recreational use. RTP funds support a wide range of trail activities including hiking, mountain biking, walking, running, cross-country and backcountry skiing, nature-based interpretive trail use, equestrian, snowmobiling, and off-road motorized recreation. Funds can be used for the following types of projects: construction of new trails or trail connections; construction of new trailhead areas/parking facilities; construction of trailside facilities; maintenance, renovation, or restoration of trails; improvements to signage or trail structures along the trail; assessments of existing trail conditions for accessibility and improvements; equipment; and trail-related educational projects (i.e., information about trail safety, appropriate trail use, environmental protection, etc.). The program is administered by the Vermont Department of Forests, Parks and Recreation in the Agency of Natural Resources, in cooperation with the Vermont Agency of Transportation.

<http://fpr.vermont.gov/recreation/grants/rtp>

Transportation Alternatives Program (TAP)

The Transportation Alternatives Program (TAP) is a grant program administered by VTTrans that provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, sidewalks, and bicycle infrastructure. These funds will cover a maximum of 80% of the project with the remaining portions most likely coming from the project-sponsoring organization or town. The FY 2019 funds are reserved for environmental mitigation projects.

<http://vtrans.vermont.gov/highway/local-projects/transport-alt>



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VTrans Bicycle and Pedestrian Program (BPP)

The Vermont Bicycle and Pedestrian Program (BPP) provides funds managed by VTrans for scoping, design, and construction of bike and pedestrian facilities, sidewalks, shared-use paths, and bike lanes. A local match is required but varies based on the type of project.

<http://vtrans.vermont.gov/highway/local-projects/bike-ped>

Vermont Community Development Program (VCDP)

The Vermont Community Development Program provides Community Development Block Grants (CDBG) to all Vermont towns and cities, aside from Burlington. The grant provides financial and technical assistance to identify and address local needs in housing, economic development, public facilities, public services, and handicapped accessibility modifications. The four types of grants are Accessibility Modification Grants (AM), Implementation Grants (IG), Planning Grants (PG), Scattered Site Grants (SS). These grants must primarily benefit persons of low and moderate incomes.

http://accd.vermont.gov/strong_communities/opportunities/funding/vcdp

State Grants and Programs

Vermont Community and Urban Forestry Council Grants (Caring for Canopies Grants, CCG)

These Caring for Canopies Grants (CCG) are awarded to municipalities to aid in taking the necessary actions to developing and sustaining a community-wide tree program, including tree plantings, inventories, maintenance, and planning. There are two grant categories, Caring for the Canopy and Canopy Mini. Caring for Canopy is for projects that help move a community's tree management program towards a sustained level while Canopy Mini is for smaller projects to help move a tree management program forward. The grants range in size from \$500 to \$5,000 and require a 50% match.

<https://vtcommunityforestry.org/programs-0/financial-assistance/caring-canopy-grants>

Municipal Planning Grant Program (MPG)

The Municipal Planning Grants (MPG) are Vermont State grants for a wide range of municipal planning projects including land use plans, zoning and subdivision bylaws, trail networks and walking and biking improvements, resiliency planning, economic plans, and village and neighborhood planning. The range of the grants is from \$2,500 to \$20,000 with a required 10% match.

<http://accd.vermont.gov/community-development/funding-incentives/municipal-planning-grant>



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Recreational Facilities Grants Program (RFG)

The Recreational Facilities Grants (RFG) program provides matching state grants for capital costs associated with the development and creation of community recreational opportunities. This program provides last gap funding for shovel ready projects and does not support any ongoing fundraising initiatives. The program requires a 100% match and awards are capped at \$25,000.

<https://bgs.vermont.gov/commissioner/building-communities-grants>

ANR Ecosystem Restoration Grant Program (ERG)

The ANR Ecosystem Restoration grant program gives grants for design and construction projects that target nonpoint sources of pollution that cause or contribute to the state's surface waters.

<http://dec.vermont.gov/watershed/cwi/grants#Ecosystem%20Restoration>

Northern Border Regional Commission Grants (NBRCG)

The Northern Border Regional Commission invests in community and economic development projects in economically distressed counties in Vermont, Maine, New Hampshire, New York. In Vermont, the eligible counties are Essex, Orleans, Caledonia, Lamoille, Franklin, and Grand Isle. Projects must focus on the following program areas: transportation infrastructure, basic public infrastructure, telecommunications infrastructure, workforce develop, entrepreneurship and business and technology development, resources and open space conservation, recreation and tourism, and renewable and alternative energy.

<http://accd.vermont.gov/economic-development/funding-incentives/Northern-Boarder-Regional-Commission>

Better Connections Program (BCP)

The Better Connections Program seeks to align state and local investments to increase transportation options, build resilience, and strengthen economic vitality in Vermont's community centers, through an annual grant program administered by Vermont Agency of Transportation (VTrans), in partnership with the Vermont Agency of Commerce and Community Development (ACCD). Municipalities annually compete for approximately \$200,000 in projects funds. A 10% local cash match is required. The program supports implementation-focused, municipal planning initiatives that: provide safe, multi-modal and resilient transportation systems that supports the Vermont economy; support downtown and village economic development and revitalization efforts; and lead directly to project implementation. The program has been used for trails and active transportation master plans, village connection planning and other multi-modal planning efforts.

<http://vtrans.vermont.gov/planning/projects-programs/better-connections>



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VOREC Community Grant Program

The Vermont Outdoor Recreation Collaborative (VOREC) is launching a community grant program for outdoor recreation in Vermont municipalities. The grant is designed to help communities leverage their local outdoor recreation assets and applying communities must have completed some prior planning or mapping of outdoor recreation assets, have identified outdoor recreation as a component of their local economy through previous plans, and have a dedicated staff and/or volunteers to ensure long-term success of the project. The funds can be used for consultants, small scale outdoor recreation infrastructure improvements, materials or equipment to support outdoor recreation programs, marketing relating expenses, community based outdoor recreation planning, and securing public access through acquisition of land, easements, or rights-of-way. Communities are also responsible for making products and deliverables that could be adapted and reproduced by other communities in the state. The program is administered by FPR in partnership with ACCD and VOREC and offers grants between \$10,000 and \$100,000.

https://fpr.vermont.gov/VOREC_Community_Grant

State Organizations

Vermont Community Foundation – General Grants (VCF)

A variety of grants are available to support projects to improve environmental sustainability, cultural heritage, social justice, historic preservation, and vitality of Vermont communities. The different types of grants offered include: Place-Based Grants, Arts Endowment Fund, Special and Urgent Needs, and Nonprofit Capacity Building (see below). Each place-based grant is only available to a specific region of the state. For information about which grants are available for your community, please see the website below.

<http://www.vermontcf.org/Nonprofits/AvailableGrants.aspx>

Vermont Community Foundation – Nonprofit Capacity Building (NPCB)

The Nonprofit Capacity Building program is small grants to support the cost of consultants to facilitate discussions related to strategic planning, financial sustainability funding, or facilitating a merger. These grants are meant to supplement other funding. This grant is available to both nonprofits and municipalities.

<https://www.vermontcf.org/NonprofitsGrants/AvailableGrants/NonprofitCapacityBuilding.aspx>

VHCB Local Conservation Projects (VHCP)

The Vermont Housing and Conservation Board provides funding to conserve natural areas, recreation lands, and historic properties. For public outdoor recreation projects, VHCB provides loans to enable the project to leverage other funds or grants in cases where local efforts to obtain sources of funding have been exhausted. The available funds vary based on whether the parcel has



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statewide significance. For conserving locally-significant land, other sources must provide 1/3 of the project funding. VHCB also provides funding for feasibility analysis, project-specific capacity (i.e., engineering work, historic preservation analysis, and hazardous materials analysis).

<https://vhcb.org/our-programs/conservation/apply-for-funding>

Lintilhac Foundation (LF)

The foundation's central purpose is to support organizations that are making sustainable, positive change for Vermont's environment and its people. Grants are available in three core giving areas, water quality, energy, and conservation. The conservation giving is primarily to backcountry recreational access to lands and integrative land use planning.

<http://www.lintilhacfoundation.org/application-guidelines/>

Vermont Arts Council Animating Infrastructure Grant (AIG)

The Animating Infrastructure Grant (AIG) funds projects that integrate public art into existing or proposed infrastructure improvements, which could include buildings, recreational paths, parks, bridges, small-scale renewable energy projects, and water treatment facilities.

<http://www.vermontartscouncil.org/grants-and-services/organizations/animating-infrastructure>

Ben & Jerry's Foundation (BJF)

The Ben & Jerry's Foundation funds multiple grants programs to help communities in Vermont. The Vermont Economic Justice Program gives grants to non-profits working to address the economic, social, and environmental impacts of poverty. The Vermont Community Action Team Grant is a small grant awarded to non-profits, schools, and municipalities. The Community Action Teams provide general or project support. The CATs fund the following types of community programs: social services organizations, cultural, recreational, arts programs, and community celebrations.

<https://benandjerrysfoundation.org/vermont-grant-programs.html>

National Organizations

PeopleforBikes Community Fund (PBCG)

The PeopleforBikes Community Grant Program (PBCG) provides funding for important and influential projects that build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, and large-scale bicycle advocacy initiatives. PeopleforBikes will fund engineering and design work, construction costs, and reasonable volunteer support costs. The maximum grant award is \$10,000 and the grant cannot make up more than 50% of the total project budget.

<http://www.peopleforbikes.org/pages/community-grants>



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Robert Wood Johnson Foundation Grants (RWJF)

The Robert Wood Johnson Foundation (RWJF) provides grant funds to improve the health and health care of all Americans. For town forest projects, RWJF awards grants for projects creating healthier communities. This funding has gone towards walking and bicycling facilities and upgrading underutilized green space.

<https://www.rwjf.org/en/how-we-work/grants-and-grant-programs.html>

Trails Connecting People with Nature: A program of the Sierra Club's Nearby Nature Initiative (TCPN)

Trails Connecting People with Nature is a Sierra Club initiative that works to ensure that access to the outdoors is increasingly equitable and available to all communities. The Sierra Club Foundation awards one year trail grants ranging from \$5,000 to \$20,000 towards trail creation or maintenance projects that engage new leaders and provide opportunities for communities to connect with nature.

<https://content.sierraclub.org/ourwildamerica/nearby-nature>

